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I am submitting herewith a thesis written by William A. Benoit entitled "An analysis of Rorschach aggression and interpersonal variables in forensic and clinical samples." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Arts, with a major in Psychology.

Leonard Handler, Major Professor

We have read this thesis
and recommend its acceptance:

John Lounsbury, Professor

Jack Barlow, Assistant Professor

Accepted for the Council:

Interim Vice Provost and
Dean of the Graduate School

AN ANALYSIS OF RORSCHACH AGGRESSION AND INTERPERSONAL VARIABLES IN FORENSIC AND CLINICAL SAMPLES

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William A. Benoit
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Abstract

This study sought to compare the effectiveness of selected Rorschach aggression and interpersonal variables from three different scoring systems (Exner, 1993; Gacono & Meloy, 1994; Holt, 1977) in discriminating between protocols of individuals from each of three groups (n=23; 19 male, 4 female): those who have committed violent crimes, those who have committed nonviolent crimes, and clinical control participants. Approximately 78% of the violent group and 57% of the nonviolent group met criteria for the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text revision [DSM-IV TR]; American Psychiatric Association, 2000) diagnosis of Antisocial Personality Disorder (ASPD). All remaining members of both forensic groups qualified for another DSM-IV TR Personality Disorder with antisocial features. Participants in the clinical control group were negative for the presence of criminal history, antisocial features, and anger-management problems. All members of this latter group met the criteria for DSM-IV TR Personality Disorder diagnoses other than ASPD. Nonparametric analyses revealed significant main effects for two Exner variables (Sum T and Lambda), two Gacono and Meloy variables (AgC and Sum Ag), and six Holt variables (L2O-AG, LO-AG_{TOT}, AG1R, AGLV1, AGLV2, and AG_{TOT}). In addition, a factor analysis was conducted on the full sample (N=69) for six Rorschach aggression variables (AG, MOR, AgC, AgPast, AGLV1, AGLV2) in an attempt to corroborate the findings of Baity and Hilsenroth (1999). Results of the principal factor solution supported these authors' assessment that there are two unequivocal factors underlying

unequivocal factors underlying these six variables. The amount of variance explained by these two factors in the current study (60%) was slightly lower than the figure reported by Baity and Hilsenroth in their investigation (77%). Factor loading patterns and relative magnitudes among variables loading on each factor, however, were nearly identical in both studies. Clinical and theoretical implications of the present findings and directions for future research are discussed.

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Chapter 1

Introduction

From the mid-1980s up to the present, the fields of clinical and forensic psychology have seen a renewed interest in the use of the Rorschach to assist both in the diagnosis of antisocial and psychopathic personality characteristics and in the assessment of violence risk potential. The focus of much current debate in this area of research is the groundbreaking work of Reid Meloy and Carl Gacono (Gacono, 1990, 1997; Gacono & Meloy, 1991, 1994, 1995, 1997; Gacono, Meloy, & Berg, 1992; Gacono, Meloy, & Heaven, 1990; Meloy, 1988, 1992; Meloy & Gacono, 1992, 1998; Weber, Meloy, & Gacono, 1992), particularly their proposed additions to the aggression scores in Exner's (1993, 1994) Comprehensive System. These authors, separately and in collaboration, have generated an impressive array of studies that demonstrate the Rorschach's unique contribution to the test battery in assessing problems within this sphere.

There are several possible reasons for this renaissance of the Rorschach within the forensic setting. The first of these pertains to forensic assessment in general and its status in contemporary society. It appears that, within the United States at least, there is at present a heightened social awareness of violent and antisocial behavior and its costs, both obvious and hidden. Indeed, Americans seem to be obsessed with such matters, which continue to exert a strange fascination even as they are socially condemned. It remains an open question whether antisocial acts have actually increased in frequency

and severity in recent years or whether it is merely the public's sensitivity to these problems that has become more acute. One practical result of these developments has been a proliferation of laws mandating harsher penalties for a wide variety of crimes along with more vigorous enforcement of these statutes and prosecution of offenders. These circumstances, collectively, have brought about an increased need for the services of forensic psychologists. Because the financial resources any society may devote to running a criminal justice system are not limitless, it is impossible (not to mention undesirable) to incarcerate every person who happens to commit a crime. Decisions must still be made regarding whom to release or not to release on the basis of dangerousness to others and risk of violence. Forensic psychologists are but one group of experts who advise legal authorities on these and other issues. This demand for their services has caused experts to expand their repertoire by reexamining a number of tests for use with offender populations in the light of current research, among these being the Rorschach.

Another recent development that concerns the Rorschach specifically has been the substantial improvement in the test's reliability and validity as a result of Exner's (1993) efforts to base his system on empirical foundations. Large sample normative data for a variety of patient and nonpatient groups have helped to provide a more objective rationale for interpretation of protocols than was previously possible. This fact, in and of itself, has greatly augmented the Rorschach's credibility in a number of contexts, including in court. In addition, the construct of "psychopathy" has been convincingly validated in the work of Robert Hare, whose Psychopathy Checklist-

Revised (PCL-R; Hare, 1991) represents the culmination of nearly three decades of research on criminal offender groups. This construct has provided an extremely useful framework for comprehending many findings on the Rorschach (Gacono & Meloy, 1994) and other psychological tests.

The third factor contributing to the reconsideration of the Rorschach in the assessment of aggression and antisocial tendencies consists precisely in its "projective" nature. When combined with the technical advances cited above, the ambiguity of the Rorschach testing situation becomes one of its greatest strengths when assessing antisocial and psychopathic populations. These subjects typically have an extraordinarily high motivation to dissimulate on psychological tests (*i.e.,* to appear as "better" or "worse" than they really are) in order to escape prosecution or mitigate the severity of court sentences. In order to dissimulate successfully, however, a subject must be able to discern what a test is measuring. Tests with face valid content that inquire directly about antisocial practices, as is unfortunately the case with many self-report inventories, may prove to be of little help in ferreting out a psychopath of even modest intelligence, validity keys notwithstanding. Less direct measures of aggression, such as many of those employed with the Rorschach, give forensic practitioners an additional tool to assess unconscious or suppressed aggressive tendencies.

The present study proposes to examine Rorschach aggression-related variables from three different systems in three groups of participants (each with n=23): those who have committed crimes involving violence against persons, those who have committed crimes not involving such violence, and clinical patients having no prior contact with

the criminal justice system and no antisocial personality features or problems with anger management. There have been relatively few Rorschach studies to date comparing participants grouped on the basis of the nature of their offenses rather than their psychiatric clinical diagnosis (Coram, 1995). For purposes of this study, acts of violence will be operationally defined as acts characterized by the direct application of physical force resulting in significant injury or death to other persons. Such violent acts may vary in degree of intentionality exhibited by the person carrying them out and do not include those actions involving the use of force in the service of self-defense.

The variables that were assessed include Holt's (1977) PRIPRO aggression scales, selected Exner (1993) aggression-related and interpersonal variables, and Gacono and Meloy's (1994) more recent aggression categories. Hitherto, very few studies (Baity & Hilsenroth, 1999) have attempted to analyze aggression variables from all three systems. This study may be viewed as an attempt to replicate certain of Baity and Hilsenroth's (1999) findings and to extend their analysis to include several variables they chose not to investigate.

Chapter 2

Method

Participants

Psychological testing records for persons convicted of a variety of violent and nonviolent crimes were sought and obtained from clinical and forensic psychologists in the southeastern United States. All identifying information was removed from the archival material prior to being seen by the researchers. Participants were identified only by a randomly assigned code number. In the vast majority of these cases, psychological testing was administered as part of a complete forensic pretrial evaluation in order to ascertain the defendant's competence to stand trial, mental state at the time of the offense, current dangerousness, or other issues unique to each case. All of these individuals, however, were eventually convicted of their offense of record. A subset of other participants (n=13) had already been convicted of their offense at the time of testing and were being evaluated as part of the appellate process. In addition to the psychological testing records, available data included police and court documents detailing the nature of the offense of record, criminal records, medical reports, records of previous contacts with the mental health system, and information relevant to establishing personal and family histories. It should be noted that the nature and extent of this documentation varied considerably from case to case.

A total of 66 forensic cases were obtained, 62 of which included Rorschach test protocols. A portion of these protocols (n=17) were excluded from the study due to factors rendering their validity questionable, such as records consisting of less than 14 responses (R<14) or inadequate to nonexistent inquiry of responses. The remaining protocols were divided into two groups on the basis of their current offenses and relevant information in the case history. Two additional cases were excluded because of significant ambiguity regarding the specifics of the offenses committed and insufficient information on which to base a decision with regard to classification, leaving a total of 43 valid cases. In order to balance the groups for number of participants and gender composition, three other cases were obtained from the archives of a major university-based psychological clinic (one violent, two nonviolent), bringing the total number of participants in each group to 23 (19 male, 4 female).

The first group consisted of individuals whose precipitating offense was a violent crime (as defined in the previous chapter). The modal crime for what will be referred to as the violent group (V) was murder (n=22, or 96%). The subset of the total group whose crime of record was first degree murder consisted of n= 20 participants, or 87%. The mean age for this group was 29.6 years (SD=9.2 years), with a range extending from 18 to 46 years. The racial composition of the violent group was about 78% (n=18) Caucasian, 17% (n=4) African American, and 4% Hispanic. The participants in this group were retrospectively evaluated by the primary investigator for the presence antisocial features according to the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed., text revision [DSM-IV TR]; American Psychiatric Association,

2000) criteria for Antisocial Personality Disorder (ASPD). Of the participants in this group 39% (*n*=9) qualified for a diagnosis of ASPD unequivocally. Another 39% (*n*=9) of the group met the criteria for this diagnosis provisionally due to lack of sufficient information to account for criterion C (*i.e.,* the existence of Conduct Disorder prior to age 15 years). Based on the existing evidence in these latter cases, in the opinion of the primary investigator, it is *extremely* likely that, given the necessary documentation, this criterion would be met. Each of the remaining 22% (*n*=5) of the group qualified for a different DSM-IV TR personality disorder diagnosis with marked antisocial features.

The second group was comprised of individuals whose precipitating offense did not involve physical violence and whose case histories indicated no significant pattern of violent behavior. The crimes committed by participants in what will be called the nonviolent group (NV) were far more heterogeneous in nature than those for the violent group. The breakdown of precipitating offense in this group is as follows: property crimes, 26% (*n*=6); nonviolent sexual offenses, 22% (*n*=5); drug-related offenses, 17% (*n*=4); robbery (no violence involved), 17% (*n*=4); financial crimes, 13% (*n*=3); and other, 4% (*n*=1). The mean age for the nonviolent group was 33.1 years (SD=10.9), with a range extending from 19 to 59 years. The racial composition of this group was approximately 96% (*n*=22) Caucasian, 4% (*n*=1) African American, and 0% other. This group was also evaluated for the presence of antisocial features by the primary investigator. A smaller percentage of this group met the criteria for DSM-IV TR ASPD either fully (26%, or *n*=6) or provisionally (30%, or *n*=7). The remaining participants

(44%, or n=10) each qualified for diagnosis of another personality disorder with antisocial features.

A clinical control group (CC) was formed using cases randomly selected from the archives of the university-based psychological clinic previously mentioned. Several selection criteria were employed. First, the file needed to contain a valid and scoreable Rorschach protocol. Second, the participant was required to have no criminal record for violent or nonviolent crimes other than trivial offenses (*e.g.*, parking tickets, traffic citations, etc.). Third, the participant needed to have no significant problems with anger management or hostile acting out, verbal or otherwise. Cases were selected in this manner until the control group was matched to the remaining two groups with regard to number of participants and gender composition (n=23; 19 male, 4 female). The mean age for the clinical control group was 29.7 years (SD=6.5), with a range extending form 19 to 43 years. The racial composition of the group was 100% (n=23) Caucasian and 0% other. Members of this group were also evaluated for the presence of antisocial features by the primary investigator in the same manner as described above. No participants (0%, or n=0) in this group met the criteria for ASPD fully or provisionally and none were positive for the presence of antisocial features.

Instruments

Exner Comprehensive System Structural Summary Variables. A number of variables described by Exner (1993) that appear on the Comprehensive System Structural Summary, while not necessarily direct measures of aggressive tendencies in test subjects, certainly have some bearing on the nature of character pathology and overall

quality of social functioning. Most of these are grouped in Exner's Interpersonal and Self-Perception clusters. For this study, the variables COP, AG, T, Lambda, Fr+rF, and EGOI were chosen for examination. Prior research has shown these to be useful indices for differentiating antisocial and psychopathic subjects from those with other personality disorders (Gacono & Meloy, 1991, 1994). It seems intuitive that one would expect violent and aggressive individuals to score low on cooperative movement (COP=0) and high on aggressive movement (AG>2). While research solidly supports the first observation, the evidence concerning the production of AG responses antisocial populations runs counter to what might be expected. In fact, Gacono and Meloy (1992, 1994; Gacono, 1997) note that their antisocial and psychopathic subjects actually score lower on AG than normative and other clinical populations.

The Rorschach texture response (Sum T) has long been associated with the capacity for attachment and interpersonal relatedness (Exner, 1993; Weiner, 1998) when it occurs at an expected frequency (Sum T=1). It should come as no surprise that severe antisocial personalities are woefully deficient with regard to this variable (Sum T=0).

Lambda (L) is an extremely important and complex Structural Summary variable that is computed as the ratio of pure form (F) responses to the total number of protocol responses (R) minus all pure form responses (L=F/R-F). High L (L>.99) may occur in a record for a variety of reasons (Exner, 1993) which will be considered in detail later in this study. One possible cause for elevated L is that it represents a consistent and pervasive characterological approach to the world based on extreme oversimplification

and disregard for details, such as social rules. It is not surprising that high L occurs with great frequency in criminal samples (Gacono & Meloy, 1994).

Reflection responses (Fr + rF) and the Egocentricity Index (EGOI=3r+(2)/R) pertain to narcissistic preoccupation and self-focusing activity respectively. Both of these variables have implications for the diagnosis of character pathology. The appearance of any reflection responses in a protocol (Fr + rF > 0) or of an EGOI above or below a certain normative range (EGOI<.33 or EGOI>.44) both point to marked difficulties in regulating self-esteem. This is the case especially when reflections are present. The reflection response has shown some promise for discriminating subjects with Narcissistic Personality Disorder (NPD) from those suffering from other DSM-IV Personality Disorders (Hilsenroth, et al. 1997). Gacono and Meloy view the construct of psychopathy as a highly aggressive narcissistic variant of the antisocial personality. These authors have noted reflections as occurring frequently in this latter subpopulation.

Gacono and Meloy Expanded Aggression Scores. In the course of their forensic work with individuals exhibiting severe ASPD, Gacono and Meloy came to question the adequacy of the Exner aggressive movement score (AG) with this type of psychopathology. What they began to notice was that certain antisocial personalities (most notably, those with primary psychopathic features), whose criminal histories are often replete with extremely violent offenses, actually produced less AG than normal or other clinical populations. Exner's AG score is restricted to any clear and unequivocal aggressive action that is taking place in the present tense. These authors hypothesized that non-antisocial people tend to experience aggressive impulses as ego-dystonic and

tend to inhibit their direct expression, preferring to discharge them via ideation or fantasy. This is what they believed that the Exner AG score was measuring. For many antisocial individuals, however, aggression is indeed highly ego-syntonic and, in combination with primitive psychological defenses, not infrequently results in the impulse being acted out directly.

In order to get at this ego-syntonic quality, Gacono and Meloy (1994) developed four new aggression categories to be used in addition to the Exner AG score. Aggressive Content (AgC) is scored for any response the subject matter of which is popularly perceived as predatory, dangerous, malevolent, injurious, or harmful. Aggressive Potential (AgPot) is scored for any response in which an aggressive act is about to occur and Aggressive Past (AgPast) is used for any response in which an aggressive act has already taken place in the past. The Sado-Masochism (SM) category applies to any response in which devalued, aggressive, or morbid content occurs in conjunction with pleasurable affect expressed by the subject. Gacono and Meloy also speak of a fifth aggregate score that comprises the total of all aggression scores. In the present study, this score will be referred to as Sum of Aggression (Sum Ag=AG +AgC + AgPot + AgPast +SM). Detailed scoring instructions may be found in Gacono and Meloy (1994).

Gacono and Meloy acknowledge that some of their scores occur quite infrequently, even in antisocial populations. This appears to be the case specifically for the AgPot and SM categories. This fact renders questionable the use of most statistical tests with these variables (at least as considered in isolation). A frequency check for the sample

used in this study (N=69) confirmed that AgPot and SM occurred too rarely to justify running statistical tests. The remaining scores (AgPast, AgC, and SumAg), however, all occurred with sufficient frequency to warrant group comparisons.

Holt Primary Process (PRIPRO) Scoring System Aggressive Content Variables. This complex psychoanalytically derived Rorschach scoring system was first devised by Holt in the 1950s and has been revised several times since then. For the purpose of this study, the 1977 (Holt, 1977) version will be employed. Holt bases his system on an ego psychological drive model of the mind. The purpose of the system is to measure the relative degree of "primary process" (*i.e.,* primitive, unmodulated) versus "secondary process" (*i.e.,* indirect, controlled, "socialized") thinking that may appear in a Rorschach protocol. The system includes formal, control and defense, and content variables. The content variables pertaining to aggression are of primary interest for this study. Holt's Aggressive Content category consists of three scores: Attack (Sadistic Aggression), Victim of Aggression (Masochistic Aggression), and Results of Aggression. In addition, each of these scores must be specified as Level 1 (more crude, direct expressions of aggression) or Level 2 (more sublimated, socially acceptable expressions of aggression), thereby yielding six aggression scores (AG1A, AG1V, AG1R, AG2A, AG2V, AG2R). In Holt's Libidinal Content category, the Oral Aggressive score is also relevant to this study. This latter score also exists as Level 1 (L1O-AG) and Level 2 (L2O-AG). Very detailed instructions about when to assign these scores may be found in Holt (1977).

As with certain of the Gacono and Meloy (1994) aggression scores described previously, a difficulty encountered with some Holt Aggressive Content variables is that they occur too infrequently, even in criminal populations, to yield sufficient variance to justify the use of statistical tests. A frequency check for the sample used in this study (N=69) found that the variables L2O-AG, AG1R, AG2A, AG2V, and AG2R occurred often enough across the three groups to be subjected to statistical testing.

Several aggregate scores that do not appear in Holt's system were developed for the present study. A Total Oral Aggression score was created from the sum of all Level 1 and Level 2 Oral Aggression scores (*i.e.*, $LO\text{-}AG_{TOT}$=L1O-AG + L2O-AG). Two additional scores were derived by summing the three Aggressive Content scores (Attack, Victim of Aggression, and Results of Aggression scores) for each Level (AGLV1 and AGLV2). Finally, a Total Aggression score summing all three Aggressive Content Scores across both levels (*i.e.*, AG_{TOT}=AGLVL1 + AGLVL2). These latter three variables (AGLV1, AGLV2, and AG_{TOT}) do not include the Oral Aggressive scores from the Libidinal Content category.

Research Hypotheses

With respect to the Comprehensive System variables selected for comparison, it was hypothesized that significant main effect differences across all three groups would be found. For COP and T, it was predicted that the clinical control group would be significantly higher on both of these variables than the nonviolent group which, in turn, would be significantly higher than the violent group (*i.e.*, CC>NV>V). Following Gacono and Meloy (1994), it was also maintained that the same main effect pattern

would also hold true for AG (*i.e.*, CC>NV>V). For the variables L and Fr+rF, a significant main effect of the opposite type would be discovered (*i.e.*, V>NV>CC). Significant main effect differences between the three groups were predicted for the variable EGOI, but no specific hypotheses were held concerning the direction of these differences other than that the clinical control group would fall within the average range, while the two remaining groups would fall outside of this range (either higher or lower).

For all of the Gacono and Meloy aggression variables chosen for testing (AgPast, AgC, and SumAg), it was hypothesized that significant main effects across the three groups would be found with the violent group scoring significantly higher than the nonviolent group which, in turn, would score higher than the clinical control group (*i.e.*, V>NV>CC).

Likewise, the identical pattern of significant main effects was predicted for all Holt aggression scores selected (L2O-AG, LO-AG_{TOT}, AG1R, AG2A, AG2V, AG2R, AGLV1, AGLV2, AG_{TOT}) as for the Gacono and Meloy variables with the violent group scoring highest, followed by the nonviolent group, then the clinical control group (*i.e.*, V>NV>CC).

Procedures

The entire sample of Rorschach protocols (N=69) was scored using the Comprehensive System according to procedures outlined by Exner (1993). The protocols were divided among three raters, all of whom were advanced clinical psychology graduate students with a minimum of two years experience using the

Comprehensive System. The protocols were also scored by these same raters for the Gacono and Meloy (1994) Expanded Aggression Scores and the Holt (1977) PRIPRO System Aggressive Content variables of interest. Raters also had a minimum of two years familiarity with these instruments as well. For the purpose of assessing interrater reliability (Weiner, 1991), fifteen protocols were chosen at random from the total sample and scored by all three raters using the indicated instruments. The three sets of protocols were compared to one another by calculating overall correct classification (OCC) and kappa coefficients (Fleiss, 1981; Kèssel & Zimmermann, 1993) for all Gacono and Meloy scores, Holt scores, and those Comprehensive System variables selected for comparison.

Chapter 3

Results

Interrater reliability (Weiner, 1991) was evaluated using formulas both for percentage agreement and kappa coefficients. Results may be found in Table 1. Percentage agreement was calculated from Kessel and Zimmermann's (1993) formula for overall correct classification (OCC) rate. Kappa coefficients (Fleiss, 1981) were also calculated, once again following Kessel and Zimmermann's (1993) method, in order to ascertain the true rate of interrater agreement above chance. A conservative exact match criterion between all three raters (*i.e.,* presence or absence of the variable in question) was adopted as the standard for agreement. These statistics were calculated for the following variables: COP, AG, Sum T (*i.e.,* simple presence or absence of T without regard to relative predominance of form), Pure F (used to calculate Lambda), Fr+rF, Pairs (used to calculate EGOI), MOR, AgPot, AgPast, AgC, L1O-AG (used to calculate $LO\text{-}AG_{TOT}$), L2O-AG, AG1A, AG1V, AG1R, AG2A, AG2V, AG2R, AGLV1, and AGLV2. No statistics were calculated for Gacono and Meloy's SM score for reasons that will be noted in the following chapter. It will be observed that two of the kappa coefficients in Table 1 fall in the average to good range ($\geq$.60-.74; Fleiss, 1981) and the remaining 18 are in the excellent range (>.74; Fleiss, 1981). It may be concluded that adequate interrater reliability exists for all variables tested. Significant drop in interrater reliability between OCC and kappa for any variable likely indicates low base rates of

Table 1. Interrater Reliability of Selected Exner, Gacono & Meloy, and Holt Rorschach Variables[a].

Variable	OCC[b]	κ[c]
COP	.99	.89
AG	.99	.91
Sum T	1.0	1.0
F	.94	.89
Fr+rF	.99	.66
Pairs	.96	.89
MOR	.98	.83
AgPot	.99	.92
AgPast	.99	.87
AgC	.98	.91
L1O-AG	1.0	1.0
L2O-AG	.99	.91
AG1A	1.0	1.0
AG1V	1.0	1.0
AG1R	.99	.75
AG2A	.97	.91
AG2V	.99	.66
AG2R	.97	.73
AGLV1	.99	.89
AGLV2	.95	.88

Note. COP=Exner cooperative movement score; AG=Exner aggressive movement score; Sum T=Exner sum of texture responses; F=Exner pure form score; Fr+rF=Exner sum of reflection responses; Pairs=Exner number of pair responses; MOR=Exner morbid content score; AgPot=Gacono & Meloy aggressive potential score; AgPast= Gacono & Meloy aggressive past score; AgC= Gacono & Meloy aggressive content score; L1O-AG=Holt oral aggression score, level 1; L2O-AG=Holt oral aggression score, level 2; AG1A=Holt aggressive attack, level 1; AG1V=Holt victim of aggression, level 1; AG1R=Holt results of aggression, level 1; AG2A=Holt aggressive attack, level 2; AG2V=Holt victim of aggression, level 2; AG2R=Holt results of aggression score, level 2; AGLV1=sum of all level 1 Holt aggression scores; AGLV2=sum of all level 2 Holt aggression scores.

[a] 15 protocols, 317 responses. [b] OCC=overall correct classification rate (percentage agreement) uncorrected for chance; formula from Kessel & Zimmermann (1993). [c] κ=Kappa coefficient, formula from Kessel & Zimmermann (1993); all values for κ are significant at the $p<.001$ level.

occurrence for that variable. Likewise, kappa values of 1.0 (as for Sum T, L1O-AG, AG1A, and AG1V) point to relatively low base rates for these variables in the random sample of protocols scored by all three raters.

A one-way analysis of variance (ANOVA) demonstrated that the mean number of Rorschach responses (R) did not vary significantly ($F[2, 66]=.46$, $p=.63$) across groups. The selected variables were compared for main effects using the nonparametric Kruskal-Wallis *H* test for independent samples. Results were regarded as significant if a p-value of less than .05 was attained. When the Kruskal-Wallis *H* analysis yielded significance, post hoc Mann-Whitney *U* tests were performed for pairwise comparisons.

Table 2 presents the findings for the Kruskal-Wallis *H* analysis for the previously selected Exner Comprehensive System structural summary variables. The test revealed significant main effect differences for two of the six variables across all three groups, Sum T and Lambda (both at $p<.001$). These two variables were then analyzed with the Mann-Whitney *U* for between-group differences. For Sum T, the pairwise contrasts showed that each of the three groups differed significantly from the other two (*i.e.*, NV>V, $p<.05$; CC>NV, $p<.05$; CC>V, $p<.001$). It should also be noted that these group differences for T are in the predicted direction (*i.e.*, CC>NV>V). The same type of analysis performed on L partially supported the hypotheses maintained for that variable. Mann-Whitney *U* tests found for L that both the violent and nonviolent groups differed significantly from the clinical control group (*i.e.*, V>CC, $p<.001$; NV>CC, $p<.001$), but did not differ from one another. Kruskal-Wallis *H* tests for the remaining

Table 2. Group Comparisons of Selected Exner Rorschach Variables (*N*=69).

Rorschach Variables	Group Means			Kruskal-Wallis *H*	*p*	Group Contrasts[a]
	Violent (*n*=23)	Nonviolent (*n*=23)	Clinical Controls (*n*=23)			
COP	0.39	0.70	0.74	2.89	.24	*ns*
AG	0.65	0.91	1.30	1.91	.39	*ns*
Sum T	0.04	0.30	1.0	16.26	<.001	NV>V* CC>NV* CC>V****
L	2.41	1.54	0.63	22.28	<.001	V, NV>CC****
Fr+rF	0.35	0.17	0.52	3.82	.15	*ns*
EGOI	0.29	0.29	0.38	3.48	.18	*ns*
MOR[b]	1.61	0.61	1.61	6.48	.04	V, CC>NV*

Note. V=violent offender group; NV=nonviolent offender group ; CC=clinical control group ; COP=cooperative movement response; AG=aggressive movement response; Sum T=sum of texture responses; L=lambda; Fr+rF=sum of reflection responses; EGOI=egocentricity index; MOR=morbid content response.

[a] Mann-Whitney *U* statistic. [b] Post hoc analysis.

* p<.05. ** p<.01. *** p<.005. **** p<.001

Table 3. Group Comparisons of Selected Gacono & Meloy Expanded Aggression Scores (*N*=69).

Rorschach Variables	Group Means			Kruskal-Wallis *H*	*p*	Group Contrasts[a]
	Violent (*n*=23)	Nonviolent (*n*=23)	Clinical Controls (*n*=23)			
AgPast	1.26	0.61	0.78	3.31	.19	*ns*
AgC	3.61	2.17	3.35	8.73	.01	V>NV*** CC>NV[b]
Sum Ag	6.22	3.78	5.61	7.35	.03	V>NV** CC>NV[c]

Note. V=violent offender group; NV=nonviolent offender group; CC=clinical control group; AgPast=aggressive past score; AgC=aggressive content score; SumAg=sum of all Gacono & Meloy aggression scores plus Exner aggressive movement (AG) score.

[a] Mann-Whitney *U* statistic. [b] Approaching statistical significance (p=.05).

[c] Approaching statistical significance (p=.09).

* p<.05. ** p<.01. *** p<.005. **** p<.001

Comprehensive System variables (COP, AG, Fr+rF, EGOI), contrary to prediction, failed to yield any significant differences between groups. Frequency tables for all Exner variables selected are included in Appendix A.

Identical statistical procedures were employed to analyze selected Gacono and Meloy expanded aggression scores for this sample. The results of this analysis are presented in Table 3. For two variables, AgC and SumAg, the Kruskal-Wallis *H* displayed significant between-group differences (both at the $p<.05$ level). With regard to AgC, Mann-Whitney tests showed that the violent group differed significantly from the nonviolent group (V>NV, $p<.005$), but did not differ from the clinical control group. The pairwise comparison between the nonviolent and clinical control groups approached statistical significance (CC>NV, $p=.05$). The post hoc analysis for SumAg displayed a similar pattern of findings with the violent and nonviolent groups differing significantly (V>NV, $p<.01$), the nonviolent and clinical control group comparison approaching significance (CC>NV, $p=.09$), and the violent and clinical control groups showing no significant differences. Pairwise contrasts for both AgC and SumAg lend partial support to the hypotheses maintained. The Kruskal-Wallis test for the third variable, AgPast, proved to be nonsignificant. Frequency Tables for all Gacono and Meloy aggression scores are included in Appendix B.

The same procedures were also applied to the Holt PRIPRO aggressive content variables of interest. Results of these statistical tests appear in Table 4. Of the nine variables chosen for Kruskal-Wallis analysis, six yielded significant findings across all three groups (L2O-AG, $p<.05$; LO-AG_{TOT}, $p<.05$; AG1R, $p<.05$; AGLV1, $p<.005$;

Table 4. Group Comparisons of Selected Holt Primary Process (PRIPRO) System Aggressive Content Variables (*N*=69).

Rorschach Variables	Group Means			Kruskal-Wallis *H*	*p*	Group Contrasts[a]
	Violent (*n*=23)	Nonviolent (*n*=23)	Clinical Controls (*n*=23)			
L2O-AG	1.39	0.96	0.70	6.48	.04	V>CC[b, *]
LO-AG_{TOT}	1.52	1.04	0.77	6.59	.04	V>CC[b, *]
AG1R	0.57	0.04	0.26	8.0	.02	V>NV[c, **] V>CC[d]
AG2A	3.65	2.83	4.09	5.46	.07[e]	*ns*
AG2V	0.30	0.13	0.52	3.61	.17	*ns*
AG2R	1.17	0.96	1.43	1.16	.56	*ns*
AGLVL1	0.74	0.04	0.39	11.03	.004	V>NV[c, ***] CC>NV[*]
AGLVL2	5.13	3.91	6.04	8.04	.02	CC>NV[**]
AG_{TOT}	5.87	3.96	6.39	9.45	.009	V>NV[*] CC>NV[c,**]

Note. V=violent offender group; NV=nonviolent offender group; CC=clinical control group; L2O-AG=oral aggression score, level 2; LO-AG_{TOT}=sum of all oral aggression scores; AG1R=results of aggression score, level 1; AG2A=aggressive attack score, level 2; AG2V=victim of aggression score, level 2; AG2R=results of aggression score, level 2; AGLVL1=sum of all level 1 aggression scores; AGLVL2=sum of all level 2 aggression scores; AG_{TOT}=sum of all aggression scores.
[a] Mann-Whitney *U* statistic. [b] p=.01. [c] p=.005. [d] Approaching statistical significance (p=.08).
[e] Approaching statistical significance (p=.07).
[*] p<.05. [**] p<.01. [***] p<.005. [****] p<.001.

AGLV2, $p<.05$; AG_{TOT}, $p<.01$), one approached statistical significance (*i.e.,* AG2A, $p<.07$). and two proved nonsignificant (*i.e.,* AG2V and AG2R). Pairwise Mann-Whitney *U* tests found the following results. The L2O-AG and LO-AG_{TOT} variables differentiated the violent group from the clinical control group (*i.e.,* V>CC, both at $p<.05$), but failed to differentiate either from the nonviolent group. The AG1R variable successfully distinguished between the violent and nonviolent groups (*i.e.,* V>NV, $p<.01$), while the comparison of the violent group to the clinical controls approached significance (*i.e.,* V>CC, $p=.08$) and the comparison of the nonviolent to the control group proved nonsignificant.

For AGLV1 it was discovered that both the violent and clinical control groups differed significantly from the nonviolent group (*i.e.,* V>NV, $p<.005$; CC>NV, $p<.05$), but did not differ from one another. A similar pattern of group contrasts was found for AG_{TOT}, only with significance levels differing slightly (*i.e.,* V>NV, $p<.05$; CC>NV, $p<.01$; V to CC=*ns*).

With AGLV2, a significant difference between the nonviolent and clinical control groups was found (*i.e.,* CC>NV, $p<.01$), but no differences between either group and the violent group. Frequency tables for all Holt PRIPRO aggression variables are included in Appendix C.

A correlation matrix is presented in Table 5 in order to demonstrate the relationships among the aggression variables used in this study across the total sample ($N=69$). Note that parenthesized values for *r* indicate trivial correlations between aggregate variables (Sum Ag, LO-AG_{TOT}, AGLV1, AGLV2, and AG_{TOT}) and other variables of which they

Table 5. Correlation Matrix for Selected Rorschach Aggression Variables (*N*=69).

Rorschach Variables		AG	MOR	AgPast	AgC	Sum Ag	L2O-AG	LO-AG_{TOT}	AG1R	AG2A	AG2V	AG2R	AGLV1	AGLV2	AG_{TOT}
AG	*r*	1.0	.27	-.04	.28	(.37)	-.05	.02	.004	.39	.30	-.02	.11	.35	.35
	p	.	.02*	.76	.02*	.	.68	.87	.97	.001***	.01*	.85	.37	.003***	.004***
MOR	*r*		1.0	.45	.08	.19	-.07	-.05	.36	-.04	-.001	.34	.37	.15	.24
	p		.	<.001****	.52	.12	.59	.71	.002***	.76	.99	.004***	.002***	.24	.05[a]
AgPast	*r*			1.0	.18	(.57)	.05	.09	.48	-.04	.01	.57	.43	.26	.35
	p			.	.15	.	.71	.49	<.001****	.76	.94	<.001****	<.001****	.03*	.003***
AgC	*r*				1.0	(.79)	.39	.45	-.09	.55	.09	.13	.05	.48	.45
	p				.	.	.001***	<.001****	.46	<.001****	.48	.29	.70	<.001****	<.001****
Sum Ag	*r*					1.0	.22	.29	.10	.42	.11	.32	.18	.49	.49
	p					.	.07[b]	.02*	.40	<.001****	.35	.008**	.14	<.001****	<.001****
L2O-AG	*r*						1.0	(.96)	-.04	.29	.05	-.04	-.006	.20	.18
	p						.	.	.73	.02*	.66	.73	.96	.10	.14
LO-AG_{TOT}	*r*							1.0	-.05	.36	.05	.007	.02	.27	.25
	p							.	.66	.003***	.66	.96	.87	.02*	.04*
AG1R	*r*								1.0	-.03	.02	.23	(.89)	.10	(.35)
									.	.83	.88	.05[a]	.	.40	.
AG2A	*r*									1.0	.18	.09	.08	(.81)	(.74)
	p									.	.14	.49	.50	.	.
AG2V	*r*										1.0	.16	.14	(.47)	(.45)
	p										.	.18	.25	.	.

Table 5 (continued). Correlation Matrix for Selected Rorschach Aggression Variables (*N*=69).

Rorschach Variables		AG	AgPast	AgC	Sum Ag	L2O-AG	LO-AG_{TOT}	AG1R	AG2A	AG2V	AG2R	AGLV1	AGLV2	AG_{TOT}
AG2R	*r*										1.0	.32	(.61)	(.63)
	p										.	.008**	.	.
AGLV1	*r*											1.0	.26	(.51)
	p											.	.04*	.
AGLV2	*r*												1.0	(.97)
	p												.	.
AG_{TOT}	*r*													1.0
	p													.

Note. Values in parentheses represent trivial correlations between aggregate measures and the other variables of which they are composed: no significance levels are given for these figures. *r*=Pearson correlation coefficient; *p*=level of significance (2-tailed);AG=Exner aggressive movement score; AgPast= Gacono & Meloy aggressive past score; AgC= Gacono & Meloy aggressive content score; Sum Ag=sum of all Gacono & Meloy aggression scores plus Exner aggressive movement score; L2O-AG=Holt oral aggression score, level 2; LO-AG_{TOT}=sum of all Holt oral aggression responses; AG1R=Holt results of aggression, level 1; AG2A=Holt aggressive attack, level 2; AG2V=Holt victim of aggression, level 2; AG2R=Holt results of aggression scores, level 2; AGLV1=sum of all level 1 Holt aggression scores; AGLV2=sum of all level 2 Holt aggression scores; AG_{TOT}=sum of all Holt aggression scores.

[a] Approaching statistical significance (*p*=.05). [b] Approaching statistical significance (*p*=.07).

* *p*<.05. ** *p*<.01. *** *p*<.005. **** *p*<.001.

are constituted. Consequently, no significance levels are provided for these figures. Of the 77 valid correlation coefficients, at total of 30 reached significance at the $p<.05$ level. Eleven of these 30 correlations were significant at the $p<.001$ level, all with values of r falling into the moderate range ($.40 \leq r \leq .60$). An additional 9 correlations were significant at the $p<.005$ level, with all of these values of r occurring in the low-moderate range ($.30 \leq r \leq .40$). A condensed listing of these 20 correlations (in order of decreasing magnitude) appears in Table 6. The remaining 10 significant correlations all fall within the low range ($r<.30$).

The relationship among several of these aggression variables was explored further by seeking to elucidate their underlying factor structure. A subset of six variables (two each from Exner, Gacono and Meloy, and Holt) was selected for a factor analysis utilizing the entire sample ($N=69$). In an attempt to replicate the findings of Baity and Hilsenroth (1999), the variables chosen were Exner's AG and MOR, Gacono and Meloy's AgC and AgPast, and Holt's AGLV1 and AGLV2 (these latter two corresponding, respectively, to Baity and Hilsenroth's A1 and A2 variables). A principal components method factor analysis with Varimax rotation and Kaiser normalization was performed. The number of factors retained was determined by inspection of eigenvalues, root curve criterion, and the scree test. The analysis yielded two unequivocal factors. The variables loading primarily on Factor I were MOR (.75), AgPast (.81), and AGLV1 (.76). This factor had an eigenvalue of 1.9, which accounted for 30.9% of the variance. The variables with significant loadings on Factor II were AG (.70), AgC (.79), and AGLV2 (.79). Factor II had an eigenvalue of 1.7, accounting for

Table 6. Strongest Correlations Between Rorschach Aggression Variables from Table 5.

P<.001		*P*<.005	
Variables Correlated	*r*	Variables Correlated	*r*
AgPast-AG2R	.57	AG-AG2A	.39
AgC-AG2A	.55	MOR-AGLV1	.37
Sum Ag-AGLV2	.49	LO-AG_{TOT}-AG2A	.36
Sum Ag-AG_{TOT}	.49	MOR-AG1R	.36
AgPast-AG1R	.48	AG-AGLV2	.35
AgC-AGLV2	.48	AgPast-AG_{TOT}	.35
MOR-AgPast	.45	AG-AG_{TOT}	.35
AgC-LO-AG_{TOT}	.45	MOR-AG2R	.34
AgC-AG_{TOT}	.45		
AgPast-AGLV1	.43		
Sum Ag-AG2A	.42		

Note. *r*=Pearson correlation coefficient; *p*=level of significance (2-tailed);AG=Exner aggressive movement score; MOR=Exner morbid content score; AgPast= Gacono & Meloy aggressive past score; AgC= Gacono & Meloy aggressive content score; Sum Ag=sum of all Gacono & Meloy aggression scores plus Exner aggressive movement score; LO-AG_{TOT}=sum of all Holt oral aggression responses; AG1R=results of aggression, level 1; AG2A=Holt aggressive attack, level 2; AG2R=results of aggression scores, level 2; AGLV1=sum of all level 1 Holt aggression scores; AGLV2=sum of all level 2 Holt aggression scores; AG_{TOT}=sum of all Holt aggression scores.

29.0% of the variance. Collectively, these two factors explained 59.9% of the total variance, with this divided almost equally between the two. These findings are summarized in Table 7. Additional solutions were attempted for the same variables using different orthogonal rotations and several oblique rotations. These latter analyses yielded an identical number of factors as well as essentially the same pattern and relative magnitude of factor loadings. The solution described here is certainly the most parsimonious explanation of the factor structure common to these variables and possesses the additional advantage of avoiding the complications associated with negative factor loadings. For purposes of comparison, results of Baity and Hilsenroth's factor analysis of these six variables are provided in Table 8.

The results of this factor analysis do appear, in large part, to corroborate the findings of Baity and Hilsenroth (1999). The latter authors found two distinct factors as well (also using the principal components method with varimax rotation). The variables loading on Baity and Hilsenroth's Factor I were MOR (.86), AgPast (.90), and A1 (.87). This first factor had an eigenvalue of 3.1 and accounted for 52% of the variance. Their Factor II contained significant loadings for the variables AG (.60), AgC (.93), and A2 (.92). This second factor attained an eigenvalue of 1.5 and explained 25% of the variance. The two factors in the original study, taken together, accounted for an impressive 77% of the total variance. These findings are reproduced in Table 7. The present study found (employing identical methods) the same number of factors, the same variables loading on each factor, and remarkably similar ordering and relative magnitude of the variables within each factor.

Table 7. Factor Structure of Six Rorschach Aggression Variables (*N*=69).

Variables	Factor Loadings	
	I	II
AG		.70
MOR	.75	
AgC		.79
AgPast	.81	
AGLV1	.76	
AGLV2		.79
Eigenvalue	1.9	1.7
% Variance	30.9%	29.0%

Note. Results of principal components method factor analysis with Varimax rotation and Kaiser normalization. Only factor loadings ≥.25 are shown. AG=Exner aggressive movement score; MOR=Exner morbid content score; AgC=Gacono & Meloy aggressive content score; AgPast=Gacono & Meloy aggressive past score; AGLV1=sum of all Holt level 1 (primary process) aggression scores; AGLV2=sum of all Holt level 2 (secondary process) aggression scores.

Table 8. Baity & Hilsenroth's (1999) Explanation of Factor Structure for the Same Six Rorschach Aggression Variables (*N*=78).

Variables	Factor Loadings	
	I	II
AG		.60
MOR	.86	
AgC		.93
AgPast	.90	
A1	.87	
A2		.92
Eigenvalue	3.1	1.5
% Variance	52%	25%

Note. Results of principal components method factor analysis with Varimax rotation and Kaiser normalization. Only factor loadings ≥.35 are shown. AG=Exner aggressive movement score; MOR=Exner morbid content score; AgC=Gacono & Meloy aggressive content score; AgPast=Gacono & Meloy aggressive past score; A1=sum of all Holt level 1 (primary process) aggression scores; A2=sum of all Holt level 2 (secondary process) aggression scores.
Source: Baity, M.R. & Hilsenroth, M.J. (1999). Rorschach aggression variables: A study of reliability and validity. *Journal of Personality Assessment, 72,* 93-110.

The primary difference between these studies lies in the sizes of the eigenvalues for the two factors and the percentage of the total variance accounted for by each. Baity and Hilsenroth's large first factor explains slightly more than half of the variance in their sample, the second factor about one fourth of the variance, and the two together over three fourths of the total. The eigenvalues for the two factors in the current study are roughly equal, with each accounting for about 30% of the variance and, therefore, for a more modest 60% of the total.

Chapter 4

Discussion

Perhaps a few words should be said about the distribution of EB style in the current sample. Frequencies and percentages for each group may be found in Table 9. Following Rorschach's original conception of the *Erlebnistypus* (Rorschach, 1942 [1921]), Exner's (1993) EB style ratio is derived from the number of human movement responses (M) to the weighted sum of the number of color responses (WSumC) in a given protocol. Like Rorschach himself and many subsequent investigators, Exner regards this ratio as revealing an important and fundamental personality dimension. EB style may be viewed as describing an individual's preferred pattern of coping, problem solving, and processing experience generally. People whose ratio is weighted in the direction of human movement by greater than 1.5 are referred to as introversive and prefer to approach the world primarily through ideation. Likewise, those whose EB leans toward WSumC by greater than 1.5 are called extratensive. This latter group comprises those whose most natural inclination is to approach the world via affect. Each of these EB styles has an extreme or "pervasive" variant, which applies to any person whose protocol is skewed in either direction by greater than 2.5. The third primary EB style pertains to individuals whose ratio of M to WSumC differs by less than 1.5. Exner refers to such people as possessing an ambitent EB style. These individuals appear to lack a well-defined, consistent approach to the world, not

Table 9. Frequencies & Percentages for Exner EB by Group (*N*=69).

	Violent		Nonviolent		Clinical Controls	
EB Frequency	Count	%	Count	%	Count	%
Introversive	5	21.7%	6	26.1%	6	26.1%
Pervasive Introversive[a]	1	4.3%	5	21.7%	4	17.4%
Extratensive	2	8.7%	6	26.1%	9	39.1%
Pervasive Extratensive[a]	2	8.7%	3	13.0%	1	4.3%
Ambitent	16	69.6%	10	43.5%	8	34.8%

[a] Figure denotes percentage of entire participant group (*n*=23).

infrequently resulting in haphazard and maladaptive patterns of thought and behavior. Exner (1993) has demonstrated that the EB possesses reasonable temporal stability. In his (1993) adult nonpatient normative sample (*N*=700), 36% of this population's EB is introversive, 44% is extratensive, and 20% is ambitent.

As may be seen from Table 9, the most salient finding here pertains to the number of ambitents in each group. The EB style of almost 35% of the clinical control group was ambitent, a somewhat smaller percentage than in Exner's adult outpatient sample (*N*=440; EB ambitent: 44%). The nonviolent offender group also contained about 44% ambitents and the violent offender group was nearly 70% ambitent. The fact that the ambitent EB style occurs much more frequently in clinical and forensic populations is well-established (typically at about 40% in such groups). Percentages of ambitents occur at this frequency in Gacono and Meloy's (1994) male (*N*=82; EB ambitent: 40%) and female (*N*=38; EB ambitent: 42%) adults with ASPD, and Exner's (1986) adult Borderline Personality Disorder (BPD) (*N*=84; EB ambitent: 33%) and (1993) mixed character disorder group (*N*=180; EB ambitent: 41%). The reference group with the highest percentage of ambitents is Exner's (1993) adult inpatient depressive sample (*N*=315) at 56%.

Put in this perspective, the importance of the finding that 70% of the violent offenders are ambitent becomes readily apparent. This figure is unusually high even in comparison to these clinical and forensic reference groups. The ambitent EB style occurs in 20% of Exner's nonpatient adult population and, while it may be argued that this approach to the world may be a risk factor for maladjustment and psychopathology,

this outcome is clearly not an inevitability. In fact, nonpatient ambitents tend to have much more in common with nonpatient introversives and extratensives on most variables than with clinical or forensic groups. It makes sense, however, that an ambitent EB in combination with a variety of other elements could "lay the groundwork" for the impulsivity, aggression, and lack of empathy so commonly associated with antisocial and psychopathic personality disturbances. Further, it should not be completely unexpected that the more severe the level of antisocial pathology in a forensic group, the higher the percentage of ambitents it is likely to contain. As Kernberg has observed (1975, 1992), the most recent versions of ASPD found in the *Diagnostic and Statistical Manual of Mental Disorders* (DSM) is almost by definition functioning at a borderline level of personality organization (BPO). It is this confluence in the present violent offender group of the potentially unstable ambitent EB with several other findings that will be highlighted in the discussion of antisocial psychopathology that follows.

Exner Variables

Sum T

The hypothesis advanced in this study concerning the Exner variable Sum T found strong support (H=16.26, df=2, p<.001), revealing highly significant group differences and with these differences occurring in the predicted direction (*i.e.*, CC>NV>V). Almost 89% of Exner's (1993) normative population of nonpatient adults (N=700) gave at least one texture response, with a mean occurrence of about one per protocol

(M=1.03, SD=[.58][1]). While the mean for the clinical control group in the present study is nearly identical to this figure (M=1.0, SD=.56), with 56.5% giving Sum T>0, those for the nonviolent (M=.30, SD=.56), and the violent (M=.04, SD=.21) offender groups fall well below this norm. Approximately 96% of the violent and 74% of nonviolent offenders gave "T-less" protocols, as opposed to about 44% of the clinical control group. These findings, though apparently quite striking, certainly come as no surprise to clinicians and researchers familiar with the Rorschach literature on severely character-disordered populations, particularly those with ASPD. The absence of the texture determinant in the protocols of these groups is one of the most robust findings across many studies in this area. The mean Sum T for some of Exner's (1993) other reference groups, such as the adult outpatient (*N*=440; M=.46, SD=[.78]; Sum T=0: 64%) and mixed character disorder (*N*=180; M=.31, SD=[.52]; Sum T=0: 72%) samples, come closer to the results obtained here. The figures for Sum T in the tentative norms presented by Gacono & Meloy (1994) for a variety of antisocial groups come closer still. These latter include adult ASPD males (*N*=82; M=.28, SD=.63; Sum T=0: 79%), adult ASPD psychopathic males (*N*=33; M=.12, SD=.41; Sum T=0: 91%), adult ASPD females (*N*=38; M=.39, SD=.75; Sum T=0: 71%), and conduct disordered (CD) adolescent males (*N*=79; M=.14, SD=[not given[2]]; Sum T=0: 87%) and females (*N*=21; M=.29, SD=[not given]; Sum T=0: 81%). In addition, it should be noted in passing that the mean value of Sum T for Exner's (1993) sample of adult nonpatient ambitents

[1] Bracketed SDs indicate that Exner regards these estimates as extremely unstable.
[2] [not given]=figures not cited by author.

(*N*=143; M=.95, SD=.71; Sum T=0: 23%) bears the greatest similarity to that for Exner's full adult nonpatient group quoted above.

The texture determinant on the Rorschach has long been associated with level of psychological need for "contact comfort" (Harlow & Zimmermann, 1959; Harlow, 1960; Marsh & Viglione, 1992) and with the capacity to develop and sustain close interpersonal attachments (Klopfer, Ainsworth, Klopfer, & Holt, 1954; Exner, Martin, & Thomas, 1983; Exner, 1993; Weiner, 1998). Some research offers evidence that the presence or absence of texture in a protocol has implications for a patient's ability to engage readily in psychodynamic psychotherapy, with lack of T being associated with poorer prognosis and increased risk of premature termination (Alpher, Perfetto, Henry, & Strupp, 1990; Hilsenroth, Handler, Toman, & Padawer, 1995). Although there have been few articles published to date attempting to validate this conception of the texture response experimentally (Marsh & Viglione, 1992), it has been amply documented that texture often fails to occur in the protocols of individuals in diagnostic groups typically associated with extremely disturbed attachment histories (Gacono & Meloy, 1991, 1994, 1995, 1997; Loving & Russell, 2000). Bowlby (1979) observed that in psychopaths "the capacity to make and maintain affectional bonds is always disordered and not infrequently conspicuous by its absence" (p. 73). The use of the term "psychopath" here, of course, does not correspond precisely to the construct as it is presently understood (Hare, 1991) and most likely contains aspects of both Cleckley's (1976 [1941]) version of the "psychopath" and the "sociopath" of Robins (1966).

Nevertheless, it is still safe to say that with regard to most severe antisocial syndromes subsequent research has produced very little to disconfirm this assertion.

A fascinating line of research that may have implications for our understanding of the Rorschach texture response comes from an unlikely source. A series of investigations by Hofer and associates (1987, 1999) looked at the effect of attachment-related behaviors in female rats on neurochemical regulation of bodily functions in their offspring. Hofer demonstrates that the mother rats serve directly as "hidden regulators" of their pups' somatic functioning by up- or down-regulating a variety of neurotransmitter and hormonal levels. By controlling a mother's presence or absence and her attachment behavior when present, he shows that it is possible to selectively alter the systems regulating biological homeostasis. One of these systems is, in fact, directly impacted by tactile stimulation or lack thereof. Hofer extends his model to humans in a way that supports a psychoanalytic object relations view of attachment and its consequences for personality development. From an evolutionary perspective, attachment-related behavior in rats and other animal species is obviously adaptive. The attachment process in animals differs from humans both in its accelerated schedule, its greater degree of biological (and possibly genetic) "hardwiring", and, ultimately, the manner of its continued influence upon biological and behavioral regulation.

This decreased level of biological overdetermination of the attachment process in humans is eventually mediated by what Hofer refers to as "object representations" and, later, language. In other words, if the attachment process is carried out to completion relatively free of complications, the human infant should progressively move from a

state of complete psychological and physical dependence upon the mother toward successful "internalization" (Hartmann, 1950; Schafer, 1968) of certain of these functions. By adulthood, humans should, in large part, be cognitively, emotionally, behaviorally, and somatically self-regulating.

It is possible to view the Rorschach texture response as but one indication that the hazards of the attachment process have been negotiated to a "good enough" extent (Winnicott, 1975[d] [1958[b]]) and that an adequate degree of self-regulation and capacity for interpersonal relatedness has been attained. Gacono and Meloy (1997) have described the texture determinant as "a somatosensory analogue for skin (tactile) contact with the early maternal object" (p. 49). Following this line of thought, the ability to produce one Rorschach texture response of reasonable quality may signal the attainment of a level of "libidinal object constancy" (Fraiberg, 1969) sufficient to evoke a positive maternal introject of "contact comfort" in the form of an articulated fantasy to a Rorschach stimulus in the interpersonal context of psychological testing. Yet, while one texture response in the Comprehensive System is psychometrically equivalent to any other, all texture responses, qualitatively speaking, are clearly *not* the same. So unusual is the occurrence of Sum T>0 in the protocols of bonafide antisocial and psychopathic personalities, some writers caution that detailed qualitative evaluation of such responses is necessary in those instances where they do surface (Meloy, 1988; Gacono & Meloy, 1994, 1997). Most common among these are responses in which otherwise acceptable percepts using the texture determinant are "spoiled" in various ways (*i.e.*, poor form quality, "inappropriate" content, presence of Special Scores) as if

to deny or devalue the need for close interpersonal attachments. Another sort of deviant texture response was identified by Schachtel (1966), who observed that certain of these responses are driven by conscious or unconscious fear of undesired skin contact, directly opposite in motivation to the typical "healthy response" given by the majority of nonpatients. Schachtel speculates that these texture responses may derive from traumatic childhood experiences of an unspecified type. These responses often convey sensations of coldness or hardness and may serve to recreate for the tester within the counter-transference (Schafer, 1954), by the way subjects "makes use of" the examiner or fail to do so, something of the experience of their pathogenic early environments (Bollas, 1987).

The usual processes of attachment and internalization may be disrupted or "short-circuited" in a variety of ways. Meloy (1988) states that in certain individuals, who may be predisposed to aggression by temperment, early environmental failure can initiate a "psychopathic process"—an extreme perversion of the normal course of development. He believes that a major step on this deviant pathway is the premature identification with a "stranger selfobject" (Grotstein, 1982) in the environment. This latter concept may be seen as a precursor to adult defense mechanism of "identification with the aggressor" (A. Freud, 1946). Grotstein (1982) describes the "stranger selfobject" as "the unconscious pre-awareness of the enemy which is believed to be both inside ourselves and to have an external counterpart" (p. 63). He also speaks of it as "a phantasy we have via preconception which helps us to anticipate the presence of the predator in the external world to whom we are to be the prey, or sometimes even the reverse, are prey

to whom we are to be the predator" (p.63). The similarity here to the Kleinian (1975[d] [1946]) "paranoid-schizoid position" is quite evident. Gacono and Meloy (1994) discuss their AgPot score in the context of just such a predatory dynamic. The proclivity of antisocial and psychopathic personalities for identification with the inanimate and the predatory is further reflected in the defensive "hard-object cathexis" (Meloy, 1992) found in these individuals. This tendency is typically expressed in adolescence and adulthood as a pseudomasculine (Blacker & Tupin, 1990) or exaggerated phallic-narcissistic (Reich, 1933 [1949]) character structure, exemplified in the highly privileged status of weapons and other forms of "character armor" (Reich, 1949 [1933]) in the fantasy lives of these individuals. These latter "aggressive objects" find their true Rorschach correlate in Gacono and Meloy's aggressive content (AgC) score.

Production of too little (Sum T=0) or too much (Sum T>1) texture may thus be viewed as specific failures in internalization (Meloy, 1988) and "evocative memory" (Fraiberg, 1969; Adler, 1985). There appear to be two primary forms of this attachment deficit and two corresponding Rorschach analogues. The first, which may be termed the "unstable" type, is driven by "abandonment anxiety" and indiscriminate attachment-seeking, and is most unequivocally associated with Borderline Personality Disorder (BPD). Exner (1986) cites a mean Sum T for his BPD group as 1.35 (SD=1.25). Anecdotally, many clinicians have noted Sum T>1 in Rorschach protocols of these patients, but the phenomenon has not been sufficiently studied. Weiner (1998) states that Sum T>1 may be due to either situational or more chronic characterological influences and that the patient's history may illuminate which alternative is correct. In

the former case, it may be conjectured that Sum T>1 reflects an inability to sustain the self-soothing effect of a "holding introject" (Adler, 1985) over time. Situationally induced forms of neediness are also possible. For example, Exner (1993) found that 23% of his adult inpatient depressive population (*N*=315) gave Sum T>1. The temporal stability of the finding Sum T>1 has not yet been sufficiently established and some limited disconfirming evidence regarding its significance does exist (Marsh & Viglione, 1992).

The second type of deficit in this area might best be regarded as "detached" or "arelational". This latter category is most likely the one into which many antisocial personalities would fall. As already noted, on the Rorschach this is represented by the finding of Sum T=0, which possesses a robust temporal stability of .91 over a one year test-retest condition (Weiner, 1998). At best, a finding of Sum T=0 may signify counter-dependent personality trends, but often the prognosis is considerably worse. Most often serious disturbances in the subject's early attachment history will be found. Disruption of the early attachment relationship by prolonged separation from the mother or primary caregiver during the first five years of life is a strikingly common finding in the life histories of antisocial individuals (Robins, 1966). Bowlby (1973; 1984) found that 85% of "affectionless" juveniles he studied (many of whom would now be regarded as conduct-disordered) had experienced such disruptions earlier in life.

It should be noted that while Sum T=0 does appear to be remarkably sensitive to ASPD (especially with psychopathic features), there is no indication that the index is specific to this disorder. It is probably more accurate to state that Sum T=0 is more

broadly related to a variety of detached or asocial character disorders (i.e., Cluster A PDs, ASPD, some NPDs, Obsessive-Compulsive PD [OCPD]) as well as a variety of DSM-IV TR Axis I conditions (particularly, Psychotic Disorders).

Lambda

Also, as predicted, highly significant differences between groups were found on the Kruskal-Wallis test for Exner's Lambda (L) variable (H=22.28, df=2, p<.001), partially confirming the hypothesis maintained in this instance. While the trend was in the predicted direction (*i.e.,* V>NV>CC), post hoc contrasts showed that the violent (M=2.41, SD=3.13) and the nonviolent (M=1.54, SD=.94) groups differed significantly from the clinical control group (M=.63, SD=.56), but not from one another. The mean for L in Exner's normative sample of adult nonpatients (N=700) is .58, with a standard deviation of .26, placing the mean figure for the present clinical control group well within the normal range. Exner's (1986) adult BPD group displayed very similar figures for L (N=84; M=.57, SD=.49). Only 5% of this normative sample exhibits what Exner (1993) has termed the "high Lambda style" (L>.99). The mean values for L are quite high in both the violent and nonviolent offender groups, with nearly 74% of the former and 78% of the latter displaying this "high Lambda" pattern. Again, the values obtained here invite comparison with other reference groups: Exner's (1993) adult outpatient (N=440; M=1.16, SD=1.26; L>.99: 38%) and mixed character disorder (N=180; M=2.12, SD=2.39; L>.99: 68%) samples, as well as Gacono and Meloy's (1994) adult ASPD males (N=82; M=.94, SD=.60; L>.99: 37%) and females (N=.38; M=.83, SD=.48; L>.99: 37%), adult ASPD psychopathic males (N=33; M=1.03, SD=.69;

L>.99: [not given]), and CD adolescent males (N=79; M=1.67, SD=[not given]; L>.99: 59%) and females (*N*=21; M=1.61, SD=[not given]; L>.99: 62%). Once again, the figures for Exner's (1993) adult nonpatient ambitent group (*N*=143; M=.63, SD=.38; L>.99: 11%) most resemble those for his full adult nonpatient normative sample described above.

The importance of the Lambda variable to the Comprehensive System cannot be overestimated. This is because L simultaneously serves as a source of information about test taking attitudes, level of intellectual functioning, and actual personality features of the test subject. The elevation of L above .99 may occur for a variety of reasons. Lambda greater than .99 may be due to an extremely high degree of defensiveness towards testing, low intelligence, or an authentic high Lambda personality style (which constitutes an unofficial "fourth EB style"). While a finding of L>.99 tends to be rare in nonpatient normals, it is relatively common in clinical and forensic groups. When dealing with forensic cases in particular, it can often be difficult to distinguish which of these explanations for high L is primary, since it is not unusual for all three factors to occur together. Recent research (Meyer, Viglione, & Exner, 2001) has drawn attention to some psychometric difficulties with Lambda as it is presently calculated, notably the non-normality of the distribution due to its extremely unstable upper tail. These authors propose the use of another ratio (F%), which would retain the desirable properties of L while satisfactorily addressing these problems. It is possible that F% will replace Lambda in future revisions to the Comprehensive System.

Exner (1993) refers to Lambda as a rough indicator of the extent to which a subject "narrows the stimulus field" of the Rorschach task in order to keep matters at manageable level of complexity. Weiner (1998) also speaks of this variable as an important index of the level of "openness to experience" subjects exhibit while engaging in the test. It follows that people for whom L>.99 (due to other than exclusively situational factors) must narrow their focus to an excessive degree to accomplish this goal. Among these subjects there is often a rigidity of mental set and an inability to utilize new information effectively to modify a course of action. There is a tendency for certain high L personality types to "act first and think later", sometimes with extraordinary insensitivity to the context in which these actions are taking place (Weiner, 1998).

High L does not invariably point to psychopathology and may have limited adaptive significance for individuals in certain professions (Exner, 1993; Weiner, 1998), but generally this is not the case. In personalities demonstrating marked antisocial trends, the presence of this trait may signal a profound level of social maladjustment. It should hardly come as a surprise, therefore, that the high Lambda style is well represented in criminal populations, as is certainly true in the present study. What is most striking about many individuals in forensic settings with L>.99 is their seeming obliviousness to societal rules and appropriate interpersonal behavior. Their attentional focus typically does not extend beyond the satisfaction of immediate "need states", with little ability to foresee consequences or empathize with others. Most of the nuances of social interaction escape such people, as do quite a few more obvious social expectations (*i.e.*,

refraining from murdering or assaulting people, stealing, etc.), making them no strangers to the law enforcement community.

The L variable also has an interesting property that may help to explain a pattern of results found in this study. The L ratio is an index of the extent to which pure form (F) responses or blends predominate in a protocol: the higher the value of L, the more pure form has been employed. Another way of stating this is that elevation of L is an index of the degree to which all non-form determinants are *directly suppressed.* This is corroborated by the fact that L correlates negatively with all but two of the variables compared in this study (and it correlates with these remaining two quite weakly). Further, to the extent that high Lambda represents a generalized approach toward the test, it may also indicate the degree to which certain content variables are *indirectly suppressed.* It will be noticed in what follows that for a number of the aggression variables used in this study, there is a pattern of results in which the violent and clinical control groups do not differ significantly from one another, but both are significantly higher than the nonviolent group. One possible explanation for the pattern involves this *indirect suppression effect.* It will be noted in Table 1 that the mean L for the clinical control group is in the normal range (.63), while that for the nonviolent group is in the high range (1.54) and that for the violent group is extremely high (2.41). This indicates that the level of content suppression is moderate in the clinical controls, but high for the nonviolent offenders and extremely high for violent offenders. In other words, means for both of these latter groups would likely be *even higher* were it not for this suppression effect, while those for the control group would remain the same. The

violent group maintains a high base rate on most aggression variables used in this study *despite* having an extremely high Lambda suppression: without the influence of this factor, base rates for these variables would, in all likelihood, be *much higher.*

COP and AG

While trends existed in the predicted direction for both Exner's COP and AG variables, in neither instance did group differences achieve statistical significance. For COP (H=2.89, df=2, p=.24), the clinical control group (M=.74, SD=1.01, COP=0: 52.2%) ranked higher than the nonviolent offender group (M=.70, SD=.76, COP=0: 47.8%), which, in turn, was greater than the violent offender group (M=.39, SD=.72, COP=0: 73.9%). The same pattern was true for AG (H=1.91, df=2, p=.39), with the means ascending from the violent (M=.65, SD=.83, AG=0: 56.5%) to the nonviolent (M=.91, SD=.90, AG=0: 47.8%) to the clinical control (M=1.30, SD=1.61, AG=0: 39.1%) groups (*i.e,* CC>NV>V).

The rationale behind the hypothesis maintained for COP is fairly transparent. The proposition that populations with antisocial characteristics should score lower on a variable assessing interpersonal cooperation (COP) than populations without these characteristics possesses a modicum of face validity. This seems to be the case especially in the present violent offender group, where almost 74% of the sample failed to give even one COP response. The mean number of COP per protocol for Exner's (1993) adult nonpatient group is about one (N=700, M=1.09, SD=1.52) with only 21% having COP=0. Other reference groups show a much higher percentage of protocols with no COP, such as Exner's character-disordered adults (N=180; M=.57, SD=.85;

COP=0: 62%), and Gacono and Meloy's male (*N*=82; M=.60, SD=.89; COP=0: 51%) and female (*N*=38; M=.84, SD=.92; COP=0: 45%) ASPD adults. A somewhat higher percentage of the present clinical controls than expected gave no COP (about 52%), but the two criminal groups show figures compatible with findings just cited for personality-disordered groups.

The hypothesis that the same pattern should hold true for an aggression variable such as AG, however, appears counterintuitive and requires some explanation. Gacono and Meloy (Meloy, 1988; Gacono & Meloy, 1994; Gacono, 1997) found that individuals with ASPD, particularly those with moderate to high psychopathic traits as measured by the Hare PCL-R (Hare, 1991), frequently gave far fewer AG responses than patients in other diagnostic groups and fewer even than subjects in nonpatient samples. In order to account for this disparity, these authors hypothesized that for normative or neurotic subjects the presence of aggressive impulses tended to produce an ego-dystonic tension discharged ideationally via fantasy elaboration in the present. These authors claim that the Rorschach marker for secondary process resolution of this tension is the Exner AG response. Excessive reliance on these "autoplastic" defenses, however, can result in indirect expression of aggression toward the self in the form of a symptomatic neurosis. For more primitively organized character-disordered subjects (especially those with pronounced antisocial features), however, aggressive impulses are far more ego-syntonic and may be channeled motorically in a more "alloplastic" manner (Ferenczi, 1930; Eissler, 1949, 1950) without fantasy elaboration. In other words, such subjects are prone to enact primitive aggression directly without secondary process mediation. This

serves to explain why populations with high base rates for aggressive and violent behavior give very little AG. For these people, aggressive impulses are not so much unwelcome visitors whose presence brings about intrapsychic conflict as core elements of their identity and inner world. One group of researchers (Lillienfeld, Van Valkenburg, Larntz, & Aksikal, 1986) has raised the intriguing possibility that the manner in which strongly histrionic personality characteristics will be expressed, either in chronic antisocial behavior (an "alloplastic" disorder) or in somatization (an "autoplastic" disorder), may be primarily determined by gender, with men inclined towards the former and women towards the latter. Eissler (1949,1950) was the first to develop a theory of "alloplastic disorders" specifically dealing with aggression. He noted that although the antisocial individual ostensibly directs his aggression toward the external world, he remains dependent on the structure of this world in order to maintain a "sense of reality" and defend against disintegration of the ego. Gacono and Meloy (1994) believe that this more ego-syntonic, other-directed variety of aggression is better captured by their own aggression scoring categories.

For Exner's normative nonpatient adult sample (*N*=700) the mean number of AG is about one per protocol (M=1.18, SD=1.18), with only 33% giving no AG whatsoever. Exner's adult outpatient sample displays a similar pattern for this variable (*N*=440; M=.97, SD=1.24; AG=0: 46%). Gacono and Meloy (1994), however, found much lower base rates for AG in their forensic reference groups of male (*N*=82; M=.60, SD=.87; AG=0: 60%) and female (*N*=38; M=.71 SD=.80; AG=0: 47%) ASPD adults, male (*N*=79; M=.65, SD=[not given]; AG=0: 62%) and female (*N*=21; M=.33, SD=[not

given]; AG=0: 76%) conduct-disordered adolescents, and adult male psychopaths (*N*=33; M=.48, SD=.71; AG=0: [not given]). These figures are closest to those of Exner's character-disordered adults (N=180; M=.41, SD=.85; AG=0: 69%). The findings concerning Exner's AG response in this study provide limited support to this aspect of Gacono and Meloy's alloplastic theory of aggression.

Fr+rF and EGOI

Kruskal-Wallis tests for Exner's Fr+rF (*H*=3.82, *df*=2, *p*=.15) and EGOI (*H*=3.48, *df*=2, *p*=.18) variables also yielded no significant group differences. The occurrence of reflections is quite rare in Exner's (1993) adult nonpatient norms (*N*=700; M=.08, SD=[.35]), with no more than 7% of this population producing any such responses (Fr+rF>0: 7%). This fact renders the presence of even one reflection in a Rorschach protocol significant from a diagnostic standpoint. It is surprising that the lowest incidence of reflections was in the nonviolent offender group (M=.17, SD=.39; Fr+rF>0: 17.4%), followed by the violent offender group (M=.35, SD=.88; Fr+rF>0: 17.4%), and the clinical control group (M=.52, SD=.73; Fr+rF>0: 39.1%). Reflections occur somewhat more frequently in Exner's (1993) adult outpatients (*N*=440; M=.28, SD=[.63]; Fr+rF>0: 10%), and mixed character-disordered adults (*N*=180; M=.47, SD=[.43]; Fr+rF>0: 20%). Base rates for this variable are even higher in Exner's (1986) adult BPD patients (*N*=84; M=.76, SD=.97; Fr+rF>0: [not given]), Gacono and Meloy's (1994) male (*N*=83; M=.67, SD=1.13; Fr+rF>0: 35%) and female (*N*=38; M=.47, SD=.92; Fr+rF>0: 26%) ASPD adults, and adult male psychopaths (*N*=33; M=.85, SD=1.15; Fr+rF>0: 45%). Hilsenroth and associates (Hilsenroth, Fowler, Padawer, &

Handler, 1997) reported the mean number of reflections for several personality disorder groups, including patients with ASPD (n=16, M=.30), BPD (n=23, M=.60), and NPD (n=12, M=2.30).

The mean EGOI score for the clinical control group (M=.38, SD=.19; EGOI<.33: 34.8%; EGOI>.44: 39.1%) fell within the normal adult range (.33<EGOI<.44) for this variable, while the means for the violent (M=.29, SD=.17; EGOI<.33: 65.3%; EGOI>.44: 17.4%) and nonviolent (M=.29, SD=.15; EGOI<.33: 52.2%; EGOI>.44: 17.4%) offender groups were somewhat below the lower limit of this range. The percentage of each group falling above and below this range is also extremely revealing. The mean EGOI value for Exner's (1993) normative nonpatient adult population is .39 (SD=.07), with 16% of this group falling below .33 and 24% above .44. The figures for other comparison groups include Exner's adult outpatient (M=.41, SD=.14; EGOI<.33: 28%; EGOI>.44: 31%) and mixed character-disordered adults (M=.46, SD=.17; EGOI<.33: 34%; EGOI>.44: 33%), in addition to Gacono and Meloy's (1994) male (M=.38, SD=.18; EGOI<.33: 48%; EGOI>.44: 29%) and female (M=.40, SD=.20; EGOI<.33: 45%; EGOI>.44: 34%) ASPD adults.

A number of studies in the last decade have pointed to the durability of the finding of the Rorschach reflection response's association with the DSM-IV (American Psychiatric Association, 1994) Narcissistic Personality Disorder (NPD) (Berg, 1990; Hilsenroth, Hibbard, Nash, & Handler, 1993; Hilsenroth, Fowler, Padawer, & Handler, 1997) as well as its more aggressive variant, psychopathy (Gacono, 1990; Gacono & Meloy, 1994; Gacono, Meloy, & Berg, 1992; Gacono, Meloy, & Heaven, 1990). The

link between the reflection response and ASPD is far less clear and frequently clouded by the lack of an accurate measure of psychopathy level, the PCL-R (Hare, 1991) being the current "gold standard", in order to sift out this subpopulation from the personality disorder groups under investigation. Unfortunately, such is the case in the present study. It appears at the moment that nonpsychopathic ASPD adults (PCL-R score<20) are less likely to give reflections than their moderately (PCL-R score≥20, but <30) to highly (PCL-R score≥30) psychopathic counterparts (Gacono & Meloy, 1994). It is obviously also possible for psychopathic traits to exist in personality disorder diagnoses other than NPD and ASPD, though undoubtedly to a lesser extent. In the absence of overtly psychopathic traits, the reflection response appears to occur most frequently in NPD groups (Hilsenroth, Fowler, Padawer, & Handler, 1997).

Each of the groups in the current study gave a mean number of reflections greater than the adult nonpatient norm (M=.08), as expected in clinical and forensic groups, but there were some surprises. Group differences did not achieve statistical significance (p=.15) and the direction of the differences was not as predicted (*i.e.*, V>NV>CC). Rather, the results demonstrated that the mean for the clinical control group was highest (M=.52), followed by the violent (M=.35) and nonviolent groups (M=.17). In the clinical group, approximately 39% of the sample gave at least one reflection response, compared to around 17% in both the violent and nonviolent offender groups. It should be noted that about 52% (n=12) of the clinical sample was diagnosed by the treating clinician as having personality disorder with narcissistic features. Of these 12 narcissistic patients, 59% (n=7) gave at least one reflection response. Possible reasons

for the low number of reflections in the criminal groups will be discussed in what follows.

Exner (1995) makes it clear that if one were searching for an index of narcissistic personality features in the Comprehensive System, these would probably be found in the reflection response, *not* in the EGOI as claimed by Nezworski and Wood (1995; Wood, Nezworski, & Stejskal, 1996). It would be more accurate to think of the EGOI as "a crude measure of self-focusing or self-attending behavior" (Exner, 1993; p. 506). Weiner (1998) points to the fact that the Fr+rF and EGOI variables may be used in combination in order to provide a more nuanced reading of the relationship between narcissism and self-preoccupation (or lack thereof) in specific protocols. This method makes it possible to set up a contingency table into which subjects may be classified according to both the presence or absence of reflection responses and the relative level of the EGOI in their protocols. Frequencies and percentages for the current sample are presented in this manner by group in Table 10. The six cells correspond to different strategies that may be employed in regulating self-regard and maintaining a stable sense of self. For example, an individual who is positive on both Fr+rF>0 and EGOI>.44 is very likely a grandiose or "oblivious" narcissist (Gabbard, 1990), who makes ample use of primitive defenses, such as devaluation, in order to bolster self-esteem. Likewise, a person who is positive on Fr+rF>0 and EGOI<.33 might be characterized as a compensatory or "hypervigilant" narcissist (Gabbard, 1990), some of whose defenses have perhaps started to fail due to situational stressors.

Table 10. Relationship Between Exner EGOI and Fr+rF by Group (*N*=69)

	Fr+rF=0		Fr+rF>0	
	n	%	*n*	%
EGOI<.33				
Violent	11	47.8%	1	4.3%
Nonviolent	13	56.5%	2	8.7%
Clinical Controls	5	21.7%	3	13.0%
.33≤EGOI≤.44				
Violent	6	26.1%	1	4.3%
Nonviolent	3	13.0%	1	4.3%
Clinical Controls	4	17.4%	4	17.4%
EGOI>.44				
Violent	2	8.7%	2	8.7%
Nonviolent	3	13.0%	1	4.3%
Clinical Controls	5	21.7%	2	8.7%

Note. For each group, n=23. EGOI=Exner Egocentricity index; Fr+rF=Exner sum of reflection responses. The Mantel-Haenszel correlation statistic (Q_{CS}) for the 3 x 3 x 2 table (Group x EGOI x Fr+rF) yielded no significant overall pattern of association (Q_{CS}=.93, df=1, p=.33). Fisher Exact tests (two-tailed) by Group for each individual 3 x 2 table (EGOI x Fr+rF), however, revealed that the table for the violent group approached significance (p=.06), with those of the nonviolent (p=.19) and clinical control (p=.10) groups failing to reach significance.

Examination of Table 10 reveals some patterns in the data. First, the clinical control group is fairly evenly distributed among the six cells. This indicates that the members of this group do not cluster into any particular category. Second, the violent and nonviolent offender groups do appear to have an unusually large number of subjects who are positive for both Fr+rF=0 and EGOI<.33, with about 48% of the former and 56% of the latter falling into this cell. One would expect individuals with these features to display an absence of overt narcissism and an avoidance of self-focusing activity possibly motivated by low self-esteem. Additionally, it might be conjectured that the lack of self-focus denoted by EGOI<.33 betrays a lack of introspection and a tendency towards highly "concrete" thinking. It is also curious that 26% of the violent group turns up in the cell designating Fr+rF=0 and .33≤EGOI≤.44, since these are qualities that should be found most often in psychological normals. There are two plausible explanations for this anomaly. First, it is certainly possible that the criminal groups in this study are actually comprised of relatively few individuals with malignantly narcissistic and psychopathic traits. As previously mentioned, without an independent measure of psychopathy, it is impossible to know this definitively. The other possibility is Type II error: while Fr+rF>0 implies narcissistic features, Fr+rF=0 does not necessarily denote the absence of such features, since it is a unidirectional variable (Weiner, 1998).

In addition, statistical tests were conducted on Table 10 in order to assess the accuracy of these observations. The Mantel-Haenszel correlation statistic (Q_{CS}) for the 3 x 3 x 2 table Group x EGOI x Fr+rF yielded no overall pattern of association (Q_{CS}=.93,

df=1, *p*=.33). Fisher Exact tests (two-tailed) by Group for each individual 3 x 2 table EGOI x Fr+rF revealed that only the violent group approached significance (*p*=.06). While the table exhibits trends, there are no statistically significant associations.

MOR

Exner's morbid content (MOR) variable was selected for inclusion in this study post hoc. Kruskal-Wallis analysis here discovered significant group differences (*H*=6.48, *df*=2, *p*=.04), with the direction of these differences not occurring exactly as predicted (*i.e.,* V>NV>CC). The rankings of the violent (M=1.61, SD=1.81; MOR>2: 21.7%) and clinical control (M=1.61, SD=1.97; MOR>2: 21.7%) samples differed significantly from the nonviolent group (M=.61, SD=.99; MOR>2: 21.7%), but were not significantly different from one another. The MOR variable was initially not included in this study due to concern that it was not a "pure" index of aggression in the manner of Holt's (1977) and Gacono and Meloy's (1994) aggression categories. According to Exner (1993; 1994), the MOR special score should be assigned to any response in which a person or object is depicted as damaged, broken, worn out, etc., *or* in which a dysphoric affect is attributed to a person or object (*i.e.,* "a gloomy tree", "a sad house", etc.). It was believed originally that this latter qualification rendered the variable too heterogeneous to be useful in examining aggression responses, but this position was reconsidered in light of a current in psychoanalytic thought relating depressive affect to introjected aggression (Abraham, 1948 [1911, 1924]; Freud, 1961 [1917, 1923]; Klein, 1975[a] [1932], 1975[b] [1935], 1975[c] [1940]; Radó, 1928, 1951) as well as Baity and Hilsenroth's (1999) inclusion of the variable in their study. The mean MOR for

Exner's (1993) nonpatient adult norms is .70 (SD=[.82]), with only 3% giving greater than two such responses. Of the various reference groups cited in this study, the means for Gacono and Meloy's male (N=82; M=1.66, SD=1.81; MOR>2: 22%) and female (N=38; M=1.66, SD=1.24; MOR>2: 26%) ASPD adults most closely resemble those reported for the present violent offender and clinical control groups.

Baity and Hilsenroth (1999) found that of five different DSM-IV Personality Disorder (PD) groups (ASPD, BPD, NPD, Cluster A PDs, and Cluster C PDs), the ASPD group gave the lowest mean on MOR (M=1.25), with the BPD group giving the highest (M=2.70). Exner (1986) cites the mean for his BPD group (*N*=84) as 1.29 (SD=1.52). Using DSM-IV BPD criteria as the criterion variable and six aggression variables as predictors (AG, MOR, AgC, AgPast, A1, A2), Baity and Hilsenroth (1999) in conducting a stepwise regression analysis found that MOR was the only significant predictor of BPD (R^2=.06, p=.03). These authors performed the identical procedure using DSM-IV number of ASPD criteria as criterion and discovered that MOR was one of two significant predictors of this disorder (R^2=.12, p=.009). In the latter regression analysis, MOR was a negative and AgC a positive predictor of ASPD criteria. The MOR variable's association with a damaged or defective sense of self (Exner, 1993) makes it quite likely that the score occurs frequently across a wide range of personality pathology, but appears to have an especially strong affinity to BPD.

Gacono and Meloy Variables

Group comparisons for certain of Gacono and Meloy's (1994) expanded aggression scores also yielded some significant findings. The Kruskal-Wallis test for the aggressive content variable (AgC) produced a significant overall main effect (H=8.72, df=2, p=.01), with post hoc contrasts revealing that the violent offenders differ significantly from the nonviolent offenders (*i.e.*, V>NV), but not differing substantially from the clinical controls. The contrast between the controls and the nonviolent offenders approached statistical significance (p=.05). The direction of these differences turns out only partly as predicted. While the violent group is indeed highest on AgC (M=3.61, SD=1.34), the clinical control group is nearly as high (M=3.35, SD=2.04), followed by the nonviolent group (M=2.17, SD=1.59). Gacono and Meloy (1994) give tentative norms for AgC in male (N=82; M=3.08, SD=2.28) and female (N=38; M=2.21, SD=1.49) ASPD adults, adult male psychopaths (N=33; M=2.63, SD=2.19), and male (N=79; M=3.18, SD=2.80) and female (N=21; M=2.62, SD=2.33) conduct-disordered adolescents. It should be borne in mind that comparison to other clinical groups on any of these expanded aggression variables is further complicated by the lack of published reference group data at present. These authors cite unpublished Venezuelan nonpatient data (N=192) from Riquelme, Occupati, & Gonzales (1991), which gives a mean AgC of 1.70 (SD=1.01) for this population. Baity and Hilsenroth (1999) note that their ASPD sample (n=16) had a mean AgC of 3.50, but three other personality disorder groups (BPD, M=3.26; NPD, M=3.08; Cluster A PD, M=3.67) also attained comparable mean figures.

In addition, the Sum Ag variable showed a significant main effect across the three groups (H=7.35, df=2, p=.03), with same pattern of contrasts as AgC: the violent offenders differing significantly from the nonviolent offenders (*i.e.,* V>NV), but not differing substantially from the clinical group. The contrast between the controls and the nonviolent offenders approached statistical significance as well (p=.09). Again, the direction of differences is not entirely as expected, with the violent group at the top (M=6.22, SD=2.15), followed by the clinical control group (M=5.60, SD=3.92), and the nonviolent group (M=3.78, SD=2.15) Although all of Gacono and Meloy's aggression categories are ultimately "experimental" in nature, the Sum Ag variable is especially so. Even less published reference group data exists for Sum Ag than for the other categories. As noted earlier, this variable is an aggregate sum of Exner's AG plus all four Gacono and Meloy scores (Sum Ag=AG+AgPot+AgC+AgPast+SM). The authors give means for their male ASPD adults (N=82; M=5.40, SD=3.53), as well as adult male psychopaths (N=33; M=4.64, SD=3.20) groups. It is difficult to assess the meaning of the present findings in the absence of additional data. While an aggregate variable may be potentially useful in attempting to discriminate between various diagnostic or offender groups, it is far from clear which of the component variables should be retained or whether a weighting scheme might be of help as this must be determined by future research.

The AgPast variable failed to yield significant group differences (H=3.31, df=2, p=.19) and the direction of the differences turning out not quite as expected, with the violent offender group (M=1.26, SD=.30) being highest, followed by the clinical control

group (M=.78, SD=.25), and the nonviolent offender group, (M=.61, SD=.17). Gacono and Meloy (1994) cite Venezuelan adult nonpatient norms for AgPast (Riquelme, Occupati, & Gonzales, 1991) (*N*=192; M=.25, SD=.61), as well as for male (*N*=82; M=1.07, SD=1.17) and female (*N*=38; M=.74, SD=1.0) ASPD adults, as well as adult male psychopaths (*N*=33; M=.79, SD=.96), and male (*N*=82; M=.65, SD=1.0) and female (N=21; M=.33, SD=.58) conduct-disordered adolescents. Baity and Hilsenroth (1999) give means for personality disorder groups with ASPD (*n*=16; M=.75), BPD (*n*=23; M=1.39), and NPD (*n*=12; M=.83) among others.

Two additional Gacono and Meloy (1994) aggression variables, AgPot and SM, were not selected for analysis due to low base rates of occurrence in clinical and even forensic samples, as was true of the present sample. In addition, frequency tables for these two variables (given in Appendix B) yield no distinct patterns according to group. The authors argue that both of these variables contain elements of a predatory and sadistic nature and would be expected to occur at a greater frequency in antisocial and especially psychopathic personalities. In particular, Gacono and Meloy state that the SM variable is practically a Rorschach pathognomonic sign of psychopathy with extremely high sensitivity and specificity for this syndrome. The evidence they cite, some of it quite compelling, is largely of the case study variety and difficult to evaluate with regard to generality. The SM score is given for any response in which "devalued, aggressive, or morbid content is accompanied by pleasurable affect expressed by the subject" (p. 263) (Gacono and Meloy, 1994). This imposes the added requirement that the examiner observe the subject's expression closely and faithfully record these

observations in the test protocol. The need for this information becomes especially problematic in using archival data, where it is seldom assured that this will be available or accurately noted, potentially resulting in decreased base rates and poor reliability. It is for this reason that reliability coefficients were not calculated for SM in this study. As a result, figures in Table B-4 must be regarded with great caution. Two instances of SM occur in the present clinical control group in participants with no history of violence or antisocial traits, raising some doubts as to the "pathognomonic" status of this type of response. Clearly, further large sample research involving a variety of diagnostic groups is necessary to shed some light on these questions.

Holt PRIPRO Variables

The results of group comparisons for the Holt PRIPRO system aggression variables present interesting difficulties regarding interpretation of these findings. Kruskal-Wallis analysis indicates that seven of the nine variables tested yielded significant main effects (L2O-AG, LO-AG_{TOT}, AG1R, AGLV1, AGLV2, AG_{TOT}). Although it has existed in various forms since the 1950s, Holt's Rorschach scoring system has not been widely studied and references to it in the current literature are infrequent. It appears many researchers found the system in its entirety too complicated and unwieldy to be of much practical use. The Holt aggression variables employed in this study have not yet been empirically validated on specific populations in a manner that would meet contemporary standards. Accurate base rates of occurrence for these variables have not been established even to the degree of the Gacono and Meloy aggression variables. As a

consequence, no adult normative data exists against which to compare the results obtained here.

It is noteworthy that each of the Holt PRIPRO variables that failed to yield significant main effects are the three different varieties of level 2 aggression score (AG2A, AG2V, AG2R). The direction of the means for all three variables follows the same pattern (*i.e.*, CC>V>NV). The variable representing the sum of these three scores (AGLV2), however, did render a significant main effect (H=8.04, df=2, p=.02), with post hoc contrasts revealing only that the clinical control group was significantly greater than the nonviolent group (*i.e.*, CC>NV). The direction of the means here followed the same pattern as for the separate level 2 component scores (*i.e.*, CC>V>NV).

The level 1 PRIPRO variables selected for analysis, AG1R (H=8.0, df=2, p=.02) and AGLV1 (H=11.03, df=2, p=.004), both produced significant group differences. For AG1R, Mann-Whitney contrasts showed that the violent offender group (M=.57, SD=1.08) differed significantly from both the nonviolent offender (M=.04, SD=.21) and clinical control (M=.26, SD=.54) groups, but with the latter two groups not differing substantially from one another. Further, the post hoc contrasts for AGLV1 demonstrate that the violent (M=.74, SD=2.66) and clinical control (M=.39, SD=.78) groups both differ significantly from the nonviolent (M=.04, SD=.21) group, but not from one another. The direction of the means for both variables is partially as predicted (*i.e.*, V>NV>CC) with the violent offenders being highest, followed by the clinical controls and the nonviolent offenders. The AG_{TOT} variable (comprising the sum of all PRIPRO aggression scores) displayed a highly significant main effect (H=9.45, df=2, p=.009) as

well, with a contrast pattern identical that of AGLV1 (*i.e.,* V, CC>NV). Here the direction of the differences did not turn out as anticipated, with the clinical control group (M=6.39, SD=3.35) giving the most total aggression responses, followed by the violent (M=5.87, SD=2.83) and the nonviolent (M=3.96, SD=1.97) groups.

Finally, the two oral aggression variables tested also rendered significant main effects. The L2O-AG variable (H=6.48, df=2, p=.04) was taken from Holt's libidinal content scales. The $LO\text{-}AG_{TOT}$ score (H=6.59, df=2, p=.04) was created for this study and consists of the sum of all level 1 and level 2 oral aggression responses. Post hoc contrasts for both variables revealed that the violent offenders differed significantly from the clinical controls (*i.e.,* V>CC). It is interesting, however, that the differences were in the predicted direction (*i.e.,* V>NV>CC). It is likely level 1 oral aggression responses are extremely rare in most populations. The aggregate variable $LO\text{-}AG_{TOT}$ appears to have a bit more power to discriminate between groups than L2O-AG alone.

While manifestations of "oral dependency" on the Rorschach have been investigated extensively for over thirty years, the construct of "oral aggression" or "oral sadism" has fallen into relative obscurity. Masling's Rorschach Oral Dependency (ROD) scale (Masling, Rabie, & Blondheim, 1967) has been employed in a wide array of studies and recent review articles have demonstrated that the instrument possesses modest reliability and validity (Bornstein, 1996, 1997). Masling (1986) notes that he abandoned the pursuit of an oral-aggressive construct very early in his research into orality on the Rorschach, ostensibly for two reasons. First, he claims that it became quite difficult to differentiate between instances of oral and anal aggressive drives. This is a conceptual

problem that has a direct bearing on reliability and that any future attempts to define or redefine the construct must address. Second, Masling states that his efforts to validate the construct came to nought: oral aggression did not appear to predict anything. Because he does not elaborate on this point, it is hard to assess the meaning of this finding. Holt (1977) appears to be the primary Rorschach researcher to have taken an interest in this topic on the level of response content, though it is arguable that some Rorschach defense scales (Cooper & Arnow, 1986; Cooper, Perry & Arnow, 1988; Lerner, 1990; Lerner, Albert, & Walsh, 1987; Lerner & Lerner, 1980; Kwawer, 1979, 1980; Perry & Cooper, 1986) incorporate part of what is at stake in a construct of oral aggression. Yet, given the importance oral aggression has assumed in psychoanalytic theory during the past two decades in the study of severe personality disorders, especially those involving antisocial and psychopathic traits (Kernberg, 1975; 1984), this may be a construct that has "come of age." The time may be ripe for the development of sophisticated projective and self-report measures of oral aggression. Current researchers might be well advised to take a fresh look at this construct.

The idea of an oral-aggressive or oral-sadistic phase of libidinal development was first identified by Abraham (1948 [1924[a]], 1948 [1924[b]]) and eventually taken up by Klein (1975[a] [1932], 1975[b] [1935], 1975[c] [1940]) and her others influenced by her (Winnicott, 1975[a] [1945], 1975[b] [1955], 1975[c] [1958]), particularly with reference to her concept of a "preoedipal super-ego" and the "paranoid-schizoid position" as the most primitive phase of psychic development. Freud also alluded frequently to the "savage" aspects of an excessively harsh "oedipal" super-ego as it manifested itself in

patients with severe symptomatic and character neuroses (1961 [1917], 1961 [1923]; 1961 [1930]). He tended to view this type of super-ego as "overdeveloped" to such a degree that, paradoxically, it could become "as cruel as only the id can be" (p. 54) (1961 [1923]). For example, he notes that in melancholia it often seems as if the superego "rages against the ego with merciless violence as if it had taken possession of the whole of the sadism available in the person concerned" (p. 53) (1961 [1923]). Freud goes so far as to say that in such cases "a pure culture of the death instinct" (p. 53) holds sway over the super-ego (1961 [1923]). He tends to depict the superego (*i.e.*, the "oedipal" super-ego) as having a vocal-auditory quality (as in "the voice of conscience"), which in neurotics could be described as taking the form of endless self-tormenting reproaches or, phrased differently, as oral aggression directed against the self. Kernberg (1975, 1984, 1992) observes that in severe personality disorders, especially of the antisocial variety, it is not possible to speak of the superego at even this level of development. He argues that in these syndromes what is seen are the "sadistic superego precursors" of the type Klein (1975[a] [1932], 1975[b] [1935], 1975[c] [1940]) has delineated and that in these cases primitive oral aggression is directed *outward* into the interpersonal sphere where it is enacted ("alloplastically"), often in the form of paranoid projection and projective identification. It should be noted that although oral sadism directed inward is a primary mechanism in melancholic and depressive syndromes as conceived here, this *does not* guarantee that the "depressive position" has been achieved (Klein 1975[d] [1946]; Winnicott, 1975[b] [1955]). In fact, unusually high levels of oral aggression would appear to contraindicate the attainment

of this milestone. This research should be taken into consideration in any endeavor to move beyond Holt in the development of a new oral aggression scale.

The factor analysis conducted on the total sample (*N*=69) for six Rorschach aggression variables successfully replicated the findings of Baity and Hilsenroth's (1999) analysis of the same variables on another sample (*N*=78). In the present study, several orthogonal and oblique rotations were attempted, all yielding essentially the same results: two unequivocal factors, the same variables loading on each factor, the same factor loading patterns in approximately the same relative magnitudes. The solution presented here, a principal components factor analysis with Varimax rotation, is by far the clearest and most parsimonious of these explanations of the factor structure underlying the six variables analyzed. The same method and rotation were employed by Baity and Hilsenroth in their study, also yielding two factors. Comparison of the results of these two analyses (see Tables 7 & 8), carried out on separate samples, reveal several noteworthy similarities. In each study, the same variables load on the same factors in the same order with similar relative magnitudes among the variables loading on each factor. In both studies, one variable from each of the three scoring systems (Exner, Gacono & Meloy, Holt) loads on each factor. The primary difference between the two analyses lies in the percentage of the total variance explained. Baity and Hilsenroth's two factors account for an astonishing 77% of the total variance, with almost two thirds of this amount explained by Factor I (52%) and the remaining third by Factor II (25%). In the present study, the two-factor solution accounted for 60% of the variance, with this total almost evenly divided between the two factors (Factor I: 30.9%; Factor II:

29.9%). The within-factor correlations (all highly significant) for Baity and Hilsenroth's analysis (Factor I: AgPast-A1, r=.69; AgPast-MOR, r=.79; A1-MOR, r=.63. Factor II: AgC-A2, r=.84; AgC-AG, r=.38; A2-AG, r=.47) and the present one (Factor I: AgPast-AGLV1, r=.43; AgPast-MOR, r=.45; MOR-AGLV1, r=.37. Factor II: AgC-AGLV2, r=.48; AgC-AG, r=.28; AGLV2-AG, r=.35) serve to amplify the nature of the relationships between these variables. Correlations between the six selected aggression variables and their derived factor scores for the present study are provided in Table 11.

It should be noted, however, that the results of both Baity and Hilsenroth's study and the present one should be regarded as extremely tentative and approached with some caution. In order to be generalized, these findings need to be replicated on substantially larger samples. Some researchers (Zillmer & Vuz, 1995) observe that the minimum sample size for conducting a respectable factor analysis is probably in the range of 100 to 150 subjects, depending on the number of variables analyzed.

The results of the present factor analysis provide additional support for Baity and Hilsenroth's (1999) analysis as well as their interpretation of the factors derived. Their conclusion that Factor I represents "aggression at objects" and that Factor II is most clearly associated with "aggressive objects" is totally consistent with the results obtained here. In each analysis, on Factor I the strongest correlation is between MOR and AgPast, which is not completely unexpected given that both variables pertain to "damaged objects" and so share a fair amount of "overlap." Most Rorschach responses that would qualify for an AgPast score would also meet the criteria for scoring MOR, but the opposite scenario is not necessarily true because AgPast is narrower in scope

Table 11. Correlations Between Six Rorschach Aggression Variables and their Derived Factor Scores (*N*=69).

Variables	Factors			
	I		II	
	r	*p*	*r*	*p*
AgPast	.81	<.001	.07	*ns*
AGLV1	.76	<.001	.07	*ns*
MOR	.75	<.001	.13	*ns*
AgC	.02	*ns*	.79	<.001
AGLV2	.23	.05	.78	<.001
AG	.05	*ns*	.70	<.001

Note *r*=Pearson correlation coefficient; *p*=level of significance (2-tailed); AgPast=Gacono & Meloy aggressive past score; AGLV1=sum of all Holt level 1 (primary process) aggression scores; MOR=Exner morbid content score; AgC=Gacono & Meloy aggressive content score; AGLV2=sum of all Holt level 2 (secondary process) aggression scores; AG=Exner aggressive movement score.

than MOR. In order for a response to be scored AgPast, Gacono and Meloy indicate that damage to the object must result explicitly and unambiguously from being subjected to violence or aggression. In contrast, MOR is far more inclusive and may be scored for *any* violation to the integrity of the object regardless of the specific cause, which may include missing or deformed parts of an object as well as the "spoiling" or "damage" incurred by the attribution of negative affect. In this respect, MOR bears a greater resemblance to Holt's Results of Aggression scores than to AgPast. The variable AGLV1/A1 does not correlate quite as strongly with AgPast or MOR, possibly due to the fact that it comprises both aggressors and objects of aggression. All three Factor I variables hold in common frequent eruptions of extremely primitive primary process aggression and, consequently, enhanced potential for cognitive disorganization.

Likewise, in both studies the strongest correlation on Factor II involves AgC and AGLV2/A2. Both of these variables encompass a range of objects that may be perceived as aggressive, but whose articulation generally occurs via a more controlled and socially acceptable secondary process modality. The correlations between the variables AgC and AGLV2/A2 and Exner's AG are, in both analyses, the weakest on Factor II. This suggests that AG may be tapping a slightly different dimension of aggression than either AgC or AGLV2/A2, a fact that would provide further corroboration of the "alloplastic" aggression hypothesis proposed for this variable.

Bibliography

Bibliography

Alpher, V.S., Perfetto, G.A., Henry, W.P., & Strupp, H.H. (1990). The relationship between the Rorschach and assessment of the capacity to engage in short-term dynamic psychotherapy. *Psychotherapy: Theory, Research, Practice, & Training, 27,* 224-229.

Abraham, K. (1948[a]). Notes on the psychoanalytical investigation and treatment of manic-depressive insanity and allied conditions. (Original work published in 1911). In D. Bryan and A. Strachey (Eds.), *Selected Papers of Karl Abraham,* (3rd ed., pp. 137-156). London, UK: The Hogarth Press.

Abraham, K. (1948[b]). The influence of oral erotism on character-formation. (Original work published in 1924 [1924[a]]). In D. Bryan and A. Strachey (Eds.), *Selected Papers of Karl Abraham,* (3rd ed., pp. 393-406). London, UK: The Hogarth Press.

Abraham, K. (1948[c]). A short study of the development of the libido, viewed in the light of mental disorders. (Original work published in 1924 [1924[b]]). In D. Bryan and A. Strachey (Eds.), *Selected Papers of Karl Abraham,* (3rd ed., pp. 418-501). London, UK: The Hogarth Press.

Adler, G. (1985). *Borderline psychopathology and its treatment.* New York: Jason Aronson.

American Psychiatric Association (1994). *Diagnostic and statistical manual of mental disorders* (4th ed [DSM-IV]). Washington, D.C.: Author.

American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed, text revision [DSM-IV TR]). Washington, D.C.: Author.

Baity, M.R. & Hilsenroth, M.J. (1999). Rorschach aggression variables: A study of reliability and validity. *Journal of Personality Assessment, 72,* 93-110.

Baity, M.R., McDaniel, P.S., & Hilsenroth, M.J. (2000). Further exploration of the Rorschach aggressive content (AgC) variable. *Journal of Personality Assessment, 74,* 231-241.

Berg, J. (1990). Differentiating ego functions of borderline and narcissistic personalities. *Journal of Personality Assessment, 55,* 537-548.

Blacker, K. & Tupin, J. (1991). Hysteria and hysterical structures: Developmental and social theories. In M. Horowitz (Ed.), *Hysterical personality style and the histrionic personality disorder,* (pp. 17-66). Northvale, NJ: Jason Aronson.

Bollas, C. (1987). *The shadow of the object: Psychoanalysis of the unthought known.* New York: Columbia University Press.

Bornstein, R. (1996). Construct validity of the Rorschach oral dependency scale: 1967-1995. *Psychological Assessment,* 8, 200-205.

Bornstein, R. (1997). Construct validity of the Rorschach oral dependency (ROD) scale: relationship of ROD scores to Wais-R scores in a psychiatric inpatient sample. *Journal of Clinical Psychology, 53,* 99-105.

Bowlby, J. (1973). *Separation, anxiety, and anger.* New York: Basic Books.

Bowlby, J. (1979). Effects on behaviour of disruption of an affectional bond. In J. Bowlby (Ed.), *The making and breaking of affectional bonds* (pp.67-80). London, UK: Tavistock Publications Ltd.

Bowlby, J. (1984). Violence in the family as a disorder of the attachment and caregiving systems. *American Journal of Psychoanalysis, 44,* 9-27.

Bowlby, J. (1987). Defensive processes in light of attachment theory. In J.L. Sacksteder, D.P. Schwartz, & Y. Akabane (Eds.), *Attachment and therapeutic process: Essays in honor of Otto Allen Will, Jr., M.D.,* (pp. 63-79). Madison, CT: International Universities Press.

Bursten, B. (1989). The relationship between narcissistic and antisocial personalities. *Psychiatric Clinics of North America, 12,* 571-584.

Cleckley, H. (1976). *The mask of sanity.* St. Louis, MO: Mosby. (Original work published in 1941).

Cooper, S. & Arnow, D. (1986). An object relations view of borderline defenses: A Rorschach analysis. In M. Kissen (Ed.), *Assessing object relations phenomena,* (pp. 143-171). Madison, CT: International Universities Press.

Cooper, S., Perry, J., & Arnow, D. (1988). An empirical approach to the study of defense mechanisms: I. Reliability and preliminary validity of the Rorschach defense scale. *Journal of Personality Assessment, 52,* 187-203.

Coram, G.J. (1995). A Rorschach analysis of violent murderers and nonviolent offenders. *European Journal of Psychological Assessment, 11,* 81-88.

Eissler, K.R. (1949). Some problems of delinquency. In K.R. Eissler (Ed.), *Searchlights on delinquency: New psychoanalytic studies,* (pp. 3-25). New York: International Universities Press.

Eissler, K. (1950). Ego-psychological implications of the psychoanalytic treatment of delinquents. In *Psychoanalytic study of the child* (pp. 97-121). New York: International Universities Press.

Exner, J.E., Jr., Martin, L., & Thomas, E. (1983). Preference for waiting room seating among subjects with elevations or absence of T in the Rorschach. Rorschach Workshops Study no. 282 (unpublished). Asheville, NC: Rorschach Workshops.

Exner, J.E., Jr. (1993). *The Rorschach: A Comprehensive System: Vol. 1: Basic foundations* (3rd ed.). New York: Wiley.

Exner, J.E., Jr. (1994). *A Rorschach workbook for the Comprehensive System* (4th ed.). Bayville, NY: Rorschach Workshops.

Exner, J.E., Jr. (1995). Comment on "Narcissism in the Comprehensive System". *Clinical Psychology: Science and Practice, 2,* 200-206.

Fairbairn, W.R.D. (1999). The repression and return of bad objects (with special reference to the war neuroses). In W.R.D. Fairbairn (Ed.), *Psychoanalytic Studies of the Personality,* (pp.59-81). New York: Routledge. (Original work published in 1952).

Ferenczi, S. (1930). Autoplastic and alloplastic. In *Final contributions to the problems and methods of psychoanalysis,* (p. 221). New York: Basic Books.

Fleiss, J.L. (1981). *Statistical methods for rates and proportions* (2nd ed.). New York: Wiley.

Fraiberg, S. (1969). Libidinal object constancy and mental representation. In *Psychoanalytic study of the child* (pp. 9-47). New York: International Universities Press.

Freud, A. (1946). *The ego and the mechanisms of defense.* New York: International Universities Press.

Freud, S. (1961). Mourning and melancholia. (Original work published in 1917). In J. Strachey (Ed.), *The standard edition of the complete psychological works of Sigmund Freud, vol. 21,* (pp. 237-258). London, UK: The Hogarth Press.

Freud, S. (1961). The ego and the id. (Original work published in 1923). In J. Strachey (Ed.), *The standard edition of the complete psychological works of Sigmund Freud, vol. 19,* (pp. 57-146). London, UK: The Hogarth Press.

Freud, S. (1961). Civilization and its discontents. (Original work published in 1930). In J.Strachey (Ed.), *The standard edition of the complete psychological works of Sigmund Freud, vol. 21,* (pp. 237-258). London, UK: The Hogarth Press.

Gabbard, G.O. (1990). Two subtypes of narcissistic personality disorder. *Bulletin of the Menninger Clinic, 53,* 527-532.

Gacono, C.B. (1990). An empirical study of object relations and defensive operations in antisocial personality disorder. *Journal of Personality Assessment, 54,* 589-600.

Gacono, C.B. (1997). Is the Rorschach aggressive movement response aggressive enough? *British Journal of Projective Psychology, 42,* 5-10.

Gacono, C.B. & Meloy, J.R. (1991). A Rorschach investigation of attachment and anxiety in antisocial personality disorder. *Journal of Nervous and Mental Diseases, 179,* 546-552.

Gacono, C.B. & Meloy, J.R. (1994). *The Rorschach assessment of aggressive and psychopathic personalities.* Hillsdale, N.J.: Lawrence Erlbaum Associates, Inc.

Gacono, C.B. & Meloy, J.R. (1995). Rorschach research and the psychodiagnosis of antisocial and psychopathic personalities. In I. Weiner (Ed.), *Rorschachiana: yearbook of the International Rorschach Society, 22,* (pp. 130-148). Seattle, WA: Hofgrefe & Huber.

Gacono, C.B. & Meloy, J.R. (1997). Attachment deficits in antisocial and psychopathic personalities. *British Journal of Projective Psychology, 42,* 47-55.

Gacono, C.B., Meloy, J.R., & Berg, J.L. (1992). Object relations, defensive operations, and affective states in narcissistic, borderline, and antisocial personality disorder. *Journal of Personality Assessment, 59,* 32-49.

Gacono, C.B., Meloy, J.R., & Heaven, T.R. (1990). A Rorschach investigation of narcissism and hysteria in antisocial personality. *Journal of Personality Assessment, 55,* 270-279.

Hare, R. (1991). *Manual for the Revised Psychopathy Checklist.* Toronto: Multihealth Systems.

Harlow, H.F. & Zimmermann, R.R. (1959). Affectional responses in the infant monkey. *Science, 130,* 421-432.

Harlow, H.F. (1960). Primary affectional patterns in primates. *American Journal of Orthopsychiatry, 30,* 676-684.

Hilsenroth, M.J., Fowler, J.C., Padawer, J.R., & Handler, L. (1997). Narcissism in the Rorschach revisited: Some reflections on empirical data. *Psychological Assessment, 9,* 113-121.

Hilsenroth, M.J., Handler, L., Toman, K.M., & Padawer, J.R. (1995). Rorschach and MMPI-2 indices of early psychotherapy termination. *Journal of Consulting and Clinical Psychology, 63,* 956-965.

Hilsenroth, M.J., Hibbard, S., Nash, M., & Handler, L. (1993). A Rorschach study of narcissism, defense, and aggression in borderline, narcissistic, and Cluster C personality disorders. *Journal of Personality Assessment, 60,* 346-361.

Hofer, M.A. (1987). Early social relationships: A psychobiologist's view. *Child Development, 58,* 633-647.

Hofer, M.A. (1995) Hidden regulators: Implications for a new understanding of attachment, separation, and loss. In S. Goldberg, R. Muir, & J. Kerr (Eds.), *Attachment theory: Social, developmental, and clinical perspectives* (pp.203-230). Hillsdale, NJ: The Analytic Press.

Holt, R.R. (1977). A method for scoring primary process manifestations and their control in Rorschach responses. In M.A. Rickers-Ovsiankina (Ed.), *Rorschach Psychology* (2nd ed., pp. 375-420). Huntington, N.Y.: Krieger.

Jacobson, E. (1971). *Depression: Comparative studies of normal, neurotic, and psychotic conditions.* Madison, CT: International Universities Press.

Kernberg, O. (1975). *Borderline conditions and pathological narcissism.* New York: Jason Aronson.

Kernberg, O. (1984). *Severe personality disorders: Psychotherapeutic strategies.* New Haven, CT: Yale University Press.

Kernberg, O. (1992[a]). The psychopathology of hatred. In O. Kernberg (Ed.), *Aggression in personality disorders and perversions* (pp. 21-32). New Haven: Yale University Press.

Kernberg, O. (1992[b]). Antisocial and narcissistic personality disorders. In O. Kernberg (Ed.), *Aggression in personality disorders and perversions* (pp. 211-221). New Haven:Yale University Press.

Kernberg, O. (1992[c]). Vicissitudes of and pleasure in hatred. In O. Kernberg (Ed.), *Aggression in personality disorders and perversions* (pp. 67-84). New Haven: Yale University Press.

Kernberg, O. (1992[d]). Psychopathic, paranoid, and depressive transferences. In O. Kernberg (Ed.), *Aggression in personality disorders and perversions* (pp. 67-84). New Haven: Yale University Press.

Kessel, J.B. & Zimmermann, M. (1993). Reporting errors in studies of diagnostic questionnaires: Extent of the problem, recommendations for standardized presentation of results, and implications for the peer review process. *Psychological Assessment, 5,* 395-399.

Kestenbaum, C.J. (1984). Pathological attachments and their relationship to affective disorders in adult life. *American Journal of Psychoanalysis, 44,* 33-49.

Klein, M. (1975[a]). Early stages of the Oedipus conflict and of super-ego formation. In A. Strachey & H.A. Thorner (Eds.), *The complete works of Melanie Klein, vol. 1: The psycho-analysis of children,* (pp. 123-148). New York: Dell. (Original work published in 1932).

Klein, M. (1975[b]). A contribution to the psychogenesis of manic-depressive states. In E. O'Shaughnessy, H. Segal, B. Joseph, & R. Money-Kyrle (Eds.), *The complete works of Melanie Klein, vol. 2: Love, guilt, and reparation, and other works, 1921-1945,* (pp. 262-289). New York: Dell. (Original work published in 1935).

Klein, M. (1975[c]). Mourning and its relation to manic-depressive states. In E. O'Shaughnessy, H. Segal, B. Joseph, & R. Money-Kyrle (Eds.), *The complete works of Melanie Klein, vol. 2: Love, guilt, and reparation, and other works, 1921-1945,* (pp. 344-369). New York: Dell. (Original work published in 1940).

Klein, M. (1975[d]). Notes on some schizoid mechanisms. In E. O'Shaughnessy, H. Segal, B. Joseph, & R. Money-Kyrle (Eds.), *The complete works of Melanie Klein, vol.3: Envy and gratitude, and other works, 1946-1963,* (pp.1-24). New York: Dell. (Original work published in 1946).

Klopfer, B., Ainsworth, M., Klopfer, W., & Holt, R. (1954). *Developments in the Rorschach technique: Vol. 1.* Yonkers-on-Hudson, NY: World Books.

Kwawer, J. (1979). Borderline phenomena, interpersonal relations, and the Rorschach test. *Bulletin of the Menninger Clinic, 43,* 515-524.

Kwawer, J. (1980). Borderline phenomena, interpersonal relations, and the Rorschach test. In J. Kwawer, A. Sugarman, P. Lerner, & H. Lerner (Eds.), *Borderline phenomena and the Rorschach test,* (pp. 89-106). New York: International Universities Press.

Lerner, H., Albert, C., &Walsh, M. (1987). The Rorschach assessment of borderline defenses: A concurrent validity study. *Journal of Personality Assessment, 51,* 334-348.

Lerner, H. and Lerner, P. (1980). Rorschach assessment of primitive defenses in borderline personality structure. In J. Kwawer, A. Sugarman, P. Lerner, & H. Lerner (Eds.), *Borderline phenomena and the Rorschach test,* (pp. 257-274). New York: International Universities Press.

Lerner, P. (1990) Rorschach assessment of primitive defenses: A review. *Journal of Personality Assessment, 54,* 30-46.

Lillienfeld, S.O., Van Valkenburg, C., Larntz, K., & Akiskal, H.S. (1986). The relationship of histrionic personality disorder to antisocial personality and somatization disorders. *American Journal of Psychiatry, 143,* 718-722.

Loving, J.L., Jr. & Russell, W.F. (2000). Selected Rorschach variables of psychopathic juvenile offenders. *Journal of Personality Assessment, 75,* 126-142.

Marsh, A. & Viglione, D.J. (1992). A conceptual validation study of the texture response on the Rorschach. *Journal of Personality Assessment, 58,* 571-579.

Masling, J., Rabie, L., & Blondheim, S.H. (1967). Obesity, level of aspiration, and Rorchach and TAT measures of oral dependence. *Journal of Consulting Psychology, 31,* 233-239.

Masling, J. (1986). Orality, pathology, and interpersonal behavior. In J. Masling (Ed.), *empirical studies of psychoanalytic theories, vol. 2,* (pp. 73-106). Hillsdale, NJ: The Analytic Press.

Melges, F.T. & Bowlby, J. (1969). Types of hopelessness in psychopathological process. *Archives of General Psychiatry, 20,* 690-699.

Meloy, J.R. (1988). *The psychopathic mind: Origins, dynamics, and treatment.* Northvale, NJ: Jason Aronson.

Meloy, J.R. (1992). *Violent attachments.* Northvale, NJ: Jason Aronson.

Meloy, J.R. & Gacono, C.B. (1992). The aggression response and the Rorschach. *Journal of Clinical Psychology, 48,* 104-114.

Meloy, J.R. & Gacono, C.B. (1998). The internal world of the psychopath. In T. Millon & E. Simonsen (Eds.), *Psychopathy: Antisocial, criminal, and violent behavior,* (pp. 95-109). New York: The Guilford Press.

Meyer, G.J., Viglione, D.J., & Exner, J.E., Jr. (2001). Superiority of *Form %* over *Lambda* for research on the Rorschach Comprehensive System. *Journal of Personality Assessment, 76,* 68-75.

Meyer, J.S., Novak, M.A., Bowman, R.E., & Harlow, H.F. (1975). Behavioral and hormonal effects of attachment object separation in surrogate-peer reared and mother-reared infant rhesus monkeys. *Developmental Psychobiology, 8,* 425-435.

Murray, J.F. (1997). The Rorschach search for the borderline Holy Grail: An examination of personality structure, personality style, and situation. In J.R. Meloy, M.W. Acklin, C.B. Gacono, J.F. Murray, & C.A. Peterson (eds.), *Contemporary Rorschach interpretation* (pp.123-138). Mahwah, NJ: Lawrence Erlbaum Associates.

Nezworski, M.T. & Wood, J.M. (1995). Narcissism in the Comprehensive System for the Rorschach. *Clinical Psychology: Science and Practice, 2,* 179-199.

Perry, J. & Cooper, S. (1986). A preliminary report on defenses and conflicts associated with borderline personality disorder. *Journal of the American Psychoanalytic Association, 34,* 863-894.

Radó, S. (1928). The problem of melancholia. *International journal of psychoanalysis, 9,* 420-438.

Radó, S. (1951). Psychodynamics of depression from the etiologic point of view. *Psychosomatic Medicine, 13,* 51-55.

Reich, W. (1949). *Character-analysis.* New York: Noonday Press. (3rd ed.; original work published in 1933).

Riquelme, J., Occupati, R., & Gonzales, E. (1991). *Rorschach: Estudio de contenidos. Datos normativos para de sujetos no pacientes di Caracas y su area metropolitana. Aportes al sistema de Exner.* [Rorschach: Study of content. Normative data for nonpatient subjects from the greater Caracas area. According to Exner's Comprehensive System.] Unpublished raw data. Cited in Gacono & Meloy (1994).

Robins, L. (1966). *Deviant children grown up.* Baltimore: Williams & Wilkins.

Rorschach, H. (1942). *Psychodiagnostics: A diagnostic test based on perception.* Bern: Hans Huber. (Original work published in 1921).

Schachtel, E. (1966). *Experiential foundations of Rorschach's test.* New York: Basic Books.

Schafer, R. (1954). *Psychoanalytic interpretation in Rorschach testing: Theory and Application.* New York: Grune & Stratton.

Schafer, R. (1968). *Aspects of internalization.* New York: International Universities Press.

Smith, A., Gacono, C., & Kaufman, L. (1997). A comparison of psychopathic and nonpsychopathic conduct-disordered adolescents. *Journal of Clinical Psychology, 53,* 289-300.

Vaillant, G.E. (1975). Sociopathy as a human process. *Archives of General Psychiatry, 32,* 178-183.

Weiner, I.B. (1991). Editor's note: Interscorer agreement in Rorschach research. *Journal of Personality Assessment, 56,* 1.

Weiner, I.B. (1998). *Principles of Rorschach interpretation.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Weber, C.A., Meloy, J.R., & Gacono, C.B. (1992). A Rorschach study of attachment and anxiety in conduct-disordered and dysthymic adolescents. *Journal of Personality Assessment, 58,* 16-26.

Winnicott, D.W. (1975[a]). Primitive emotional development. In D.W. Winnicott (Ed.), *Through paediatrics to psycho-analysis,* (pp. 145-156). New York: Basic Books. (Original article published in 1945).

Winnicott, D.W. (1975[b]). The depressive position in normal emotional development. In D.W. Winnicott (Ed.), *Through paediatrics to psycho-analysis,* (pp. 262-277). New York: Basic Books. (Original article published in 1955).

Winnicott, D.W. (1975[c]). Aggression in relation to emotional development. In D.W. Winnicott (Ed.), *Through paediatrics to psycho-analysis,* (pp. 204-218). New York: Basic Books. (Original article published in 1958 [1958[a]]).

Winnicott, D.W. (1975[d]). Primary maternal preoccupation. In D.W. Winnicott (Ed.), *Through paediatrics to psycho-analysis,* (pp. 300-305). New York: Basic Books. (Original article published in 1958 [1958[b]]).

Wood, J.M., Nezworski, M.T., Stejskal (1996). The Comprehensive System for the Rorschach: A critical examination. *Psychological Science, 7,* 3-10.

Zillmer, E.A. & Vuz, J.K. (1995). Factor analysis with Rorschach data. In J.E. Exner, Jr. (Ed.), *Issues and methods in Rorschach research* (pp. 251-306). Mahwah, NJ: Lawrence Erlbaum Associates.

Appendices

Appendix A

Frequency Tables for Selected Exner Rorschach Variables

Table A-1. Frequencies & Percentages for COP.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
COP=0	17	73.9%	11	47.8%	12	52.2%
COP=1	3	13.0%	8	34.8%	7	30.4%
COP=2	3	13.0%	4	17.4%	3	13.0%
COP>2	0	.0%	0	.0%	1	4.3%

Table A-2. Frequencies & Percentages for AG.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
AG=0	13	56.5%	11	47.8%	9	39.1%
AG=1	5	21.7%	9	39.1%	6	26.1%
AG=2	1	4.3%	3	13.0%	3	13.0%
AG>2	4	17.3%	0	.0%	5	21.7%

Table A-3. Frequencies & Percentages for Sum T.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
Sum T=0	22	95.7%	17	73.9%	10	43.5%
Sum T=1	1	4.3%	5	21.7%	7	30.4%
Sum T>1	0	.0%	1	4.3%	6	26.1%

Table A-4. Frequencies & Percentages for L.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
L<.30	1	4.3%	1	4.3%	5	21.7%
.30≤L≤.99	5	21.7%	4	17.3%	15	65.3%
L>.99	17	73.9%	18	78.3%	3	13.0%

Table A-5. Frequencies & Percentages for Fr+rF.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
Fr+rF=0	19	82.6%	19	82.6%	14	60.9%
Fr+rF=1	2	8.7%	4	17.4%	6	26.1%
Fr+rF>1	2	8.7%	0	.0%	3	13.0%

Table A-6. Frequencies & Percentages for EGOI.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
EGOI<.33	15	65.3%	12	52.2%	8	34.8%
.33≤EGOI≤.44	4	17.4%	7	30.4%	6	26.1%
EGOI>.44	4	17.4%	4	17.4%	9	39.1%

Table A-7. Frequencies & Percentages for MOR.

	Violent		Nonviolent		Clinical Controls	
Frequnecies	Count	%	Count	%	Count	%
MOR=0	7	30.4%	15	65.2%	8	34.8%
MOR=1	7	30.4%	4	17.4%	7	30.4%
MOR=2	4	17.4%	2	8.7%	3	13.0%
MOR=3	2	8.7%	2	8.7%	1	4.3%
MOR=4	1	4.3%	0	.0%	2	8.7%
MOR>4	2	8.7%	0	.0%	2	8.7%

Appendix B

Frequency Tables for Selected Gacono & Meloy Expanded Aggression Scores

Table B-1. Frequencies & Percentages for AgPot.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
AgPot=0	19	82.6%	17	73.9%	20	87.0%
AgPot=1	2	8.7%	6	26.1%	3	13.0%
AgPot>1	2	8.7%	0	.0%	0	.0%

Table B-2. Frequencies & Percentages for AgPast.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
AgPast=0	8	34.8%	13	56.5%	13	56.5%
AgPast=1	8	34.8%	7	30.4%	5	21.7%
AgPast=2	4	17.4%	2	8.7%	4	17.4%
AgPast=3	0	.0%	1	4.3%	0	.0%
AgPast>3	3	13.0%	0	.0%	1	4.3%

Table B-3. Frequencies & Percentages for AgC.

	Violent		Nonviolent		Clinical Controls	
Frequencies	Count	%	Count	%	Count	%
AgC=0	0	.0%	4	17.4%	1	4.3%
AgC=1	0	.0%	4	17.4%	4	17.4%
AgC=2	5	21.7%	6	26.1%	4	17.4%
AgC=3	5	21.7%	5	21.7%	4	17.4%
AgC=4	10	43.5%	1	4.3%	3	13.0%
AgC=5	2	8.7%	3	13.0%	3	13.0%
AgC>5	1	4.3%	0	.0%	4	17.4%

Table B-4. Frequencies & Percentages for SM.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
SM=0	18	78.3%	23	100.0%	21	91.3%
SM=1	3	13.0%	0	.0%	1	4.3%
SM=2	2	8.7%	0	.0%	0	.0%
SM>2	0	.0%	0	.0%	1	4.3%

Table B-5. Frequencies & Percentages for Sum Ag.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
Sum Ag=0	0	.0%	1	4.3%	1	4.3%
Sum Ag=1	0	.0%	1	4.3%	0	.0%
Sum Ag=2	2	8.7%	6	26.1%	3	13.0%
Sum Ag=3	3	13.0%	4	17.4%	5	21.7%
Sum Ag=4	4	17.4%	4	17.4%	2	8.7%
Sum Ag=5	2	8.7%	0	.0%	2	8.7%
Sum Ag=6	2	8.7%	4	17.4%	2	8.7%
Sum Ag=7	3	13.0%	2	8.7%	2	8.7%
Sum Ag>7	7	30.4%	1	4.3%	6	26.1%

Appendix C

Frequency Tables for Selected Holt PRIPRO

Aggressive Content Variables

Table C-1. Frequencies & Percentages for L1O-Ag.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
L1O-Ag=0	21	91.3%	21	91.3%	22	95.7%
L1O-Ag=1	1	4.3%	2	8.7%	1	4.3%
L1O-Ag=2	1	4.3%	0	.0%	0	.0%

Table C-2. Frequencies & Percentages for L2O-Ag.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
L2O-Ag=0	4	17.4%	10	43.5%	13	56.5%
L2O-Ag=1	10	43.5%	6	26.1%	6	26.1%
L2O-Ag=2	7	30.4%	6	26.1%	3	13.0%
L2O-Ag=3	1	4.3%	0	.0%	0	.0%
L2O-Ag>3	1	4.3%	1	4.3%	1	4.3%

Table C-3. Frequencies & Percentages for LO-AG_{TOT}.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
LO-AG_{TOT}=0	4	17.4%	9	39.1%	12	52.2%
LO-AG_{TOT}=1	9	39.1%	6	26.1%	7	30.4%
LO-AG_{TOT}=2	6	26.1%	7	30.4%	3	13.0%
LO-AG_{TOT}=3	3	13.0%	0	.0%	0	.0%
LO-AG_{TOT}>3	1	4.3%	1	4.3%	1	4.3%

Table C-4. Frequencies & Percentages for AG1A

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
AG1A=0	20	87.0%	23	100.0%	22	95.7%
AG1A=1	3	13.0%	0	.0%	0	.0%
AG1A=2	0	.0%	0	.0%	1	4.3%

Table C-5. Frequencies & Percentages for AG1V.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
AG1V=0	22	95.7%	23	100.0%	23	100.0%
AG1V=1	1	4.3%	0	.0%	0	.0%

Table C-6. Frequencies & Percentages for AG1R.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
AG1R=0	14	60.9%	22	95.7%	18	78.3%
AG1R=1	8	34.8%	1	4.3%	4	17.4%
AG1R=2	0	.0%	0	.0%	1	4.3%
AG1R>2	1	4.3%	0	.0%	0	.0%

Table C-7. Frequencies & Percentages for AG2A.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
AG2A=0	0	.0%	2	8.7%	1	4.3%
AG2A=1	1	4.3%	3	13.0%	2	8.7%
AG2A=2	4	17.4%	5	21.7%	2	8.7%
AG2A=3	7	30.4%	7	30.4%	5	21.7%
AG2A=4	5	21.7%	2	8.7%	3	13.0%
AG2A=5	4	17.4%	2	8.7%	3	13.0%
AG2A>5	2	8.7%	2	8.7%	7	30.4%

Table C-8. Frequencies & Percentages for AG2V.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
AG2V=0	17	73.9%	21	91.3%	16	69.6%
AG2V=1	5	21.7%	1	4.3%	3	13.0%
AG2V=2	1	4.3%	1	4.3%	3	13.0%
AG2V=3	0	.0%	0	.0%	1	4.3%

Table C-9. Frequencies & Percentages for AG2R.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
AG2R=0	9	39.1%	10	43.5%	8	34.8%
AG2R=1	8	34.8%	7	30.4%	5	21.7%
AG2R=2	2	8.7%	3	13.0%	5	21.7%
AG2R=3	2	8.7%	3	13.0%	3	13.0%
AG2R=4	1	4.3%	0	.0%	1	4.3%
AG2R=5	1	4.3%	0	.0%	1	4.3%

Table C-10. Frequencies & Percentages for AGLV1.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
AGLV1=0	12	52.2%	22	95.7%	17	73.9%
AGLV1=1	8	34.8%	1	4.3%	4	17.4%
AGLV1=2	2	8.7%	0	.0%	1	4.3%
AGLV1>2	1	4.3%	0	.0%	1	4.3%

Table C-11. Frequencies & Percentages for AGLV2.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
AGLV2=0	0	.0%	1	4.3%	1	4.3%
AGLV2=1	0	.0%	0	.0%	0	.0%
AGLV2=2	2	8.7%	4	17.4%	2	8.7%
AGLV2=3	5	21.7%	6	26.1%	2	8.7%
AGLV2=4	4	17.4%	5	21.7%	1	4.3%
AGLV2=5	4	17.4%	2	8.7%	4	17.4%
AGLV2=6	3	13.0%	3	13.0%	1	4.3%
AGLV2=7	1	4.3%	1	4.3%	4	17.4%
AGLV2=8	2	8.7%	0	.0%	6	26.1%
AGLV2>8	2	8.7%	1	4.3%	2	8.7%

Table C-12. Frequencies & Percentages for AG_{TOT}.

	Violent		Nonviolent		Clinical Controls	
Frequency	Count	%	Count	%	Count	%
AG_{TOT}=0	0	.0%	1	4.3%	1	4.3%
AG_{TOT}=1	0	.0%	0	.0%	0	.0%
AG_{TOT}=2	1	4.3%	4	17.4%	2	8.7%
AG_{TOT}=3	4	17.4%	5	21.7%	2	8.7%
AG_{TOT}=4	5	21.7%	6	26.1%	1	4.3%
AG_{TOT}=5	1	4.3%	2	8.7%	3	13.0%
AG_{TOT}=6	4	17.4%	3	13.0%	1	4.3%
AG_{TOT}=7	2	8.7%	1	4.3%	4	17.4%
AG_{TOT}=8	3	13.0%	0	.0%	5	.0%
AG_{TOT}>8	3	13.0%	1	4.3%	4	17.4%

Vita

William A. Benoit was born in Lowell, Massachusetts on February 13, 1963. He attended public schools there, graduating from Lowell High School in June 1981. He entered Bennington College in Bennington, Vermont in September 1981, where he received the degree of Bachelor of Arts, with a major in Literature and Languages, in June 1987. After completing additional course work in psychology at the University of Massachusetts at Lowell from January 1993 through May 1994, he entered the Ph.D. Program in Clinical Psychology at the University of Tennessee, Knoxville in August 1994, where he remains enrolled up to the present. He currently resides in Knoxville, Tennessee.