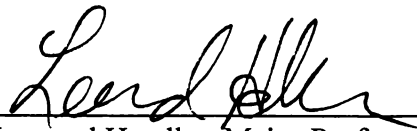
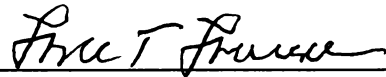


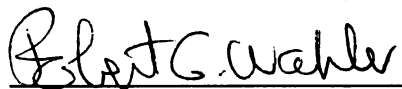
To the Graduate Council:

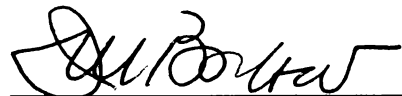
I am submitting herewith a dissertation written by Robert J. Riethmiller entitled "A Look at Personality Change Among Conduct Disordered Adolescents in Residential Treatment." I have examined the final paper copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy, with a major in Psychology.

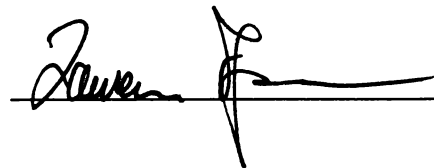

Leonard Handler, Major Professor

We have read this dissertation
and recommend its acceptance:

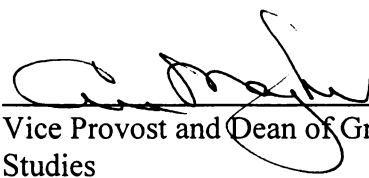

Eric T. Funder


Robert G. Wahler


Bill Borker


James F.

Accepted for the Council:


Vice Provost and Dean of Graduate
Studies

A LOOK AT PERSONALITY CHANGE AMONG CONDUCT
DISORDERED ADOLESCENTS IN RESIDENTIAL TREATMENT

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

Robert J. Riethmiller
December 2002

This Dissertation is dedicated to my loving family
and to the supervisors and mentors who have inspired
and supported me throughout my training.

ACKNOWLEDGEMENTS

I would like to thank Peninsula Village, and Larry Brown in particular, for allowing me to conduct this study. I would like to thank Dennis Plant for his ongoing help with testing and the management of this study. Thanks to Allison Ballew and Melissa Herring who graciously volunteered their services and administered the Rorschach to many of the subjects. I would like to thank all of the Peninsula Village staff, and particularly the milieu staff in STU and in the cabins. They took the time to fill out many CBCL forms in a timely manner. Finally, I would like to thank Leonard Handler for his ongoing support and guidance.

ABSTRACT

The current study examines the personality structure of conduct disordered adolescents who are being treated via residential care. Personality is assessed using the Rorschach, the Minnesota Multiphasic Personality Inventory – Adolescent Form, and the Child Behavior Checklist Parent form and Youth Self Report. Findings from these instruments are used to evaluate personality attributes discussed in the conduct disorder research such as impulsivity, egocentricity, low ego strength, oppositionality, emotional detachment, and failed identification. Changes on these instruments from admission to discharge are then examined to evaluate any personality changes that may be the result of the residential treatment interventions. The results generally show improved functioning when the MMPI-A and CBCL were used to measure change, as is consistent with other residential treatment studies. Few personality changes were seen when the Rorschach was used. These findings are discussed within several contexts. The personality changes are compared with those described by Donald Rinsley (1980) in his discussion of long-term hospital treatment. Differences among assessment techniques are discussed using Strupp and Hadley's (1977) tripartite model of outcome assessment as an explanatory framework.

TABLE OF CONTENTS

CHAPTER	PAGE
1 LITERATURE REVIEW PART 1	1
The Subtypes and Causal Factors of Conduct Disorder	1
Looking at Subtypes	1
Socialized and Undersocialized Conduct Disorder: A Biological Approach	2
Early versus Late Onset: A Longitudinal Approach	8
Adolescent Limited Children	9
Early Onset Children	10
Problems with Using Age of Onset to Determine Subtypes	12
Looking at Overlap Thus Far	14
Conduct Disorder with ADHD: Looking at Comorbidity	15
Looking at Overlap Thus Far	18
A Typology of Aggression and Aggressive Behavior	18
Looking at Overlap Thus Far	21
Impulsive versus Callous/Unemotional: Personality and Genetics	23
Summary: A Final Look at Subtype Overlap	27
Future Directions	28
Girls	29
A Closer Look at Causal Factors	30
Adolescent Onset Conduct Disorder	30
Childhood Onset Conduct Disorder	32
Genetic Factors	32
Temperament	34
Parent-Child Relationship	39
Attachment	39
Parental Responsiveness	43
Parental Discipline	46
Other Characteristics of Parents	47
Summary and Future Directions	48
 2 LITERATURE REVIEW PART 2	 51
Residential Treatment of Externalizing Children and Adolescents	51
Wayward Youth	51
Bettleheim's "Progressive" Milieu	56
Rinsley's Authoritative Hospital	58
Diagnosis and Etiology	58
Symbiotic	58
Borderline Personality	59
Narcissistic Personality	64

Treatment	66
Engagement	66
The Resistance Phase	70
The Definitive Stage: A Stage of Introject Work	72
Conclusion	75
3 METHODS	77
Assessment Techniques and Hypotheses	77
Current Trends in Outcome Assessment	79
The Rorschach	80
MMPI-A	82
Child Behavior Checklist	84
Hypotheses	84
At Admission	84
Subtypes at Admission	85
At Discharge	86
Subtypes at Discharge	87
The Program	87
Subjects	89
Diagnosis	90
Data Collection	91
4 RESULTS	94
The Admission Sample	94
Subgroup Differences	99
Treatment Outcome	103
Additional Descriptive Data	112
5 DISCUSSION	114
The Admission Sample	114
Differences Between Subgroups	117
Treatment Outcome	120
Outcome in the Context of Rinsley's Theory and Personality Assessment Theory	123
REFERENCES	130
APPENDICES	155
Appendix A: Informed Consent Statements	156
Appendix B: Diagnostic Categorization Form for Program Director and Team	160
Appendix C: Admission Descriptive Statistics for Major Rorschach Variables	162

Appendix D: Percentages of Major Rorschach Variables for Normative Samples and the Admission Sample	168
Appendix E: Admission MMPI-A Descriptive Statistics	171
Appendix F: Admission MMPI-A Descriptive Statistics for Subjects Without Elevated Validity Scales	172
Appendix G: Percentages of Major Rorschach Variables for the Impulsive and Callous Groups	173
Appendix H: MMPI-A Descriptive Statistics for Impulsive Subjects	176
Appendix I: MMPI-A Descriptive Statistics for Impulsive Subjects without Elevated Validity Scales	177
Appendix J: MMPI-A Descriptive Statistics for Callous Subjects at Admission	178
Appendix K: MMPI-A Descriptive Statistics for Callous Subjects without Elevated Validity Scales	179
Appendix L: Admission and Discharge Descriptive Statistics for Major Rorschach Variables	180
Appendix M: Percentages for Major Rorschach Variables at Admission and Discharge	191
Appendix N: Descriptive Statistics at Admission and Discharge for 14 Major MMPI-A Scales	194
Appendix O: Rorschach Changes Among 50 Adolescents in Residential Treatment	196
Appendix P: Rorschach Means Among 50 Adolescents in Residential Treatment	197
Appendix Q: Longitudinal Changes for Selected Rorschach Variables Among 88 Patients in Long-Term Dynamic Psychotherapy	198
Appendix R: Longitudinal Changes for Selected Rorschach Variables Among 88 Patients in Short-Term Dynamic Psychotherapy	200
VITA	202

LIST OF TABLES

Table	Page
1. Lists of Characteristics of Psychopaths from Cleckley's <i>The Mask of Insanity</i>	24
2. Rorschach Percentages for Normative Samples and Admission Sample	95
3. One Sample T-Tests for Admission Predictions	97
4. Percentage of Clinically Impaired Subjects at Admission	99
5. Discriminating Subtypes with Rorschach Variables	101
6. Discriminating Subtypes with MMPI-A, CBCL and YSR Variables	102
7. Percentage of Clinically Impaired Subjects by Subtype	104
8. ANOVA Comparing Admission to Discharge	105
9. Percentage of Clinically Impaired Subjects at Admission and Discharge	107
10. ANOVA Comparing Admission to Discharge for Subjects whose Length of Stay is Over 4 Months	109
11. Percentage of Clinically Impaired Subjects at Admission and Discharge Among those Subjects with a Length of Stay Over Four Months	110
12. Average Difference Scores for Subjects with Short and Long Lengths of Stay	111

CHAPTER 1

LITERATURE REVIEW PART 1

The Subtypes and Causal Factors of Conduct Disorder

Conduct Disorder is currently the most common psychiatric diagnosis given to children and adolescents. In 1994 between 6 and 16% of American male children and between 2 and 9 % of American female children were diagnosed with this disorder (American Psychiatric Association, 1994). Over the past twenty years an enormous body of research has developed in an attempt to understand this societal problem. This paper will present a broad and general overview of this research, with a focus on two fundamental questions (1) What are some general categories of children diagnosed with conduct disorder and (2) What are the most commonly studied causal factors contributing to conduct disorder in children.

Looking at Subtypes

The label “conduct disorder” signifies a child’s failure to abide by society’s rules and regulations. This label, however, provides little additional information about a child. Conduct disordered children are remarkably heterogeneous. Thus, questions regarding prognosis, personality dynamics, neurological impairment, peer relations, and family dynamics are all contingent on more specific information. Over the past two decades, attempts have been made to create more informative labels that would identify subtypes

of conduct disordered children. These efforts have been fruitful, but at times redundant. This section attempts to review the various subtypes proposed, and to reduce redundancy.

Special considerations regarding conduct disordered girls will follow a general review of research on subtypes. Most of the research to date has primarily studied boys. They are more likely than girls to be diagnosed with a conduct disorder in childhood at a ratio of 4:1 (Silverthorn & Frick, 1999). There has been some arising controversy regarding gender differences and conduct disorder (Silverthorn & Frick, 1999; Moffit & Caspi, 2001). Both sides of this controversy will be discussed.

Socialized and Undersocialized Conduct Disorder: A Biological Approach

Hewitt and Jackson (1946) made the first distinction between conduct disorder types. They distinguished between the *undersocialized aggressive child* and the *socialized delinquent*. Undersocialized aggressive children, they said, were typically male. They were often referred for treatment because they were observed being cruel toward their peers. These boys were self centered, exploitative, and callous. They regularly bullied and preyed upon other children without any apparent remorse. They had few, if any friends, and they seemed uninterested in forming close relationships. In general, they were suspicious and sullen around other children and they were argumentative and defiant with adults. Hewitt and Jackson identified other features of this subtype. They noted that this group tended to have poor performance on verbal cognitive tasks, and that they tended to come from low SES families. Based on their many observations, Hewitt and Jackson hypothesized that undersocialized aggressive children were likely to have been rejected or neglected during infancy.

The socialized delinquents exhibited many of the same behaviors as the undersocialized aggressive children. However, they were less misanthropic and had a stronger emotional bond with others. Typically, the delinquents were referred for treatment during early adolescence after being caught stealing, using drugs, or skipping school. Compared to most clinic referred children, they were generally well-liked among their classmates. Hewitt and Jackson believed that these boys typically came from homes with inadequate supervision. This poor supervision, said the authors, made these children more susceptible to peer pressure and tempting opportunities to transgress rules.

In 1980, the DSM-III presented a taxonomy that was inspired by Hewitt and Jackson, but that made more distinctions. The DSM-III distinguished aggressive from non-aggressive children. It also distinguished between children who had developed empathic social bonds (socialized) and those who had not done so (undersocialized). The taxonomy included four subtypes: Undersocialized Aggressive, Undersocialized Nonaggressive, Socialized Aggressive, and Socialized Non-Aggressive CD.

In time, clinicians and researchers came to believe that this taxonomy was overly complex. The undersocialized non-aggressive category, for example, seemed superfluous. In a sample of 345 psychiatric inpatient children and adolescents only 2% received a diagnosis of undersocialized non-aggressive versus 46% for socialized aggressive, 38% for undersocialized aggressive, and 14% socialized non-aggressive (Lahey et al. 1992). A study by Frick et al. (1993) also raised some doubts about the need for the socialized non-aggressive subtype. These authors factor analyzed the antisocial behaviors of 177 boys between the ages of 7 and 13. They found a cluster of non-aggressive children who exhibited confrontational yet non-aggressive behavior. This

group corresponded to the socialized non-aggressive group. These children, however, typically met criterion for oppositional defiant disorder rather than for conduct disorder.¹ Conduct Disorder and Oppositional Defiant Disorder are currently considered distinct disorders (for an extended discussion of this issue see Loeber et al. 1991, and Fergusson et al. 1994).

We are thus left with a distinction that is very similar to that made by Hewitt and Jackson between the undersocialized aggressive and socialized aggressive groups². In time, researchers became primarily interested in the undersocialized aggressive group. These children seemed not only to be cruel and predatory, but they were also very active and motoric. They were impulsive, sensation seeking, and fearless. The prognoses for the undersocialized group was poor, and many believed that this childhood disorder was a precursor to adult criminality or psychopathy (Quay, 1993).

The socialized aggressive children were similar to the socialized delinquents. They could at times be callous and predatory, but these children had social networks that included genuine friendships. Socialized aggressive children cared about the well-being of their friends, though they were often unkind and aggressive toward those who were outside “the group”. These children were considered less worrisome, and their prognoses were generally better (American Psychiatric Association, 1980).

Contemporary research investigating the socialized versus undersocialized distinction has been predominantly biological. Interestingly, no notable biological

¹ Note that this sample does not include many children whose onset of CD begins during adolescence.

² Renamed Conduct Disorder, solitary type in DSM-III-R

abnormalities have been found among the socialized aggressive group. These children have been indistinguishable from normal children in studies using electroencephalogram, electodermal responding, or dopamine beta hydroxylase (Quay, 1993). In contrast, the undersocialized aggressive children seem to fit a distinct abnormal physiological profile.

The biological research has often been inspired by Gray's (1994) theory regarding psychopathy. Gray proposed that the impulsivity and callousness seen among undersocialized aggressive child can be traced to the "behavioral inhibition system" (BIS) and "Reward system" (REW) of the brain. The BIS is responsible for producing anxiety in the face of impending danger. It is located in the septohippocampal region of the brain and has connections to the prefrontal cortex. The neurotransmitters involved in this system are noradrenalin and serotonin. The Reward System is believed to control approach behaviors, escape behaviors, and predatory aggression. It is fueled by the dopamine active in the reward centers of the brain. According to Gray, these two systems are antagonistically related, they inhibit one another. Undersocialized aggressive conduct disorder is believed to involve an imbalance between these two systems, with the BIS being underactive and the REW system being overactive (Quay, 1993).

There has been some consistent evidence that the BIS may be underactive among undersocialized aggressive children. Studies have found that the brains of both undersocialized aggressive children and antisocial adults have decreased levels of noradrenelin activity. In a series of studies, Rogeness and colleagues (Rogeness et al. 1990) found that approximately half of the children who had abnormally low dopamine-B-hydroxylase (DBH) levels were diagnosed with undersocialized aggressive conduct disorder. DBH is needed to convert dopamine into noradrenelin. Researchers have found

that, as children age, this conversion leads to a gradual increase of noradreneline and a decrease in dopamine in the brain. Some have hypothesized that this change in brain chemistry corresponds to the maturational development of behavioral control (Hill, 2001). Low DBH may indicate abnormally low noradrenergic and abnormally high dopaminergic activity in the brain. It may also suggest disrupted maturational changes in brain development. As noted earlier, no relationship was found between low DBH and socialized aggressive conduct disorder.

Autonomic nervous system functioning is also driven by the central noradrenergic system. Low heart rate and low skin conductance are both indicators of an underactive Behavior Inhibition System. These measures have been significantly lower among undersocialized aggressive males (Lahey & McBurnett, 1995; Raine, 1996). Several studies have found them to be a good predictor of future criminality (Farrington, 1997), perhaps even better than family history (Brennan, Raine, & Mednick, 1994). Curiously, in one study the antisocial individuals who had the lowest skin conductance and the lowest heart rates came from the most intact and highest SES families. (Raine, 1997). Thus, evidence suggests that autonomic underarousal, when extreme, may lead to criminality despite a relatively healthy and supportive environment. The link between autonomic underarousal and criminality, however, remains unclear. Some believe that the sensation seeking and predation seen among conduct disordered children may reflect a need for stimulation to counteract chronic autonomic underarousal (Raine, 1996; Meloy, 1992). Others believe that autonomic underarousal may make children less susceptible to punishment, and thus may disrupt social learning (Lynam, 2001).

Numerous studies have also found decreased cerebrospinal fluid serotonin levels or a blunted prolactin response (signaling decreased release of serotonin) in adults with Antisocial Personality Disorder (APD). This finding was particularly striking among impulsive APD adults. Results with children, however, have been less consistent. Interestingly, aggressive and impulsive children without a family history of antisocial personality disorder often have an enhanced (rather than blunted) prolactin response. Aggressive impulsive children with a family history of antisocial personality, in contrast, typically have the expected blunted prolactin response (Pliszka, 1999). The interactions among serotonin levels, familial variables, genetics, and antisocial traits are clearly complex and are not yet well understood.

The BIS system influences impulsivity and anxiety, in part, through its connection to the prefrontal cortex. Thus, the impulsivity seen among undersocialized aggressive children may also be related to lesions in the prefrontal area of the brain. This possibility has been discussed in detail by Damasia (2000).

There has been some behavioral evidence that undersocialized aggressive children perform poorly on passive learning tasks. These tasks require one to inhibit reward-seeking behavior in response to cues that rewards are unavailable. Undersocialized aggressive children are more likely to continue pursuing unavailable rewards after these cues are given. The persistency of reward seeking behavior, and the inability inhibit behavior when cued to do so, are believed by Gray (1994) to be evidence of an overactive REW system (Quay, 1993). The biological evidence for an overactive reward/dopaminergic system among undersocialized aggressive children, however, has also been inconsistent. Indeed, studies looking at levels of Homovanillac Acid (HVA), a

dopamine metabolite, within cerebrospinal fluid, found that individuals with a history of violence actually had low levels of dopamine activity. (Linnoila, 1997). The reasons for this finding remain unclear.

Psychophysiological research leaves many unanswered questions regarding the contribution of genetic and familial variables to the development of antisocial behavioral patterns. This research does, however, suggest that the differentiation between socialized and undersocialized aggression is important and useful. There is considerable evidence that undersocialized aggressive children differ from socialized aggressive and normal children in predictable ways, particularly when the noradrenergic system is assessed.

Early versus Late Onset: A Longitudinal Approach

The socialized versus undersocialized distinction has been supported by physiological research, but it has been unpopular among many researchers and clinicians. Many have found the distinction to be overly subjective (Quay, 1999). In 1994, the conduct disorder taxonomy was changed in the DSM IV manual (American Psychiatric Association, 1994). The DSM IV now distinguishes between “late onset” versus “early onset” conduct disorder.

This early versus late distinction was influenced primarily by the work of Terrie Moffitt. She and her colleagues conducted a seminal longitudinal study using 1037 male children from Dunedin, New Zealand (Moffitt, 1990, 1993; Moffitt et al. 1996, 2001). Through this study, Moffitt found that children who exhibited antisocial behavior at a young age (younger than 10 years old) looked very different from later onset children on variables such as prognoses, personality traits, and cognitive functioning.

Adolescent Limited Children

The majority of boys with conduct disorder first exhibit antisocial behavior during adolescence, rather than earlier in life. These “adolescent onset” boys do not typically become antisocial as adults (Loeber & Farrington, 2000; Moffitt and Caspi, 2001; Kratzer & Hodgins, 1999). In most cases they “grow out” of their antisocial behavior after families and professionals respond with standard interventions. Moffitt has thus labeled this group “adolescent limited” (Moffitt & Caspi, 2001).

Despite the limited duration of delinquent behavior in this group, the behavior itself can be quite concerning. By eighteen years of age this group’s criminal behavior is not easily distinguished from that of early-onset adolescents who become chronic offenders. Some of the adolescent limited boys were more than 5 standard deviations above the mean on self-reported delinquency by age 18, and by age 19 some had over 50 court convictions (Moffitt, 1993). Both groups have a similar number of police contacts and court convictions at age 18. Both typically believe that they can get away with crimes and choose friends that they view as delinquents. The adolescent onset group also engages in reckless behavior such as drunk driving, unprotected sex, and regular excessive drinking (Moffitt, 1996).

Upon closer inspection, however, it becomes clear that the adolescent onset boys are less emotionally detached and less aggressive than their early onset peers. They report feeling less alienated and more affiliative on the Multidimensional Personality Questionnaire (MPQ), and they also report feeling a stronger bond with their families (Moffitt, 1993). Frick et al. (1993) found that the court convictions of later onset children tended to involve violations of age appropriate norms, such as drinking, running

away, and truancy. This group is significantly less likely to be convicted of violent crimes (Jeglum-Bartusch et al. 1997).

Moffitt believes that adolescent onset conduct disorder is a “near normative” phenomenon (Moffitt & Caspi, 2001). The delinquent behavior seen among members of this group, she says, “arises from factors endemic to the peer social context of adolescence, not from adverse development” (Moffitt, 1996, p. 402). Developmental variables tend to look normal among this group. No identifiable temperament style or cognitive deficits were found early in these boys’ lives, and their families showed no obvious or predictable difficulties (Caspi, Henry, McGee, Moffitt, & Silva, 1995, Moffitt, 1996).

There is some emerging evidence that this group may develop internalizing problems or disrupted parenting styles as adults (Aguilar et al. 2000). In general, however, the research suggests that these adolescents are only mildly pathological. Despite their concerning and provocative behaviors, the risk of adult criminality among this group is low (Loeber & Farrington, 2000; Kratzer & Hodgkins, 1999; Moffitt & Caspi, 2001).

Early Onset Children

Robins (1966) found that children exhibiting CD symptoms before the age of 11 were twice as likely to receive a diagnosis of antisocial personality disorder or sociopathy as adults. Within Moffitt’s sample, fifty-nine (12.9%) boys had childhood histories of antisocial behavior. Thirty-two of these children (7% of the total sample) later self-reported delinquent behavior during adolescence. Moffitt and colleagues point to the life long course of delinquency among these thirty-two subjects and predict that they will

continue exhibiting antisocial behavior into adulthood (Moffitt, 1996). These predictions were later confirmed by a Swedish longitudinal study (Kratzer & Hodgins, 1999) that examined the behaviors of 7,101 males and 6,751 females from childhood to 30 years old. This study found that children who exhibited disruptive behavior during early childhood were considerably more likely to do so as adults.

Moffitt (1993) believes that childhood onset children suffer from neurological impairments as early as infancy. These impairments, she argues, lead to difficult temperament during infancy and will potentially lead to hyperactivity, impulsivity, and verbal deficits as the child ages. In support of this hypothesis, Caspi et al. (1995) demonstrated that ratings for “lack of control” and decreased motor coordination at ages 3 and 5 were good predictors of delinquent behavior during middle childhood and adolescence. Poor performance on the Stanford Binet Intelligence Test was also predictive. Donellan (2000) has provided further support for cognitive deficits by showing that “life course persistent” adolescents are more cognitively impaired than “adolescent limited” adolescents. Among a sample of adjudicated adolescents ($n = 4,065$), Caucasian life course persistent offenders performed more poorly than adolescent limited offenders on 9 out of 12 cognitive subscales from four cognitive batteries [the California Achievement Test (CAT), California Test of Mental Maturity (CTTM), General Aptitude Test Battery, and the Ravens Test of Progressive Matrices]. Hispanic adolescent limited offenders performed significantly better on 6 of the 12 subscales. Interestingly, these results were not consistent among African American subjects.

Impairments in verbal skills are of particular interest to Moffitt because of the theoretical link to impulse control (Caspi et al. 1995). Verbal skills are believed to help

children inhibit behaviors through the use of mental strategies and mediation. In the end, Moffitt believes that the life course persistent child's neurological impairments will cause him/her to become impulsive and uninhibited. It is this trait that will cause the child to be more maladaptive than his/her peers.

Moffitt argues that early neurological deficits typically lead to long-term impairment after they are exacerbated by environmental stressors such as poor parenting, disrupted familial bonds, and poverty. In general, the differences between the life course persistent and adolescent onset children increase and become more global with age. Differences during the toddler years are subtle, but by middle childhood medium effect sizes are found for verbal IQ, reading skills, and hyperactivity (Moffitt, 2001).

Campbell et al. (2000), in a recent review, estimated that 60% of the children who exhibit disruptive behavior during childhood go on to be lifelong offenders (about 6% of the population). It is now generally accepted that early onset children have poorer prognoses than do adolescent onset children. Studies using nine different samples in six different countries have found that life course persistent conduct disorder is more highly associated with cognitive, neuropsychological, and environmental risk factors than is adolescent limited conduct disorder (Moffitt, 2001). Rationales regarding the specific role of cognitive and neuropsychological impairment in the development of conduct disorder, however, are controversial and will be further discussed in the next section of this paper.

Problems with Using Age of Onset to Determine Subtypes

While Moffitt's findings have certainly changed the landscape of conduct disorder research, Loeber & Stouthamer-Loeber (1998) has presented several arguments

to dissuade the common use of the early versus late distinction. First, he notes that the distinction has been notoriously unreliable in clinical settings. Age of onset is typically determined by asking children and their parents to recall previous antisocial behaviors. Not surprisingly, faulty and selective memory is common and problematic (Angold et al. 1996).

Second, Loeber & Stouthamer-Loeber (1998) argue that basing a diagnosis on the onset of a behavior, rather than on a pattern of behavior, is inappropriate. It misrepresents the developmental course of conduct disorder. Life course persistent individuals do not develop conduct disorder in a stepwise fashion whereby a child suddenly begins exhibiting symptoms. Instead, the aggressive and oppositional behavior gradually escalates over time.

Third, the developmental change in the prevalence of aggression during adolescence is similar to, and only questionably more meaningful than, other such shifts during the lifespan. Loeber et al. (1998) have noted that oppositional and aggressive behaviors are common among male preschoolers, much as they are during adolescence. In an Australian study (Kingston & Prior, 1995) one quarter of the children who were aggressive during the preschool years were no longer aggressive by age 8. Thus, Loeber asks, why is an “adolescent limited” subtype more appropriate than say a “preschool only” subtype?

And finally, the early versus late onset distinction makes it easy to forget that 25 to 50 percent of early onset children do not become antisocial adults. In Moffitt’s sample 17 of the 59 children who were diagnosed with conduct disorder as children did not

continue exhibiting antisocial behavior as adolescents (Loeber & Stouthamer-Loeber, 1998; Moffitt, 1996).

Looking at Overlap Thus Far

There are several areas of possible redundancy between the biological and longitudinal approaches. First, most of the adolescent limited children are likely to fall into the Socialized Aggressive or Socialized Non-Aggressive groups. These “socialized” individuals tend to be oppositional and provocative, but they are not emotionally detached. They report feeling less alienated from others and they are emotionally bonded with their families. They also do not show the persistent and extreme aggression that is typically found among the undersocialized aggressive group. Combined findings from physiological and longitudinal studies suggest that adolescent limited subjects look normal on most biological, cognitive, and familial variables.

There is some evidence that the life course persistent children fall into the undersocialized aggressive category. There is one obvious parallel. The biological perspective believes that the undersocialized aggressive group has an underactive physiological system responsible for inhibiting behavior. Moffitt then finds that the life course persistent children show verbal intelligence and motor coordination deficits that are linked with later inattention, hyperactivity, and impulsivity. Thus, biological and neurological/cognitive findings suggest that the undersocialized and life course persistent groups are likely to overlap substantially.

The undersocialized aggressive group is also cruel, predatory, and detached. Interestingly, these traits were discussed extensively by Hewitt and Jackson (1946), but are less emphasized by contemporary researchers. The biological perspective has

theoretically linked predatory traits to an overactive reward system of the brain, and the child's inability to inhibit goal directed behavior when cued to do so. Similarly, Moffitt believes that these traits are a byproduct of impulsivity. Impulsivity, she says, interferes with the development of empathy and moral reasoning. Thus, both perspectives see behavioral inhibition as the primary cause of later predation. This assumption will be further discussed as the work of other researchers is reviewed.

As noted earlier, approximately 40% of the children who show an early onset of conduct disorder do not show a life course persistent pattern. At this point in the discussion we know little about this group.

Conduct Disorder with ADHD: Looking at Comorbidity

The comorbidity of conduct disorder and attention deficit disorder is very common. Jensen (1997) estimated that, among ADHD children anywhere from 42 to 93% are conduct disordered. Conversely, both Moffitt (1990) and Fergusson et al. (1993) found that approximately one quarter of conduct disordered children meet criteria for ADHD.

As the research literature grows, this comorbid group becomes more and more worrisome. Children from this group exhibit aggressive behavior early in life, often by preschool. (White et al. 1994; Loeber & Stouthamer-Loeber, 1998). They have more police contacts, higher rates of offenses, more mental health referrals, and more self reported aggression than "pure conduct disordered" children (Loeber et al. 1990; Moffitt, 1990; Lynam, 1996). They are also often rated as the "child who fights the most" by their school peers (Walker et al. 1987). The comorbid group tends to perform more poorly on

cognitive tests of verbal skills, reading, and memory. In a recent review Hogan (1999) concluded that there is little support for a link between “pure CD” and low IQ, but this link has been found for comorbid children. The comorbid group also has low autonomic arousal, low skin conductance, and poor performance on passive learning tasks (Lynam, 1996). Not surprisingly, prognoses are poor among this group. Comorbid children are at considerable risk for continuing antisocial behavior into adulthood (Magnusson, 1988; Lynam, 1996).

Several authors have now questioned whether the comorbid group is a distinct genetic subtype. Silberg, Rutter, & Meyer et al. (1996) found that the covariation between hyperactivity and conduct disorder among a cohort of children (aged 8 to 11) best fit a model suggesting that these traits were influenced by the same set of genes. This was true for both girls and boys. The authors concluded “that hyperactivity and conduct disorder probably reflect a unitary psychiatric construct in early childhood”. This was not as true for a group of older children (aged 12-16). With this group there was an overlap of genetic influences, but there was also specificity. That is, adolescent conduct disorder and hyperactivity seemed to often be influenced by different genes. This finding further supports the claim that adolescent onset conduct disorder is distinct from childhood onset conduct disorder, and is perhaps less influenced by heredity.

Lahey et al. (1988) found that fathers of the pure and comorbid groups were equally likely to be diagnosed with antisocial personality disorder while the fathers of the comorbid group were significantly more aggressive. Fifty percent of the fathers of this group had been imprisoned at least once by their child’s ninth birthday as compared to

8% of the fathers of the pure CD children. Children who meet diagnoses for both CD and ADHD typically have first order relatives who meet diagnoses for both disorders as well.

Indeed, there has been some debate about whether the ADHD+CD diagnosis should be considered “comorbid” at all. Jensen (1997) reviewed research regarding comorbidity for children with ADHD. He concluded that ADHD+CD children are different from “pure ADHD” children in ways that are not additive. The comorbid syndrome appears to look different in qualitative ways. Lynam (1996), in support of this notion, noted that pure ADHD children show greater difficulties sustaining attention. Thus the hyperactivity of the “comorbid” group may be similar to, but distinct from, that seen in ADHD. This position was in agreement with two past literature reviews (Biederman et al. 1991; Hechtman, 1994). These authors thus support the development of a DSM diagnosis coinciding with the International Classification of Diseases (ICD-10) Hyperkinetic-Conduct Disorder subtype for children showing both CD and ADHD symptoms.

Lynam (1996) believes that the comorbid pattern is an early manifestation of adult psychopathy. He argues that the defining impairment of this pattern is an “inability to inhibit goal directed behavior in the face of environmental contingencies”. In other words, this group is impulsive. They lack the ability to restrain themselves when they desire particular rewards. They perform goal directed behaviors at times when these behaviors are contraindicated. Lynam links this deficit to decreased serotonergic and increased dopaminergic activity in the brain. He argues that if a child has this deficit, only an exceptionally responsive environment can save that child from becoming an adult psychopath.

Looking at Overlap Thus Far

The research suggests that the comorbid group is likely to be identical to the undersocialized aggressive group. Both groups are impulsive and aggressive; both have low autonomic arousal and difficulty with passive learning. Both groups also have poor prognoses. Indeed, we may hypothesize that the 40% of early onset conduct disordered children who desist antisocial behavior during adulthood may be the children who do not fit this category. We still, however, know little about this group who desists.

We are left with some questions, however. The psychopathic personality traits discussed regarding the undersocialized aggressive group continue to be underemphasized among the comorbid and early onset groups. Instead, the focus is on impulsivity. How central are psychopathic traits in these groups? What is the relationship between hyperactivity, impulsivity, and antisocial behavior? And how genetically determined are these traits?

A Typology of Aggression and Aggressive Behavior

In previous sections it has become clear that conduct disordered children can be distinguished in terms of various biological, cognitive, and personality characteristics. Another method that can be used to identify subtypes, however, involves looking at characteristics of behavior. Perhaps there are discrete subtypes of disruptive behavior that will correspond with groups of individuals. Loeber and Schmalting (1985) used this subtyping approach. They conducted a meta-analysis of 22 previous child behavior studies, all of which looked at parent or teacher ratings of disruptive behavior. They factor analyzed 33 different types of disruptive behavior identified in these studies. The

results suggested that disruptive behavior could be conceptualized as unidimensional on a continuum from overt to covert. Overt behaviors such as fighting, temper tantrums, bragging, and swearing tended to covary as did covert behaviors such as stealing, vandalism, and substance abuse. Two later reviews of factor analytic studies (Loeber & Lahey, 1989; Quay, 1986) and a meta-analysis (Frick et al. 1993) confirmed this finding, leading some to question whether the overt versus covert distinction could lead to useful subtypes.

Overt and Covert subtypes have not yet been well defined. Loeber & Stouthamer-Loeber (1998), however, note some potentially important distinctions between these types of behavior. Among normal children, he notes, overt and covert behavior patterns have different developmental courses. Overt behaviors typically decrease as children age while covert behaviors typically increase. Overt and covert patterns may also be related to different causal factors. Overt behavior patterns are likely to develop within conflictual home environments as a result of inconsistent discipline or uninvolved parents. In contrast, Loeber asserts, strict authoritarian parenting, or immoral role models, may be more responsible for the development of covert delinquent behavior patterns.

Interestingly, Loeber also links overt and covert aggression with different subjective and emotional experiences. He refers to Vitiello and Stoff's (1997) distinction between predatory and affective aggression in both animals and humans. This related distinction seems useful and important. Predatory aggression involves low physiological arousal and a subjectively "cold" or unemotional experience. It is highly intentional reward-seeking. Interestingly, Dodge and Coie (1987) found that children with predatory aggressive, but not affective aggressive behavior patterns, were often admired by their

peers. They were often seen as leaders who had a good sense of humor. Predatory aggression is believed to involve specific physiological correlates, including increased cholinergic activity and decreased autonomic arousal. Loeber & Stouthamer-Loeber (1998) similarly notes that covert acts of evasion have been correlated with decreased skin conductance in adults.

Affective aggression, in contrast, is accompanied by a high level of arousal. It is defensive, and is accompanied by intense feelings of anger or fear. Defensive aggression is used to protect against a perceived threat. Dodge and Coie (1987) found that children showing predominantly affective aggression were more likely to misinterpret peers' behaviors as hostile. These children tended to be "hotheaded", reacting defensively and aggressively to ambiguous situations. Children who exhibited predominantly predatory aggression did not have the same biases, nor the same hypersensitivity. Affective aggression in animals is related to the physiological signs of low inhibition/impulsivity that were described earlier (decreased serotonergic and increased dopaminergic activity). As would be expected, McBurnett et al. (1996) found that lowered salivary cortisol, which is an indicator of serotonin activity, was specifically associated with overt aggression but not with covert forms of antisocial behavior.

Loeber associates "overt conduct disorder" with a predominance of affective aggression and covert conduct disorder with a predominance of predatory aggression. It should be noted, however, that overt aggressive behavior can involve either affective or predatory aggression. An overtly aggressive child can be prone to temper tantrums, but he/she can also be a cold, calculating bully in the schoolyard. "Covert conduct disorder" does appear to be more associated with predatory aggression than affective aggression, but

the predatory behaviors of the covert conduct disordered child would be considerably less confrontational (and perhaps less severe) than those of the overt conduct disordered child.

Overt and covert aggressive behavior patterns are also correlated with one another, as are predatory and affective behavior patterns. Thus, subtyping would involve three groups (1) overt aggressive individuals, (2) covert delinquent individuals (3) and antisocial individuals exhibiting both overt and covert behaviors³. Loeber & Stouthamer-Loeber (1998) has found that all three of these subtypes follow a developmental course involving a gradual progression from minor offenses to more serious offenses. Interestingly, Loeber notes that the most persistent criminals fall into two groups (1) those who commit both violent and property offense crimes (overt and covert) and (2) those who only commit property offense crimes (covert).

Looking at Overlap Thus Far

The inclusion of distinctions between overt and covert aggression, as well as affective and predatory aggression, make classification considerable more complex. The number of potential subtypes has now increased. The Covert Conduct Disordered subjects are likely to fall predominantly into the adolescent limited category. These adolescents commit sneaky status offenses such as stealing, skipping school and using drugs. Some Overt Conduct Disordered children may exhibit only affective aggression. This is a highly impulsive and reactive group; it is likely to overlap significantly with the life course persistent and comorbid groups. Another group of children, however, exhibit

³ Compare this to Dodge and Coie's subtyping of Proactive/Reactive, Reactive only, and Proactive only (Dodge and Coie, 1987).

both affective and predatory aggression. These children may be Overt/Covert or simply Overt. This group is very similar to the undersocialized aggressive group. Undersocialized aggression, as noted earlier, is characterized by both impulsivity *and* predation.

Perhaps, at this point, we could identify four hypothetical groups. There is (1) an adolescent limited group which is mildly pathological; (2) an early onset group who is only predatory. This group would be unlikely to show a life long pattern of criminality because they typically have enough self-control to keep their lives relatively intact. They may become exploitive in legal ways, or they may be likely to get away with crimes. Some of these children may go on to be among the most serious property offense criminals described by Loeber, but most will be in the forty percent that desists obvious antisocial behavior; (3) a group of early onset children who are impulsive and show predominantly affective aggression. These children would be classified by Loeber as “Overt Conduct Disorder”. They would not be classified as undersocialized aggressive because they are not predatory, but they are “comorbid”. It is difficult to say if the prognosis for this category would lead them to be life-course persistent or not; and (4) The most severe group would show both affective and predatory aggression. Most of these would be classified by Loeber as Overt/Covert, but some may be Overt. These children would also fit into the undersocialized aggressive, and comorbid categories. This fourth category would be essentially a smaller subset of the comorbid or early onset categories. The prognosis of this group is clearly not good, and it is worth asking whether this group may account for the prognostic severity of the early onset and comorbid groups.

The work of Vitiello and Stoff (1997) has raised an important question regarding the role of predation and its relationship to impulsivity among conduct disordered children. Vitiello and Stoff (1997), like Dodge and Coie (1987), discriminate individuals who are aggressive due to behavioral and affective dysregulation from other individuals who seem to be in control of their impulses, but nevertheless choose to hurt others. Thus, these authors would argue that aggression is secondary to impulsivity only for a less predatory, less behaviorally controlled group of individuals. This distinction challenges the views of previously reviewed authors who believe that behavioral dysregulation is the primary dysfunction of all life course persistent conduct disordered children.

Impulsive Versus Callous/Unemotional: Personality and Genetics

Fortunately, Paul Frick (1992; 1993; 1994; 1999) and his colleagues have begun to look directly at impulsivity and predatory behavior as they have attempted to discriminate subtypes. Like Dodge and Coie, Frick sees impulsivity and predation as separate phenomena. Frick's work is inspired by Robert Hare's work with adult psychopaths. Hare developed a checklist used to identify adults exhibiting what Cleckley (1976) referred to as the psychopathic personality. For Cleckley, psychopathic personality was a very curious disorder because it involved serious impairment that was not easily detected by casual observers. A list of characteristics seen by Cleckley among psychopathic individuals is presented in Table 1. Reid Meloy (1992) later extended Cleckley's theoretical work and aptly defined psychopathy as a "deviant developmental disturbance characterized by an inordinate amount of instinctual aggression and the absence of an object relational capacity to bond" (p. 5).

Table 1

List of Characteristics of Psychopaths from Checkley's *The Mask of Sanity*

-
1. Superficial charm and good "intelligence"
 2. Absence of delusional and other signs of irrational thinking
 3. Absence of nervousness or psychoneurotic manifestations
 4. Unreliability
 5. Untruthfulness and insincerity
 6. Lack of remorse or feelings of shame
 7. Inadequately motivated antisocial behavior
 8. Poor judgement and failure to learn from experience
 9. Pathological egocentricity and incapacity for love
 10. General poverty in affective reactions
 11. Specific loss of insight
 12. Unresponsiveness in general interpersonal relations
 13. Fantastic and uninviting behavior with drink and sometimes without
 14. Suicide rarely carried out
 15. Sex life impersonal, trivial, and poorly integrated
 16. Failure to follow any life plan
-

Hare's checklist consists of two correlated ($r = .56$) factors. The first assesses lack of control, including traits such as impulsivity, irresponsibility, and poor verbal skills. The second factor measures the interpersonal/narcissistic aspects of psychopathic personality including egocentricity, lack of remorse, grandiosity, absence of anxiety, and callousness. Combined, these two factors predicted the postrelease behavior of prison inmates better than DSM IV criteria (Hare, 1991).

Frick et al. (1994) created the Psychopathy Screening Device, essentially a Psychopathy checklist for children. They conducted a principal components analysis using combined teacher and parent ratings on the PSD. The procedure yielded two

factors that replicated Hare's findings with adults. These were labeled the Impulsive/Conduct Problems Factor and the Callous/Unemotional Factor. The Impulsive/conduct problems factor correlates highly with behavioral ratings of conduct problems (average $r = .65$) and it correlates negatively with IQ. The Callous/Unemotional factor has a weaker, yet significant correlation with conduct problem scales (average $r = .38$). The CU factor was also positively correlated with sensation seeking and was negatively correlated with anxiety. These results are nearly identical to those found by Hare with adults.

The relationship between anxiety and the presence of callous unemotional traits is interesting. Frick et al. (1999) found that conduct disorder is generally positively correlated with trait anxiety. This correlation, however, is tempered by the presence of callous unemotional traits. Thus, callous unemotional traits are negatively correlated with trait anxiety when conduct problems are controlled, and the positive correlation between conduct problems and trait anxiety increases when callous unemotional traits are controlled. Consequently, children who have both impulsivity (conduct problems) and callous unemotional traits tend to be more anxious than non-conduct disordered children, but less anxious than conduct disordered children without callous unemotional traits.

Christian et al. (1997) assessed a sample of conduct disordered boys ages 6 to 13. They compared a group of children who scored high on both factors (labeled psychopathic children) to another group who were rated high on only the Impulsive/Conduct Problems factor. Despite having higher intelligence and lower anxiety, the psychopathic group were more severely delinquent than were the impulsive group. They met more ODD and CD criterion, they scored higher on the Aggression and

Delinquency scales of the Child Behavior Checklist, and they had had more contacts with the law (though this was a nonsignificant trend) than did the impulsive group. The psychopathic group were also more likely to have a family history of Antisocial Personality Disorder, while the impulsive children did not differ from non-conduct disordered children on this variable. These findings are consistent with Cleckley's description of the psychopath as intelligent, and with Lahey et al's (1995) finding that children with high IQ scores and parents who have APD are most likely to persist with criminal behavior into adulthood. Interestingly, the psychopathic and impulsive groups did not show any difference on age of onset. The mean age of the sample was 8 with a standard deviation of 2. The vast majority of the sample would be deemed early onset using DSM-IV's standards.

In another study, Wootton et al., 1997 found that psychopathic elementary school children (those high on both conduct problems and the callous unemotional factor) seemed immune to maternal parenting factors. The severity of impulsive conduct disordered children's behavioral problems tended to negatively correlate with mothers' reports regarding the quality of maternal supervision, involvement, and disciplinary practices. No association between these variables and behavioral problems, however, were found for children who scored high on both factors. Frick believes that children with callous unemotional traits develop behavior problems via a different etiological path than do non-callous conduct disordered children. Specifically, he proposes that children high on CU have a genetically inherited temperament style that makes them low on fearful inhibitions (anxiety) and makes them less susceptible to punishment (Frick & Jackson, 1993). Thus, these children are impacted little by parental disciplining. Frick

believes that this temperament style prevents proper moral development and thus leads to interpersonal narcissistic traits (lack of empathy, lack of guilt, and grandiosity). Conduct disordered children who are impulsive but do not have callous/unemotional traits, conversely, are highly sensitive to parental interactions. They do not have the family history/genetic link. Thus their difficulties are largely the result of maladaptive parent-child interactions. These hypotheses will be further discussed in the next section of this paper.

Summary - A Final Look at Subtype Overlap

Frick's work is highly consistent with the hypothetical four subtypes proposed thus far. The work of his lab has added some important descriptors to these subgroups. We should list them once again. (Subtype A) There is the adolescent limited group (Subtype B) Frick found a group that scored high only on factor two (callousness), but not on conduct problems. This is the predatory only group described above. Frick does not look closely at this group, and it has not been discussed much in the literature. We may hypothesize that many of these children do not go on to be convicted criminals. The degree of dysfunction in their later lives, and in their relationships is unknown. (Subtype C) There are children who scored high only on factor one (impulsivity). These children are impulsive but are not predatory. They are the subset of comorbid children who exhibit affective aggression. Interestingly, these children tend to be more anxious than non-conduct disordered children. They also tend to have greater intellectual impairments. They are no more likely to have antisocial parents than are non-conduct disordered children. Thus, we might hypothesize that this category of disorder is not highly

heritable. Indeed, these children tend to be highly sensitive to environmental factors. (Subtype D) Then there are the children who are both impulsive and psychopathic. These children are unresponsive to the environment. They show no obvious intellectual impairment and decreased anxiety. These children are also more likely to have antisocial parents. These are the undersocialized aggressive children with the worst prognoses.

Future Directions

There is considerable heterogeneity within the diagnosis of conduct disorder. The body of research that has detailed different subtype discriminations has been extensive and impressive. This research, however, seems to have focused primarily on prognosis in terms of criminal offenses. As a result, the life course persistent criminal offender is becoming the most highly studied and highly understood group. Other groups such as the adolescent onset or the non-“comorbid” groups have inspired less interest. This is unfortunate because, though fewer children from these groups are likely to become career criminals, the study of these groups may help us to better understand the developmental course of other psychiatric disorders, such as personality disorders.

Another area for potential growth is a focus on personality traits seen within different subtypes. Our current literature looks closely at biological, cognitive, and behavioral attributes, but does not look closely at the emotional lives of these children. One would expect the study of emotional variables such as sadism, empathy, and grandiosity could make the distinctions between subtypes more clear and meaningful.

Girls

Researchers are becoming increasingly curious about the associations among gender, aggression, and conduct disorder. Curiously, during the first five years of life levels of aggression do not differ between boys and girls. By age 5, however, girls' levels of aggression decrease and aggression in boys remains the same. During the elementary school years boys are four times more likely to become behaviorally disruptive than girls. This ratio remains stable until adolescence, when antisocial behavior increases for both boys and girls. The increase in antisocial behavior is greater for girls than for boys. Thus, during adolescence the amount of non-aggressive antisocial behavior among boys and girls is approximately equal.

Is adolescent onset conduct disorder particularly prevalent among girls?

Silverthorn and Frick (1999) do not think so. They reviewed research taken from psychiatric and adjudicated samples and found that conduct disordered girls looked more like early onset boys than adolescent onset boys. These girls tended to be impulsive, they had cognitive deficits, and poor prognoses. The authors thus argue that girls who exhibit conduct disorder tend to be severely impaired, despite the adolescent onset. They believe that hormonal and social factors cushion girls during childhood and prevent the disorder from being expressed. The beginning of adolescence then is a difficult stage both biologically and socially for girls. Consequently, the problems are seen with full force during this time. Silverthorn and Frick termed this purported female subtype "delayed onset" conduct disorder.

Moffit and Caspi (2001) disagree with the above interpretation of the data. They argue that it is rare for females to exhibit life course persistent conduct disorder (10 to

one ratio of males to females). Adolescent conduct disorder, on the other hand, is common in females and is very similar to that found in males. To support this argument these authors presented data from 6 life course persistent females and 78 adolescent onset females from their longitudinal sample. Indeed the adolescent onset females looked very similar to the adolescent onset males on social, personality, and cognitive variables. Their functioning was considerably higher on these variables than that of the life course persistent boys. The authors argued that Silverthorn and Frick's (1999) different interpretation was due to their perusal of studies with clinical and adjudicated samples. They argue that the samples in these studies are likely to be filled with the rare cases of life course persistent female offenders. While this explanation seems plausible, the developmental course of female conduct disordered children and adolescents is likely to become clear only after future discussion and study.

A Closer Look at Causal Factors

Now that some hypothetical subtypes of conduct disorder have been described, suspected causal factors will be briefly reviewed. Attempts will be made, where possible, to discriminate different causes for different subtypes. Unfortunately, however, most of the research on causal factors has ignored subtype discrimination.

Adolescent Onset Conduct Disorder

The research just reviewed suggests that adolescent onset conduct disordered children may be indistinguishable from normal children up until the preadolescent years. These children do not face the familial, genetic, cognitive, and neuropsychological risk

factors that are commonly faced by early onset children. What then accounts for the sudden onset of antisocial behavior? Moffitt et al. (1996) argues that adolescent onset children mimic their childhood onset peers. They do so, Moffitt explains, because they envy the freedom that delinquent children seem to enjoy. Adolescents are at a difficult point in their lives, she says. They are biologically thrust toward adulthood but are unable to enjoy the rights and privileges of adult status. Moffitt refers to this dilemma as the “maturity gap”.

Thus, according to this theory, the drug use, truancy, and disobedience of this group is an expression of their desire to quickly attain the freedom of adulthood. It is important to note, however, that most of the antisocial behaviors committed by this group are strikingly un-adultlike. Among adults, stealing, breaking and entering, using illegal drugs, and vandalism are all activities that are often attributed to a “failure to grow up”. Moffitt’s theory diverges from other theories of adolescence, such as those of Erikson (1968), Blos (1979), and Kaplan (1984). These authors believe that adolescent antisocial behavior signals an attempt to break free from the parents, despite strong feelings of ambivalence. The adolescent vehemently rejects the parents, and the adult culture, in order to overcome unconscious desires to remain dependent. According to this model, delinquent behavior is an expression of both parts of the adolescent’s ambivalence. It both expresses a pseudo-independence/rejection of adult culture, while it slows the adolescent’s progression toward adult responsibility.

These authors would argue that adolescent limited conduct disorder involves an expression of ambivalence about becoming an adult, rather than a frustrated wish to do

so. There is little clear empirical data to resolve this disagreement, but the issue is interesting and clinically important.

Childhood Onset Conduct Disorder

Causal factors for childhood onset conduct disorder have been studied extensively, and will be reviewed only briefly. Detectable signs of this subtype have been found as early as the preschool years, thus the focus of this review will be primarily on factors operative within the first several years of life.

Genetic Factors

Conduct disorder and criminality tend to “run in families”; this observation is not controversial. As Frick (1993) points out, three different laboratories, using different assessment techniques, have found that approximately 40% of conduct disordered children have parents diagnosed with antisocial personality disorder (Stewart et al 1980; Beiderman et al, 1987; Faraone et al, 1991; Lahey et al., 1988). In recent years, some researchers have begun to attribute this intergenerational transmission to genetic factors rather than parenting. Frick (1993) for example, noted that studies demonstrating the predictive value of family functioning above that of parental criminality were typically conducted with adolescent subjects rather than with exclusively child onset subjects (Farrington, 1978; McCord, 1979; and Laub & Sampson, 1988). When using a callous child-onset sample, Frick et. al. (1992) found that mothers’ reports about their parenting practices did not contribute to the prediction of conduct problems after parental APD was controlled. In this study, the antisocial parents were typically fathers, 54% of whom did not live in the child’s home. As noted earlier, among the early onset children only the

callous/unemotional children have an increased percentage of antisocial parents. The impulsive only group did not differ from normals on this variable. Frick thus concludes that, for the conduct disordered group with callous/unemotional traits, the causal pathway is primarily genetic.

Frick hypothesizes that callous/unemotional traits cause children to be less susceptible to environmental impact. Even when this premise is accepted, however, it does not necessarily follow that callous/unemotional traits are genetically determined. Callous/unemotional traits may be strongly influenced by early parent child interactions. Other findings raise doubts about the purported nearly exclusive role of genetic factors, even for the callous/unemotional group.

In recent years, some large twin studies have emphasized genetic effects, but results have been inconsistent. Over the past ten years heritability (h^2) estimates from twin studies have ranged from .03 (Schmitz et al, 1994, referenced from Siminoff, 2001) to .81 (McGuffin & Thapar, 1997 referenced from Siminoff, 2001). This variability may be largely due to the heterogeneity of the conduct disordered population. Twin studies in general have found a greater genetic effect for aggression as opposed to delinquency (status offenses) (Edelbrock et al, 1995). Piffner (1999) also found a greater genetic effect among CD + ADHD children. These studies suggest that genetics may play a greater role in the development of aggressive life-course -persistent conduct disorder, which would explain why heritability is higher for adult antisocial personality disorder as compared to child and adolescent conduct disorder.

Twin studies, however, are unable to detect gene-environment interactions (Siminoff, 2001). This may cause heritability estimates to become inflated. For example,

a child who shares genetic vulnerabilities with a parent will be more likely to receive suboptimal parenting, and will be more vulnerable to parenting failures. Conversely, a conduct disordered child may evoke coercive or hostile parenting practices in parents who are genetically predisposed toward hostility. In twin studies, both the environmental and genetic components of these interactions will increase heritability estimates.

Adoption studies, on the other hand, are able to disentangle these separate interacting influences. These studies have typically yielded lower heritability estimates (Siminoff, 2001). One Swedish study (referenced in Siminoff, 2001) found that adoptee children had a 6.7% chance of adult criminality when only an adoptive parent had a history of criminality, a 12.1% chance when only a biological parent had such a history, and a 40% chance when both biological and adoptive parents had criminal histories. In a separate study, Cadoret et al. (1995) found that both the biological parent's criminal history and the adoptive parent's psychopathology had independent contributions to the development of antisocial personality disorder in children. Adverse rearing, at times, had an impact in the absence of genetic risk factors. Thus, both of these studies examined the development of *life course persistent* criminality. Both confirmed the role of combined genetic and environmental impact. There has not yet been a study, however, that has assessed the relative impact, and the interaction of, genetic and early environmental factors specifically with callous/unemotional children.

Temperament

Some researchers suspect that the genetic vulnerabilities of life course persistent children are expressed through neuropsychological impairment (Moffitt, 1996; Lynam, 1990; Quay, 1999). As noted previously, Moffitt believes that this impairment typically

causes children to have a “difficult” temperament (Moffitt and Caspi, 2001). “Difficult temperament” refers to tendencies toward negative emotionality and low manageability during infancy. In support of this argument, Guerin, Gottfried, & Thomas (1997) found that difficult temperament at one year of age predicted parents’ reports of externalizing behavior problems between the ages of 3 and 12. Sanson et al. (1993) analyzed data from the Australian Temperament Project and found that children who later exhibited CD + ADHD were more active, irritable, and difficult to manage during infancy than were pure CD and pure ADHD children. After reviewing the literature, Sanson and Prior (1999) concluded that the temperament factors most indicative of later conduct disorder were irritability and inflexibility.

The research assessing the link between difficult infant temperament and conduct disorder during childhood, however, has been inconsistent. Belsky et al (1998) failed to find a direct relationship between negative emotionality at 12 and 13 months and behavior problems at three years old. Likewise, Aquilar et al. (2000) used a twenty-year longitudinal sample of high-risk families from the Minnesota High Risk study. Fifteen different measures of temperament style were obtained using five different scales and surveys (Nurses’ Rating Scale, Brazleton Behavioral and Neurological Assessment, 3 month feeding, Carey Infant Temperament Scale, & EASI Temperament Survey). All of these measures were obtained between birth and two years of age. Life Course Persistent subjects did not score significantly higher on any of these measures when compared to either Adolescent Limited offenders or to subjects who were never antisocial. These researchers also administered early cognitive measures such as the Bayley Scales of

Infant Development, the Zimmerman Preschool Language Scale, and the Wechsler Preschool and Primary Scale of Intelligence (WPPSI) to subjects at differing points between infancy and age five. The life-course persistent group did not score lower on these measures when compared to either the adolescent limited or the non-antisocial groups.

Findings become more consistent as the mean ages of samples increase. This is demonstrated through several findings from the Australian Temperament Project. Kingston & Prior (1995) looked at stable versus time limited aggression. They found no significant differences during infancy, but the stable aggressive group showed signs of difficult temperament from the age of 2-3 on. Similarly, children who were aggressive at the ages of 11-12 had more temperament risk factors during infancy, but only became significantly different from normal children by the age of 3. Overall, the evidence for temperament factors is considerably stronger and more consistent when measurements are taken during the preschool years rather than during infancy. This, however, does not prove that temperament effects are not, in part, genetically determined. Michael Rutter (2001) addresses this question directly. He argues that genetically influenced characteristics (such as language) often take time to develop. They may not be operative until well after the first several years of life.

In fact, several authors have argued that the disruptive behavior of life course persistent conduct disorder children begins with genetic constitutional characteristics of the child. Lytton (1990) and Lynam (1996) both contend that parenting variables have been overemphasized, and are less of a contributing factor than is commonly believed.

These authors acknowledge that parenting problems are consistently associated with conduct disorder (Campbell, 1990; Greenberg et al, 1993; Patterson et al., 1989; Webster Stratton, 1990; Loeber & Southamer-Loeber, 1986; Rothbaum & Weisz, 1994). They argue, however, that these problems are likely to be attributable to “child effects”. That is, the child’s temperament and neuropsychological deficits make parenting more difficult, and thus lead to parenting problems (see Mekos et al., 1996, O’Connor et al., 1995, Dodge (1990), and Wahler (1990) for further debate). Supporting this theory, Barklay & Cunningham (1979) found that mother-child interactions were nearly normalized after children were treated for disruptive behavior with stimulant medication, whereas parent training had a more modest effect on parent child interactions. Anderson, Lytton, and Romney (1986) found that mothers of CD children did not exhibit more negative reactions, as compared to non-CD mothers, when interacting with a non-CD child. Studies such as these have led many authors to wonder about the CD child’s contribution to familial and parenting difficulties. Perhaps maladaptive parenting is an effect, rather than a cause of conduct disorder.

Other evidence, however, has not supported a primary role for child effects. Bates et al (1991), in their Bloomington Longitudinal Study, found that resistance to control and low manageability during infancy was a weak predictor of later disruptive behavior disorders if these variables were unaccompanied by disrupted parenting. In the Australian Temperament Project data set (Sanson et al, 1993), difficult temperament was invariably accompanied by a number of familial and social risk factors. The mother-child relationships of the aggressive children were poorer than those of the normal

children throughout their lives. Their mothers tended to view them more negatively, even during infancy. In addition, the families of these children had more severe social stressors, such as lower SES, domestic violence, and unemployment. Similarly, while Aquilar et al (2000) did not find evidence of early cognitive or temperament variables, they did find that life course persistent subjects were distinguished from adolescent limited and non-antisocial children by family stress indices assessed during the child's first three years. These indices included mother's level of stress, the quality of social, emotional, and cognitive support available in the environment (assessed through the Home Observation for Measurement of the Environment HOME), and a composite of risk factors related to the child's environment. In general, the life course persistent children experienced more physical abuse and neglect before the age of three than did adolescent onset and normal children. If temperament and cognitive differences were insignificant at this time, it is unlikely that they could be strong enough to elicit significant abuse and neglect. Thus, these findings seriously call into question the "primary child effects" interpretation of the data.

Overall, there is considerable evidence that both constitutional and environmental factors play major roles in the development of conduct disorder. The interplay of these two forces are likely to vary from individual to individual (Dodge, 1990 ; Wahler, 1990). In a review of the literature Sanson and Prior (1999) conclude that data supports a "transactional" rather than purely "child effects" or "environmental" model. According to this model temperament risk factors lead to serious behavioral difficulties when they are in the context of familial and social risk factors.

Parent-Child Relationship

As previously noted, research has consistently shown that CD children have problematic interactions with their parents. The problems within parent child relationships are global, and include factors such as parental negative affect, hostile attributions, neglect, intrusiveness, and inconsistent punishment (see Carlson et al., 1999, Campbell et al, 1995, & Campbell, 2000 for reviews). Despite considerable debate, this literature has led some researchers to conclude that parenting is the most essential predictor of later aggression (Denham et al, 2000).

Attachment

To date, attachment style has been the researchers best tool for assessing the quality of the parent child-relationship. Attachment reflects the caregiver's ability to facilitate the child's management of distress. The caregiver achieves this by responding in an attuned and appropriate manner to the child's displays of affect. This is a natural but complex skill. Responsiveness will be easier or more difficult depending on the child's temperament and socioeconomic stress factors. Regardless, effective responsiveness, and the resulting security of attachment, is believed to be crucial in the child's development of emotional regulation and the ability to form intimate relationships. CD is often characterized by a lack of development in both of these areas. Thus, one would expect early attachment be a good predictor of later conduct problems.

Infant attachment style, like temperament, is more predictive of later disruptive behavior when coupled with other risk factors. Studies using convenience samples from low risk populations, typically fail to predict later behavior problems using attachment

style (Deklyken & Speltz, 2001). Among infants from high risk environments (low socioeconomic status, multiple family stressors), however, “disorganized attachment” appears to be a significant predictor of later disruptive behavior. This attachment style is believed to result from a pattern of frightening interactions with a caretaker. Infants who are categorized as disorganized interact with their caregivers in an awkward, inconsistent, and unusual manner. They vacillate between clinging and ostensible disinterest in the caretaker, and they exhibit odd behaviors such as freezing or slow “underwater” movements. Overall these children seem uncomfortable around the parent, and they seem reluctant to go to their parent for support and comfort (Lyons Ruth, Bronfan, & Atwood, 1999). This is a particularly pathological relationship pattern, found in less than 10% of children assessed (Lyons-Ruth and Block, 1996).

There has been some clear evidence demonstrating a relationship between disorganized attachment and later disruptive behavior. Lyons-Ruth et al (1996) found that preschoolers with highly hostile behavior were six times more likely to be classified as disorganized rather than secure during infancy. Shaw and colleagues (Shaw & Vondra, 1995; Shaw et al., 1996) found that six out of ten children classified as disorganized showed clinically elevated ratings of aggressive behavior at ages 3 and 5. Similarly, Vondra et al (2001) found that disorganized attachment at 12 and 18 months predicted poorer emotional and behavioral regulation at 3.5 years. Positive results for infant attachment, however, have typically been found only with boys and only in low socioeconomic environments (Deklyken & Speltz, 2001).

Some risk factors that serve as context variables for attachment studies include familial stress, poverty, cognitive variables, and temperament variables. When in the context of these other risk factors, attachment has been a more robust predictor of later conduct problems. The Minnesota Mother-Child Project (Erickson, Sroufe, & Egeland 1985) assessed children in high risk, low socioeconomic environments. They found a significant correlation between avoidant attachment and externalizing behavior problems in boys at age 5 and between 7-8 years of age. Lyons-Ruth Easterbrook, & Cibelli (1997) found that a combination of low infant intelligence and insecure attachment was highly predictive of teacher-rated externalizing problems at 7 years old. Neither of these factors were predictive alone. Similarly, Shaw & Winslow (1997) found that disorganized children who exhibited difficult temperament at 2 years of age, typically later fell into the 99th percentile for aggression. Neither of these factors, in isolation, discriminated these children from normal children.

Recent studies have suggested that attachment style is often unstable during first five years of life. A inconsistent style of attachment during this time period tends to be related to other risk factors. Typically, children from at risk environments are susceptible to becoming less securely attached as they approach toddlerhood (Vondra et al, 2001). Vondra et al (2001) found that infants from high-risk environments rarely remained within the same attachment category from 12 months through 18 months and into 24 months (though some of this variability may be due to different classification schemes). Infants also often have different attachment styles when assessed with different caretakers (Fox, Kimmerly, & Schafer, 1991). Both DyKlyen et al (1998) and Suess et al

(1992) found that children who were insecurely attached to both parents were more likely to show later externalizing problems than were those who were insecurely attached to only one.

Several authors have studied the development of attachment behavior over time. Crittendon (1992) has noted the increased complexity and mutuality of the parent-child relationship as the child enters preschool. She notes that children play a more active role during the preschool years in summoning needed attention from the parent. Securely attached preschoolers begin communicating more directly with their parents, and become more likely to initiate play. Insecurely attached preschoolers will use more problematic methods of summoning the parents' attention and affection. They may display only positive emotions in order to please the parent (labeled the defensive style) or they may try to engage the parent forcefully through coy, conflictual, or threatening behavior (labeled the coercive style). Vondra et al (2001) found that both of these insecure preschool attachment styles, when assessed at 24 months, were good predictors of externalizing problems at 3.5 years. In this study, infant attachment classifications at 12 and 18 months were not associated with later externalizing behavior.

During the preschool years, the "coercive" style of attachment⁴ is the strongest indicator of potential future externalizing problems. Two longitudinal studies (Main & Cassidy, 1988; Wartner et al, 1994) have noted a shift in the behavior of disorganized children as they begin preschool. In these studies, children ceased to act in a chaotic and

⁴ The coercive group is roughly equivalent to the "controlling" classification of the Cassidy Preschool Assessment System.

confused manner in interactions with the caregiver. They begin to actively coerce their parents to attend to them. While these studies are promising, more evidence is needed to determine whether this developmental course is common. In general, predictions from preschool attachment to early school externalizing problems have been more robust than studies predicting from infancy (Vondra et al, 2001; Fagot and Pears, 1996).

Preschool attachment studies, like infant attachment studies, make better predictions when attending to the context of other risk factors. Vondra et al (2001) found that behavioral and emotional regulation ratings explained variance in the prediction of later externalizing behavior above and beyond that explained by attachment classification. Greenberg et al (2001) found that insecure attachment only weakly discriminated a clinical externalizing group from a normal group, even if it was combined with child vulnerabilities such as IQ, developmental history, or birth complications. Attachment, however, became a strong discriminator when it was combined with measures of parenting practices or family adversity, and attachment added discriminative power to both of these variables.

Parental Responsiveness

Since attachment style is believed to be the result of parental responsiveness, it seems worthwhile to look at responsiveness directly. Several authors have done this. Two critical studies looking at parental responsiveness during infancy were conducted by Martin (1981) and Shaw et al (1994). Martin (1981) used a middle class sample. He found that both attention-seeking behavior and a lack of contingent responding by mothers, predicted noncompliant child behavior at 22 months and coercive behavior at 42

months (for boys only). Shaw (1994) replicated Martin's study using a sample from a low income, high risk setting. He found that a lack of maternal responsiveness at twelve months correlated with increased aggression at 24 months. In fact, 12 month lack of responsiveness, 12-month infant-persistence (attention seeking), and 18 month infant non-compliance all contributed to the prediction of 24 month aggression. Thus, these studies continue to support the transactional model for the development of CD.

Aggression at 24 months was by far the best predictor of later aggression. Neither responsiveness nor temperament could provide predictive power over and above this variable. This would support the notion that aggression, once it fully develops, begins to take on a life of its own. Early risk factors may lead to relationship patterns that involve hostility and coercion. These patterns then become entrenched. They determine, in part, others' reactions to the child, and thus cause the child's environment to become more pathogenic. The relationship between the disorder and these early risk factors thus appears to become less direct over time.

Wahler and Dumas (1989) have examined the relationship among parental responsiveness, behavior disorders, and contextual factors surrounding the parent. Contextual factors include socioeconomic conditions, the marital relationship, the child's history of disruptive behavior, and any other stressors surrounding the immediate parent-child interaction. Wahler (1996) is interested in the ways that contextual factors make parental responsiveness more difficult, even for parents who have received training in parenting skills. Wahler looks at the influence of context on the parent's perception and responses. He found that some parents were more negatively influenced by contextual

factors than others. Some parents were able to use and attend to contextual factors in order to respond to their child appropriately, while others were disrupted by them. For some parents, outside factors could “spill over” into interactions with the child and interfere with appropriate responsiveness. For example, if a parent has just finished having an angry argument with a bill collector, he might misinterpret his child’s laughter during play as hostile. He may thus react to the child in an inappropriate angry manner. In other situations the parent may not attend to the context enough. In these cases the parent may respond to the child with “perseverating responses”, meaning that the response to a particular class of behavior is the same every time without appropriate attention to changing contextual factors.

Wahler’s perspective is consistent with current attachment and temperament research. Research in both of these areas points to socioeconomic and familial stressors as powerful mediating factors in the development of conduct disorder. Wahler’s theoretical notions describe how the interaction of these variables may play out at the level of specific parent-child interactions. This perspective is also consistent with the transactional model, where both the parent and the child effect the behavior of one another. Wahler’s system looks at this process at a molecular level. He, for example, recognizes ways that prior behaviors of the parent or child can play an important role in determining behavioral exchanges in the present. In one study, the mothers of conduct disordered children were found to be less directive and limit setting with their children following episodes where the child was involved in friendly social activities. This inhibition was not found with parents of normal children (Wahler et al, 1996).

Interestingly, Wahler measures the coherence and complexity of parents' personal narratives in order to assess their ability to appropriately attend to context. This is an assessment practice that has been used by attachment theorists who use the Adult Attachment Interview (Van Ijzendoorn, 1996). Fonagy et al. (1991) found that this measure predicts the attachment security of the child, even when the parent's coherence is assessed before the child's birth. Thus, both Wahler and Fonagy see the parent's well being and mental health as important variables contributing to the developmental path of the child.

Parental Discipline

Patterson (1992) has studied the parent child interactions of conduct disordered children extensively. He found a consistent pattern of interaction present by the preschool years. This pattern has been termed the "coercive cycle". The coercive cycle involves a child's aversive and disruptive responses to the parent's demands. Patterson found that parents of conduct disordered children often retract demands or limits imposed when they are faced with escalating aversive behaviors. This tendency to "give in" negatively reinforces the child to misbehave. As a result, disruptive behavior increases and becomes a means of gaining control over the parent. Gardner (1989) supported this theory, finding that parents of conduct disordered children were eight times more likely to capitulate when faced with children's aversive behavior as compared to the parents of non-conduct disordered children. According to the coercive cycle theory, when parents fall into this cycle they often see themselves losing control of their child and at times resort to harsh, but inconsistent limits. The result is inconsistent parenting that is at times

too permissive and at other times overly harsh. A number of studies have supported this theory, showing that both harsh and inconsistent parenting behavior tends to be associated with antisocial behavior in children (Patterson, 1986; Forgatch, 1991; Conger, 1995).

Other Characteristics of Parents

There have been other studies that have looked at interesting parenting variables, such as the emotional tone of the child-parent relationship. Pettit, Dodge, and Brown (1988) found that children's aggression was related to the mother's tendency to make hostile attributions regarding their own children. Dehnham et al (2000) found that mothers' reports about their own level of hostility on the Buss-Durkee Hostility Inventory were a powerful predictor of later externalizing behavior among children who were aggressive at 5 years old. Interestingly, hostility had less of an effect for children who were not already aggressive at 5 years old. Renken et al (1989) found that while avoidant attachment in infancy only predicted later aggressive behavior in boys, maternal hostility at age 3.5 predicted later externalizing problems in both genders. Greenberg et al (2001) found that the 28-item Parent Questionnaire, which assesses harshness, effective discipline, and warmth in caregivers was a more important discriminator between conduct disordered and normal children than was children's IQ, attachment status, developmental history, or familial stress factors.

Summary and Future Directions

The research reviewed, unfortunately, rarely separated the conduct disordered samples into groups and subtypes. In studies where this was done, higher and more consistent correlations were found among the life course persistent, aggressive, and comorbid children regardless of the risk factors reviewed. This finding is not surprising. It suggests that life course persistent conduct disorder is a very serious type of psychopathology that is not typically the result of subtle or specific risk factors. In most cases, these children have been bombarded with multiple risk factors that make normal development difficult.

Twin and adoption studies suggest that there is a genetic component that contributes to the development of early onset conduct disorder. The expression of this genetic component is still unclear. Many conduct disordered children may be biologically more active, and less tolerant of negative affect. This may lead them to become more irritable, inflexible, and difficult to manage than most children by the preschool age. This review, however, does not suggest that irritability and low manageability naturally lead to conduct disorder. Rather, the child's developmental path is likely to be highly dependent on the adequacy of the environment. The data suggests that children with responsive caregivers, who are not in highly stressed environments, do not typically develop life course persistent conduct disorder. Thus, researchers are beginning to believe that the developmental course of conduct disorder is best seen as transactional. The causes cannot be located in the child, in the society, or in the parent. Rather, developmental psychologists need to look at the interaction of all of these variables.

Researchers are already beginning to do this. Fortunately, multivariate statistical techniques now allow researchers to look at the relationship among numerous different variables.

Among clinicians, the transactional development of conduct disorder is often understood in terms of a developing parent child relationship. That is, over time the attributes of the child and parent within a societal context leads to the development of a particular type of relationship beginning early in life. This relationship then sets the stage for the child's interactions with others. This interpretation is not inconsistent with the data. The literature suggests that there is a fair amount of plasticity during the first several years of life, when quality of the parent child relationship is still not quite set. During the first several years of life, attachment quality is often in flux and the child's characteristics are not yet highly predictive of later problems. This can be seen as a time when the parent and child are still becoming acquainted, and the quality of the parent child relationship has not yet been firmly established. In situations where the child is difficult to manage, where the family is highly stressed, and where the parent has emotional vulnerabilities, this period of bonding does not go well. Both the parent and child are awkward and unnatural. The child is reluctant to use the parent for soothing and comfort. Thus, the disorganized attachment style, which is predictive of later externalizing behavior, develops.

Interestingly, during the preschool years, there may be a shift from an awkward, uncomfortable parent-child relationship to one where the child has developed considerable control over the parent. Both the parental discipline and the attachment

literature suggest that conduct disordered preschoolers have coercive relationships with their parents. The child keeps the parent engaged through disruptive, attention seeking, and coy behavior. The child also avoids demands and receives rewards through the use of aversive and disruptive behavior. If this hypothetical shift is validated, it would be helpful to understand the psychodynamics involved. In what ways, and to what extent is the child's desire to be in control related to the reluctance and mistrust seen among infants with disorganized attachment?

Overall, the research seems to demonstrate how various variables can coalesce to create an interpersonal pattern that gains momentum and becomes more entrenched over time. While many variables are involved in the development of a conduct disorder relationship pattern, once that pattern is formed it is the best predictor of future aggression. Thus, while conduct disordered children appear to be sensitive to many environmental variables early in life, they appear to become less so as the disorder persists. This sobering fact has led many to look for intensive and at times very intrusive methods of treatment. It seems naïve to believe that small changes in a child's environment will dislodge him from an interpersonal pattern that becomes ingrained by the preschool years. Perhaps we need to develop environments that are carefully designed to address the conduct disordered child's difficulties. This has historically been the rationale of the milieu therapy proponents that will be discussed in the next chapter.

CHAPTER 2

LITERATURE REVIEW PART 2

Residential Treatment of Externalizing Children and Adolescents

Historically, conduct disordered children have often been treated in residential treatment centers. Some of these centers have provided a very intensive treatment method, called milieu therapy, that is designed to radically alter personality. The evolution of this method over the past eighty years has been interesting, and continues to be relevant in the treatment of conduct disordered children. This chapter will review some of the theory and rationale behind milieu therapy. The theory has been psychoanalytic, and the focus has been on the internal and unconscious experience of conduct disordered child. Thus, this chapter will look at conduct disorder from a very different perspective than that taken in Chapter 1. This chapter will attempt, where possible, to reconcile the conclusions made by psychoanalytic and empirical investigators.

Wayward Youth

August Aichhorn was one of the fathers of the milieu treatment movement. In 1925 he wrote *Wayward Youth*, a seminal book about his work as director of Oberhollabrun, a Viennese institution for delinquent children. Freud wrote the foreward for this book, and it was very influential. Aichhorn developed a psychoanalytic rationale

for milieu therapy that would later be adopted and revised by authors such as Bruno Bettelheim, Fritz Redl, and Donald Rinsley.

In the first half of *Wayward Youth*, Aichorn describes delinquency in terms of conflict between libidinal wishes and parental/societal prohibitions. Initially, he barely discriminates between delinquency and the other expressions of neurotic conflict discussed by Freud. Aichorn uses case studies. For example, he describes an eighteen-year-old boy who refuses to work, is cruel to his sister, and steals money from his mother to buy candy. This boy's father died when he was very young and he was raised in a family full of females. Aichorn examines the particulars of the boy's life and concludes that he is having difficulty negotiating emerging sexual desires due to a strong feminine identification and the absence of a significant male role model. Aichorn looks at a handful of other cases that involve psychological conflict, trauma, and thwarted development. He describes how an individual's history, personality, and family variables can coalesce to make individuation and sexuality difficult during adolescence. When this occurs, he posits, delinquent behavior often becomes part of a struggle with complex developmental tasks.

Curiously, most of Aichorn's case examples were seen in private practice, rather than in institutions. All but one exhibited "adolescent limited" delinquency. These patients suddenly and unexpectedly began exhibiting antisocial symptoms during preadolescence or adolescence after a childhood of seemingly normal adjustment. Recent surveys suggest that less severe, adolescent limited cases are probably uncommon in current residential treatment programs (Wells, 1996). Residential treatment is expensive, and is typically only used after less drastic measures are exhausted. Thus, the case

examples presented by Aichorn are good illustrations of the complexity of adolescent limited conduct disorder, but are probably not reflective of the types of pathology currently seen in residential treatment centers.

During the second half of the book, Aichhorn does discuss treatment resistant children. He evaluates them in terms of Freud's model of ego development. According to this model, the psyche, during infancy, is dominated by desire. The infant desires stimulation and immediate relief from frustration. In Freud's terms, the infant is ruled by the "pleasure principal". Over time, the infant gradually becomes more accustomed to its environment. If environmental conditions are adequate, the ego develops and the child's mind becomes more and more intentional. The child no longer simply desires; he/she now plans ways of attaining desired goals. With time the ego further develops and plans become more elaborate. The child develops the ability to withstand frustration as increasingly complex and long-range plans are devised and executed.

Frustration tolerance is the key here. The developing ego, which is oriented toward acting within reality, tames the psyche's desire for immediate gratification. The ego develops further as new psychological skills are mastered. As frustration tolerance develops the child becomes more able to renounce pleasures that will ultimately result in pain. This freedom from the pleasure principle, and the ability to evaluate future consequences was termed by Freud "the reality principle". Aichhorn believed that delinquents had not extricated themselves from the pleasure principle. They lacked the ability, or desire, to develop and execute long range plans. They were dominated by their desire for immediate pleasure and a freedom from frustration.

Aichhorn's ideas are consistent with the conclusions of current research.

Empiricists have found that conduct disordered children are: (1) impulsive: They have a compulsive need to go after immediate desired goals without the ability or proclivity to process environmental information that would inhibit or revise behavioral plans. & (2) callous and detached: They are preoccupied with their own needs and desires.

Undersocialized aggressive children fail to develop adequate social bonds and they fail to see themselves as a part of the larger society.

Aichhorn hypothesized that infants often fail to relinquish the pleasure principle because they find reality aversive or frightening. Infants and young children, he said, will be reluctant to begin planning and negotiating within a world that seems intimidating and unrewarding. Reality may seem aversive to an infant because he/she is hypersensitive to life's discomforts, or perhaps the child's environment is unduly harsh. Regardless, the infant and young child will remain focused on the immediate fulfillment of desires if rewards outside his/her immediate reach are not inviting. Aichhorn's treatment thus sought to make reality, and the social order, more attractive for the children. "During the course of his training," he writes "the delinquent must learn that the amount of pleasure obtained from social conformity is greater than the sum of small pleasures derived from dissocial acts, even when the accompanying discomfort of conformity is taken into account".

Aichhorn was also instructed by Freud's notion of identification. Children, he said, naturally identify with adult caregivers. The developing male child, for example, forms a vivid image of the father and other admired figures in his mind. The affection and envy associated with this image leads the child to want to emulate the father. He seeks

approval from this paternal image even when the father is absent. Over time, this image becomes more complex. It is sculpted by positive memories of the father. It becomes incorporated into child's personality and plays the role of a psychic structure called the "ego ideal". This structure is the source of the child's social values. According to Aichorn and Fried, if the father is a respectable person, identification "socializes" the child. The ego ideal is the source of concern about one's role in the society and one's capacity to become a good and admirable citizen.

Aichorn believed that the process of identification was usually disrupted for delinquents who did not have respectable, "socialized" caretakers with whom to identify. These children thus either identified with a criminal or immoral father, or they resisted identification due to overwhelming aggressive feelings toward the father.

For some delinquent children the failed identification was attributable more to innate characteristics of the child than to failures of the environment. Some children had "hereditarily determined structural deficiencies" that prevented them from forming relationships. They were thus unable to identify with their fathers or with other admired figures. Sadly, Aichorn held little hope for these cases. He states "In cases of constitutionally determined dissocial behavior, we can accomplish nothing because educational means do not help us. We must classify these cases as incapable of social adaptation and thereby excluded from the possibilities of social retraining." (p.225)

Treatment at Oberhollabrun involved the implementation of two basic principles. First, Aichorn provided a comfortable and happy environment. He wanted the delinquents' basic needs to be fulfilled so that an interest in the world beyond immediate desires could develop. Second, the primary reward available, as the child begins to

participate in the treatment, is affection and support from admirable counselors. These counselors encourage the child to master new skills, and to thus develop frustration tolerance. The counselors act as benevolent role models. They develop positive relationships with the delinquents that will allow for identifications to occur. The counselors will promote and model social values, and thus identification will lead to socialization. In the end, these two influences should enable the delinquent to become less impulsive and more concerned about the society around him/her.

Bettleheim's "Progressive" Milieu

During the 1940s, Bruno Bettelheim started a residential treatment program in Chicago called the Orthogenic School. This program treated severely disturbed elementary school aged children. As the director of this school, Bettelheim (1951) boldly argued that most severely emotionally disturbed children were from very harsh and neglectful family environments. He believed that family interactions caused and preserved the impulsivity and noncompliance seen in these children. The behavior and symptomatology of the child, he said, often served the parents' emotional needs. Symptoms were thus subtly and unconsciously encouraged by the parents who usually resisted and sabotaged treatment. For example, Bettelheim found that parents often criticized the treatment and staff when talking with their child. They seemed to discourage their child from forming relationships with counselors and staff.

Above all, Bettelheim argued that the parents of his patients offered insufficient rewards to their children. In Bettelheim's words, "The most basic conditions for normal personality development are environments that allow for instinctual gratification within a

consistent frame of interpersonal relations” (Bettleheim & Sylvester, 1948, p. 54).

Bettleheim, like Aichorn, believed that his patients were fundamentally detached. They had never become interested in “reality”. They lacked trust in the society’s ability to provide for them, so they never put much stock in the social order or in long term goals. These children were slaves to immediate desires and were often lost in unrealistic fantasy. Their detachment also precluded them from emotionally bonding with adult figures. These children, said Bettleheim, often did not have anyone in their life worthy of being drawn toward. Identification with an admirable adult figure did not occur, and these children thus lacked social values.

Bettleheim’s treatment involved a desperate attempt to peak children’s interest in the society around them. Inspired by the work of both Aichorn and John Dewey, Bettleheim created a “progressive” environment that was enticing and non-restrictive. The Orthogenic school followed the “noble savage” philosophy. Children were encouraged and were allowed to follow their natural proclivities. They were offered candy, fun games, and as much food as they could eat. There was little required of them. Children at the Orthogenic School were not required to wash, to participate in activities, or to rest. Schooling was also governed by the personal preferences of the children. Staff members were told that “The inner controls which determine the realistic expression of instinctual gratification are based on early experiences of unconditional gratification” (Bettleheim & Sylvester, 1948, p. 64). Children needed to experience a period of blissful gratification, said Bettleheim, before they could be expected to delay gratification. They needed to be free from unnecessary external regulations and agendas. It is out of this environment that attachment, as opposed to detachment, begins to

develop. Subsequently, the processes of identification and socialization described by Aichorn can naturally occur. Bettelheim, like Aichorn, believed that relationships with counselors enabled children to develop frustration tolerance and a system of social values.

Rinsley's Authoritative Hospital

In 1980, after sixteen years of working at the Children's Section of the Topeka State Hospital, Donald Rinsley (1980) published *The treatment of severely disturbed adolescents*. In this book, Rinsley accepts many of Aichorn's basic premises regarding milieu therapy. However, he details the treatment process more extensively. Rinsley also examines the treatment process through an object relational perspective rather than a strictly Freudian one.

Diagnosis and Etiology

Rinsley discriminated between two subtypes of adolescents seen in residential treatment. One group was labeled Autistic/Presymbiotic Psychotic. These were frankly psychotic children, whom Rinsley believed had never bonded with their primary caretaker. Thus, these children, said Rinsley, were truly detached. They remained almost completely in their own worlds. This led not only to disruptions in the development of frustration tolerance, but also to severe problems with reality testing.

Symbiotic

The other group described by Rinsley was quite heterogeneous. These adolescents exhibited diverse symptoms including: extreme anxiety, psuedo-

psychopathy, underdeveloped superego, learning problems, and an inability to inhibit primitive drives (and thereby behavior). This was a group of externalizing children most of whom could be diagnosed with conduct disorder or oppositional defiant disorder. Rinsley labeled these patients Symbiotic Psychotic. He argued that they, like most children, had initially developed a symbiotic attachment with the mother during early infancy. While in a symbiotic relationship the infant essentially sees the mother as part of oneself, and thus sees oneself and the mother as fused. Interestingly, Rinsley says that the conduct disordered child's focus on immediate desires is essentially a focus on the mother, who is seen as the source of potential immediate gratification. He believed that these children had difficulty separating adequately from a fused relationship with their mothers. Rinsley's theory implies that children become involved in the society around them only after they have successfully separated from their primary caretakers. This important revision from the "pleasure principle" to "symbiosis" mirrored a major shift in the field of psychoanalysis from a "one person" to a "two person" psychology.

Rinsley tended to see symbiotic children as falling into two nebulously defined groups. Some of these externalizing children, he believed, exhibited borderline personality traits while others exhibited narcissistic traits. More contemporary psychoanalytic theorists tend to agree that externalizing and criminal behavior are typically seen in children and adults with borderline and narcissistic personality styles (see Fonagy, 1992 for a review).

Borderline Personality

Borderline Personality disorder has been discussed for close to one hundred years. It is a broad area of study that involves many controversies. There are controversies

regarding the essence of the disorder, environmental versus constitutional factors of etiology, and the most appropriate type treatment for the disorder. Rinsley's theoretical ideas were inspired by the research of Margeret Mahler (1986). She closely studied the child's separation and individuation from the primary caretaker during the first five years of life. Mahler describes separation as a process of "differentiation, distancing, boundary-structuring, and disengagement from the mother" (p. 436). After observing children's interactions with their mothers early in life she came to believe that separation occurred only after the development of "basic trust" (Erikson, 1950). Two-year-old children, she said, who trusted that their mothers would continue to be available and loving toward them, were able to temporarily shift their focus away from the mother and toward their environment. They were able to become engrossed in exploration and in the mastering of new skills, while only periodically turning to the mother for reassurance. These experiences enabled the child to feel simultaneously separate from and related to the mother.

Successful exploration, accompanied by feelings of security, gradually orients the child away from the mother's lap and towards the "real world". Without feelings of security, however, the child remains focused on the proximity of the mother. He/she feels overwhelming anxiety, fear of abandonment, and fear of rejection when the mother is absent. This preoccupation seriously impedes the drive toward mastery, and the concomitant development of frustration tolerance. In addition, the insecure child does not engage in society around him/her.

Clinicians working with borderline patients often notice a resistance to achievement and autonomy. These patients demand continuous attention and reassurance.

They are anxious, clingy, and immature. Like young children, these patients remain labile, “impulse ridden”, and highly reactive. They tend to “act out” their feelings impulsively rather than discussing them. The tendency to avoid growth and autonomy seriously impedes the psychological development of the ego.

At times, these patients will recognize how needy and dependent they are; they will feel vulnerable. The relationship with the mother may feel engulfing. They react to these feelings by pushing the mother, and others, away dramatically and emotionally. Extreme behavior such as yelling, temper tantrums, or physical aggression may often be seen. The motivation behind these outbursts will be feelings of separateness and strength in the moment. Nevertheless, sustained efforts toward true independence are frightening. They evoke fears of rejection and abandonment. Often these children attempt to resolve this conflict by becoming coercive, essentially demanding that the parent stay engaged while at the same time expressing some autonomy. Mahler noted that insecure children often vacillated between coercive and clingy behavior.

Another notable feature of borderline pathology is the use of splitting as a defense. Contemporary theory suggests that young children cope with ambivalence about the parent, and other important figures, by splitting their impression of the other into a “good other” and a “bad other”. Over time, as children develop a greater tolerance for ambiguity, these impressions are integrated into a realistic portrait of the other. The borderline child, however, does not develop much tolerance for ambiguity. There is too little security in the primary relationships for this child to express aggression toward an other while at the same time loving the other. The fear of rejection and abandonment are too great. Thus, these children tend to continue using splitting as a defense. Splitting

causes impressions of others to be extreme. Others are perceived as either perfect or as hostile and persecutory. Often times, as well, splitting causes the impression of one individual, such as the parent or therapist, to change abruptly and drastically from moment to moment.

This borderline group has some striking parallels to what was termed “the impulsive/reactive group” in Chapter 1. Borderline individuals are resistant to achievement. This could explain the low Verbal IQ scores. Verbal IQ scales are very sensitive to involvement in educational pursuits. This group is highly anxious, impulsive, and reactive. They are also aggressive and immature. The use of splitting is consistent with Dodge & Coie’s (1987) finding that these patients often view others as hostile and persecutory. In addition, Mahler’s observations regarding the borderline child’s use of coercion to maintain a connection with the mother describes Crittendon’s findings regarding the coercive attachment of conduct disordered children rather well. While the theoretical perspectives (biological versus psychoanalytic) between these two categories are quite different, there is little descriptive data that suggests differences between these two groups. Perhaps the long history of conceptual theorizing about borderline personality disorder can help us understand the complex motivations and internal workings of the children from this impulsive group.

There has not been consensus regarding the etiology of borderline personality disorder among psychoanalytic clinicians. Rinsley points specifically at the mother-child relationship. He sees pathology in the mother as the most important causal factor. He believes that the mothers of borderline children usually exhibit borderline pathology themselves. They thus have difficulty tolerating their child’s separateness. He believed

that these mothers encourage dependency in their children by rejecting, rather than supporting, the child's movement toward autonomy. Over time the child internalizes these interactions and has fantasies of being abandoned whenever he/she is self-sufficient. Achievement and independence thus come to evoke an "abandonment depression" in the child, causing him/her to feel alone, weak, anxious, and bad.

A review of the research strongly suggests that it would be inappropriate to pin all the blame for this type of pathology on the child's mother. Indeed, there is little need to do so. Separation from the dyadic relationship is a normal part of development. It is, however, always difficult. Mahler recognizes that this separation can be complicated by many factors, including the child's constitution, the amount of support in the child's community, the presence of a supportive father in the home, as well as the mother's proper handling of the situation. It is conceivable that in some situations the mother may be the person who is most helpful in enabling the child to become independent. Yet, a combination of other factors may impede the child. This may explain why attachment with the mother early in life is a predictor, but not a strong absolute predictor of later conduct problems. Nevertheless, the review of research does suggest that the quality of the parent-child relationship is a very important factor when tracking the development of conduct disorder. This is particularly true for the impulsive type child, who happens to be very similar to Rinsley's borderline type. It is also true, however, that many of the variables that will influence the quality of this relationship are largely outside of the parents' control (temperament, SES, genetically determined vulnerabilities, cognitive vulnerabilities, etc.)

Narcissistic Personality

The narcissistic child also has difficulty separating from the parent due to a failure of basic trust. This child, however, responds to the conflict by becoming precociously independent. The child attempts to feel secure through a denial of dependency feelings and an illusion of self-sufficiency (Modell, 1986). This personality style is analogous to the avoidant attachment style seen in some infants. Avoidant infants are ostensibly uninterested in the mother's proximity. They seem aloof and undisturbed by the mother's absence. Interestingly, the behavior of these infants is inconsistent with their affective state. Studies have found significant changes in cortisol levels that coincide with the mother's absence, suggesting that the child does become anxious and distressed when the mother leaves, though he/she does not express this when she returns (Main & Cassidy, 1985).

According to contemporary theory (Kernberg, 1975; Kohut, 1971; Meisner, 1986) narcissistic children show greater ostensible ego strength than do borderline children. These children are sometimes talented and intelligent. They are less anxious, less dependent, and less impulsive than the borderline children. In fact, these children tend to be grandiose and cocky. Their strengths, however, are deceiving. The narcissistic individual's illusion of self-sufficiency is very fragile; it must be maintained through constant praise and admiration from others. In addition, the narcissistic individual must deny his/her basic dependency needs by remaining largely out of touch with the affects evoked by relationships with others. As a result, the development of empathy is seriously disrupted, and these children have considerable difficulty forming genuine emotional attachments.

As Bursten (1986) and Meisner (1986) point out, these children tend to have exploitative or parasitic relationships. They are interested in others to the extent that others can be of service to them. Some narcissistic children are manipulative, ruthless, or sadistic. In fact, Kernberg (1975) places psychopathy and antisocial personality at the most pathological end of the narcissistic continuum. While more pathological patients will need to sadistically control and overpower others to maintain fragile feelings of strength, less pathological children will depend instead on continuous praise and admiration from others.

Meisner (1986) describes a continuum of narcissistic pathology. The severity of the disorder, he says, determines how easily an individual's illusion of self sufficiency is likely to crumble when challenged. When this illusion crumbles, regression occurs and the narcissistic individual temporarily resembles a borderline individual. Thus, the more pathological narcissistic child is likely to vacillate between narcissistic and borderline symptom profiles. Kernberg (1975) noticed this vacillation and theorized that narcissistic individuals have an "underlying borderline personality structure".

When evaluating these theories in light of the material discussed in Chapter 1, the similarity between narcissistic pathology and callous/unemotional traits, as described by Frick, becomes obvious. Interestingly, Frick found that some children, who were callous and unemotional, did not exhibit impulsivity and conduct problems, while others did. The psychoanalytic diagnostic system suggests that the children showing both symptoms are highly pathological narcissistic children who have frequent regressions. These are children who are impulsive and have conduct problems, but who tend to be less impulsive, less anxious, and less cognitively impaired than the borderline/ strictly

impulsive children. These children correspond to Frick's "psychopathic children", to Kernberg's "malignant narcissists" and to Kohut's "narcissistic behavior disordered" individuals. Interestingly, as Frick points out, while these children ostensibly look higher functioning than the strictly impulsive group, their prognoses are actually worse. They tend to be less engageable than are the borderline children because they are so disconnected from their affect. They also have less of a capacity to attach to others.

While it may seem contradictory to describe the severely narcissistic and detached child as symbiotic, this label is appropriate. The narcissistic child has largely bypassed the process of gradually weaning oneself from the mother. This process involves the child building a sense of self that gradually feels more and more solid. This sense of self enables the child to feel safe and secure even during the brief intervals when the mother is not available for reassurance. The narcissistic child has not developed this security. Instead, confidence rests on an illusion of greatness and self-sufficiency. These illusions only stay intact when they are validated by others. Essentially, the child is symbiotically dependent on the other to provide him/her with a secure sense of self. When the severely narcissistic child does not see an image of greatness and self-sufficiency in the eyes of others, he/she then becomes like the borderline child, intensely anxious and needy.

Treatment

Engagement

Rinsley, like Aichorn and Bettelheim, believed that the initial task of residential treatment is to engage the patient. Rinsley also believed that engagement involved the

development of positive ongoing relationships with treatment staff. Rinsley, however, gives a more extensive theoretical explanation for the patient's detachment.

Rinsley says that the patient's detachment is due to a failure of basic trust. Basic trust, he believed, typically occurs as the result of the normal idealization of the parents. Mothers and fathers have traditionally had roughly stereotyped roles regarding the development of the child and the child's basic trust. The mother's traditional responsibility was to be a reliable provider of love, nurturance, and understanding for the child. In optimal circumstances the child develops a basic trust that the mother will provide this support, even after he leaves to explore the world for some time. The father, on the other hand, traditionally has introduced the child to society's laws and limits. He aids the child in the transition from a preoccupation with the mother-child relationship to an emergence into the larger society. Basic trust regarding the father involves benevolent control. The father is a strong voice for reality, but he has the child's best interests at heart. The child is able to separate from the mother, in part, by identifying with the father. During this process the father is idealized as a benevolent overseer who maintains integrity despite challenges.

In most families that eventually have a child in residential treatment, Rinsley says, these types of basic trust do not develop. The patient does not have faith that the mother will be a reliable source of love and understanding, and the father does not have benevolent control. In most of these families, says Rinsley, the parent-child relationship does not look like a parent-child relationship at all. The parent is not clearly a parent and the child is not clearly a child. Instead, the child takes on a different role that tends to meet the emotional needs of the parent. The child may seem more like the parent, the

parent and child may seem like competitive siblings, the child may seem like a “king” or “queen” who always gets his/her way, or the child may be rejected. These parents, Rinsley says, are not in the role of an admirable, protective caretaker. They do not have benevolent control over their child. Instead, both the child and parent were typically engaged in a powerful but pathological relationship¹. It is interesting to compare this description of the parent-child relationship to those of Crittendon and Patterson, discussed in Chapter 1. All three authors discuss the parents’ failure to maintain benevolent and consistent control over the child. Rinsley, however, looks at the phenomenological features of this dynamic. Specifically, he discusses the ways that the parent’s lack of control reflects the child’s lack of trust and respect with regard to the parent.

Rinsley’s psychoanalytic description of the parent-child dynamics is also considerably more complex than is the empirical model. Rinsley, like Mahler, believes that the child’s view of the mother as unreliable actually intensifies the child’s preoccupation with the mother. The attachment to the mother becomes insecure or anxious. The child believes that if all energy is not focused on maintaining this relationship, than it may be completely lost. If this were to occur, the child would be completely helpless because he/she has not developed adequate ego strength. The father is of little help in the situations if he does not possess strength and integrity. In such a situation the child has considerable difficulty separating from the symbiotic relationship and identifying with a role model.

¹ The contribution of parent and child effects to the development of this relationship are likely to vary from case to case.

When the child is first admitted, the program takes on the role of the strong and benevolent father. It acts as a strong, reliable, and limit setting caretaker through the use of the “hospital structure”. The hospital structure is the “consistent and dynamic milieu”. It involves such factors as the roles of staff members, restrictions, privileges, and medications. The structure is designed to meet the patient’s individual needs while maintaining nearly complete control over the environment. The most important elements of this structure are its reliability, its consistency, and its focus on furthering the health and well being of the child. Ideally, the child will be impressed by the strength, effectiveness, and integrity of this structure, and will consequently come to respect the staff who create it. This will lead to an eventual idealization and subsequent emulation of the treatment staff. This identification will facilitate the patient’s separation from his/her symbiotic parent-child relationship.

Rinsley’s treatment philosophy is clearly very different from that of Bettelheim. Bettelheim believed that structure was a means by which parents prevented children from expressing their potentialities. He sought to create an environment that was virtually free from external controls and structure. Rinsley is very critical of the “overpermissiveness” seen in institutions such as Bettelheim’s. He believed that children in these facilities tended to disrespect the staff, who seemed weak and ineffective. In Rinsley’s view, patients only become truly engaged with adults after they trust that adults are clearly in charge. A reliable structure, rather than bags of goodies, was the key. Generally, Bettelheim’s philosophy seems more traditionally “maternal”, while Rinsley’s philosophy seems more traditionally “paternal”.

The Resistance Phase

Rinsley believed that idealization only occurred after a long and difficult process. Initially, he said, the patient is highly resistant to becoming emotionally engaged in treatment. These patients lack basic trust, and are suspicious of the hospital. Adults seem unreliable, and thus the child expects to be disappointed. Consequently, the child will not respect and trust the treatment staff before they are tested. The staff is tested via attempts to undermine their authority. Rinsley believed that the initial phase of treatment involves a battle over control. The child attempts to recreate with staff a relationship similar to that with the parent. If the program conformed to this pressure, the patient's preoccupation with the symbiotic relationship would be maintained. By maintaining paternal strength and authority, however, the program's staff attempts to build the patient's trust in their reliability and integrity.

The patients are believed to test this integrity by challenging the staff's integrity and perceptivity. They may do this in a number of ways. Patients may attempt to form a "friend" relationship with staff members. They may become overly submissive in hopes that the staff will not scrutinize their behavior. They may also challenge the staff through open defiance. Interestingly, Rinsley believed that "dissimulation" was a particularly common technique used by patients. Dissimulation involved the patient quickly becoming highly compliant with hospital rules. Patients who have a long history of disruptive behavior and oppositionality will report no symptoms and will be highly cooperative and easy to manage. Rinsley believed that this shift in behavior often occurred early during the hospitalization, and that it was in the service of resistance. These patients are hoping to bring about a speedy discharge with a minimal level of

engagement. Dissimulation was one of many methods used by patients to resist using treatment. Regardless of the method, Rinsley believed that undermining “maneuvers” were in the service of remaining emotionally disengaged while testing the structure of the treatment. Rinsley believed that the staff’s ability to withstand these challenges, while maintaining benevolent control, enabled the patients to begin developing basic trust.

The adolescent’s continued symbiotic attachment to the parent also fuels resistance. The child feels dependent on the continuation of the pathological parent-child relationship. He/she believes that the loss of this relationship will lead to irreparable psychological breakdown. Both the parent and the child also often implicitly believe that the program jeopardizes their relationship, and are likely to disrupt it. If the child becomes emotionally invested in the treatment, he/she will essentially be choosing the program over the parent. The child is likely to unconsciously perceive this as equivalent to rejecting or abandoning the parent, and thereby destroying the parent-child relationship. Parents often share these perceptions. Thus, as Bettelheim noted, initially there is a “loyalty” problem whereby the child feels subtle or not so subtle parental pressure to resist treatment. Rinsley dealt with this dilemma by initially separating the child from the family. He would then subsequently begin extended family therapy. Rinsley believed that most relatively intact families eventually become aligned with the treatment process. This alliance helped the treatment tremendously. The family would begin to interpret the child’s resistances along with the treatment staff. The parent would thus grant permission for the child to move out of the resistance phase which, Rinsley says, typically lasts about six months.

The Definitive Stage: a Stage of Introject Work

Once the child begins to move out of the resistance phase he/she begins to disengage from the parent-child relationship. The patient begins to perceive a reality beyond that which has been unconsciously agreed upon within the parent-child relationship. Splitting, as a defense, is challenged through interpretations as staff recognize the child's attempts to use splitting in their perceptions of others on the unit. The child's tolerance for ambiguity increases and he/she begins to perceive both the gratifying and frustrating aspects of the parent simultaneously. The parent becomes someone toward whom the child feels both love and an angry mistrust. This experience is frightening for the child. The parent-child relationship seems to be in jeopardy. Indeed, there has been a loss for the child. An illusion of blissful dependency or self-sufficiency has been shattered.

At this stage, patients become depressed, regressed, and highly symptomatic. The patient may begin to experience reality testing problems, somatic symptoms, and desperate despair. Rinsley provides a detailed description of the staff's countertransference feelings at this time. Staff members often feel frightened by these symptoms. They worry that the treatment will make the patient lose his/her mind. Interestingly, both the patient and the staff, at this point, feel frightened that the patient will not remain mentally intact as he/she begins to disengage from the symbiotic relationship. This is another test of the staff's integrity. The staff members feel compelled to loosen the structure of the program, to allow the child to use splitting, or to become complicit with the child's denial. The staff realizes that if they give in, and they loosen the structure of the program, the patient is likely to become less symptomatic and

troubling. However, if the treatment remains consistent and uncompromising the child will sense the strength and the reliability of the staff. He/she will see that staff can continue to have an honest and genuine relationship with him/her, no matter how difficult things get. This non-verbal interpretation directly confronts the patient's basic mistrust. In successful cases, the staff becomes a source of strength for the child as inner demons are confronted.

The staff is further tested by the child's use of projection during this treatment stage. Curiously, the staff tends to find themselves drawn into pathological relationship patterns with patients that resemble the parent-child relationship. These staff members may feel hostile, detached, or resentful toward a particular patient. These reported reactions are clearly consistent with the "child effects" reported by Lytton (1990), as described in Chapter 1. These experiences, however, are understood differently by Rinsley than they are by most contemporary empiricists. According to Rinsley, and other relational theorists, these reactions mark the patient's continuing lack of separation from the parent, and thus the inability to differentiate the parent from other adults. While enmeshed in a symbiotic relationship the child perceives every caregiver as he/she perceives the parent. The child assumes that the new caregiver feels hostile or detached, and the child reacts to the caregiver as if he/she had these experiences. The result, according to these theorists, is that the caregiver finds oneself having many experiences that are similar to that of the parent. It is important to note, however, that this interpretation does not assume that child effects are markers of biological or temperamental traits. Rather, these theorists hypothesize, child effects suggest that the

relationship with the parent tends to become reenacted with others when the child has not yet successfully separated from the parent.

The “bad” aspects of the parent are most notably projected onto the staff. Often the child’s behavior and attitudes impact the environment, making it resemble the home environment. This has been discussed by psychoanalytic theorists, who have called this phenomenon the “alloplastic defense”. This defense enables the child to “externalize” his/her negative feelings. The child essentially says to staff “It is you, rather than the memories of the parent, that are bringing about these unpleasant feelings in me. I will focus on fighting you rather than attempting to understand these feelings and their origins”.

The staff’s role through this time is to maintain integrity and to become aware of their reactions to the patient. Attention to these reactions helps the staff to understand the child and his/her primary relationships. This enables the staff to be empathic and to resist urges to mistreat the child. Over time, the patient realizes that staff is able to tolerate ambiguity. Staff recognizes the children’s anger and “badness”, while not losing sight of their goodness. Thus, the staff models the psychological skills needed to reduce splitting and to differentiate the staff members from the parent.

Over time, the consistency, reliability, and benevolence of the staff challenges splitting. The patient’s ability to see both good and bad aspects of the parent, the staff, and oneself improves as the patient recognizes that he/she can express anger at the staff and at the same time depend on them to not abandon or reject him/her. This builds basic trust and enables the child to begin differentiating and disengaging from both the parent and the staff in order to develop skills and to individuate.

Meanwhile the child is meeting with his/her family for weekly therapy sessions. The therapy is designed to change the dynamics of the family so that the family can tolerate the child's autonomy and separateness. The parents are helped to become more benevolently authoritative and strong. If the family is able to change, then the home becomes a supportive and growth promoting environment, and the child is able to leave the hospital to continue with outpatient treatment.

Conclusion

It is refreshing to see that many of the observations of the milieu theorists regarding the symptoms and deficits of conduct disordered children were similar to the findings of empiricists. These theorists, like the empiricists, saw the child's inability to inhibit responses as particularly telling and important. They also noted similar intellectual deficits, attachment problems, child effects, family dynamics, and misattributions. Rinsley's description of borderline and narcissistic personality seems to mirror the distinctions made by Frick, and the subtypes that are emphasized again and again in the empirical literature. Overall, these theorists would probably not be surprised to read the current descriptive literature on conduct disorder, though they may take issue with its biological focus.

These theorists, and Rinsley and Bettelheim in particular, can be criticized for not recognizing the influence of "child variables" in the development of conduct disorder. More contemporary theoreticians will be challenged to stop seeing children as blank screens whose personalities are developed exclusively through the quality of parenting that they receive. The review from Chapter 1 strongly emphasizes that varied ways of

experiencing one's environment are probably present as early as birth, and that many of the factors involved in determining the individual's experience are outside of the parent's control. Nonetheless, this does not mean that the parent-child relationship does not continue to be the best prototype for the child's overall interpersonal relationships. It does not mean that the process of separation and individuation are any less important, or that the quality of the parent-child relationship is any less crucial. It only suggests that this relationship is mutual and will be influenced by both parties, as well as by outside factors. If this is the case, than Rinsley's theories and recommendations regarding residential treatment continue to be applicable.

Rinsley's description of residential treatment does provide an opportunity for the empiricist. Rinsley, like Frick and other theorists, makes clear distinctions between different subtypes of patients. Rinsley also makes clear predictions about the behavior and experience of the child at different points during residential treatment. Thus, an empiricist can test predictions regarding subtypes, and can track the patient's movement from the resistant phase to a definitive phase in treatment. The current study is designed to be a first step toward this end.

CHAPTER 3

METHODS

Assessment Techniques and Hypotheses

The previous chapters have left us with many predictions regarding the subtypes of children who are likely to be treated within a residential treatment program, and the intrapsychic and behavioral changes that are likely to occur during this treatment. Personality assessment instruments can potentially validate these predictions. But what are the most appropriate instruments to use? Past residential treatment outcome studies have almost exclusively used either self-report measures or behavior rating scales to assess personality change. These methods are used because they typically possess acceptable reliability and validity, and they are typically easy to administer and score. However, if we are testing Rinsley's predictions, these methods have some limitations. Rinsley sharply criticized programs that put too much stock in quick behavioral change. As noted in Chapter 2, he believed that children in treatment often "dissimulate" in order to avoid becoming engaged in treatment. Thus ironically, the most well-behaved adolescents may at times be the least engaged in treatment. These patients may often be avoiding the disturbing psychodynamic issues that evoke stress, spur behavioral disruptions, and theoretically promote personality change. In short, behavioral compliance can hypothetically be a form of withdrawal and detachment that actually decreases the effectiveness of therapeutic interventions. At times this pseudo compliance seems to be obvious to staff members within residential programs who will say that some

patients are “going through the motions” without truly utilizing therapeutic services. This hypothesis is consistent with the finding that behavioral change from admission to discharge is a poor predictor of post-discharge adjustment. (Curry, 1991; Durkin & Durkin, 1975; Lewis, 1982; Pecora et al., 1992; Tuma, 1989; Wells 1991; Whitaker and Pecora, 1984).

Similar criticisms can be directed toward self-report instruments. Residential treatment programs send fairly clear messages to patients regarding statements that are considered offensive or pathological. Patients are often likely to learn what kinds of statements will be well received and praised. Some behaviorist clinicians may believe that this type of socialization is the targeted treatment effect, but other practitioners may question the degree to which this necessarily leads to attitudinal change. Again, ironically individuals who are more open, trusting, and self aware when leaving treatment may at times appear more pathological when compared with individuals who are less engaged in treatment, and who have been focused on the subtle art of “talking healthy”. Indeed, this is why many self-report instruments include measures of defensiveness. However, it seems naïve to believe that these scales are sensitive enough to eliminate this as an important variable, especially among adolescents who have had constant contact with mental health workers.

Another limitation of self-report measures is that they often rely on the patient’s awareness of therapeutic change. The American Psychiatric Association has noted that therapeutic outcome findings are highly correlated with the use of instruments that measure subjective impressions (APA Commission on Psychotherapies, 1982 p.138, cited in Blatt & Ford, 1996). This finding suggests that the optimism and enthusiasm of patients and treatment providers may inflate estimates of change. In general, gains made

in treatment, as measured by self-report scales, have been poor predictors of post-discharge success (Curry, 1991; Durkin & Durkin, 1975; Jensen et al., 1986; Lewis, 1982; Pecora et al., 1992; Tuma, 1989; Wells 1991; Whitaker & Pecora, 1984). Consequently, a less biased measure of therapeutic change seems warranted.

Current Trends in Outcome Assessment

Ogles, Lambert, and Masters (1997) have recently reviewed the evolution of outcome assessment since the 1930s. They note that there has been a gradual movement from impressionistic assessment instruments to ones that are more psychometrically respectable in terms of reliability and validity. Specifically, studies have moved from using unstandardized therapist ratings to the use of self-report measures, behavior rating scales, and standardized therapist ratings. Ogles et al. (1996) have also noted, as have others (Pfeiffer, 1989), that studies are becoming more multidimensional. More and more studies are using several different instruments to assess change. While the authors applaud this evolution, they complain that the current literature seems to be in a state of “multi-dimensional chaos” where the choice of instruments does not seem to follow any conceptual or organizational framework. In fact, many studies seem to use separate instruments that provide redundant information from the same source. For example, some studies use several self-report measures of distress while leaving other sources of information, such as therapist or parent ratings, untapped.

Strupp and Hadley (1977) provide a conceptual scheme that is intended to help researchers cover important non-redundant information in outcome studies. These authors suggest a tripartite model of outcome assessment based on the perceptions of

clinicians (intrapsychic improvement as described by personality theory), of the patient (self-report measures), and of society (improvement in the eyes of teachers, parents, counselors, or peers). The current study will obtain information from each of these sources, although the “clinician rating” will be based on an objective measure (the Rorschach) in order to reduce possible biases that have been previously discussed.

The Rorschach

The Rorschach is a personality assessment instrument that is commonly used to assess the intrapsychic features of one’s personality. Consequently, this instrument seems particularly well suited to test some of Rinsley’s predictions, and to fulfill the theoretical/intrapsychic component of Strupp and Hadley’s (1977) tripartite system.

The study of disruptive behavior using the Rorschach began at least as early as 1931, when Medard Boss published an article called “Psychological and Characterological Inquiries on Antisocial Psychopaths Carried Out with the Help of the Rorschach”. This article was followed, many years later, by work from Robert Lindner (1943), Carl Gacono (1994), and Reid Meloy (1994). These authors have all studied the use of the Rorschach with conduct disordered children and antisocial adults. The following is a list of personality traits and Rorschach indices that are associated with these traits:

Inability to Inhibit Behavior

- **FC:CF + C** The relationship between the use of color and the use of form in a response has traditionally provided information regarding self-regulation. A predominance of non-form dominated color responses (CF+C) over form dominated ones (FC) is believed to reflect a tendency toward unmodulated intense expression of emotion. This unmodulated expression is characteristic of the affective aggression discussed in Chapter 1. We would expect a predominance of non-form dominated responses among impulsive children. This has been found

among conduct disordered and delinquent children and adolescents by Zulliger, (1938), and Gacono and Meloy (1994)¹. When Pantle et al. (1994) looked at the relationship between the Rorschach and impulsivity, as measured by the Gordon Diagnostic System distractibility task, they found that more impulsive individuals tended to have a lower FC: CF + C ratio as compared to non-impulsive individuals.

Overall Ego Strength

- The **Ego Impairment Index** is a variable that was recently developed by Perry and Viglione (1991). It is designed to measure the adequacy of ego functioning, and to be relatively uninfluenced by environmental and behavioral conditions.
- **EA** is the sum of Color and Human Movement responses. This variable is believed to be a good measure of psychological resources.

Flawed Reality Testing

- **X-** calibrates the proportion of times that responses do not fit the contours of the blot. This scale measures one's tendency to misinterpret environmental cues. High X- among conduct disordered children and adolescents was found by Gacono and Meloy (1994).
- **WSum6** is a measure of the one's tendency to use flawed logic or to think incoherently. High Wsum6 among conduct disordered adolescents was found by Gacono and Meloy (1994).

Failed Identification

- **Sum H** Many psychodynamic theorists continue to agree with Aichorn's formulation that conduct disorder involves a failure to identify with caregivers. Interestingly, the Rorschach theorists believe that the number of responses involving humans (H) determines the tendency to identify with others (Weiner, 1998). Low H among conduct disordered adolescents was found by Gacono and Meloy (1994).

Emotional Detachment/Inability to Bond

- **Sum T** is the number of responses attending to the tactile features of the blot. This index is believed to reflect an individual's ability to become emotionally attached to others. Low Sum T among conduct disordered children and adolescents was found by Gacono and Meloy (1994). Loving & Russel (2000) found that "high psychopathy" conduct disordered juveniles had fewer T responses than low or moderate psychopathy conduct disordered juveniles. Smith et al. (1997) found low T among conduct disordered adolescent offenders, but did

¹ Note that Gacono & Meloy looked at two separate conduct disordered groups, one group of children and one group of adolescents.

not find that this differentiated the psychopathic from non-psychopathic offenders.

- The **Fr + rF** (reflection responses) is a measure of grandiosity and preoccupation with self. This is a relatively new variable in the history of the Rorschach. Loving & Russel (2000) found that “high psychopathy” conduct disordered juveniles had significantly more reflection responses as compared to moderate or low psychopathy conduct disordered juveniles. Smith et al. (1997) did not find that reflections differentiated psychopathic from nonpsychopathic adolescent offenders, although they did find that the psychopathic offenders were more likely to have an Fr + rF of greater than 1, and they were more likely to see reflections on atypical cards. Gacono (1990) found more reflection responses in the protocols of psychopathic versus non-psychopathic adult offenders (see Hilsenroth et al. 1997 for further discussion of the Reflection response).

Resistance

- A high **Lambda** signifies a tendency to look solely at the form features of the blot. This often reflects a detached, uninvolved, and subtly resistant approach to the task (Exner, 1995). As noted earlier, high Lambda was found among a group of conduct disordered children and adolescents by Gacono and Meloy (1994).
- **Sum S** measures the total number of responses that involve the use of white space. Weiner (1998) states “ Subjects who give White Space responses on the Rorschach are doing just the opposite of what was expected of them” (p. 130). A high number of these responses has traditionally suggested a generalized oppositional tendency. Increased White Space responses among conduct disordered adolescents have been found by Gacono and Meloy (1994).

MMPI-A

The Minnesota Multiphasic Personality Inventory-Adolescent form will be used to assess the self-perception component of the tripartite system. The MMI-A is the self-report inventory that is most frequently used to clinically assess adolescents (Archer, 1997). The MMPI-A is a revised version of the MMPI. Its development involved the deletion of items that are not applicable to adolescents and the inclusion of items and scales that address personality variables that are specifically related to adolescents.

The MMPI-A has been chosen for the current study because it measures a number of very relevant variables, and because it is regularly administered at the residential program being studied. The following are variables and scales from the MMPI-A that will be relevant to for this study.

Ego Strength

Immaturity Scale. The development of this scale was based on Loevinger's theory regarding the assessment of ego strength. This scale has been significantly correlated with the following relevant items on the Schedule of Affective Disorders and Schizophrenia for School Aged Children (K-SADS-III-R) when delinquent adolescents were assessed: Irritability/Anger, temper tantrums, difficulty concentrating, excessive shifts in activity, and thinking before acting.

Anxiety

Adolescent-Anxiety Scale This is a scale designed to measure anxiety. It was significantly correlated with the following relevant items on the Schedule of Affective Disorders and Schizophrenia for School Aged Children (K-SADS-III-R) when delinquent adolescents were assessed: Inability to sit still, agitation, generalized anxiety, somatic symptoms, fear of dying/losing control, need for reassurance, and difficulty concentrating.

Interpersonal Bias

PA1 – Persecutory Ideas Scale This scale measures the degree to which adolescents tend to assume that others have hostile intentions. While there has not been any empirical findings related to the specific scale, its content is very relevant to the perceptual misattributions described by Petit, Dodge & Brown (1988).

Failed Identification

Adolescent-Cynicism Scale According to Aichorn, Bettelheim, and Rinsley the externalizing child's failure to identify with adults was related to the child's lack of faith and trust in them. These authors saw a lack of basic trust as fundamentally underlying failed identification. Thus, a measure of cynicism is being used to measure this variable.

Child Behavior Checklist

The Child Behavior Checklist is a 118-item measure used to track children's behavior. The Parent Form is typically filled out by a parent or parent surrogate, and the Youth Self Report is filled out by the subject. Both instruments have been found to have adequate reliability and validity (Ogles, Lambert, & Masters, 1996).

While the Parent Form was designed to be used by parents, and was validated using data from parents, Albrecht et al. (2001) report that the scale is often used by group care workers in residential settings. These authors found that the factor structure of the ratings of group care workers is identical to that of parents. Group care workers will be used to assess children at admission and discharge in this study. The Parent form and Youth Self Report will be used to measure the disruptiveness of each child's behavior. For this purpose the **Externalizing Scale** from these instruments will be used. Kazdin and Heidish (1994) found this scale to be higher among conduct disordered children as compared to children with other disorders.

Hypotheses

At Admission

Rinsley's description of externalizing adolescents during the initial stage of treatment enables us to make some clear hypotheses. He believed that all symbiotic children, including both borderline and narcissistic children, had several things in common. All of these children, he hypothesized, had underlying ego deficits. All of them failed to adequately identify with parental authority figures. They were all also

initially resistant to residential treatment. Consequently, we would expect the following variables to be in the abnormal range among all of the children at the time of admission.

Rorschach Variables: EA should be low, H should be low, and both Lambda and S should be high

MMPI-A Variables: Immaturity and Adolescent Cynicism scales should be high

CBCL Variables: Interestingly, Rinsley probably would not argue that disruptive behavior will be clearly seen among adolescents during the initial stage of treatment. As noted earlier, Rinsley found that adolescents often “dissimulated” during this stage, showing few disruptive behaviors in order to bring on a speedy discharge. Thus we would expect the CBCL Externalizing Scale to be only mildly elevated or to be within the Normal range.

Subtypes at Admission

Based on discussion thus far, we would expect a number of differences between the impulsive/borderline group of adolescents and the Narcissistic/callous unemotional children. According to past research the borderline/impulsive children can be characterized by several key personality features. These children are (1) impaired in their ability to inhibit their behavior when appropriate (2) highly anxious and (3) prone to misperceiving others’ intentions. The Narcissistic/Callous unemotional group are described as less anxious than the impulsive group. This group, however, is characterized by cold detachment from others. We would expect these differences to be seen as follows.

On the Rorschach

Impulsive/Borderline Group

Lower FC: CF + C
Higher X-
Higher Wsum6
Higher T
Lower Fr + rF

Callous/Narcissistic Group

Higher FC: CF + C
Lower X-
Lower Wsum6
Lower T
Higher Fr + rF

On the MMPI-A

Impulsive/Borderline Group

Higher Adolescent Anxiety Scale
Higher PA-1

Callous/Narcissistic Group

Lower Adolescent Anxiety Scale
Lower PA-1

On the CBCL

Impulsive/Borderline Group children should score higher on the Externalizing scale due to greater difficulties with impulsiveness.

At Discharge

Rinsley believed that, under the best circumstances, a number of important gains were made by adolescents in residential treatment. He believed that, with time, the patients begin to develop some trust in the treatment program staff. As this occurs the patients become less resistant to treatment. They begin to emulate and identify with admired staff members, and their perception of others becomes more accurate. This increased trust allows them to become less symbiotic with the parent and thus to pursue personal goals and develop increased ego strength. The following findings would be consistent with Rinsley's theory regarding therapeutic changes:

On the Rorschach from Admission to Discharge: Lower FC:CF + C, Lower Ego

Impairment Index, Lower X-, Lower Wsum6, Higher H, Lower Fr + rF, Lower Lambda, and Lower S

On the MMPI from Admission to Discharge: Lower Immaturity Scale, Lower PA-1,
Lower Adolescent Cynicism

On the CBCL Externalizing Scale from Admission to Discharge: No prediction

Subtypes at Discharge

From the discussion in Chapter 2 we can hypothesize that the differences between children in these categories should decrease if treatment is successful. Narcissistic children should give up their defense of pseudo independence, and should thus become less detached and more anxious. Borderline children, on the other hand, should become more comfortable with independence and should thus become less needy, dependent, and impulsive.

The Program

In this study, we will assess the outcome of patients in a residential treatment facility. These patients are adolescents with externalizing behavior disorders. The treatment provided for them is psychoanalytically oriented and is inspired by the theories of Donald Rinsley and Vance Sherwood (Larry Brown, Personal Communications). The program at this facility utilizes group peer culture, medication, group psychotherapy, and family therapy. Biweekly individual psychotherapy is provided for some patients as well. Interventions are individually tailored for each patient, and can at times be supportive, interpretive, or confrontational. Goals are also individually tailored, but typically include improved emotional and behavioral regulation, increased ability to attach interpersonally, improved family dynamics, reduced egocentricity, and reduced sadism.

When patients are first admitted to this facility, they spend an initial period of time in a Special Treatment Unit (STU). This unit is designed to prepare patients for the teams. The treatment in STU involves an extended period of time with very little activity. While in STU the patients participate in few activities outside of school and group psychotherapy. In fact, much of their time is spent sitting on their bunks and reflecting. This method is designed to help action-oriented patients access their emotional experience. The length of time spent in STU varies from patient to patient. This is dependent on the individual characteristics of the patient and on the clinical judgments of the treatment providers. Typically the stay in STU ranges from two weeks to two months.

When a patient leaves STU, he/she will be assigned a treatment team. Each team consists of counselors, family therapists, school personnel, individual therapists, and a psychologist, who acts as team leader. The team leader coordinates the patient's treatment. The psychologists are responsible for consulting with the various treatment providers and for providing guidance regarding treatment decisions. They also have the final say regarding any diagnostic decisions.

Patients typically attend the program anywhere from 2 months to two years. Often the most severe patients stay for the longest periods of time. Some patients are treated on a trial basis to determine whether the program is appropriate for them. Others may be discharged early due to insurance complications. Towards the end of their stay patients are gradually transitioned back into their home environment or into a new treatment environment.

Subjects

Adolescents admitted between 07/99 and 04/00, who were expected to be in treatment for at least 2 months, were eligible to participate in this study. Twenty-three subjects, during this time, were not expected to stay longer than two months. These patients were thus ineligible. Eight adolescents, who were initially expected to have stays longer than two months, left prematurely. Four of these subjects were discharged early due to insurance complications and two were discharged early because they were deemed to be too psychotic to benefit from this treatment modality. Only admission data were obtained from these subjects whose length of stay was under two months.

Informed consent was obtained from both the participants in this study and their parents. A copy of the consent form can be found in Appendix A. When possible, the study was discussed with parents during their first family therapy session, and consent forms were signed at this time. Unfortunately, however, often parents did not begin family therapy for over a month after admission. In these cases parents were informed via the telephone and consent forms were mailed. Parents were asked to mail the consent forms back as soon as possible. Thirteen patients were not included in this study because their parents took over one month to return the forms. It was thus too late for these children to be assessed within one month of admission. Five patients were not included because their parents refused consent, and one patient refused to participate. Discharge data was not obtained for 4 patients who were discharged suddenly and unexpectedly, and for one patient who eloped.

Thus, of the 103 subjects who were initially eligible to be participants in this study 42 were excluded for the reasons described above. Admission, but not discharge,

data was obtained for 12 subjects. The admission sample consisted of 61 subjects, ranging in age from 12 to 18 years old ($M = 15.35$, $S.D. = 1.52$). Thirty-four of these subjects were male and 27 were female. Discharge data was collected for 49 of these subjects (28 male and 21 female). Among the admission sample, sixty of the subjects were Caucasian and one was Asian. The sample included a range of socioeconomic status that was approximately evenly spread. Six patients were in state custody. About a third of the subjects had parents who were unemployed or who had jobs that paid less than \$20,000 per year. Approximately one quarter of the subjects had parents with professional jobs requiring advanced training. Ten subjects were adoptees. Length of stay ranged from 67 to 501 days ($M = 250.21$, $SD = 123.67$).

Diagnoses

Charts were reviewed to determine eligibility for a conduct disorder diagnosis. The presence of specific criteria was tallied. Forty-nine of the 61 subjects met criteria for Conduct Disorder. Among those subjects who did not get a Conduct Disorder diagnosis, 5 met criteria for Oppositional Defiant Disorder. Three other subjects had a primary diagnosis of substance abuse. Another two subjects met criteria for internalizing disorders. Forty-two subjects had a history of substance abuse, 26 subjects had a history of physical aggression toward others, and 21 subjects had a history of self-mutilation. There were reports of past sexual abuse in the charts of 11 subjects, and reports of serious physical abuse in the charts of 6 subjects.

Data Collection

Categorizations

In this study, the team leaders were given descriptions of four categories regarding personality style labeled (1) impulsive (2) callous (3) internalizing (4) and psychotic. The team leaders were asked to place each subject into the category that best describe his/her personality style. They were told to consult with the members of the team as they saw fit when making this decision. The form given to the team leaders that described each of these personality styles is presented in Appendix B. Team leaders categorized 18 subjects as impulsive, 23 subjects as callous, 4 subjects as internalizing, 7 subjects as psychotic, and 3 subjects as equally impulsive and callous. Six subjects, for whom we obtained admission data only, were not rated. These subjects all had very short stays. The team leaders reported being too unfamiliar with these subjects to assign them to categories.

MMPI-A

During the first week after admission each patient is routinely asked to fill out an MMPI-A. The MMPI-A was then re-administered within the last two weeks prior to discharge. The VRIN scale was used to detect random or very careless responding. Two subjects were excluded from the MMPI-A statistical analyses because they had VRIN scales over 70. For unknown reasons, admission MMPI-As were not administered for four subjects who were discharged in under two months.

The Rorschach

A Rorschach was administered for each patient between the second and sixth week following admission. Administration was done by four advanced graduate students

(fourth or fifth year) trained in the Exner Comprehensive System. The Rorschach was then re-administered during the last three weeks of treatment. For all but five of the patients the admission and discharge Rorschachs were not administered by the same student. When patients gave less than 14 responses, they were asked to go through the cards again and to try to give more. This procedure is recommended by Exner (1993). All the protocols ultimately had more than fourteen responses.

The first author scored all 110 protocols using the Exner system. He was blind to the subtype of each patient (callous, impulsive, etc.), but unfortunately, could not be kept blind regarding time of administration (admission versus discharge). Twenty protocols were randomly selected and were re-scored by another graduate student to assess reliability. Kappa chance corrected reliability estimates were computed for each major Response Segment using the procedures described by Meyer (1991). The results are as follows kappa = .86 for determinants, .74 for Developmental Quality, .63 for Determinants, .60 for Form Quality, .88 for Pairs, .70 for Content, .86 for Popularity, .68 for Z scores, .54 for Cognitive Special Scores, and .71 for Other Special Scores. According to the interpretive guidelines presented by Cichetti (1994) kappa greater than .74 suggests Excellent reliability, between .60 and .74 suggest Good reliability, between .40 and .54 suggest Fair reliability, and Kappas under .40 suggest Poor reliability.

CBCL

The differences between the STU environment and the team environment are likely to contaminate measures of behavioral change from admission to discharge. To control for this, the CBCL was administered on three occasions during treatment. The first administration occurred after one month in STU, or when the patient was transferred

from STU if his/her stay was under one month. The second administration occurred after one month as part of a team. The third occurred within two weeks of discharge. CBCLs were filled out by two different counselors. These counselors lived with and treated the subjects for approximately 40 hours per week. The ratings of these counselors were averaged. The average Pearson r correlation between raters for the three administrations was $r = .72$. (.595, .820, .756) (df 55,47,48). The subjects also filled out a Youth Self Report at each of these times. The Rorschach, MMPI-A, and Youth Self Report were typically all administered during a single testing session within two weeks of discharge.

The first administration of the CBCL did not occur for five patients who left the program in under two months. For three subjects there was no second administration of the CBCL because their stay in the team was under two months, leaving inadequate time to measure behavior change during treatment by the team. Two other patients were returned to STU after less than one month of being treated by the team. These patients were having considerable difficulty, and were deemed to need the increased containment provided in STU. Thus there was also no second administration of the CBCL for these patients.

In obtaining CBCL data, the researchers relied on the milieu counselors to complete the forms and return them. Unfortunately, in some cases this did not occur and this went unnoticed. We did not receive second administration data for one subject, and we did not receive discharge data for three subjects. In the statistical analysis there were 56 subjects at admission. Longitudinal data looking at behavior change during treatment by the teams includes 43 subjects.

CHAPTER 4

RESULTS

The Admission Sample

Table 2 shows the percentage of subjects, among the full admission sample, falling into clinically impaired ranges on 27 Rorschach variables. This table also presents percentages from Exner's (1995) normative samples of 15 year olds, conduct disordered adolescents, and depressed adolescents. This table allows one to evaluate this sample's similarity to another conduct disordered group, a normative group, and a non-conduct disordered clinical group on the Rorschach. In general, while there seem to be many similarities between the admission group and Exner's normative conduct disordered group, these groups are no more similar to one another than they are to Exner's normative group of depressed adolescents.

Predictions regarding scale elevations at admission were tested using one sample t-tests that compared the sample means with published norms. Results are presented in Table 3. For the Rorschach, the sample means were compared with Exner's (1993) sample of 15-year -old normal adolescents using two and one-tailed tests of significance. When using a one-tailed test for significance, the mean Lambda ($p < .001$) and Sum Space ($p < .001$) were significantly higher than the published norm means. Both of these findings suggest that the admission sample was more detached, resistant, and oppositional than are normal adolescents. The mean for Sum H was significantly lower than the published norm mean ($p < .05$), which supported

Table 2

Rorschach Percentages for Normative Samples and Admission Sample

	Normative Samples			
	15 year olds N = 110	Conduct Disorder N = 140	Depression N = 100	Admission Sample N = 61
<i>EB Style</i>				
Introversive	37%	26%	34%	17%
Ambitent	21%	24%	40%	42%
Extratensive	42%	50%	26%	42%
<i>EA-es Differences</i>				
D score < 0	27%	26%	47%	38%
Adj D score < 0	25%	13%	24%	18%
<i>ZD</i>				
Zd > 3.0	23%	26%	41%	18%
Zd < -3.0	15%	04%	21%	33%
<i>Form Quality Deviations</i>				
X+ % < .50	00%	16%	32%	72%*
F+ % < .70	70%	89%	68%	90%
X- % > .15	02%	51%	71%	87%*
<i>FC:CF+C Ratio</i>				
CF + C > FC + 1	21%	31%	26%	28%
CF + C > FC + 2	02%	27%	16%	20%
<i>Constellations and Scores</i>				
HVI Positive	00%	14%	18%	28%
SCZI ≥ 4	00%	14%	12%	54%*
DEPI ≥ 5	00%	38%	69%	38%
CDI ≥ 4	11%	17%	41%	23%
<i>Miscellaneous Variables</i>				
Lambda > .99	07%	31%	19%	56%*
S > 2	15%	81%	76%	43%*
Sum T = 0	05%	61%	53%	79%
3r + (2)/R > .44	45%	31%	31%	31%
Fr = rF > 0		36%	23%	30%
Pure C > 1	00%	20%	02%	08%*
Afr < .50	17%	41%	46%	47%

Table 2 (continued)

	Normative Samples			
	15 year olds N = 110	Conduct Disorder N = 140	Depression N = 100	Admission Sample N = 61
(FM + m) < Sum Shading	15%	40%	59%	23%
Populars < 4	03%	10%	21%	33%
COP = 0	11%	50%	49%	50%
AG = 0	25%	49%	51%	40%
AG > 2	07%	19%	28%	13%
MOR > 2	04%	30%	46%	32%
Level 2 Spec. Score > 0	08%	53%	43%	62%
Sum 6 Spec Score > 6	08%	20%	25%	30%
Pure H < 2	21%	34%	28%	34%
Pure H = 0	01%	03%	02%	15%

Table 3

Z-Tests for Admission Predictions

Variable	Admission Sample			Normative Samples			t
	N	M	SD	N	M	SD	
EA	61	7.78	6.02	110	8.82	2.34	-1.44 ⁺
Sum H	61	2.68	3.08	110	3.42	1.96	-1.87 ⁺⁺
Lambda	61	1.09	1.01	110	0.65	0.22	3.49***
Sum Space	61	2.95	2.57	110	1.44	1.31	4.50****
Immaturity Scale	55	47.73	10.17	1620	50.00	10.00	-1.66*
Cynicism Scale	55	48.96	10.44	1620	50.00	10.00	-.74
STU CBCL Externalizing	56	55.29	8.77	1753	50.00	10.00	4.51****
Team CBCL Externalizing	48	61.13	9.17	1753	50.00	10.00	8.40****
STU YSR Externalizing	55	56.76	10.89	1753	50.00	10.00	4.61****
Team YSR Externalizing	46	55.11	11.27	1753	50.00	10.00	3.07***

* p <= .10 ** p < .05, two tailed, *** p < .01 two tailed, ****p < .001

⁺ p < .10, one tailed, ⁺⁺ p < .05, one tailed

the hypothesis that the adolescents have not adequately identified with adult authority figures. The mean for EA was also lower than the normative mean, but this difference was only a statistical trend ($p < .10$). Thus, there was only weak support for the hypothesis that the admission sample had lower ego strength than do normal adolescents. Overall, differences for Rorschach variables were all in the expected direction, and all variables except EA were statistically significant. Thus, when using the Rorschach as the assessment tool all of the hypotheses regarding personality attributes at admission were supported.

In contrast, both the MMPI-A Immaturity and Cynicism scale means were lower than the published norms, while they were predicted to be higher. This difference was significant enough to be considered a statistical trend $p = .103$, (two tailed) for the Immaturity Scale. Thus, when using the MMPI-A as an assessment tool, the data suggests that the admission sample does not have deficient ego strength when compared to a normal sample. In fact, there is weak evidence that their egos may be more highly developed than those of normal adolescents. Similarly, the MMPI-A data do not support the notion that the admission sample is less trusting of adults than are normal adolescents.

Subjects scored higher than the norm on the CBCL Externalizing Scale after both their first month in STU ($p < .0001$) (one tailed), and after their first month with the team ($p < .0001$) (one tailed). The YSR Externalizing Scale was also higher than the norm after one month in STU ($p < .0001$) (one tailed) and after one month with the teams ($p < .001$) (one tailed). Thus, the CBCL measures strongly suggest that the admission sample exhibits more disruptive and aggressive behavior than do normal adolescents. Table 4

Table 4

Percentage of Clinically Impaired Subjects at Admission

EA < 6.5	46%
Lambda > .99	56%
S > 2	43%
Pure H < 2	34%
Pure H = 0	15%
Immaturity > 65	05%
Cynicism > 65	02%
STU Externalizing > 65	16%
Team Externalizing > 65	33%
STU YSR Externalizing > 65	27%
Team YSR Externalizing > 65	20%

shows the percentage of subjects within a clinically impaired range on each of these variables at admission. Clinical impairment was determined using clinical cut off scores set by Exner (1995), and Archer (1997). Clinical impairment for the CBCL and YSR scales was set at 1.5 standard deviations above the mean, This is the cut off score typically used in clinical practice.

Subgroup Differences

Next the discrimination between subgroups was addressed. For the purpose of these analyses, subjects who were categorized as both impulsive and internalizing or both impulsive and psychotic were placed in the impulsive category. Subjects who were categorized as both callous and internalizing or both callous and psychotic were placed in the callous category. Subjects who were categorized as only internalizing, only psychotic, or both impulsive and callous were not included. Differences between

subgroups for number of responses were compared. The impulsive group gave more responses ($M = 24.89$, $SD = 9.72$) than did the callous group ($M = 22.43$, $SD = 6.55$); but this difference was not significant [$t(28.53) = .920$, $p = .365$ (two tailed)]. The callous group ($M = 15.12$, $SD = 1.69$) was slightly younger than the impulsive group ($M = 15.52$, $SD = 1.50$); this difference was non-significant [$t(39) = -.797$, $p = .430$ (two tailed)]. The callous group (16 males and 7 females) was also more predominantly male than the impulsive group (9 males and 9 females). This gender difference was not statistically significant [$X^2(1, N = 41) = 1.62$, $p = .202$].

Many of the Rorschach variables being used in this study have non-normal distributions. Thus the Mann Whitney U test was used to test differences between subtype means for Rorschach variables. Results for the Rorschach variables are presented in Table 5. To prevent missing values, the ratio FC: CF + C was converted to range scores ($-2 = CF + C > FC + 2$, $-1 = CF + C > FC + 1$, $0 = FC + 1 > CF + C$ and $FC < CF + C + 1$, $1 = FC > CF + C + 1$, $2 = FC > CF + C + 2$). When using the Rorschach to assess group differences, FC:CF + C was expected to be lower for the Impulsive group. This difference would reflect the difficulty that impulsive adolescents have inhibiting their impulses. This hypothesis was not supported. It was expected that Sum T would be lower, and Fr + rF would be higher among the Callous/Unemotional group. These differences would reflect the tendency for Callous/Unemotional adolescents to be more cold, egocentric, and interpersonally detached than the Impulsive adolescents. This hypothesis was not supported. In addition, X-percent and Wsum6 were expected to be higher among the Impulsive

Table 5
Discriminating Subtypes with Rorschach Variables

Variable	Mean Rank		Mann Whitney U
	Impulsive	Callous	
FC : CF + C	21.31	20.76	201.50
X- Percentage	23.50	19.04	162.00
Wsum6	22.75	19.63	175.50
Sum T	21.72	20.43	194.00
Fr + rF	21.94	20.26	190.00

group, reflecting the tendency for impulsive adolescents to distort interpersonal situations. This hypothesis was also not supported.

A t-test was used to assess mean differences between subgroups for MMPI-A, CBCL, and YSR variables. The results of these analyses are shown in Table 6.

Impulsive subjects scored significantly higher on the MMPI-A Anxiety Scale subjects ($M = 54.53$, $SD = 10.70$) than did Callous subjects ($M = 48.83$, $SD = 11.04$), [$t(38) = 1.64$, $p < .05$ (one-tailed)]. Thus, the hypothesis that the Impulsive adolescents were generally more anxious than the Callous/Unemotional adolescents was weakly supported.

Differences on the PA-1 scale were non-significant. Thus, MMPI-A findings did not support the hypothesis that Impulsive adolescents were more likely to distort interpersonal situations.

Table 6

Discriminating Subtypes with MMPI-A, CBCL and YSR Variables

Variable	Impulsive		Callous				t
	N	SD	N	SD			
Variable	M	SD	N	M	SD		
Anxiety Scale	18	54.53	10.70	23	48.83	11.04	1.64**
PA-1 Scale	18	51.94	5.88	23	52.35	9.10	9.10
STU Externalizing	18	58.14	7.08	23	54.52	8.08	1.50*
STU YSR Externalizing	18	56.11	10.19	22	57.95	11.44	-.53
Team Externalizing	16	60.53	7.18	21	62.19	7.80	-.66
Team YSR Externalizing	15	55.20	8.95	22	56.45	12.39	-.36

* $p < .10$ ** $p < .05$, one tailed

Impulsive subjects scored higher on the CBCL Externalizing Scale after their first month in STU. This was a statistical trend [$t(38) = 1.50, p < .10$ (one tailed)]. There was thus weak support for the hypothesis that Impulsive subjects have more difficulty inhibiting impulses than do Callous/Unemotional subjects. The difference after the first month with the teams was then non-significant. No statistically significant differences between the subgroups were found using the Youth Self Report Externalizing Scale. Thus, the YSR findings did not support the hypothesis that that Impulsive subjects have more difficulty inhibiting impulses than do Callous/Unemotional subjects. Table 7 shows percentages of subjects, within each group, falling into clinically impaired ranges on these variables.

Treatment Outcome

Change in number of Rorschach responses from admission to discharge was evaluated and was non-significant [$F(1,48) = 1.77, p = .190$]. Predicted changes on Rorschach, MMPI-A, and CBCL variables from admission to discharge were tested using ANOVAs. The results of these analyses are presented in Table 8. An increase on the FC:CF + C ratio was expected but was not found. Thus there was not evidence suggesting that subjects' ability to inhibit impulses had improved when using this Rorschach variable. The Ego Impairment Index did not decrease significantly, thus there was there was not Rorschach evidence suggesting that subjects' ego functioning improved. Neither the X- percent nor Wsum6 decreased significantly. Thus, there

Table 7
Percentage of Clinically Impaired Subjects by Subtype

		Impulsive	Callous
FC: CF + C Ratio	CF + C > FC + 1	28%	26%
	CF + C > FC + 2	22%	22%
X- Percent	X- % > .15	94%	91%
	X- % > .20	94%	78%
	X- % > .30	72%	52%
Wsum6	Wsum6 > 17	44%	34%
T	Sum T = 0	72%	78%
Fr + rF	Fr + rF > 0	39%	30%
Anxiety Scale PA-1	Anxiety > 65	18%	13%
	PA-1 > 65	00%	09%
STU Externalizing	Externalizing > 65	17%	09%
YSR STU Externalizing	Externalizing > 65	17%	23%
Team Externalizing	Externalizing > 65	31%	29%
YSR Team Externalizing	Externalizing > 65	20%	18%

Table 8
ANOVA Comparing Admission to Discharge

Method	Variable	Df	F
Rorschach Variables	FC:CF + C	1, 48	0.04
	Ego Impairment	1, 48	1.52
	X- Percent	1, 48	0.79
	Wsum6	1, 48	0.47
	Sum H	1, 48	1.53
	Fr + rF	1, 48	0.82
	Lambda	1, 48	0.12
	Sum Space	1, 48	3.27*
MMPI-A Variables	Immaturity	1, 46	2.75
	Valid Immaturity	1, 29	2.42
	PA 1	1, 46	1.91
	Valid PA-1	1, 29	4.39**
	Cynicism	1, 46	9.85***
	Valid Cynicism	1, 29	9.48***
CBCL Variable	Externalizing Scale	1, 42	14.89*****
YSR Variable	Externalizing Scale	1, 42	6.96***

* < .10, ** < .05, *** < .01, ***** < .001

was not evidence that reality distortions had decreased as a result of treatment when using these selected Rorschach variables. Sum H did not increase significantly, thus the hypothesis that subjects would identify with adult figures was not supported by Rorschach data. Neither $Fr + rF$ nor Lambda decreased significantly. Thus the hypothesis that subjects would become less detached and egocentric was not supported by these selected Rorschach variables. There was a statistical trend suggesting an increase in SUM S from admission to discharge $F(1,48) = 3.27, p = .077$. A decrease on this variable was predicted. Thus, there was weak support suggesting that subjects became *more* oppositional and resistant as a result of treatment.

The MMPI-A Immaturity Scale scores did not decrease significantly from admission to discharge. Thus, the MMPI-A data did not suggest that subjects' ego functioning improved from admission to discharge. This was true when all protocols were used in the analysis, and when only those subjects without elevated validity scales (either at admission or discharge) were included in the analysis. There was not a decrease on the PA-1 score when all of the subjects were included in the analyses, but there was a significant increase when the analysis was restricted to only subjects without elevated validity scales $F(1,29) = 4.39, p = .045$. Thus, the MMPI-A data does support a decrease in interpersonal distortions from admission to discharge. Scores on the MMPI-A Cynicism scale also decreased from admission to discharge. This decrease was statistically significant $F(1,46) = 9.85, p = .003$, and continued to be significant when subjects with questionably valid protocols were excluded $F(1,29) = 9.48, p = .005$. Thus, the MMPI-A data does suggest that the subjects' developed increased trust in adults from admission to discharge.

Behavior change within a consistent environment was measured using the Externalizing scales administered during treatment by the teams. Scores on the Externalizing Scale of the CBCL and YSR after the first month with the team were compared to these scales at discharge. The CBCL Externalizing Scale decreased significantly from the time of the first team administration to discharge $F(1,42) = 14.89$, $p < .001$. This also occurred for the YSR Externalizing Scale $F(1,42) = 6.96$, $p = .012$. Thus, the CBCL and YSR data suggest that subjects exhibited significantly less aggressive and disruptive behavior at discharge than they did during their first month with the teams. The percentages of subjects falling into impaired ranges at admission and discharge are shown in Table 9.

Ten of the 49 subjects that were assessed at both admission and discharge stayed in the program for less than 4 months. These subjects are arguably the least likely to have developed personality changes during their treatment. ANOVAs were thus run again excluding these subjects. Findings from these analyses are shown in Table 10. The results obtained are almost identical. With this smaller sample there is no longer a statistical trend suggesting an increase in oppositionality (Higher Sum S) from admission to discharge. Also, there is a significant decrease in Immaturity Scale Scores from admission to discharge when all of the protocols are used in the analyses $F(1,36) = 4.0$, $p = .052$. This suggests an improvement in ego functioning from admission to discharge. This is no longer significant when subjects with elevated validity scales are excluded from the analysis. Percentages of subjects falling into clinically impaired ranges, among subjects whose stay was longer than four months, are shown in Table 11.

Table 9**Percentage of Clinically Impaired Subjects at Admission and Discharge**

		Admission	Discharge
FC: CF + C Ratio	CF + C > FC + 1	27%	28%
	CF + C > FC + 2	18%	16%
Ego Strength	EA < 6.5	49%	43%
X- Percent	X- % > .15	90%	86%
	X- % > .20	83%	75%
	X- % > .30	55%	53%
Wsum6	Wsum6 > 17	43%	48%
Sum H	Sum H < 2	39%	37%
	Sum H = 0	18%	08%
Fr + rF	Fr + rF > 0	29%	37%
Lambda	Lambda > .99	45%	41%
Sum Space	Space > 2	53%	59%
Immaturity Scale	Immaturity > 65	02%	06%
PA-1 Scale	PA-1 > 65	06%	06%
Cynicism Scale	Cynicism > 65	02%	00%
Externalizing Scale	Externalizing > 65	33%	18%
YSR Externalizing Scale	Externalizing > 65	20%	14%

Next, to evaluate the influence of length of stay, the median length of stay for all subjects who were in the program for more than 4 months was computed. The median length of stay for this group was 313.5 days (approximately 10 months). The mean difference scores (discharge score – admission score) for subjects who stayed in the program for more than 10 months was compared to those for subjects who stayed between 4 and 10 months. These difference scores were compared using independent sample t-tests. Results are shown in Table 12. These findings do not suggest that patients with longer lengths of stay showed more improvement than subjects with short lengths of stay.

Table 10**ANOVA Comparing Admission to Discharge for Subjects
Whose Length of Stay is Over 4 Months**

Method	Variable	Df	F
Rorschach Variables	FC:CF + C	1, 38	0.19
	Ego Impairment	1, 38	1.68
	Sum X-	1, 38	0.01
	Wsum6	1, 38	0.16
	Sum H	1, 38	2.63
	Fr + rF	1, 38	0.24
	Lambda	1, 38	1.56
	Sum Space	1, 38	1.76
MMPI-A Variables	Immaturity	1, 36	4.05**
	Valid Immaturity	1, 22	2.75
	PA 1	1, 36	1.81
	Valid PA -1	1, 22	4.12**
	Cynicism	1, 36	9.80***
	Valid Cynicism	1, 22	8.32***
CBCL Variable	Externalizing Scale	1, 36	14.90*****
YSR Variable	Externalizing Scale	1, 39	6.94***

* <.10, ** ≤ .05, *** ≤ .01, ***** < .001

Table 11

Percentage of Clinically Impaired Subjects at Admission and Discharge among those Subjects with a Length of Stay Over Four Months

		Admission	Discharge
FC: CF + C Ratio	CF + C > FC + 1	25%	39%
	CF + C > FC + 2	19%	14%
Ego Strength	EA < 6.5	48%	42%
X- Percent	X- % > .15	86%	89%
	X- % > .20	81%	83%
	X- % > .30	53%	58%
Wsum6	Wsum6 > 17	42%	46%
Sum H	Sum H < 2	36%	33%
	Sum H = 0	19%	06%
Fr + rF	Fr + rF > 0	31%	33%
Lambda	Lambda > .99	42%	36%
Sum Space	Space > 2	50%	64%
Immaturity Scale	Immaturity > 65	00%	00%
PA-1 Scale	PA-1 > 65	05%	03%
Cynicism Scale	Cynicism > 65	03%	00%
Externalizing Scale	Externalizing > 65	39%	21%
YSR Externalizing Scale	Externalizing > 65	20%	13%

Table 12**Average Difference Scores for Subjects with Short and Long Lengths of Stay**

Variable	df	Short LOS Average Difference	Long LOS Average Difference	t
FC: CF + C	34	-0.44	0.78	-1.65
Ego Impairment	34	-0.53	0.33	-0.24
X- percent	34	-0.02	0.02	-1.10
Wsum6	34	-4.94	-5.00	-0.45
Sum H	34	0.33	0.77	-0.56
Fr + rF	34	0.11	0.05	0.16
Lambda	34	-0.16	-0.12	-0.20
Sum Space	34	0.56	0.39	0.18
Immaturity	34	-4.05	-4.72	0.19
Valid Immaturity	21	-2.63	-4.83	0.47
PA 1	34	-3.00	-2.94	-0.01
Valid PA 1	21	-2.27	-6.75	0.98
Cynicism	34	-5.50	-7.16	0.42
Valid Cynicism	21	-5.00	-8.66	0.76
CBCL Externalizing	32	-7.26	-6.08	-0.36
YSR Externalizing	32	-3.52	-6.80	0.94

Additional Descriptive Data

Additional descriptive data is presented in Appendices C through O. Appendix C presents Rorschach descriptive statistics for the full sample of subjects at admission. Appendix D presents percentages of subjects falling into Rorschach clinically impaired ranges for the admission sample and Exner's (1993) normative samples (an extended version of Table 2). Appendix E presents MMPI-A descriptive statistics, at admission, for the 12 major MMPI-A scales. Appendix F presents these MMPI-A admission statistics for those protocols that do not have elevated validity scales.

Appendix G presents percentages of Impulsive and Callous subjects falling into Rorschach clinically impaired ranges. A X^2 with a Yates correction for continuity was run for these percentages to test differences between groups. This analysis suggested that Impulsive subjects were more likely to have a D total score < 0 than were Callous subjects $X^2(1, N = 41) = 5.03, p = .025$. Appendices H through K presents the MMPI-A major scale data for the Impulsive and Callous groups both with protocols that have elevated validity scales and without.

Appendix L presents Rorschach descriptive statistics for the longitudinal sample (a subset of the full admission sample) at both admission and discharge. Appendix M presents the percentage of subjects within the longitudinal sample falling into clinically impaired ranges at both admission and discharge. A X^2 with a Yates correction for continuity was run for these percentages to test differences between groups. This analysis suggested that from admission to discharge the percentage of subjects having D total < 0 increased $X^2(1, N = 98) = 4.08, p = .04$. The percentage of subjects having a $Z_d > 3$ increased $X^2(1, N = 98) = 3.87, p = .03$, while the percentage having $Z_d < 3$ decreased X^2

(1, N= 98) = 6.40, $p = .01$. In addition, the percentage of subjects with MOR > 2 decreased significantly from admission to discharge $\chi^2(1, N = 98) = 5.43, p = .02$.

Appendix N presents MMPI-A major scale descriptive statistics at both admission and discharge for the longitudinal sample. An ANOVA was run for each of these 12 scales, F values are presented in the table. This analysis suggested that subjects reports of depressive symptoms decreased from admission to discharge $F(1,46) = 10.46, p = .002$. Scores on the MF scale significantly increased from admission to discharge $F(1,46) = 6.81, p = .012$. Appendix O presents the same data as is Appendix N, but for only those protocols without elevated validity scales. Again, ANOVAs were run for the 12 scales and F and p values are presented in the table. With this subset of the longitudinal sample the decrease on the Depression Scale continued to be significant $F(1,29) = 5.81, p = .022$. A decrease on the Hysteria Scale became significant $F(1, 29) = 4.68, p = .039$. The increase on the MF scale is no longer significant with this sample $F(1,29) = 1.15, p > .10$.

CHAPTER 5

DISCUSSION

The Admission Sample

Before discussing the findings regarding subtypes and clinical changes, it seems worthwhile to consider the similarity of this sample to other conduct disordered samples. When charts were reviewed for diagnostic criteria 54 out of 61 subjects met criterion for either conduct disorder or oppositional defiant disorder. There were thus some clear expectations regarding the testing data. Some of these expectations were well described by Rinsley and were specific hypotheses in this study. These hypotheses were generally supported by Rorschach data. The Rorschach data suggests that the subjects failed to identify with others (pure H was low), were disengaged from the assessment task, and from treatment (Lambda was high), were oppositional (Sum Space is high), and had poor ego strength (low EA, though this was only a statistical trend). Table 2 also shows other Rorschach findings that are not surprising. As compared to normal 15 year olds, the subjects were more inconsistent in their cognitive approach (more likely to be ambitent), more likely to defensively distort reality (lower X+%, and F+%, higher X-% and SCZI), more impulsive (higher CF + C than FC), more hypervigilant (higher HVI), more depressed (higher DEPI and MOR), and much less likely to acknowledge needs for affection (lower T).

When comparing this sample, however, to both another conduct disordered sample and a depressed sample (see Table 2), it looks idiosyncratic. The admission

group looks no less similar to the depressed group than it does to the other conduct disordered group. This finding can be explained in two ways. First, perhaps the Rorschach is not a sensitive enough assessment technique to allow for discriminant validity between two diagnostic categories, such as the discrimination between conduct disorder and depression. Alternatively, this idiosyncrasy may suggest problems with conduct disorder as a diagnostic category. It has been noted repeatedly in this dissertation that the term “conduct disorder” refers to a large group of heterogeneous individuals. The term thus provides little information. Some authors have argued that conduct disorder is nothing but a reference to general psychopathology (see Lambert, Wahler, et al. 2001). If this is the case, then we would expect conduct disordered samples to be heterogeneous, and to be difficult to discriminate from other psychopathological groups.

Overall the Rorschach data says one thing loudly and clearly, this admission sample suffers from severe pathology. On certain telling variables, such as X-, T, Wsum6, and EA, large percentages of subjects scored in the impaired range. Appendix C shows that the means of the admission sample often drastically differed from normative means, and these differences are almost invariably in the pathological direction. This is interesting when compared to findings on the MMPI-A. The overall pattern of findings on the MMPI-A is consistent with a conduct disorder diagnosis. (See Appendix E) Among the Admission sample, subjects were considerably more likely to have an elevated score on the Psychopathic Deviate Scale than they were on any other Scale. The Psychopathic Deviate Scale measures one’s tendency toward disruptive behavior. Seventeen out of 61 subjects obtained elevated scores on this scale. Interestingly,

however, just as many protocols (17) showed no score elevations on any of the major scales, including the Validity scales. These protocols showed no signs of psychopathology. Indeed, if you compare the percentages of subjects falling into the clinically impaired range on the major clinical scales of the MMPI-A (See Appendix E) to the percentages of subjects falling into impaired ranges on the Rorschach's major variables (see Appendix D), the contrasts are very striking. At admission, the subjects look generally very impaired on the Rorschach and not particularly impaired on the MMPI-A.

One explanation for the discrepancy between Rorschach and MMPI-A findings is that the Rorschach may be exaggerating the pathology of relatively normal adolescents. However, this conclusion is unlikely. As noted earlier, adolescents are typically not admitted to residential treatment programs unless they are experiencing very serious difficulties. Another explanation is provided by Rinsley. Rinsley believed that, early in treatment, patients often attempt to conceal their psychopathology as a means of remaining disengaged from the treatment program. These findings may suggest that at least 17 subjects concealed their psychopathology in a subtle way that was undetected by the validity scales of the MMPI-A. This disengagement would be consistent with the high Lambda on the Rorschach and the high number of Space responses. A third explanation is related to subjects' self-perceptions. Narcissistic/Callous individuals, in particular, tend to experience little conscious emotional distress when their narcissistic defenses are intact. Thus, the lower level of impairment on the MMPI-A may suggest that these subjects do not view themselves as pathological or impaired, though the Rorschach may

suggest that they are so. Indeed, 39% of the callous subjects had both no elevated clinical scales and no elevated validity scales compared with 27% of impulsive subjects.

Differences Between Subgroups

As was predicted, the MMPI-A Anxiety scale was higher for the impulsive subjects than for the callous subjects ($p < .05$, one tailed). There was also a statistical trend ($p < .10$, one tailed) suggesting that impulsive subjects exhibited more disruptive behavior than did the callous group after one month in STU. These findings support the theoretical notion that callous subjects are able to control their behavior better than the impulsive subjects, and that they experience less subjective distress. Otherwise, however, the variables chosen to differentiate these two groups failed to do so. In hindsight, perhaps this is not surprising. As reported earlier, there is a correlation between callous and impulsive personality traits of approximately .50. These are groups that are not likely to be cleanly differentiated.

Nevertheless, there were post hoc findings that are quite consistent with the theoretical distinctions made between these groups. Most of these findings are not statistically significant, but seem notable nonetheless. For example, research suggests that impulsive children have a low tolerance for frustration. When they are taxed by environmental demands they become overwhelmed and are driven to react impulsively. This is believed to be much less true for the callous children. We hypothesized that this impulsive behavior would be seen in a lower FC: CF + C ratio among impulsive subjects. This hypothesis was not supported. The Rorschach, however, has three other variables that do not measure impulsivity directly, but do measure some of the ego functions and

experiences that contribute to impulsive behavior. These variables measure one's ability to cope with environmental demands without becoming overwhelmed. The D score measures the degree to which a subject feels stressed and overwhelmed by *current* demands. This is a measure of subjective distress. The Adj D measures one's tendency to feel overwhelmed and stressed *in most situations*. The Coping Deficit Index assesses whether subjects have a general deficiency in their capacity to cope everyday demands, regardless of whether this coping deficit leads to feelings of being overwhelmed. Exner (1993) recommends using < 0 as the cutoff for the D and Adj D score and ≥ 4 for the Coping Deficit Index. Appendix G suggests that Impulsive adolescents were approximately three times more likely to have a D score under 0. This finding was statistically significant ($p = .025$). Impulsive subjects were more than twice as likely to have an Adj D of under 0 (28% versus 13%) and were twice as likely to have a CDI score that was greater than or equal to 4 (44% versus 22%).

Dodge and Coie (1987) describe an interpersonal bias that is often seen among impulsive (reactive) children but not among callous (proactive) children. This interpersonal bias involves the belief that others are hostile or persecutory toward oneself. We thus hypothesized that impulsive adolescents would be more likely to distort reality than would callous children. A difference in X-% and WSum6 was hypothesized. The Mann Whitney U test showed no difference between means for these variables. In Appendix G, however, a greater percentage of impulsive subjects (72%) scored X-% $> .30$, compared to the callous subjects (52%). Impulsive subjects were more likely to give Level 2 special scores (72% versus 57%), and were more likely to score in the impaired range on the Schizophrenia Index (61% versus 43%). All three of these measures

suggest the presence of disordered thinking. Finally, the Hypervigilance Index is a composite score that measures one's tendency to be cautious and guarded around others, often because one fears being persecuted. Impulsive subjects (44%) were almost twice as likely to score positively on this index than were the callous subjects (26%).

As was described in Chapter 2, Narcissistic/Callous children are believed to exhibit ostensible ego strengths. They are generally able to maintain control of their behavior. They also experience little distress and emotional turmoil when their narcissistic defenses are left unperturbed. We hypothesized that the impulsive subjects would have higher Anxiety Scale scores compared to the callous subjects. The hypothesis was supported ($p < .05$, one tailed). The callous subjects' lower level of experienced distress becomes more generally apparent when one looks at the percentages of subjects scoring in the impaired range on the major MMPI-A scales (See Appendices H through K) Notice that these percentages are considerably higher for impulsive subjects than they are for callous subjects. An overview of the MMPI-A findings suggests that Callous subjects do not perceive themselves as being impaired, distressed, or pathological. The Rorschach findings, however, suggest that this perception masks underlying deficits. Overall the callous subjects look as impaired on the Rorschach as do the Impulsive subjects (See Appendix G). This is very consistent with psychoanalytic theory regarding narcissism. This theory proposes that narcissistic individuals seem superficially well adjusted and intact. However, they conceal considerable ego deficits. Kernberg (1975) has suggested that underneath a defensive grandiose self-structure, these individuals will look as impaired as borderline (impulsive) individuals. This is just what

we see if we consider the MMPI-A as a measure of self-perception and the Rorschach as a measure of underlying personality structure.

In chapter 2, psychoanalytic theory regarding narcissism was described. This theory proposes that the narcissistic individual's ostensible ego strengths come at a cost. The narcissistic individual maintains composure, and escapes distress, by remaining disconnected from affects, by denying dependency, and by remaining emotionally detached from others. In this study we hypothesized that these differences would be reflected via a lower Sum T and a Higher Fr + rF. These hypotheses were not supported. However, there were positive findings for related variables. Specifically 48% of callous subjects had Lambda scores in the impaired range ($> .99$) versus 28% of the impulsive subjects. This finding suggests that the callous subjects were more detached and disengaged during the assessment than were the impulsive subjects. Similarly, 61% of the callous individuals had Affective Ratio scores $< .50$ versus 33% of the impulsive subjects. This finding suggests that callous individuals are more likely to avoid affectively charged experiences, and are likely to be less in touch with their own emotional experiences, than are the impulsive subjects.

Treatment Outcome

Next, we can examine the changes in personality from admission to discharge. In chapter two, Rinsley's stages of treatment were described. These will be briefly reviewed for the purpose of this discussion. (1) During the initial resistant phase, patients are emotionally disengaged. They invariably, says Rinsley, take an oppositional (though

often not openly oppositional) stance toward the treatment program due to a profound mistrust of others and a preoccupation with their symbiotic parent-child relationship.

(2) With time the patient moves into the definitive stage. He/she, at this time, is forced to consider reality outside of this symbiotic relationship through an extended encounter with a firm hospital structure. During this phase the adolescent regresses and experiences increased distress and emotional turmoil. While the patient begins to separate from the symbiotic union, he/she often believes that this will cause him/her to unravel and to become unable to function. (3) Finally, after gaining support from a reliable, consistent, and benevolent staff, the adolescent successfully separates. He/she develops trust in the staff, which allows one to develop increased ego strength. Through this process the patient is able to identify with staff members. This leads to many benefits. At this point the patient should have more realistic perceptions of interpersonal situations. He/she should be less egocentric and more warm and engaged in interpersonal relationships. He/she should also become less oppositional generally.

So at what stage are these subjects in this course of treatment? The answer is, it depends on which method of assessment one uses. Most past residential treatment outcome studies have measured gains using self-report instruments and behavioral ratings. When we look at the findings from these methods exclusively, the subjects seem to have made it through all of Rinsley's phases. Instead of looking at all 47 longitudinal MMPI-A protocols, ANOVA's were computed for those 30 subjects who had no elevated validity scales either at admission or discharge. For those MMPI-A protocols without elevated validity scales we a significant decrease in interpersonal distortions (decrease on the PA-1 Scale) and a highly significant increase in trust of others (decrease Cynicism

Scale). In addition, Appendices N and O suggest an overall decrease in general psychopathology, and a considerable decrease in depressive affect. When looking at ANOVA results for protocols without elevated validity scales, the decrease on the Depression Scale and the Hysteria Scale are both significant ($p < .05$). Thus, the MMPI-A self report measure suggests that subjects, at discharge, see themselves as generally less pathological and as less distressed. In fact, the MMPI-A protocols look quite healthy at discharge. Less than 10% of the subjects scored in the clinically impaired range for 9 of the 10 clinical scales (all but PD, see Appendix N). The relative stability of the PD scale is likely to be due to its many historical items (i.e., have you ever been arrested?) that do not change over time. For 8 of the 10 clinical scales, less than 10% of the subjects have elevated scores when only valid protocols are included (Appendix O). At discharge, 64% of the subjects have no elevated clinical scales and 47% have no elevated clinical scales and no elevated validity scales.

The behavioral ratings are quite consistent with the findings from the MMPI-A. According to the counselor's ratings, the behavior of the subjects improved drastically while they were being treated by the team. The decrease in externalizing behavior was highly significant ($p < .001$). At discharge only 9 subjects (18%) are within the impaired range on the CBCL Externalizing scale. The subjects, on the YSR, also report that their externalizing behavior has decreased ($p = .01$). Only 7 subjects (14%) scored within the elevated range for this scale at discharge. Thus according to both self-reports and behavior ratings, the two most commonly used instruments for outcome studies, the subjects have made gains. At discharge, the subjects are less depressed, less anxious, and less disruptive behaviorally. They are generally only mildly more pathological and

disruptive than a normal group of adolescents. This is quite impressive considering that the mean length of stay within this residential treatment center was 7 months. According to Rinsley, when things go well, the resistance phase alone usually lasts for approximately six months.

Outcome in the Context of Rinsley's Theory and Personality Assessment Theory

When looking at these findings in the context of Strupp and Hadley's tripartite model, the MMPI-A would reflect change from the subject's perspective and the behavioral ratings would reflect changes from the society's perspective. In Chapter 3 concerns regarding the bias inherent in these methods of assessment were discussed. Specifically, these measures may be affected by counselors' and patients' optimism regarding treatment gains. They may also be biased by the patient's conscious or unconscious attempts to "look healthy" in order to leave treatment. If these biases mask underlying psychopathology, then a more objective, intrapsychic measure of personality change would not show the same treatment gains. This is exactly what we see. The Rorschach protocols at discharge continue to look highly pathological and look almost identical to the admission Rorschachs. None of the specific hypotheses regarding personality changes were supported. The subjects do not seem to have become more engaged in treatment. They do not seem to be more trusting counselors; if anything they have secretly become more oppositional. This is seen in the statistical trend toward and increase in Sum S ($p = .077$). There are no significant changes on variables suggesting increased identification with others, lowered impulsivity, increased interpersonal warmth, decreased egocentricity, increased ego strength, or decreased interpersonal distortions.

None of these hypotheses are statistically supported. Generally, according to the Rorschach, the personalities of these subjects have undergone little change. While these findings do not support our hypotheses regarding therapeutic change, they are consistent with Rinsley's predictions. He would expect little change after approximately one year of treatment.

Interestingly, the statistically significant findings that we do see on the Rorschach seem to suggest increased feelings of being overwhelmed and subjectively distressed. Subjects became more likely to have D total scores < 0 from admission to discharge ($p = .04$). This finding may be due to subjects' nervousness about their approaching discharge. The decrease in D appears to be primarily due to an increase in Sum Y, a measure of situational distress. The Mean for Sum Y increased from 2.27 to 3.36.

Alternatively, the increase in distress may be explained using Rinsley's description of the definitive stage. As previously noted, Rinsley believed that the hospital structure forces the child to confront a reality outside of one's symbiosis. When this occurs the adolescent loses the safety and comfort of Borderline and Narcissistic defenses. This forces the patient to face life in a new way, which is very frightening. The patient feels overwhelmed, regressed, unable to handle stress. The patient is also forced to cope with feelings that were previously denied.

It is important to note that the Rorschach findings suggest that these patients feel worse, not that they have gotten worse. If we look at measures of ego strength, 6% percent fewer of the subjects are in the impaired range on EA at discharge as compared to admission. The Ego Impairment Index decreased from admission to discharge (both of these findings are positive, but statistically non-significant). We may imagine that

subjects privately feel like they are getting worse. The findings, however, suggest that they are mistaken. They are only feeling and tolerating more negative affect. This, again, is consistent with Rinsley's theory.

The shift in the ZD variable suggests that the increase in subjective distress is accompanied by increased information processing. At admission, the subjects tended to scan their environment in a haphazard manner. At discharge they are more attentive and they are processing information more carefully. This may suggest some movement toward insight.

There was also a significant decrease in Morbid responses from Admission to Discharge on the Rorschach ($p = .02$). This finding is consistent with the significant decrease on the Depression scale of the MMPI-A ($p < .05$). It may be that a decreased tendency toward depression is the most significant change made by subjects in this residential treatment program. This particular finding is difficult to reconcile with Rinsley's theory. Rinsley believed that subjects experienced increased depressive affect during the definitive stage.

The Rorschach findings from this study suggest that it is inaccurate to understand Rinsley's stages as occurring sequentially. It is tempting to assume, when reading Rinsley's descriptions, that patients first become more engaged in treatment and begin trusting staff members (attained via the initial resistance phase), and then subsequently they begin to regress and to feel more overwhelmed and distressed (the definitive stage). The findings from this study, however, suggest that the regression can occur when there has been little change in one's engagement and level of trust. The Rorschach findings suggest no increase in the subjects' level of engagement (Λ), no increased

identification with others (Sum H), and a statistical trend toward *increased* oppositionality. Thus, it may be that the structure of the program may force separation and regression. This can happen before the patients have become more open to the treatment, and before they have become more trusting toward the treatment providers.

Perhaps this continuing mistrust toward the treatment providers explains why the explicit and public understanding of the treatment situation (assessed via the MMPI-A and the CBCL) and the underlying, unspoken situation (assessed via the Rorschach) are so different. Seven months is currently a normal length of stay at most residential treatment centers. It is now expected that after roughly 7 months of residential treatment adolescents should feel better, act better, and be better. At a superficial level, this is exactly what one sees. The patient's behavior improves. The patient reports that he/she feels less depressed, less anxious, and generally healthier. The patient may even believe this. The results of this study suggest, however, that this superficial view involves conscious or unconscious denial. What goes unsaid is that the patient continues to be highly suspicious of staff members. He/she continues to be disengaged and not signed on to the treatment model. And, on a private or denied level, the patient actually feels more dysfunctional than he/she ever has. These private feelings are natural and expected within this population. They are part of a long-term treatment process that has been described in detail by Rinsley. Unfortunately, because of the current trends in psychology, clinicians are forced to think from a short-term perspective. These private feelings remain concealed and denied, and mistrust is preserved. Then, not surprisingly, the impressive gains made in treatment, as measured by the self-report and behavior ratings scales, do

not lead to post discharge successes. This is true, perhaps, because these gains involve self-deception and denial.

An alternative explanation would argue that the improvements shown on the MMPI-A and behavioral ratings are not illusory. These improvements fail to predict post discharge success because post discharge environments are very different from one another. Some environments are suited to preserve therapeutic progress, while others undermine it and lead to decline. If this is the case, there is no such thing as “underlying” or “structural” change. Perhaps subjective feelings of improvement and behavioral change are the changes we should be after and “structural change” is a fantasy. If this were true, the problem could be with the Rorschach. The Rorschach may simply not be sensitive to therapeutic change, or it may not be measuring what it is supposed to be measuring.

Two important studies suggest that this is not the case. The first was conducted by Abraham et. al. (1994). These authors also used the Rorschach to assess personality changes among a sample (N=50) of adolescents in residential treatment. This sample consisted of adolescents primarily diagnosed with psychotic or affective disorders (only one subject diagnosed with conduct disorder). Nevertheless, many of the authors’ hypotheses were identical to those of this study. The major difference between Abraham et al’s (1994) study and the current study is that they retested subjects after 2 years, while the average length of stay for this study was only 7 months. Abraham’s results are seen in Appendix O (percentages of subjects in clinically impaired ranges) and P (means and standard deviations). Abraham et al. (1994) found drastic and statistically significant improvements on 19 out of 32 variables, beyond what one would expect from maturation

alone. Their study suggests that personality changes do occur during residential treatment, and that the Rorschach is sensitive to these changes. This current study, when seen in light of Abraham's et al.'s findings, suggests that these changes may take time to occur. It would be very interesting to see whether the Rorschach changes found by Abraham et al predict post discharge functioning better than improvements on self-report and behavioral ratings measures.

In this current study, attempts were made to look at the influence of length of stay on outcome. The findings did not suggest that a longer length of stay yielded greater personality changes. One confounding factor within the current study, however, is the subjects' prognosis at admission. Patients who had poorer prognoses were more likely to have longer stays in this residential treatment program. Previous research has suggested that subjects with poorer prognoses tend to make less progress within residential treatment. In Abraham et al's (1994) study, however, all subjects stayed in treatment for 2 years regardless of prognosis.

Another important study was conducted by Weiner and Exner (1991). These authors looked at treatment outcome for short term and long term psychotherapy. This sample consisted of primarily neurotic individuals, with better prognoses than the subjects in this study. Subjects in both the short and long term categories made improvements that were consistent with psychotherapy research literature. In addition, the Rorschach demonstrated that the long-term psychotherapy group was able to make considerably more progress in 4 years than was the short-term psychotherapy group. While the two groups were different (at the $p < .01$ level) on only two variables related to psychological adjustment at the start of the study, the long term group looked better

adjusted (at the $p < .01$ level) on 10 out of 27 variables after 4 years. Thus, both of these studies suggest that the Rorschach is sensitive to therapeutic change, and that it is particularly sensitive to structural changes that occur over time in long term treatment.

Overall, Weiner and Exner's (1991) subjects made considerably more gains after one year than did the subjects in this study (see Appendix Q and R). This supports the notion that the psychopathology of this conduct disordered residential group may be more intractable than that of other groups. Weiner and Exner (1991) did find, however, that certain variables such as AdjD, EA, $H < [(H) + Hd + (Hd)]$, and Sum T did not begin to improve significantly until after two years. Thus, perhaps the subjects in this study may have made greater gains if they had been in treatment longer.

If we assume that the Rorschach is sensitive to the "structural" therapeutic change, then we must assume that this change did not generally occur for the patients in this study. The discrepancy between the Rorschach, self-report, and behavioral ratings measures of therapeutic change should make us wonder about purported progress that occurs in short-term treatment modalities. Is this progress simply a reflection of the clinicians' and patients' belief that change ought to have occurred? If self-report and behavior rating changes do not predict follow up improvement, what does this mean? Have treatment gains been lost, or has structural change never occurred in the first place? These are very important questions that can potentially call into question short-term treatment models or models that focus on symptomatic change, such as behavioral changes and reductions in subjective distress. If structural change is indeed needed for long-term improvement to occur, then long-term treatments focusing on the personality dynamics underlying symptoms may be a more fruitful means of intervention.

REFERENCES

References

- Abraham, P.A., Lepisto, B.L., Lewis, M.G. Schulz, L., & Finkelberg, S. (1994). An outcome study: Changes in Rorschach variables of adolescents in residential treatment. *Journal of Personality Assessment*, 62(3), 505-514.
- Aguilar, B., Sroufe, L.A., Egeland, B., & Carlson, E. (2000). Distinguishing the early-onset/persistent and adolescent-onset antisocial behavior types: From birth to 16 years. *Development and Psychopathology*, 12, 109-132.
- Aichorn, A. (1935). *Wayward Youth*. New York: Viking.
- Albrecht, G., Veerman, J. W., Damen, H. & Kroes, G. (2001). The Child Behavior Checklist for group care workers: A study regarding the factor structure. *Journal of Abnormal Child Psychology*, 29(1), 83-89.
- American Psychiatric Association. (1994). *Diagnostic and Statistical Manual of Mental Disorder* (4th ed.). Washington, DC: Author.
- American Psychiatric Association. (1980). *Diagnostic and Statistical Manual of Mental Disorder* (3rd ed.). Washington, DC: Author.
- Anderson, K.E., Lytton, H., & Romney, D.M. (1986) Mother's interactions with normal and conduct-disordered boys: Who affects whom? *Developmental Psychology*, 22, 604-609.
- Angold, A., Erkanli, A., Costello, E. J., & Rutter, M. (1996). Precision, reliability, and accuracy in dating symptom onsets in child and adolescent psychopathology. *Journal of Child Psychology and Psychiatry*, 37, 657-664.
- Archer, R. P. (1997). *MMPI-A: Assessing adolescent psychopathology* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum Associates, Inc.

- Barkley, R., & Cunningham, E. (1979). The effects of methylphenidate on mother-child interaction of hyperactive children. *Journal of Abnormal Child Psychology*, 9, 303-310.
- Bates, J.E., Bayles, K., Bennet, D.S., Ridge, B., & Brown, M.M. (1991) Origins of externalizing behavior problems at eight years of age. In D.J. Pepler & H. Rubin (Eds), *The development and treatment of childhood aggression* (pp. 93-121). Hillsdale, NJ: Erlbaum.
- Bettelheim, B. (1951). *Love is not enough*. Glencoe, Illinois: Free Press.
- Bettelheim, B., & Silvester, E. (1947). Therapeutic influence of the group on the individual. *The American Journal of Orthopsychiatry*, 17, 684-92.
- Bettelheim, B., & Silvester, E. (1948). A therapeutic milieu. *The American Journal of Orthopsychiatry*, 18, 191-206.
- Biederman, J., Munir, K., & Knee, D. (1987). Conduct and oppositional disorder in clinically referred children with attention deficit disorder: A controlled family study. *American Academy of Child and Adolescent Psychiatry*, 48, 523-527.
- Biederman, J., Newcorn, J., & Sprich, S., (1991). Comorbidity of attention deficit hyperactivity disorder with conduct, depressive, anxiety, and other disorders. *American Journal of Psychiatry*, 148, 564-577.
- Belsky, J., Hsieh, K., & Crnic, K. (1998). Mothering, fathering, and infant negativity as antecedents of boy's externalizing problems and inhibition at age 3 years: Differential susceptibility to rearing experience. *Development and Psychopathology*, 10, 301-319.

- Blatt, S.J., & Ford, R.Q. (1994). *Therapeutic change: An object relations perspective*. New York: Plenum Press.
- Blos, P. (1965). *On adolescence: A psychoanalytic interpretation*. New York: The Free Press.
- Blumstein, A., & Cohen, J. (1987). Characterizing criminal careers. *Science*, 237, 985-991.
- Brennan, P., Raine, A., & Mednick, S.A. (1994). Psychophysiological protective factors for children at high risk for antisocial outcome. *Psychophysiology*, 31(Suppl. 1), S30.
- Bursten, B. (1986). Some narcissistic personality types. In A. Morrison (Ed.), *Essential Papers on Narcissism* (pp. 377-402). New York: NYU Press.
- Cadoret, R.J., Yates, W.R., Troughton, E., Woodworth, G., & Stewart, M.A. (1995). Genetic-environmental interaction in the genesis of aggressivity and conduct disorders. *Archives of General Psychiatry*, 52, 916-24.
- Campbell, S.B. (1995). Behavior problems in preschool children: A review of the recent research. *Journal of Child Psychology and Psychiatry*, 36, 113-149.
- Campbell, S.B. (1990). *Behavior problems in preschool children: Clinical and developmental issues*. New York: Guilford Press.
- Campbell, S.B., Shaw, D.S., & Gilliom, M. (2000). Early externalizing behavior problems: Toddlers and preschoolers at risk for later maladjustment. *Development and Psychopathology*, 12, 467-488.
- Carlson, C.L., Tamm, L., & Hogan, A.E. (1999). The child with oppositional defiant disorder and conduct disorder in the family. In H.C. Quay & A.E. Hogan (Eds.),

- Handbook of Disruptive Behavior Disorders* (pp. 337-352). New York: Kluwer Academic/Plenum Publishers.
- Caspi, A., Henry, B., McGee, R.O., Moffit, T.E., & Silva, P.A. (1995). Temperamental origins of child and adolescent behavior problems: From age 3 to age 15. *Child Development, 66*, 55-68.
- Christian, R.E., Frick, P.J., Hill, N.L., Tyler, L., & Frazer, D.R. (1997). Psychopathy and conduct problems in children: II Implications for subtyping children with conduct problems. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*(2), 233-241.
- Cleckley, H. (1976). *The mask of sanity* (5th edition). St Louis, MO: Mosby.
- Conger, R.D., Patterson, G.R. & Ge, X. (1995). It takes two to replicate: A mediational model for the impact of parents' stress on adolescent adjustment. *Child Development, 66*, 80-97.
- Curry, J.F. (1991). Outcome research on residential treatment: Implications and suggested directions. *American Journal of Orthopsychiatry, 61*, 348-357.
- Damasio, A. R. (2000). A neural basis for sociopathy. *Archives of General Psychiatry, 57*(2), 128-129.
- Deklyken, M., & Speltz, M.L. (2001). In J. Hill & B. Maughan (Eds.), *Conduct disorders in childhood and adolescence* (pp. 320-345), Cambridge, MA: Cambridge University Press.
- Deklyken, M., Speltz, M.L., & Greenberg, M.T. (1998). Fathering and early onset conduct problems: Positive and negative parenting, father-son attachment, and the marital context. *Clinical Child and Family Psychology Review, 1*, 3-21.

- Denham, S.A., Workman, E., Cole, P.M., Weisbrod, C., Kendziora, K.T., & Zahn-Waxler, C. (2000). Predictions of externalizing behavior problems from early to middle childhood: The role of parental socialization and emotion expression. *Development and Psychopathology, 12*, 23-45.
- Dodge, K.A. (1990). Nature versus nurture in childhood conduct disorder: It is time to ask a different question. *Developmental Psychology, 26*, 698-701.
- Dodge, K.A., & Coie, J.D. (1987). Social-information-processing factors in reactive and proactive aggression in children's peer groups. *Journal of Personality and Social Psychology, 53*(6), 1146-1158.
- Donnellan, M.B., Xiaoja, G., & Wenk, E. (2000). Cognitive abilities in adolescent-limited and life-course-persistent criminal offenders. *Journal of Abnormal Psychology, 109*(3), 396-402.
- Durkin, R.P., & Durkin, A.B. (1975) Evaluating residential treatment programs for disturbed children. In M. Guttenberg & E.L. Struening (Eds.), *Handbook of Evaluation Research* (Vol. 2, pp. 275-339), Beverly Hills, CA: Sage.
- Eaves, L., Rutter, M., Silberg, J.L., Shillady, L., Maes, H., & Pickles, A. (2000). Genetic and environmental causes of covariation in interview assessments of disruptive behavior in child and adolescent twins. *Behavior Genetics, 30*(4), 321-334.
- Edelbrock, C.S., Reade, R., Plomin, R., & Thompson, L.A. (1992). *Genetics and environmental effects on competence and problem behavior in childhood and early adolescence*. Manuscript submitted for publication.

- Edelbrock, C., Rende, R., Plomin, R., & Thompson, L.A. (1995). A twin study of competence and problem behavior in childhood and early adolescence. *Journal of Child Psychology and Psychiatry*, 36, 775-785.
- Elliott, D.S., Ageton, S.S., Huizinga, D., Knowles, B.A., & Canter, R.J. (1983). *The prevalence and incidence of delinquent behavior: 1976-1980 (The National Youth Survey Report No. 26)*, Boulder, CO: Behavioral Research Institute.
- Erickson, M. F., Sroufe, A.L., & Egeland, B. (1985). The relationship between quality of attachment and behavior problems in preschool in a high-risk sample. *Monographs of the Society for Research in Child Development*, 50(1-2), 147-166.
- Erikson, E.H. (1950). *Childhood and Society*. New York: Norton.
- Erikson, E. H. (1993). The problem of ego identity. In Pollock, G. H. (Ed). *Pivotal papers on identification* (pp. 265-303). Madison, CT: International Universities Press.
- Exner, J.E. (1993). *The Rorschach: A comprehensive system*. New York: John Wiley & Sons.
- Exner, J.E., & Weiner, I.B. (1995). *The Rorschach, A comprehensive system. Volume 3: Assessment of children and adolescents* (2nd Ed.), New York: Wiley and Sons.
- Fagot, B. I., & Pears, K. C. (1996). Changes in attachment during the third year: Consequences and predictions. *Development & Psychopathology*, 8(2), 325-344.
- Faraone, S.V., Biederman, J., Keenan, K., & Tsuang, M.T. (1991). Separation of DSM III attention deficit disorder and conduct disorder: Evidence from a family-genetic study of American psychiatric patients. *Psychological Medicine*, 21, 109-121.

- Farrington, D. P. (1997). The relationship between low resting heart rate and violence. In Raine, Adrian (Ed); Brennan, Patricia A. (Ed); et al. *Biosocial bases of violence. NATO ASI series: Series A: Life sciences*, (Vol. 292, pp. 89-105). New York: Plenum Press.
- Farrington, D.P. (1983). Offending from 10 to 25 years of age. In K. Van Dusen & S.A. Mednick (Eds.) *Prospective studies of crime and delinquency* (pp. 17-38). Boston: Kluwer-Nijhoff.
- Farrington, D.P. (1978). The family backgrounds of aggressive youths. In L.A. Hersov & M. Berger (Eds.), *Aggression and antisocial behavior in childhood and adolescence* (pp.73-93). Elmsford, N.Y: PUBLISHER HERE.
- Fergusson, D.M., Horwood, L.J., & Lynskey, M.T. (1993) Prevalence and comorbidity of DSM-III-R diagnoses in a birth cohort of 15 year olds. *Journal of the American Academy of Child and Adolescent Psychiatry*, 32(6), 1127-1134.
- Fergusson, D.M., Horwood, L.J., & Lynskey, M.T. (1994). Structure of the DSM-III-R criteria for disruptive childhood behaviors: confirmatory factor models. *Journal of the American Academy of Child and Adolescent Psychiatry*, 33, 1145-1157.
- Fonagy, P., Steele, H., & Steele, M., (1991). Maternal representations of attachment during pregnancy predict the organization of infant-mother attachment at one year of age. *Child Development*, 62, 891-905.
- Forgatch, M.S. (1991). The clinical science vortex: Developing a theory for antisocial behavior. In D.J. Pepler & K.H. Rubin (Eds.), *The Development and Treatment of Childhood Aggression* (pp. 291-315). Hillsdale, NJ: Lawrence Erlbaum.

- Fox, , N.A., Kimmerly, N.L., & Schafer, W.D. (1991). Attachment to mother/attachment to father: A meta-analysis with emphasis on the role of temperament. *Child Development*, 62, 210-225.
- Frick, P.J., & Jackson, Y.K. (1993). Family functioning and childhood antisocial behavior: Yet another reinterpretation. *Journal of Clinical Child Psychology*, 22(4), 410-419.
- Frick, Paul J., Lahey, Benjamin B., Loeber, R., & Tannenbaum, L., et al. (1993). Oppositional defiant disorder and conduct disorder: A meta-analytic review of factor analyses and cross-validation in a clinic sample. *Clinical Psychology Review*, 13(4), 319-340.
- Frick, P.J., Lahey, B.B., Loeber, R., Stouthamer-Loeber, M., Christ, M.G., & Hanson, K. (1992). Familial risk factors to oppositional defiant disorder and conduct disorder: Parental psychopathology and maternal parenting. *Journal of Consulting and Clinical Psychology*, 60 (1), 49-55.
- Frick, P.J., Lilienfeld, S.O., Ellis, M., Loney, B., & Silverthorn, P. (1999). The association between anxiety and psychopathy dimensions in children. *Journal of Abnormal Child Psychology*, 27(5), 383-392.
- Frick, P.J., O'Brien, W., & Mc Burnett, K. (1994). Psychopathy and conduct problems in children. *Journal of Abnormal Psychology*, 103(4), 700-707.
- Gacono, C. (1990) An empirical study of object relations and defensive operations in antisocial personality disorder. *Journal of Personality Assessment*, 54, 589-600.
- Gacono, C. B., & Meloy, J. R. (1994). *The Rorschach assessment of aggressive and psychopathic personalities*. Hillsdale, NJ: Lawrence Erlbaum Associates.

- Gardner, F.E.M. (1989). Inconsistent Parenting: Is there evidence for a link with children's conduct problems? *Journal of Abnormal Child Psychology*, 17, 223-33.
- Gray, J. A. (1994). Framework for a taxonomy of psychiatric disorder. In van Goozen, S. H. M., Van de Poll, N.E. (Ed), et al. *Emotions: Essays on emotion theory* (pp. 29-59). Hillsdale, NJ: Lawrence Erlbaum.
- Greenberg, M. T., Speltz, M. L., DeKlyen, M., & Jones, K. (2001). Correlates of clinic referral for early conduct problems: Variable- and person-oriented approaches. *Development & Psychopathology*, 13(2), 255-276.
- Greenberg, M., Speltz, M., & Deklyken, M. (1993). The role of attachment in the early development of disruptive behavior problems. *Development and Psychopathology*, 5, 191-213.
- Guerin, D.W., Gottfried, A.W., & Thomas, C.W. (1997). Difficult temperament and behavior problems: A longitudinal study from 1.5 to 12 years. *International Journal of Behavioral Development*, 21, 71-90.
- Hare, R.D., Hart, S.D., & Harpur, T.J. (1991). Psychopathy and the DSM-IV criteria for antisocial personality disorder. *Journal of Abnormal Psychology*, 100, (3), 391-398.
- Hechtman, L. (1994). Genetic and neurobiological aspects of attention deficit disorder: A review. *Journal of Psychiatric Neuroscience*, 19, 193-201.
- Hewitt, L.E., & Jenkins, R.L. (1946). *Fundamental patterns of maladjustment, the dynamics of their origin*. Springfield, IL: State of Illinois.

- Hill, J. (2001) Biosocial influences on antisocial behaviors in childhood and adolescence. In J. Hill & B. Maughan (Eds.), *Conduct disorders in childhood and adolescence* (pp. 103-125) Cambridge, MA: Cambridge University Press.
- Hilsenroth, M.J., Fowler, C.J., Padawer, J.R., & Handler, L. (1997). Narcissism in the Rorschach revisited: Some reflections on empirical data. *Psychological Assessment*, 9(2), 113-121.
- Hinshaw, S. (1994). Conduct disorder in childhood: conceptualization, diagnosis, comorbidity, and risk status for antisocial functioning in adulthood. In D.C. Fowles, P. Sutker, P., & S.H. Goodman, (Eds.), *Progress in Experimental Personality and Psychopathology Research* (pp. 3-44) New York: Springer.
- Hogan, A.E. (1999). Cognitive functioning in children with oppositional defiant disorder and conduct disorder. In H.C. Quay & A.E. Hogan (Eds.), *Handbook of Disruptive Behavior Disorders* (pp. 317-335) New York: Kluwer Academic/Plenum Publishers.
- Jensen, P.S., Martin, D., & Cantwell, D.P. (1997). Comorbidity of ADHD. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 1065-79.
- Juglum-Bartusch, D., Lynam, D., Moffitt, T.E., & Silva, P.A. (1997). Is age important: Testing general versus developmental theories of antisocial behavior. *Criminology*, 35, 13-47.
- Kaplan, L. J. (1996). The stepchild of psychoanalysis, adolescence. *American Imago*, 53(3) 257-268.
- Kernberg, O.F. (1975). *Borderline conditions and pathological narcissism*. New York: Aronson.

- Kohut, H. (1971). *The analysis of the self*. New York: International Universities Press.
- Kratzer, L., & Hodgins, S. (1999). A typology of offenders: A test of Moffitt's theory among males and females from childhood to age 30. *Criminal Behavior & Mental Health*, 9, 57-73.
- Kingston, L., & Prior, M. (1995). The development of stable, transient, and school age onset aggressive behavior in young children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 34, 348-358.
- Lahey, B. B, McBurnett, K., Loeber, R., & Hart, E. L. (1995). Psychobiology. In G. Sholevar, (Ed.), *Conduct disorders in children and adolescents* (pp. 27-44). Washington, DC: American Psychiatric Press.
- Lahey, B.B., Piacentini, J.C., McBurnett, K., Stone, P., Hartdagen, S., & Hynd, G. (1988). Psychopathology in the parents of children with conduct disorder and hyperactivity. *Journal of the American Academy of Child and Adolescent Psychiatry*, 27(2), 163-170.
- Lahey, B.B., Loeber, R., Hart, E.L., Frick, P.J., Applegate, B., Zhang, Q., Green, S.M., & Russo, M.F. (1995). Four year longitudinal study of conduct disorder in boys: Patterns and predictors of persistence. *Journal of Abnormal Psychology*, 104, 83-93.
- Lahey, B.B., Loeber., R., Quay, H. C., Frick, P.J., & Grimm, J. (1992). Oppositional defiant and conduct disorder: Issues to be resolved for DSM-IV. *Journal of the American Academy of Child and Adolescent Psychiatry*, 31(3), 539-546.

- Lahey, B. B., Piacentini, J. C., McBurnett, K., & Stone, P. (1988). Psychopathology in the parents of children with conduct disorder and hyperactivity. *Journal of the American Academy of Child & Adolescent Psychiatry*, 27(2), 163-170.
- Laub, J.H., & Sampson, R.J. (1988). Unraveling families and delinquency: A reanalysis of Glueck's data. *Criminology*, 26, 355-80.
- Lewis, W.W. (1982). Ecological factors in successful residential treatment. *Behavioral Disorders*, 7, 149-155.
- Linnoila, M. (1997). On the psychobiology of antisocial behavior. In D.M. Stoff, J. Breiling, et al. (Eds.), *Handbook of antisocial behavior* (pp. 336-340). New York: John Wiley & Sons.
- Loeber, R., Brinthaup, V.P., & Green, S. (1990). Attention deficits, impulsivity, and hyperactivity with or without conduct problems: Relationship to delinquency and unique contextual factors. In R.J. McMahon & R.D. Peters (Eds.), *Behavior disorders of adolescence: Research, intervention, and policy in clinical and school settings* (pp. 39-61). New York: Plenum Press.
- Loeber, R., Burke, J.D., Lahey, B.B., Winters, A., & Zera, M. (2000). Oppositional defiant and conduct disorder: A review of the past 10 years, Part I. *Journal of the American Academy of Child and Adolescent Psychiatry*, 39(12), 1468-1484.
- Loeber, R., & Farrington, D.P. (2000). Young children who commit crime: Epidemiology, developmental origins, risk factors, early interventions, and policy implications. *Development and Psychopathology*, 12, 737-762.

- Loeber, R., Lahey, B.B., & Thomas, C. (1991). Diagnostic conundrum of oppositional defiant disorder and conduct disorder. *Journal of Abnormal Psychology, 100*(3), 379-390.
- Loeber, R., & Lahey, B.B. (1989). Recommendations for research on disruptive behavior disorders of childhood and adolescence. In B.B Lahey & A.E. Kazdin (Eds.), *Advances in clinical child psychology* (Vol. 12, pp. 221-251). New York: Plenum Press.
- Loeber, R., Keenan, K., Lahey, B., Green, S.M., & Thomas, C. (1993). Evidence for a developmentally based diagnosis of oppositional defiant and conduct disorder. *Journal of Abnormal Child Psychology, 21*(4), 377- 410.
- Loeber, R., & Schmalting, K.B. (1985). Empirical evidence for overt and covert patterns of antisocial conduct problems: A meta-analysis. *Journal of Abnormal Child Psychology, 13*, 337-352.
- Loeber, R., & Stouthaner-Loeber, M. (1986). Family factors as correlates and predictors of juvenile conduct problems and delinquency. In M. Tonry & N. Morris (Eds.), *Crime and Justice* (Vol.7, pp.219-339) Chicago: University of Chicago Press.
- Loeber, R., & Stouthaner-Loeber, M. (1998). Development of juvenile aggression and violence: Some common misperceptions and controversies. *American Psychologist, 53* (2), 242-259.
- Loving, J.L., & Russel, W.F. (2000). Selected Rorschach variables of psychopathic juvenile offenders. *Journal of Personality Assessment, 75*(1), 126-142.
- Lynam, D.R. (1996). Early identification of chronic offenders: Who is the fledgling psychopath. *Psychological Bulletin, 120*(2), 209-234.

- Lynam, D.R. (1997). Pursuing the psychopath: Capturing the fledgling psychopath in a nomological net. *Journal of Abnormal Psychology, 106*, 425-438.
- Lynam, D. R., & Henry, B. (2001). The role of neuropsychological deficits in conduct disorders. In J. Hill, & B. Maughan (Eds.), *Conduct disorders in childhood and adolescence. Cambridge child and adolescent psychiatry* (pp. 235-263). New York: Cambridge University Press.
- Lyons-Ruth, K. (1996). Attachment relationships among children with aggressive behavior problems: The role of disorganized early attachment patterns. *Journal of Consulting and Clinical Psychology, 64*(1), 64-73.
- Lyons-Ruth, K., & Block, D. (1996). The disturbed caregiving system: Relations among childhood trauma, maternal caregiving, and infant affect and attachment. *Infant Mental Health Journal, 17*(3), 257-275.
- Lyons-Ruth, K., Bronfman, E., & Atwood, G. (1999). A relational diathesis model of hostile-helpless states of mind: Expressions in mother-infant interaction. In J. Solomon & C. George (Eds.), *Attachment Disorganization* (pp. 33-70) New York: Guilford.
- Lyons-Ruth, K., Easterbrooks, A.M., & Cibelli, D.C. (1997). Infant attachment strategies, infant mental lag, and maternal depressive symptoms: Predictors of internalizing and externalizing problems at age 7. *Developmental Psychology, 33*(4), 681-692.
- Lytton, H. (1990). Child and parent effects in boys conduct disorder: A reinterpretation. *Developmental Psychology, 26*, 683-697.
- Magnusson, D. (1988). *Individual development from an interactional perspective: A longitudinal study*. Hillsdale, NJ: Erlbaum.

- Mahler, M.S. (1986). A study of the separation-individuation process. In M. Stone (Ed.), *Essential papers on borderline disorders: One hundred years at the border* (pp. 433-452). New York: NYU Press.
- Main, M., & Cassidy, J., (1988). Categories of response to reunion with the parent at age 6: Predictable from infant attachment classifications and stable over 1 month period. *Developmental Psychology*, 24, 415-426.
- Main, M., Kaplan, N., & Cassidy, J. (1985). Security in infancy, childhood, and adulthood: A move to the level of representation. *Monographs of the Society for Research in Child Development*, 50(1-2), 66-104.
- Martin, J. (1981). A longitudinal study of the consequence of early mother-infant interaction: A microanalytic approach. *Monographs for the Society for Research in Child Development*, 46, (3, Serial No. 190).
- McBurnett, K., Lahey, B.B., Capasso, L., & Loeber, R. (1996). Aggressive symptoms and salivary cortisol in clinic-referred boys with conduct disorder. *Annals of the New York Academy of Sciences*, 794, 169-179.
- McCord, J. (1979). Some child-rearing antecedents of criminal behavior in adult men. *Journal of Personality and Social Psychology*, 37, 1477-86.
- McGuffin, P., & Thapar, A. (1997). Genetic basis of bad behavior in adolescents. *Lancet*, 350, 411-412.
- Meissner, W.W. (1986). Narcissistic personalities and borderline conditions: A differential diagnosis. In A. Morrison (Ed.), *Essential Papers on Narcissism* (pp. 403-437). New York: NYU Press.

- Mekos, D., Hetherington, E., & Reiss, D. (1996). Sibling differences in problem behavior and parental treatment in nondivorced and remarried families. *Child Development, 67*, 2148-65.
- Meloy, J.R. (1992). *The psychopathic mind*. Northvale, NJ: Aronson.
- Modell, A.H. (1986). A narcissistic defense against affects and the illusion of self-sufficiency. In A. Morrison (Ed.), *Essential Papers on Narcissism* (pp. 293-307). New York: NYU Press.
- Moffitt, T.E. (1990). Juvenile delinquency and attention deficit disorder: Boys developmental trajectories from age 3 to 15. *Child Development, 61*, 893-910.
- Moffitt, T.E. (1993). Adolescent-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100* (4), 674-701.
- Moffitt, T. E. Caspi, A., Dickson, N., Silva, P., & Stanton, W. (1996). Childhood-onset versus adolescent-limited antisocial conduct problems in males: Natural history from age 3 to 18 years old. *Development and Psychopathology, 8*, 399-424.
- Moffitt, T. E., & Caspi, A. (2001). Childhood predictors differentiate life-course persistent and adolescence-limited antisocial pathways among males and females. *Development and Psychopathology, 13*, 355-375.
- O'Connor, T.G., Hetherington, E.M., Reiss, D., & Plomin, R. (1995). A twin-sibling study of observed parent-adolescent interactions. *Child Development, 66*, 644-660.
- Ogles, B.M., Lambert, M.J., & Masters, K.S. (1996). *Assessing Outcome in Clinical Practice*. Boston: Allyn & Bacon.

- Pantle, M.L., Ebner, D.L., & Hyman, L.S. (1994). The Rorschach and the assessment of impulsivity. *Journal of Clinical Psychology, 50*(4), 633-638.
- Patterson, G.R., G., DeBaryshe B., & Romsey, E., (1989). A developmental perspective on antisocial behavior. *American Psychologist, 44*, 329-335.
- Patterson, G.R., DeGarmo, D.S., & Knutson, N., (2000). Hyperactive and antisocial behaviors: Comorbid or two points in the same process? *Development and Psychopathology, 12*, 91-106.
- Patterson, G.R., Reid, J.B., & Dishion, T.J. (1992). *A social interactional approach: IV. Antisocial boys*. Eugene, OR: Castalia.
- Patterson, G.R. (1986). Performance models for antisocial boys. *American Psychologist, 41*, 432-444.
- Pecora, P.J., Whitaker, J.K., Maluccio, A.N., Barth, R.P., & Plotnick, R.D. (1992). *The child welfare challenge: Policy, practice, and research*. Hawthorne, NY: Aldine de Gruyter.
- Perry, W., & Viglione, D. J. (1991). The Ego Impairment Index as a predictor of outcome in melancholic depressed patients treated with tricyclic antidepressants. *Journal of Personality Assessment, 56*(3), 487-501.
- Pettit, G. S., Dodge, K. A, & Brown, M. M. (1988). Early family experience, social problem solving patterns, and children's social competence. *Child Development, 59*(1), 107-120.
- Pfeiffer, S.I. (1989). Follow-up of children and adolescents treated in psychiatric facilities: A methodology review. *Psychiatric Hospital, 20*, 15-20.

- Pliska, S.R., (1999). The psychobiology of oppositional defiant disorder and conduct disorder. In H.C. Quay & A.E. Hogan (Eds.), *Handbook of Disruptive Behavior Disorders* (pp. 371-395). New York: Kluwer Academic/Plenum Publishers.
- Pfiffner, L.J., McBurnett, K., Lahey, B.B., Loeber, R., Green, S., Frick, P.J., & Rathouz, P.J. (1999). Association of parental psychopathology to the comorbid disorders of boys with attention deficit-hyperactivity disorder. *Journal of Consulting and Clinical Psychology*, 67(6), 881-893.
- Quay, H.C. (1999). Classification of the disruptive behavior disorders. In D. C. Fowles, P. Sutker, & S. H. Goodman, (Eds.), *Progress in Experimental Personality and Psychopathology Research* (pp. 3-44). New York: Springer.
- Quay, H.C. (1993). The psychobiology of undersocialized aggressive conduct disorder. *Development and Psychopathology*, 5, 165-180.
- Quay, H.C. (1986). Classification. In H.C. Quay & J.S. Werry (Eds.), *Psychological disorders of childhood* (pp. 1-34). New York: Wiley.
- Raine, A. (1996). Autonomic nervous system factors underlying disinhibited, antisocial, and violent behavior. *Annals of the New York Academy of Sciences*, 794, 46-59.
- Raine, A., Brennan, P., & Farrington, D. P. (1997). Biosocial bases of violence: Conceptual and theoretical issues. In A. Raine, & P.A. Brennan et al. (Eds.), *Biosocial bases of violence. NATO ASI series: Series A: Life sciences*, (Vol. 292, pp. 1-20). New York: Plenum Press.
- Renken, B., Egeland, B., Marvinney, D. & Mangelsdorf, S., et al. (1989). Early childhood antecedents of aggression and passive-withdrawal in early elementary school. *Journal of Personality*, 57(2), 257-281.

- Richters, J.E., & Cicchetti, C. (1993). Mark Twain meets DSM-III-R: Conduct disorder, development, and the concept of harmful dysfunction. *Development and Psychopathology*, 5, 5-29.
- Rinsley, D. (1980). *Treatment of the Severely Disturbed Adolescent*. Northvale, NJ: Aronson.
- Robins, L. (1966). *Deviant children grow up*. Baltimore: Williams & Wilkins.
- Rogeness, G.A., Javors, M., Maas, J.W., & Macedo, C.A. (1990). Catecholamines and diagnoses in children. *Journal of the American Academy of Child and Adolescent Psychiatry*, 29, 234-241.
- Rothbaum, F., & Weisz, J. (1994). Parental caregiving and externalizing behavior in non-clinical samples: A meta-analysis. *Psychological Bulletin*, 116, 44-74.
- Rutter, M. (2001). Conduct disorder: Future directions. An afterword. In J. Hill & B. Maughan (Eds.), *Conduct disorders in childhood and adolescence* (pp. 553-572) Cambridge, MA: Cambridge University Press.
- Sanson, A., & Prior, M. (1999). Temperament and behavioral precursors to oppositional defiant disorder and conduct disorder. In H.C. Quay & A.E. Hogan (Eds.), *Handbook of Disruptive Behavior Disorders* (pp. 397-417). New York: Kluwer Academic/Plenum Publishers.
- Sanson, A., Smart, D., Prior, M., & Oberklaid, F. (1993). Precursors of hyperactivity and aggression. *Journal of the American Academy of Child & Adolescent Psychiatry*, 32(6), 1207-1216.

- Schmitz, S., Cherny, S.S., Fulkner, D.W., & Mrazek, D.A. (1994). Genetic and environmental influences on early childhood behavior. *Behavior Genetics*, 24, 25-34.
- Shaw, D.S., Keenan, K., & Vondra, J.I. (1994). Developmental precursors of externalizing behavior: Ages 1 to 3. *Developmental Psychology*, 30(3), 355-364.
- Shaw, D.S., Owens, E.B., Vondra, J.I., Keenan, K., & Winslow, E.B. (1996). Early risk factors and pathways in the development of early disruptive behavior problems. *Development and Psychopathology*, 8, 679-700.
- Shaw, D.S., & Vondra, J.I. (1995). Infant attachment security and maternal predictors of early behavior problems: A longitudinal study of low income families. *Journal of Abnormal Child Psychology*, 23, 335-57.
- Shaw, D. S., & Winslow, E. B. (1997). Precursors and correlates of antisocial behavior from infancy to preschool. In D.M. Stoff, & J. Breiling, et al. (Eds.), *Handbook of antisocial behavior* (pp. 148-158). New York: John Wiley & Sons.
- Silberg, J., Rutter, M., Meyer, J., Siminoff, E., Hewitt, J., Loeber, R., Pickles, A., Maes, H., & Eaves, J.L. (1996). Genetic and environmental influences on the covariation between hyperactivity and conduct disturbance in juvenile twins. *Journal of Child Psychology and Psychiatry*, 37, 803-16.
- Silverthorn, P., & Frick, P.J. (1999). Developmental pathways to antisocial behavior: The delayed onset pathway in girls. *Development and Psychopathology*, 9, 43-58.
- Siminoff, E. (2001). Genetic influences on conduct disorder. In J. Hill & B. Maughan (Eds.), *Conduct disorders in childhood and adolescence* (pp 202-234). Cambridge, MA: Cambridge University Press.

- Smith, A.M., Gacono, C.B., & Kaufman, L. (1997). The Rorschach comparison of psychopathic and nonpsychopathic conduct disordered adolescents. *Journal of Clinical Psychology, 53*(4), 289-300.
- Stewart, M.A., Cummings, C., Singer, S., & deBlois, C.S. (1981). The overlap between hyperactive and unsocialized aggressive children. *Journal of Child Psychology and Psychiatry, 22*, 35-45.
- Stewart, M.A., deBlois, S., & Cummings, C. (1980). Psychiatric disorder in the parents of hyperactive boys and those with conduct disorder. *Journal of Child Psychiatry, 26*, 653-660.
- Strupp, H.H., & Hadley, S.W. (1977). A tripartite model of mental health and therapeutic outcomes. *American Psychologist, 32*, 187-196.
- Suess, G.J., Grossman, K.E., & Sroufe, L.A. (1992). Effects of infant attachment to mother and father on quality of adaptation in preschool: From dyadic to individual organization of self. *International Journal of Behavioral Development, 15*, 43-65.
- Tuma, J.M. (1989). Mental health services for children: The state of the art. *American Psychologist, 44*, 188-199.
- Van IJzendoorn, M. H., & Bakermans-Kranenburg, M. J. (1996). Attachment representations in mothers, fathers, adolescents, and clinical groups: A meta-analytic search for normative data. *Journal of Consulting & Clinical Psychology, 64*(1), 8-21.

- Viglione D.J., & Perry, W. (1991). The Ego Impairment Index as a predictor of outcome in melancholic depressed patients treated with tricyclic antidepressants. *Journal of Personality Assessment*, 56(3), 487-501.
- Vitiello, B., & Stoff, D.M. (1997). Subtypes of Aggression and their relevance to child psychiatry. *Journal of the American Academy of Child and Adolescent Psychiatry*, 36, 307-315.
- Vondra, J. I., Shaw, D.S., Swearingen, L., Cohen, M., & Owens, E. B. (2001). Attachment stability and emotional and behavioral regulation from infancy to preschool age. *Development & Psychopathology*, 13(1), 13-33.
- Wahler, R. G. (1996). Chaos and order in the parenting of aggressive children: Personal narratives as guidelines. In C.F. Ferris & T. Grisso (Eds), *Understanding aggressive behavior in children. Annals of the New York Academy of Sciences* (Vol. 794, pp. 153-168). New York: New York Academy of Sciences.
- Wahler, R.G. (1990). Who is driving the interaction? A commentary on "Child and parent effects in boys' conduct disorder". *Developmental Psychology*, 26, 702-704.
- Wahler, R. G., Castellani, M. E., Smith, G. D., & Keathley, E. A. (1996). Solitary behavior and friendly social activity: Differential gateways for conduct problem versus normal child-mother dyads. *Journal of Clinical Child Psychology*, 25(2), 238-245.
- Wahler, R. G., & Dumas, J. E., (1989). Attentional problems in dysfunctional mother-child interactions: An interbehavioral model. *Psychological Bulletin*, 105(1), 116-130.

- Walker, J.L., Lahey, B. B., Hynd, G.W., & Frame, C.L. (1987). Comparison of specific patterns of antisocial behavior in children with conduct disorder with or without coexisting hyperactivity. *Journal of Consulting and Clinical Psychology, 55*, 910-913.
- Wartner, U.G., Grossman, K., Fremmer-Bombik, E., & Suess, G. (1994). Attachment patterns at age six in south Germany: Predictability from infancy and implications for preschool behavior. *Child Development, 65*, 1014-1027.
- Webster-Stratton, C. (1990). Stress: A potential disruptive of parent perceptions and family interactions. *Journal of Clinical Child Psychology, 4*, 302-312.
- Weiner, I. B. (1998). *Principles of Rorschach interpretation*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Weiner, I.B., & Exner, J.E. (1991). Rorschach changes in long-term and short-term psychotherapy. *Journal of Personality Assessment, 56*(3), 453-465.
- Wells, I.K. (1991). Long-term residential treatment for children: Introduction. *American Journal of Orthopsychiatry, 61*, 324-326.
- Whitaker, J.K., & Pecora, P. (1984). A research agenda for residential care. In T. Philpot (Ed.), *Group care practice: The challenge of the next decade* (pp.87-97). Surrey: Business Press International Limited.
- White, J.L., Moffitt, T.E., Caspi, A., Bartusch, D.J., Needles, D.J., & Stouthamer-Loeber, M. (1994). Measuring impulsivity and examining its relationship to delinquency. *Journal of Abnormal Psychology, 103*(2), 192-205.

- Wootton, J.M., Frick, P.J., Shelton, K.K., & Silverthorn, P. (1997). Ineffective parenting and childhood conduct problems: The moderating role of callous-unemotional traits. *Journal of Consulting and Clinical Psychology*, 65(2), 301-308.
- World Health Organization. (1992). *International classification of diseases* (10th ed.). Geneva, Switzerland: Author.
- Zulliger, H. (1938). *Youthful thieves and the Rorschach test. A psychological and pedagogical study*. Bern: Haupt.

APPENDICES

Appendix A

Informed Consent Statement Parent Form

Outcome in a residential treatment center assessed through self report, behavior ratings, and the Rorschach.

Objectives and Benefits of the Study

Usually when adolescents leave Peninsula Village they believe that they have changed in a lot of ways. For example, many adolescents think that they have more control of their anger or that they get along with people better than they did when they first were admitted here. Peninsula Village is now doing a study to see how much, and in what ways adolescents change while they are here. You and your child are invited to be a part of it.

Information About Participants' Involvement in the Study

If you want your child to be a part of this study here is what will happen. Normally when adolescents are admitted they take several personality tests (projective drawings, the MMPI-A, and the Miale Holsopple Sentence Completion Test). These tests help the Peninsula Village staff decide how best to treat each patient. If your child is part of this study he/she will be given two additional tests (the Rorschach and Child Behavior Checklist Youth Self Report) within three weeks of his/her admission. Then at discharge, or in June of 1999 (whichever comes first) your child will again take three tests; the Rorschach, Youth Self Report, and MMPI-A. Thus, if you decide to allow your child to be part of this study he/she will undergo two additional hours of testing within three weeks of admission and three and a half hours of testing at discharge, when compared to the normal testing procedure. This additional testing will in no way effect your child's treatment here at Peninsula Village

Confidentiality Risk

It is important to insure that this study does not allow people outside of Peninsula Village to learn the names or other information about people participating in this study. To do this, the researchers will make sure that any data that is removed from the property of Peninsula Village will have no names on it. Instead, once the data is collected your child will be identified by a number rather than by his or her name.

Contact Information

If you have questions at any time about this study you may contact:

Robert Riethmiller, P.E.
University of Tennessee,
225 Austin Peay Building
Knoxville, TN 37996
(423) 974-2161

Participant's Initials _____

Also, if you have any questions about your rights as a participant, contact the Compliance Section of the Office of Research at (423) 974-3466.

Participation

Choosing for your child to be a part of the study will only effect your child's treatment at Peninsula Village if you choose to allow Peninsula Village to use his/her additional testing when making treatment decisions. Otherwise, participation will not effect how long your child stays at Peninsula Village or the quality of his/her treatment here. Also, even after you have said that you want your child to be in this study you can change your mind. If you later tell us that you don't want your child to participate in this study, then he/she will be allowed to stop participating. Similarly, if you later decide that you do not want additional testing to effect your child's treatment you can ask that it be removed from his/her file.

CONSENT

I have read the above information. I received a copy of this form. I agree to have my child participate in this study.

Parent's Signature _____ Date _____

Parent's Signature _____ Date _____

Principal Investigator's Signature _____ Date _____

Informed Consent Statement Patient Form

Outcome in a residential treatment center assessed through self report, behavior ratings, and the Rorschach.

Objectives and Benefits of the Study

Usually when adolescents leave Peninsula Village they believe that they have changed in a lot of ways. For example, many adolescents think that they have more control of their anger or that they get along with people better than they did when they first were admitted here. Peninsula Village is now doing a study to see how much, and in what ways adolescents change while they are here. You are invited to be a part of it.

Information About Participants' Involvement in the Study

If you want to be a part of this study here is what will happen. Normally when adolescents are admitted they take several personality tests (projective drawings, the MMPI-A, and the Miale Holsopple Sentence Completion Test). These tests help the Peninsula Village staff decide how best to treat each patient. If you are part of this study you will be given two additional tests (the Rorschach and Child Behavior Checklist Youth Self Report) within three weeks of your admission. Then at discharge, or in June of 1999 (whichever comes first) you will again take three tests; the Rorschach, Youth Self Report, and MMPI-A. Thus, if you decide to be part of this study you will undergo two additional hours of testing within three weeks of admission and three and a half hours of testing at discharge. By additional we mean in addition to the normal testing procedure. This additional testing will in no way effect your treatment here at Peninsula Village.

Confidentiality Risk

It is important to insure that this study does not allow people outside of Peninsula Village to learn the names or other information about people participating in this study. To do this the researchers will make sure that any data that is removed from the property of Peninsula Village will have no names on it. Instead, once the data is collected you will be identified by a number rather than by your name.

Contact Information

If you have questions at any time about this study you may contact:
Robert Riethmiller, P.E.
University of Tennessee,
225 Austin Peay Building
Knoxville, TN 37996
(423) 974-2161

Also, if you have any questions about your rights as a participant, contact the Compliance Section of the Office of Research at (423) 974-3466.

Participant's Initials _____

Participation

Choosing to be a part of the study will only effect your treatment at Peninsula Village if you choose to allow Peninsula Village to use your additional testing when making treatment decisions. Otherwise, participation will not effect how long you stay at Peninsula Village or the quality of your treatment here. Also, even after you have said that you want to be in this study you can change your mind. If you later tell us that you don't want to participate in this study you will be allowed to stop participating. Similarly, if you later decide that you do not want additional testing to effect your treatment you can ask that it be removed from your file.

CONSENT

I have read the above information. I received a copy of this form. I agree to participate in this study.

Parent's Signature _____ Date _____

Parent's Signature _____ Date _____

Principal Investigator's Signature _____ Date _____

Appendix B

Diagnostic Categorization Form for Program Director and Team

The following form requests that you select one of four that best describe particular patients' behavior/personality when they first came to the cabins. Many of these patients are likely to have attributes that are characteristic of more than one category, but please try to select the *best* category. In those cases where this seems impossible (where a patient seems to fit equally well into two different categories) please choose the two categories that best describe the patient.

The following are descriptions of the four categories:

1- Conduct Disorder, Impulsive/Borderline Type

Individuals within this category exhibit:

poor impulse control (inattentive, acting without thinking)
reactive aggression (temper tantrums, gets angry when corrected, easily disrupted)
tendency to form intense and unstable relationships
frequent attention seeking behavior
suicidal ideation, suicidal threats, or self mutilation

2- Conduct Disorder, Callous-Unemotional (Narcissist/Psychopath) Type

Individuals within this category exhibit:

little remorse or guilt about misdeeds
Insincere friendliness or charm
Instrumental aggression (planned, to exploit others) or sadistic
Deceit
lack of concern about schoolwork
little genuine anxiety or sadness
chronic mistrust of others
lack of concern regarding others' well being

3- Internalizing Disorders

Individuals within this category exhibit:

Excessive guilt, depression, or anxiety
perfectionism
shyness/self consciousness
lack of assertiveness
frequent worrying
concern about the feelings and opinions of others

4- Psychotic/Thought Disordered

Individuals within this category exhibit:

Bizarre Thoughts
Obviously odd and illogical reasoning
Hallucinations
Frequent and severe incoherence

Diagnostic Categorization Form for Program Director and Team

Please Place an X on the line under the most appropriate category.

<u>Name</u>	Impulsive	Callous	Internalizing	Psychotic
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____
XXXXXXXXXX	_____	_____	_____	_____

APPENDIX C

Admission Descriptive Statistics for Major Rorschach Variables

Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
R	23.97	8.05	14	52	21.5	18	1.28	1.67
W	11.12	6.41	3	31	9	8 ^a	1.50	1.87
D	8.90	5.41	1	25	7.5	6	.81	.33
Dd	3.95	3.06	0	14	3.5	1 ^a	1.07	1.36
S	2.95	2.57	0	13	2	2	1.56	3.07
DQ+	7.60	5.34	0	34	7	5 ^a	2.46	9.80
DQo	14.95	6.21	6	31	14	10 ^a	.83	.08
DQv	1.13	1.41	0	7	1	0	1.57	3.70
DQv/+	.28	.61	0	3	0	0	2.50	6.77
FQx+	.02	.13	0	1	0	0	7.76	.60
FQxo	9.92	3.18	5	18	10	10	.58	.06
FQxu	5.18	2.94	0	13	5	5	.51	.02
FQx-	8.47	5.76	1	35	7	6	1.96	6.66
FQxnone	.38	.67	0	2	0	0	1.51	.99
MQ+	0	.00	0	0	0	0	.31	.61
MQo	2.05	1.62	0	6	2	1 ^a	.56	-.33
MQu	.67	.95	0	3	0	0	1.22	.311
MQ-	1.80	2.62	0	15	1	0	2.84	10.95

APPENDIX C (continued)

	Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
163	MQnone	.03	.18	0	1	0	0	5.33	27.36
	SQual-	1.40	1.53	0	8	1	0	1.78	4.85
	M	4.55	3.90	0	22	4	2	2.35	8.32
	FM	2.33	1.65	0	7	2	1	.65	-.14
	m	1.95	1.92	0	9	1	1	1.36	1.99
	FC	1.38	1.51	0	6	1	0	1.28	1.02
	CF	2.03	2.02	0	11	2	1	1.88	5.67
	C	.33	.68	0	3	0	0	2.14	4.17
	Cn	.03	.18	0	1	0	0	5.33	27.36
	Sum Color	3.78	3.16	0	16	3	1 ^a	1.40	2.15
	WSumC	3.23	2.85	0	14	2.5	1 ^a	1.40	2.15
	SumT	.28	.61	0	3	0	0	2.49	6.77
	SumC'	2.08	1.99	0	9	2	1	1.19	1.46
	SumV	.40	.69	0	2	0	0	1.47	.75
	SumY	2.20	1.95	0	9	2	2	1.08	1.55
	Fr+rF	.60	1.17	0	6	0	0	2.56	7.74
	Egocentricity	.34	.20	0	1.19	0	.45	1.23	4.17
	FD	1.13	1.05	0	5	1	1	1.27	2.45
	(2)	6.05	3.74	0	19	6	7	.82	1.55
	Lambda	1.09	1.01	.14	6.00	.70	.41 ^a	2.29	8.15

APPENDIX C (continued)

	Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
164	FM+m	4.28	2.73	0	14	4	3	1.27	2.22
	EA	7.78	6.02	0	36	6.5	3 ^a	2.33	7.83
	es	9.25	5.61	1	30	8	5	1.16	2.13
	D Score	-.47	1.69	-5	5	0	0	.32	3.14
	AdjD	.37	1.54	-2	8	0	0	2.52	10.40
	A (active)	5.15	3.74	0	19	4.5	2 ^a	1.66	3.77
	P (passive)	3.78	3.09	0	16	3	3	1.58	3.63
	Ma	2.60	2.64	0	13	2	0	1.89	5.07
	Mp	2.05	1.99	0	10	2	1	1.90	5.23
	Intellect	1.90	2.52	0	9	1	0	1.71	1.94
	Zf	15.00	6.70	6	43	13	12 ^a	1.86	5.03
	Zd	-.95	5.72	-14	14	-1.5	1	.44	.68
	Blends	.480	3.59	0	18	4	3	1.21	1.86
	Blends/R	.20	.13	0	1	.19	0	.83	.24
	Col-Shad Blds	.77	1.01	0	4	0	0	1.30	1.02
	Afr	.49	.19	.16	1.08	.50	.50	.69	1.18
	Populars	4.42	1.82	1	8	4	4 ^a	.03	-.93
	X+%	.43	.13	.13	.75	.42	.42 ^a	.18	-.19
	F+%	.48	.20	.00	1.00	.46	.33	.07	.04
	X-%	.33	.14	.04	.67	.33	.33	.08	-.13
	Xu%	.21	.11	.00	.47	.21	.17	.33	-.17

APPENDIX C (continued)

Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
S-%	.16	.18	.00	1.00	.14	.00	1.95	5.97
Isolates	4.98	4.04	0	24	4	2	2.26	7.82
H	2.68	3.08	0	18	2	2	3.08	11.88
(H)	1.82	1.57	0	5	2	0	.42	.87
Hd	1.38	1.66	0	8	1	0	1.85	4.67
(Hd)	.55	.93	0	4	0	0	1.82	3.01
Hx	.35	.76	0	4	0	0	2.98	10.51
A	8.48	3.58	3	19	8	8	.88	.52
(A)	.67	1.07	0	4	0	0	1.58	1.43
Ad	2.07	1.55	0	7	2	2	.71	.48
(Ad)	.12	.32	0	1	0	0	2.45	4.14
An	.98	.55	0	5	0	0	2.36	6.75
Art	.47	.91	0	5	0	0	2.96	10.85
Ay	1.18	.93	0	6	1	0	1.94	5.13
Bl	.32	.60	0	2	0	0	1.75	2.03
Bt	1.25	1.23	0	5	1	0 ^a	1.20	1.60
Cg	1.58	1.52	0	7	1	0	.99	1.12
Cl	.22	.56	0	3	0	0	3.13	11.31
Ex	.17	.46	0	2	0	0	2.85	7.80
Fi	.80	1.02	0	5	1	0	1.70	3.86
Food	.23	.59	0	3	0	0	2.93	9.09

APPENDIX C (continued)

166

Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
Ge	.05	.29	0	2	0	0	6.15	39.25
Hh	1.33	1.31	0	5	1	0	.89	.32
Ls	1.32	1.16	0	5	1	1	1.04	.91
Na	.97	1.38	0	7	.50	0	2.12	5.84
Sc	1.73	2.28	0	10	1	0	2.04	4.56
Sx	.17	.46	0	2	0	0	2.85	7.80
Xy	.03	.18	0	1	0	0	5.33	27.36
Idio	.58	1.06	0	5	0	0	1.79	3.19
DV	.58	.91	0	4	0	0	1.79	3.19
INCOM	.87	.91	0	3	1	0	.69	-.52
DR	.65	1.25	0	5	0	0	2.28	4.77
FABCOM	.85	1.09	0	5	.50	0	1.46	2.41
DV2	.06	.41	0	3	0	0	6.81	48.41
INC2	.58	.87	0	4	0	0	1.74	3.39
DR2	.22	.58	0	3	0	0	3.09	10.08
FAB2	.90	1.59	0	8	0	0	2.86	9.37
ALOG	.73	1.45	0	7	0	0	3.05	10.52
CONTAM	.05	.29	0	2	0	0	6.15	39.25
Sum 6 Sp. Sc.	5.50	5.14	0	30	4	2 ^a	2.35	8.32
Level 2 Sp. Sc.	1.77	2.47	0	15	1	0	3.00	13.32
WSum6	21.75	24.46	0	155	14.50	0	3.12	14.33

APPENDIX C (continued)

Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
AB	.25	.77	0	4	.00	0	2.12	5.23
AG	1.28	1.69	0	8	1.00	0	2.12	5.23
Confab	.02	.13	0	1	.00	0	7.75	60.00
COP	.90	1.22	0	6	.50	0	1.83	4.35
CP	.00	.00	0	0	0	0	.31	.61
MOR	1.80	1.64	0	6	1.00	1	1.02	.67
PER	.72	1.15	0	6	.00	0	2.24	6.61
PSV	.53	.30	0	2	.00	0	1.58	1.68

^aThese variables have more than one mode.

APPENDIX D

Percentages for Major Rorschach Variables for Normative Samples and the Admission Sample

	15 year old Norm	CD Norm	Dep Norm	Admission
	N = 110	N = 140	N = 100	N = 61
EB Style				
Introversive	37%	26%	34%	42%
Super Introversive	07%	17%	22%	25%
Ambitient	21%	24%	40%	42%
Extratensive	42%	50%	26%	17%
Super Extratensive	16%	04%	11%	08%
EA-es Differences: D scores				
D score > 0	08%	33%	12%	17%
D score = 0	65%	41%	41%	45%
D score < 0	27%	26%	47%	38%
D score < -1	09%	04%	22%	20%
Adj D score > 0	15%	37%	26%	30%
Adj D score = 0	61%	50%	50%	53%
Adj D score < 0	25%	13%	24%	18%
Adj D score < -1	05%	00%	15%	05%
Zd > 3.0	23%	26%	41%	18%
Zd < -3.0	15%	04%	21%	33%
Form Quality Deviations				
X+ % > .89	06%	01%	02%	00%
X+ % < .70	06%	90%	79%	98%
X+ % < .61	03%	79%	54%	90%
X+ % < .50	00%	16%	32%	72%
F+ % < .70	70%	89%	68%	90%
Xu % > .20	08%	57%	43%	53%
X- % > .15	02%	51%	71%	87%
X- % > .20	02%	41%	63%	82%
X- % > .30	01%	14%	12%	59%

APPENDIX D (continued)

	15 year old Norm	CD Norm	Dep Norm	Admission
	N = 110	N = 140	N = 100	N = 61
FC:CF+C Ratio				
FC > CF + C + 2	09%	00%	17%	05%
FC > CF + C + 1	18%	03%	29%	08%
CF + C > FC + 1	21%	31%	26%	28%
CF + C > FC + 2	02%	27%	16%	20%
Constellations and Scores				
HVI Positive	00%	14%	18%	28%
OBS Positive	01%	00%	00%	00%
SCZI = 6	00%	00%	00%	23%
SCZI = 5	00%	01%	02%	13%
SCZI = 4	00%	13%	10%	18%
DEPI = 7	00%	01%	08%	05%
DEPI = 6	00%	00%	29%	10%
DEPI = 5	00%	37%	32%	23%
CDI = 5	01%	04%	19%	05%
CDI = 4	10%	13%	22%	18%
Miscellaneous Variables				
Lambda > .99	07%	31%	19%	56%
S > 2	15%	81%	76%	43%
Sum T = 0	05%	61%	53%	79%
Sum T > 1	08%	11%	14%	05%
3r + (2)/R < .33	06%	19%	43%	53%
3r + (2)/R > .44	45%	31%	31%	31%
Fr = rF > 0		36%	23%	30%
Pure C = 0		08%	34%	23%
Pure C > 1	00%	20%	02%	08%
Afr < .40	05%	31%	29%	28%
Afr < .50	17%	41%	46%	47%

APPENDIX D (continued)

	15 year old Norm	CD Norm	Dep Norm	Admission
	N = 110	N = 140	N = 100	N = 61
Miscellaneous Variables				
(FM + m) < Sum Shading	15%	40%	59%	23%
Populars < 4	03%	10%	21%	33%
COP = 0	11%	50%	49%	50%
COP > 2	14%	07%	16%	10%
AG = 0	25%	49%	51%	40%
AG > 2	07%	19%	28%	13%
MOR > 2	04%	30%	46%	32%
Level 2 Spec. Score > 0	08%	53%	43%	62%
Sum 6 Spec Score > 6	08%	20%	25%	30%
Pure H < 2	21%	34%	28%	34%
Pure H = 0	01%	03%	02%	15%
p> a + 1	12%	19%	51%	20%
Mp > Ma	15%	40%	61%	33%

APPENDIX E

Admission MMPI-A Descriptive Statistics (N= 55)

	Variable	Mean	SD	Min.	Max.	Median	Skew	Kurtosis	Number Elevated	% Elevated
171	L	50.85	9.85	37	74	55.00	-0.44	-0.64	3	05
	F1	51.04	6.90	39	82	49.00	1.33	2.28	4	07
	F2	47.00	6.90	39	75	46.00	1.69	3.98	1	02
	F	41.41	5.34	39	58	39.00	2.00	3.98	0	00
	K	54.07	10.30	33	73	53.00	-0.15	-0.80	8	15
	HS	50.67	13.18	33	87	48.00	0.52	-0.72	7	13
	D	54.28	9.96	37	88	54.00	0.75	1.39	7	13
	HY	55.39	10.83	36	85	54.00	0.47	-0.25	9	16
	PD	61.11	8.58	40	78	62.50	-0.46	-0.06	17	31
	MF	45.29	8.98	30	70	44.00	0.73	0.18	2	04
	PA	53.87	9.42	36	80	53.50	0.46	0.41	6	11
	PT	49.01	11.89	29	73	50.00	0.21	-0.75	5	09
	SC	48.91	9.77	33	75	48.00	0.53	0.09	3	05
	MA	52.02	10.40	27	73	54.00	-0.32	-0.45	5	09
	SI	42.00	10.59	21	66	38.00	0.43	-0.63	1	02

27/55 (49%) subjects had no elevated clinical scales.

APPENDIX F

Admission MMPI-A Descriptive Statistics for Subjects Without Elevated Validity Scales (N= 43)

	Variable	Mean	SD	Min.	Max.	Median	Skew	Kurtosis	Number Elevated	% Elevated
172	L	48.86	8.32	37	64	48	0.23	-0.99	0	00
	F1	52.79	9.00	39	82	49	1.20	1.91	4	09
	F2	48.14	7.09	39	75	46	1.61	3.68	1	02
	F	41.88	5.84	39	58	39	1.70	1.32	0	00
	K	50.72	8.59	33	64	51	-0.24	-0.74	0	00
	HS	52.58	13.22	33	82	50	0.44	-0.86	7	16
	D	55.49	10.16	37	88	55	0.70	1.45	6	14
	HY	55.58	11.44	36	85	53	0.47	-0.40	7	16
	PD	62.81	7.49	40	78	63	-0.47	1.06	15	35
	MF	45.00	9.31	30	70	43	0.87	0.38	2	05
	PA	54.95	10.11	36	80	54	0.20	0.06	6	14
	PT	52.33	10.89	29	73	53	-0.03	-0.34	5	12
	SC	51.48	9.04	34	75	50	0.50	0.43	3	07
	MA	54.23	10.00	27	73	55	-0.63	-0.25	5	12
	SI	43.81	10.47	28	66	42	0.39	-1.01	1	02

19/43 (44%) subjects had no elevated clinical scales.

APPENDIX G

Percentages for Major Rorschach Variables for the Impulsive and Callous Groups

	Impulsive Group		Callous Group	
	Number (N=18)	Percentage	Number	Percentage (N=23)
<i>EB Style</i>				
Introversive	07	39	10	43
Super Introversive	05	28	05	22
Ambitent	07	39	10	43
Extratensive	04	22	03	13
Super Extratensive	02	11	02	09
<i>EA-es Differences: D scores</i>				
D score > 0	04	22	02	09
D score = 0	03	17	16	70**
D score < 0	11	61	05	22*
D score < -1	07	39	03	13
Adj D score > 0	04	22	05	22
Adj D score = 0	09	50	15	65
Adj D score < 0	05	28	03	13
Adj D score < -1	01	06	02	09
<i>Zd</i>				
Zd > 3.0	04	22	02	09
Zd < -3.0	04	22	05	22
<i>Form Quality Deviations</i>				
X+ % > .89	00	00	00	00
X+ % < .70	18	100	22	96
X+ % < .61	17	94	20	87
X+ % < .50	13	72	16	70
F+ % < .70	16	89	22	96
Xu % > .20	09	50	10	43
X- % > .15	17	94	21	91
X- % > .20	17	94	18	78
X- % > .30	13	72	12	52

Appendix G (continued)

	Impulsive Group		Callous Group	
	Number (N=18)	Percentage	Number	Percentage (N=23)
<i>FC:CF+C Ratio</i>				
FC > CF + C + 2	02	11	01	04
FC > CF + C + 1	02	11	01	04
CF + C > FC + 1	05	28	06	26
CF + C > FC + 2	04	22	05	22
<i>Constellations and Scores</i>				
HVI Positive	08	44	06	26
OBS Positive	00	00	00	00
SCZI = 6	03	17	05	22
SCZI = 5	04	22	02	09
SCZI = 4	04	22	03	13
SCZI > 3	11	61	10	43
DEPI = 7	00	00	02	09
DEPI = 6	01	06	03	13
DEPI = 5	04	22	04	17
DEPI > 4	05	28	09	39
CDI = 5	02	11	01	04
CDI = 4	06	33	04	17
CDI > 3	08	44	05	22
<i>Miscellaneous Variables</i>				
Lambda > .99	05	28	11	48
S > 2	08	44	12	52
Sum T = 0	13	72	18	78
Sum T > 1	01	06	01	04
3r + (2)/R < .33	07	39	12	52
3r + (2)/R > .44	07	39	08	35
Fr = rF > 0	07	39	07	30

Appendix G (continued)

	Impulsive Group		Callous Group	
	Number (N=18)	Percentage	Number	Percentage (N=23)
<i>Miscellaneous Variables</i>				
Pure C > 0	14	78	17	74
Pure C > 1	04	22	06	26
Afr < .40	04	22	09	39
Afr < .50	06	33	14	61
(FM + m) < Sum Shading	05	28	04	17
Populars < 4	08	44	08	35
COP = 0	10	56	10	43
COP > 2	03	17	02	09
AG = 0	06	33	12	52
AG > 2	02	11	03	13
MOR > 2	04	22	07	30
Level 2 Spec. Score > 0	13	72	13	57
Sum 6 Spec Score > 6	04	22	04	17
Pure H < 2	08	44	09	39
Pure H = 0	05	28	03	13
p > a + 1	04	22	05	22
Mp > Ma	04	22	05	22

*p <= .05, ** p <= .01

APPENDIX H

MMPI-A Descriptive Statistics for Impulsive Subjects (N= 18)

	Variable	Mean	SD	Min.	Max.	Median	Skew	Kurtosis	Number Elevated	% Elevated
176	L	51.47	8.03	38	64	53	-0.78	-1.18	0	00
	F1	54.06	10.33	43	82	52	1.54	2.41	2	12
	F2	47.71	6.16	40	61	46	1.19	9.62	0	00
	K	53.94	7.77	39	66	53	-0.41	0.05	2	12
	HS	52.82	14.79	33	77	49	0.49	-1.35	4	24
	D	56.64	9.43	42	77	55	0.56	-0.02	4	24
	HY	55.47	12.73	36	77	51	0.21	-1.37	5	29
	PD	61.64	6.11	49	69	3	-1.27	0.59	5	29
	MF	46.94	9.28	34	68	46	0.82	-0.18	2	12
	PA	55.18	8.02	40	67	57	-0.27	-0.90	2	12
	PT	49.35	9.95	32	72	50	0.39	0.27	1	06
	SC	50.18	8.81	38	75	50	1.30	2.92	1	06
	MA	53.41	12.42	27	73	55	-0.54	0.15	3	18
	SI	42.35	11.61	28	65	38	0.67	-0.87	1	06

07/17 (41%) of the impulsive subjects had no elevated clinical scales.

APPENDIX I

MMPI-A Descriptive Statistics for Impulsive Subjects without Elevated Validity Scales (N= 15)

	Variable	Mean	SD	Min.	Max.	Median	Skew	Kurtosis	Number Elevated	% Elevated
177	L	50.87	7.83	38	63	53	-0.16	-1.31	0	00
	F1	55.53	10.46	44	82	56	1.59	2.39	2	13
	F2	48.60	6.00	41	61	47	1.22	0.88	0	00
	F	42.60	6.48	39	58	39	1.52	0.95	0	00
	K	52.33	6.75	39	60	52	-0.83	0.29	0	00
	HS	54.27	14.97	33	77	50	0.26	-1.55	4	27
	D	56.93	10.00	42	77	55	0.46	-0.38	4	27
	HY	56.33	12.92	36	77	51	0.14	-1.50	5	33
	PD	62.40	5.53	49	69	64	-1.49	1.80	5	33
	MF	47.40	9.61	34	68	46	0.77	-0.03	1	06
	PA	55.73	8.09	40	67	57	-0.38	-0.74	2	13
	PT	50.33	10.19	32	72	53	0.17	0.28	1	06
	SC	51.27	8.80	38	75	50	1.25	3.03	1	06
	MA	54.60	12.47	27	73	56	-0.80	0.38	3	20
	SI	42.07	12.13	28	65	37	0.74	-.090	1	06

05/15 (33%) of the impulsive subjects had no elevated clinical scales.

APPENDIX J

MMPI-A Descriptive Statistics for Callous Subjects at Admission (N= 23)

	Variable	Mean	SD	Min.	Max.	Median	Skew	Kurtosis	Number Elevated	
									% Elevated	
178	L	49.61	9.25	37	71	48	0.53	-0.23	1	04
	F1	50.17	8.00	39	70	49	0.96	0.77	2	08
	F2	46.30	8.04	39	75	45	2.34	6.80	1	04
	F	40.04	3.47	39	52	39	3.18	9.02	0	00
	K	54.00	11.53	33	73	52	-0.10	-0.87	4	17
	HS	47.61	11.96	33	71	44	0.66	-0.79	2	08
	D	52.26	8.27	37	66	53	-0.20	-0.84	1	04
	HY	53.48	8.87	41	75	53	0.75	0.16	2	08
	PD	61.34	8.25	49	78	62	0.35	0.77	7	30
	MF	43.91	9.18	33	70	41	1.28	1.62	1	04
	PA	52.43	9.61	37	80	50	1.11	1.72	2	08
	PT	47.57	12.31	30	73	47	0.36	0.79	2	08
	SC	47.26	10.43	33	72	46	-0.67	0.39	2	08
	MA	51.86	10.32	31	69	53	-0.32	-0.74	2	08
	SI	47.26	10.45	33	72	38	0.79	0.39	2	08

12/23 (52%) of the callous subjects had no elevated clinical scales.

APPENDIX K

MMPI-A Descriptive Statistics for Callous Subjects without Elevated Validity Scales (N= 18)

	Variable	Mean	SD	Min.	Max.	Median	Skew	Kurtosis	Number > 65
179	L	46.50	6.83	37	58	45.50	.15	-.99	0
	F1	51.77	8.20	39	70	49.00	.75	.34	2
	F2	47.55	8.66	39	75	45.50	2.05	5.30	1
	F	40.33	3.90	39	52	39.00	2.75	6.33	0
	K	49.88	9.33	33	64	51.00	-.15	-.54	0
	HS	49.67	12.10	33	71	45.00	.50	-1.07	2
	D	52.33	9.23	37	64	53.00	.41	.89	0
	HY	52.83	9.23	41	75	50.50	.82	.28	1
	PD	62.72	7.76	54	78	60.00	.56	-.85	6
	MF	43.00	9.24	33	70	40.00	1.65	3.21	1
	PA	53.50	10.50	37	80	50.50	.84	.93	2
	PT	51.61	10.67	35	73	50.00	.33	-.39	2
	SC	50.38	9.56	35	72	48.00	.87	.67	2
	MA	55.06	8.25	39	69	56.50	-.24	-.41	2
	SI	42.55	9.23	32	57	38.00	.22	-1.71	0

09/18 (50%) of the callous subjects without elevated validity scales had no elevated clinical scales.

APPENDIX L

Admission and Discharge Descriptive Statistics for Major Rorschach Variables* (N = 49)

	Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
180	R	23.76	7.61	14	43	2	18	.94	.06
		<i>25.54</i>	<i>9.18</i>	<i>16</i>	<i>59</i>	<i>23</i>	<i>18^a</i>	<i>2.00</i>	<i>4.11</i>
	W	10.88	6.17	3	29	9	8	1.47	1.70
		<i>8.38</i>	<i>4.65</i>	<i>2</i>	<i>21</i>	<i>8</i>	<i>6</i>	<i>.73</i>	<i>.33</i>
	D	9.00	5.61	1	25	8	6 ^a	.79	.33
		<i>11.90</i>	<i>7.00</i>	<i>1</i>	<i>31</i>	<i>12</i>	<i>12</i>	<i>1.02</i>	<i>1.05</i>
	Dd	3.88	3.16	0	14	3	3	1.18	1.52
		<i>5.27</i>	<i>4.18</i>	<i>0</i>	<i>22</i>	<i>5</i>	<i>5</i>	<i>1.63</i>	<i>4.28</i>
	S	3.06	2.73	0	13	2	2	1.48	2.54
		<i>3.73</i>	<i>2.85</i>	<i>0</i>	<i>12</i>	<i>3</i>	<i>2^a</i>	<i>.92</i>	<i>.39</i>
	DQ+	7.04	4.32	0	22	6	5	1.14	2.30
		<i>6.46</i>	<i>4.32</i>	<i>0</i>	<i>21</i>	<i>6</i>	<i>6</i>	<i>1.49</i>	<i>3.09</i>
	DQo	15.20	6.24	6	31	14	14	.84	.18
		<i>17.75</i>	<i>8.80</i>	<i>6</i>	<i>45</i>	<i>16</i>	<i>16</i>	<i>1.50</i>	<i>2.40</i>
	Dqv	1.22	1.48	0	7	1	0	1.54	3.45
		<i>1.02</i>	<i>1.10</i>	<i>0</i>	<i>5</i>	<i>1</i>	<i>0^a</i>	<i>1.36</i>	<i>2.36</i>
	Dqv/+	.29	.54	0	2	0	0	1.77	2.39
		<i>.31</i>	<i>.66</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>1.91</i>	<i>2.24</i>

*Admission data is in the top row. Discharge data is in the bottom row and is in italics.

Appendix L (continued)

	Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
181	FQx+	.02	.14	0	1	0	0	7.00	49.00
		.00	.00	0	0	0	0	.34	.67
	FQxo	10.20	3.32	5	18	10	10	.49	-.20
		11.00	3.50	5	19	11	12	.13	-.55
	FQxu	5.14	2.68	0	12	5	5	.30	.34
		6.29	3.84	1	17	5	4	1.23	.81
	FQx-	7.98	4.79	1	22	7	6	.92	.46
		7.96	5.38	1	29	7	5 ^a	2.06	5.66
	FQxnone	.41	.67	0	2	0	0	1.41	.71
		.29	.50	0	2	0	0	1.46	1.23
	MQ+	0	.00	0	0	0	0	.31	.61
		0	.00	0	0	0	0	.34	.67
	MQo	2.00	1.58	0	6	2	2	.63	.02
		1.90	1.80	0	8	1	1	1.42	2.36
	MQu	.61	.89	0	3	0	0	1.24	.47
		.75	.89	0	3	1	0	1.10	.56
	MQ-	1.57	2.01	0	9	1	0	1.94	4.37
		1.19	1.42	0	5	1	0	1.27	.83
	MQnone	.04	.20	0	1	0	0	4.79	21.83
		.02	.14	0	1	0	0	6.93	48.00

Appendix L (continued)

	Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
182	SQual-	1.43	1.66	0	8	1	0	1.90	3.97
		<i>1.73</i>	<i>2.09</i>	<i>0</i>	<i>8</i>	<i>1</i>	<i>0</i>	<i>1.69</i>	<i>2.51</i>
	M	4.22	3.32	0	19	4	1 ^a	1.89	6.81
		<i>3.85</i>	<i>2.81</i>	<i>0</i>	<i>11</i>	<i>3</i>	<i>2</i>	<i>.76</i>	<i>-.31</i>
	FM	2.18	1.63	0	7	2	1	.75	.20
		<i>2.27</i>	<i>1.58</i>	<i>0</i>	<i>6</i>	<i>2</i>	<i>2</i>	<i>.31</i>	<i>-.52</i>
	m	1.98	1.91	0	9	1	1	1.44	2.57
		<i>1.63</i>	<i>1.39</i>	<i>0</i>	<i>7</i>	<i>1</i>	<i>1</i>	<i>1.65</i>	<i>4.02</i>
	FC	1.41	1.47	0	6	1	1	1.29	1.33
		<i>1.42</i>	<i>1.29</i>	<i>0</i>	<i>5</i>	<i>1</i>	<i>0</i>	<i>.60</i>	<i>-.30</i>
	CF	1.96	1.68	0	7	2	1	.92	.58
		<i>1.90</i>	<i>1.48</i>	<i>0</i>	<i>5</i>	<i>2</i>	<i>1</i>	<i>.31</i>	<i>-1.10</i>
	C	.39	.73	0	3	0	0	1.91	3.06.
		<i>.24</i>	<i>.52</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>2.09</i>	<i>3.73</i>
	Cn	.04	.20	0	1	0	0	4.79	21.83
		<i>.00</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>.34</i>	<i>.67</i>
	Sum Color	3.80	2.84	0	12	3	1 ^a	.91	.39
		<i>3.56</i>	<i>1.95</i>	<i>0</i>	<i>7</i>	<i>4</i>	<i>5</i>	<i>-.21</i>	<i>-.93</i>
	WSumC	3.24	2.62	0	10	2.5	3	.99	.35
		<i>2.98</i>	<i>1.60</i>	<i>0</i>	<i>7</i>	<i>3</i>	<i>4</i>	<i>-.079</i>	<i>-.33</i>

Appendix L (continued)

	Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
183	SumT	.24	.63	0	3	0	0	2.89	8.54
		.39	.64	0	2	0	0	1.44	.94
	SumC'	2.31	2.03	0	9	2	1	1.15	1.29
		2.13	1.47	0	5	2	2	.45	-.39
	SumV	.49	.74	0	2	0	0	1.17	1.56
		.58	.77	0	3	0	0	1.18	.83
	SumY	2.27	2.02	0	9	2	2	1.11	1.56
		3.48	3.36	0	17	3	2	1.78	4.58
	Fr+rF	.47	.89	0	4	0	0	2.21	5.03
		.67	1.11	0	5	0	0	1.94	4.05
	Egocentricity	.33	.20	0	1.19	.32	.45	1.48	5.89
		.34	.18	.00	.75	.32	.22 ^a	.25	-.23
	FD	1.08	.91	0	4	1	1	.88	1.11
		.92	.90	0	3	1	1	.73	-.18
	(2)	6.06	3.63	0	19	6	7	.73	1.98
		6.29	3.52	0	14	6	6	.15	-.53
	Lambda	1.04	.80	.14	3.00	.60	.41	.85	-.53
		1.11	1.59	.11	11.00	.82	.47	5.26	32.45
	FM+m	4.16	2.62	0	14	4	3	1.28	2.81
		3.90	2.33	0	12	4	4	.80	1.85

Appendix L (continued)

	Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
184	EA	7.47	5.02	1	27	6.5	3 ^a	1.57	3.56
		6.98	3.60	0	17	7	2 ^a	.35	-.11
	es	9.47	5.63	1	30	9	5	1.17	2.38
		10.48	4.96	2	23	11	11	.55	.24
	D Score	-.65	1.64	-5	5	0	0	-.06	2.71
		-1.22	1.75	-7	2	-1	0	.19	.29
	AdjD	.22	1.23	-2	5	0	0	1.31	4.13
		-.02	.97	-2	2	0	0	.19	.29
	A (active)	4.65	3.34	0	17	4	2 ^a	1.64	4.09
		4.50	2.76	0	12	4	4	1.07	1.26
	P (passive)	3.82	2.76	0	12	3	2	.98	.85
		3.27	2.16	0	12	3	2	1.58	4.61
	Ma	2.29	2.28	0	12	2	0 ^a	1.89	5.81
		2.23	1.84	0	8	2	1	1.07	.89
	Mp	2.02	1.79	0	9	2	1	1.48	3.67
		1.63	1.58	0	6	1	1	1.23	1.20
	Intellect	1.90	2.45	0	9	2	1	1.84	2.60
		1.60	1.63	0	6	1	0 ^a	1.23	1.23
	Zf	14.35	5.98	6	34	13	12 ^a	1.27	2.08
		13.33	5.46	3	30	13.5	16	.97	2.22

Appendix L (continued)

	Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
185	Zd	-1.27	5.72	-14	14	-2	1	.41	.62
		<i>1.35</i>	<i>4.42</i>	<i>-10</i>	<i>11</i>	<i>1</i>	<i>0</i>	<i>-.26</i>	<i>.29</i>
	Blends	4.76	3.19	0	12	4	1 ^a	.61	-.51
		<i>4.44</i>	<i>2.66</i>	<i>0</i>	<i>12</i>	<i>4</i>	<i>5</i>	<i>.66</i>	<i>.47</i>
	Blends/R	.20	.13	0	1	.18	0 ^a	.87	.26
		<i>.19</i>	<i>.11</i>	<i>0</i>	<i>.40</i>	<i>.18</i>	<i>.05^a</i>	<i>.32</i>	<i>-.96</i>
	Col-Shad Blends	.82	1.05	0	4	0	0	1.27	.91
	Blends	.88	<i>1.14</i>	<i>0</i>	<i>4</i>	<i>0</i>	<i>0</i>	<i>1.24</i>	<i>.75</i>
	Afr	.50	.19	.16	1	.50	.50	.39	.24
		<i>.46</i>	<i>.13</i>	<i>-.18</i>	<i>.77</i>	<i>.47</i>	<i>.50</i>	<i>.16</i>	<i>.20</i>
	Populars	4.35	1.89	1	8	4	6	.07	-1.04
		<i>4.13</i>	<i>1.58</i>	<i>0</i>	<i>8</i>	<i>4</i>	<i>3</i>	<i>.01</i>	<i>.20</i>
	X+%	.44	.12	.25	.75	.42	.42	.44	-.36
		<i>.45</i>	<i>.14</i>	<i>.20</i>	<i>.76</i>	<i>.43</i>	<i>.42^a</i>	<i>.27</i>	<i>-.39</i>
	F+%	.49	.21	.00	1.00	.46	.33 ^a	.10	-.10
		<i>.52</i>	<i>.19</i>	<i>.17</i>	<i>1.00</i>	<i>.50</i>	<i>.67</i>	<i>.10</i>	<i>-.56</i>
	X-%	.32	.13	.04	.60	.32	.33	.11	-.16
		<i>.31</i>	<i>.13</i>	<i>.05</i>	<i>.65</i>	<i>.33</i>	<i>20^o</i>	<i>.01</i>	<i>-.21</i>
	Xu%	.22	.10	.00	.47	.22	.17	.06	-.14
		<i>.24</i>	<i>.08</i>	<i>.06</i>	<i>.43</i>	<i>.22</i>	<i>.17</i>	<i>.31</i>	<i>-.41</i>

Appendix L (continued)

	Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
186	S-%	.16	.16	.00	.53	.14	.00	.85	-.17
		.20	.022	.00	1.00	.15	.00	1.50	2.68
	Isolates	4.86	3.82	0	24	4	2	2.78	12.28
		4.50	3.30	0	19	4	5	1.94	7.00
	H	2.20	2.18	0	13	2	2	2.69	11.68
		2.57	2.17	0	11	2	1	.90	4.87
	(H)	1.76	1.52	0	5	2	0	.55	-.64
		1.71	1.60	0	7	1	0	1.06	1.30
	Hd	1.57	1.73	0	8	1	0 ^a	1.76	4.09
		2.38	2.25	0	11	2	1 ^a	1.85	4.59
	(Hd)	.55	.91	0	4	0	0	1.89	3.66
		.50	.74	0	3	0	0	3.37	11.75
	Hx	.41	.81	0	4	0	0	2.72	8.63
		.13	.39	0	2	0	0	3.37	11.75
	A	8.47	3.23	3	17	8	7	.53	-.26
		8.40	3.80	3	23	8	7	1.73	4.55
	(A)	.63	1.05	0	4	0	0	1.69	1.96
		.40	.61	0	3	0	0	1.89	5.34
	Ad	2.10	1.61	0	7	2	2	.76	.46
		2.65	2.13	0	10	2	1 ^a	1.43	2.70

Appendix L (continued)

187

Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
(Ad)	.12	.33	0	1	0	0	2.38	3.80
	.27	.49	0	2	0	0	1.60	1.76
An	.43	.79	0	3	0	0	1.96	3.23
	.46	.58	0	2	0	0	.84	-.23
Art	.41	.73	0	3	0	0	2.15	4.88
	.44	.77	0	3	0	0	1.97	3.74
Ay	.88	.97	0	4	1	0 ^a	1.25	1.47
	.79	.92	0	4	1	0	1.46	2.51
Bl	.33	.59	0	2	0	0	1.67	1.83
	.25	.48	0	2	0	0	1.77	2.40
Bt	1.29	1.21	0	5	1	1	1.27	2.20
	1.06	.91	0	3	1	1	.41	-.70
Cg	1.63	1.55	0	7	1	0	.97	1.29
	1.90	1.56	0	6	2	1	.71	-.06
Cl	.22	.59	0	3	0	0	3.15	11.05
	.23	.59	0	3	0	0	3.11	10.76
Ex	.14	.41	0	2	0	0	3.01	9.22
	.25	.56	0	4	.50	0	1.89	3.71
Fi	.71	.87	0	3	0	0	1.00	.17
	.73	1.01	0	4	.50	0	1.89	3.71

Appendix L (continued)

	Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
188	Food	.22	.51	0	2	0	0	2.28	4.60
		.38	.61	0	3	0	0	2.00	5.84
	Ge	.06	.32	0	2	0	0	5.54	31.76
		.15	.74	0	5	0	0	6.24	40.82
	Hh	1.12	1.17	0	5	1	0	1.07	1.07
		1.44	1.25	0	4	1	1	.66	-.59
	Ls	1.31	1.19	0	5	1	1	1.13	1.20
		1.25	1.44	0	4	1	1	1.03	.99
	Na	.88	1.11	0	5	1	0	1.58	2.87
		.79	1.11	0	6	0	0	2.38	9.01
	Sc	1.59	2.07	0	10	1	0	2.07	5.27
		1.73	2.05	0	9	1	0 ^a	2.07	5.06
	Sx	.16	.43	0	2	0	0	2.69	7.13
		.29	.62	0	2	0	0	1.99	2.76
	Xy	.02	.14	0	1	0	0	7.00	49.00
		.04	.20	0	1	0	0	4.74	21.32
	Idio	.59	1.10	0	5	0	0	2.37	6.01
		.40	.68	0	3	0	0	1.91	3.93
	DV	.61	.95	0	4	0	0	1.77	2.98
		.44	.80	0	4	0	0	2.46	7.69

Appendix L (continued)

Variable								
	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
INCOM	.98	.95	0	4	0	0	1.77	2.98
	.27	.61	0	2	0	0	21.38	3.33
DR	.47	1.02	0	5	0	0	2.95	9.66
	.54	.82	0	3	0	0	.53	1.74
FABCOM	.69	.87	0	3	0	0	1.05	.21
	.94	1.10	0	4	1	0	1.23	1.00
DV2	.08	.45	0	3	0	0	6.15	39.38
	.10	.31	0	1	0	0	2.68	5.38
INC2	.63	.91	0	4	0	0	1.69	3.19
	.58	.94	0	4	0	0	1.90	3.58
DR2	.24	.63	0	3	0	0	2.89	8.54
	.46	.92	0	4	0	0	2.68	7.80
FAB2	.84	1.49	0	8	0	0	2.97	11.15
	.58	.82	0	2	0	0	.93	-.86
ALOG	.80	1.57	0	7	0	0	2.86	8.81
	.46	1.01	0	6	0	0	3.87	19.18
CONTAM	.06	.32	0	2	0	0	5.54	31.76
	.04	.20	0	1	0	0	4.74	21.32
Sum 6 Spec.	5.41	5.41	0	30	4	2	2.52	8.67
Sc.	4.42	3.41	0	15	4	1	1.13	1.56

Appendix L (continued)

	Variable	Mean	SD	Min	Max	Median	Mode	Skew	Kurtosis
190	Level 2 Spec. Sc.	1.80	2.55	0	15	1	0	3.18	14.34
	Sc.	<i>1.73</i>	<i>1.72</i>	<i>0</i>	<i>7</i>	<i>1</i>	<i>0</i>	<i>1.14</i>	<i>1.07</i>
	WSum6	21.18	25.51	0	155	13	0 ^a	3.35	15.40
		<i>18.31</i>	<i>15.08</i>	<i>0</i>	<i>65</i>	<i>16.50</i>	<i>4</i>	<i>.95</i>	<i>.74</i>
	AB	.31	.85	0	4	0	0	3.22	10.27
		<i>.19</i>	<i>.45</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>2.38</i>	<i>5.35</i>
	AG	1.27	1.77	0	8	1	0	2.26	5.56
		<i>.84</i>	<i>.60</i>	<i>0</i>	<i>3</i>	<i>0</i>	<i>0</i>	<i>1.32</i>	<i>1.04</i>
	Confab	.02	.14	0	1	0	0	7.00	49.00
		<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>.34</i>	<i>.67</i>
	COP	.80	1.19	0	6	0	0	2.19	6.55
		<i>.73</i>	<i>.94</i>	<i>0</i>	<i>4</i>	<i>.5</i>	<i>0</i>	<i>1.54</i>	<i>2.54</i>
	CP	.00	.00	0	0	0	0	.34	.67
		<i>.04</i>	<i>.20</i>	<i>0</i>	<i>1</i>	<i>0</i>	<i>0</i>	<i>4.73</i>	<i>21.32</i>
	MOR	1.86	1.63	0	6	1	1	.90	.47
		<i>1.31</i>	<i>1.27</i>	<i>0</i>	<i>5</i>	<i>1</i>	<i>0</i>	<i>.92</i>	<i>.54</i>
	PER	.57	.89	0	3	0	0	1.53	1.50
		<i>.67</i>	<i>1.48</i>	<i>0</i>	<i>9</i>	<i>0</i>	<i>0</i>	<i>4.16</i>	<i>21.63</i>
	PSV	.33	.55	0	2	0	0	1.50	1.43
		<i>.15</i>	<i>.41</i>	<i>0</i>	<i>2</i>	<i>0</i>	<i>0</i>	<i>2.97</i>	<i>8.96</i>

^aThese variables have more than one mode.

APPENDIX M

Percentages for Major Rorschach Variables at Admission and Discharge

	At Admission		Discharge	
	Number (N=49)	Percentage	Number (N=49)	Percentage
<i>EB Style</i>				
Introversive	21	43	15	31
Super Introversive	13	26	08	16
Ambitent	20	41	25	51
Extratensive	08	16	09	18
Super Extratensive	08	04	04	02
<i>EA-es Differences: D scores</i>				
D score > 0	09	18	05	10
D score = 0	22	45	14	29
D score < 0	18	37	30	61**
D score < -1	10	20	17	35
Adj D score > 0	14	29	11	22
Adj D score = 0	26	53	25	51
Adj D score < 0	09	18	13	26
Adj D score < -1	03	06	03	06
<i>Zd</i>				
Zd > 3.0	09	18	16	33*
Zd < -3.0	16	33	07	14**
<i>Form Quality Deviations</i>				
X+ % > .89	00	00	00	00
X+ % < .70	48	98	47	96
X+ % < .61	44	90	44	90
X+ % < .50	36	73	33	67
F+ % < .70	44	90	41	84
Xu % > .20	26	53	29	59
X- % > .15	43	88	42	85
X- % > .20	40	82	37	75
X- % > .30	29	59	26	53

Appendix M (continued)

	At Admission		Discharge	
	Number (N=49)	Percentage	Number (N=49)	Percentage
<i>FC:CF+C Ratio</i>				
FC > CF + C + 2	03	06	02	04
FC > CF + C + 1	04	08	06	12
CF + C > FC + 1	14	28	14	28
CF + C > FC + 2	10	20	08	16
<i>Constellations and Scores</i>				
HVI Positive	14	28	15	31
OBS Positive	00	00	00	00
SCZI = 6	11	22	08	16
SCZI = 5	07	14	05	10
SCZI = 4	09	18	09	18
SCZI > 3	27	55	22	43
DEPI = 7	03	06	02	04
DEPI = 6	05	10	08	16
DEPI = 5	11	22	18	37
DEPI > 4	19	39	28	57
CDI = 5	03	06	02	04
CDI = 4	09	18	11	22
CDI > 3	12	24	13	26
<i>Miscellaneous Variables</i>				
Lambda > .99	2	45	21	43
S > 2	21	43	29	59
Sum T = 0	39	80	34	69
Sum T > 1	03	06	04	08
3r + (2)/R < .33	26	53	25	51
3r + (2)/R > .44	15	31	14	29
Fr + rF > 0	15	31	18	37

Appendix M (continued)

	At Admission		Discharge	
	Number (N=49)	Percentage	Number (N=49)	Percentage
<i>Miscellaneous Variables</i>				
Pure C > 0	11	22	10	20
Pure C > 1	04	08	02	04
Afr < .40	14	28	17	35
Afr < .50	23	47	28	57
(FM + m) < Sum Shading	11	22	22	43
Populars < 4	16	33	18	37
COP = 0	25	51	25	51
COP > 2	05	10	03	06
AG = 0	20	41	29	59
AG > 2	06	12	02	04
MOR > 2	16	33	06	12**
Level 2 Spec. Score > 0	31	63	35	71
Sum 6 Spec Score > 6	15	31	15	31
Pure H < 2	16	33	18	37
Pure H = 0	08	16	04	08
p > a + 1	10	20	06	12
Mp > Ma	16	33	12	25

*p <= .05, ** p <= .01

APPENDIX N

Descriptive Statistics at Admission and Discharge for 14 Major MMPI-A Scales (N = 47)

	Variable	Mean	SD	Min	Max	Median	Skew	Kurtosis	Number Elevated	% Elevated	F
194	L (adm)	49.55	8.93	37	71	48	.46	-.66	1	02	0.03
	(dis)	50.17	8.85	37	71	50	.58	-.48	2	04	
	F1	50.43	8.01	39	75	49	1.07	1.05	3	06	0.33
		50.85	7.86	37	77	49	1.31	2.11	2	04	
	F2	46.72	6.99	39	75	45	1.83	4.65	1	02	0.19
		47.47	9.17	39	83	45	2.06	4.71	3	06	
	F	41.77	5.65	39	58	39	1.77	1.65	0	00	0.14
		41.30	5.43	39	67	39	3.05	10.77	1	02	
	K	54.72	10.30	33	73	53	-.25	-.63	8	17	0.07
		55.15	11.01	35	76	56	-.10	-.91	9	19	
	HS	49.00	12.52	33	82	47	.81	-.01	5	11	0.32
		47.83	9.81	33	85	46	1.50	3.26	1	02	
	D	53.53	9.81	37	88	54	.81	1.91	5	11	10.46*
		48.34	8.73	30	65	46	.18	-.56	0	00	
	HY	54.21	10.93	36	85	53	.71	.13	7	15	2.68
		51.70	9.40	26	83	53	.20	3.04	2	04	

Appendix N (continued)

	Variable	Mean	SD	Min	Max	Median	Skew	Kurtosis	Number Elevated	% Elevated	F
195	PD	60.68	8.76	40	78	62	-.34	-.07	14	30	0.84
		59.30	8.33	39	85	60	.12	.93	11	23	
	MF	45.11	8.70	30	70	44	.63	.07	1	02	6.81*
		49.25	10.68	26	68	51	-.20	-.84	2	04	
	PA	53.60	9.88	36	80	53	.51	.29	6	13	1.13
		52.00	7.85	38	75	50	.92	1.09	3	06	
	PT	48.45	11.75	29	73	50	.27	-.69	4	09	0.69
		46.94	10.45	28	76	46	.59	.07	1	02	
	SC	48.23	9.33	33	72	48	.50	-.18	2	04	0.22
		47.49	9.16	33	71	47	.59	-.05	3	06	
	MA	52.28	10.87	27	73	54	-.36	-.53	5	11	2.34
		50.19	10.62	31	73	50	.17	-.32	3	06	
	SI	41.23	10.54	21	66	38	.47	-.66	1	02	1.22
		42.83	11.11	25	65	42	.31	-.76	0	00	

* $p < .05$

- At admission 25/47, or 53% had no elevated clinical scales. 18/47, or 39% had no elevated clinical and no elevated validity scales.
- At discharge 30/47, or 64% had no elevated clinical scales. 22/47, or 47% had no elevated clinical and no elevated validity scales.

Appendix O

Rorschach Changes Among 50 Adolescents in Residential Treatment

Variables	Admission Evaluation		2-Year Reevaluation	
	N	%	N	%
Managing stress				
D < 0	7	14	2	4
AdjD < 0	7	14	2	4
EA < 7	48	96	38	76*
CDI > 3	42	84	14	28**
Dealing with experience				
Ambitence	35	70	19	38*
Zd < -3.0	14	28	0	0**
Lambda > 0.99	45	90	23	46**
X+ % < .70	47	94	35	70*
X-% > .20	43	86	19	38**
Modulating affect				
sum shading > FM + m	14	28	1	2**
DEPI = 5	4	8	0	0*
DEPI > 5	2	4	0	0
Afr < .50	38	76	13	26**
CF + C > FC + 1	6	12	2	4
Using ideation				
Sum6 Sp Sc > 6	2	4	1	2
M- > 0	7	14	5	10
MP > Ma	2	4	0	0
Intellect > 5	0	0	0	0
Examining oneself				
Fr + rF > 0	10	20	6	12*
3r + (2)/R > .43	13	26	22	44
3r + (2)IR < .33	35	70	4	8**
FD > 2	0	0	0	0
Feeling comfortable in interpersonal relationships				
p > a + 1	0	0	0	0
T = 0	38	76	38	76
T > 1	2	4	1	2
Pure H < 2	34	68	1	2**
H < [(H) + Hd + (Hd)]	27	54	5	10**
Social identification				
POP < 4	40	80	3	6**
PAIRS < 8	48	96	14	28**
FM < 3	44	88	9	18**
FV > 0	24	48	0	0**
ISOLATE/R > .24	15	30	0	0**
p > a + 1	0	0	0	0
PURE H < 2	34	68	1	1
	Total N = 693		Total N = 277	

*p < .05. **p < .001.

Appendix P

Rorschach Means Among 50 Adolescents In Residential Treatment

Variables	Admission Evaluation		Re-evaluation	
	mean	SD	mean	SD
Managing stress				
D < 0	-.22	.65	.08	.60**
AdjD < 0	-.18	.63	.14	.67**
EA < 7	3.19	1.80	5.38	2.01**
CDI > 3	4.26	.88	3.08	.80**
Dealing with experience				
Ambitence1	1.46	1.22	3.28	1.47**
Ambitence2	1.67	1.23	1.85	1.17
Zd < - 3.0	1.45	3.88	.09	2.55**
Lambda > 0.99	2.50	2.59	1.33	2.08**
X+ % < .70	.47	.13	.62	.13**
X- 014 > .20	.32	.12	.19	.11**
Modulating affect				
sum shading	1.80	1.70	1.42	1.11*
FM + m	1.88	1.56	3.58	1.77**
DEPT = 5	3.08	1.35	2.48	1.09**
Afr < .50	.43	.13	.58	.19**
CF + C	1.06	.87	1.04	.91
FC + 1	2.05	1.33	2.27	1.17
Using ideation				
Sum6 Sp Sc > 6	1.88	2.10	1.74	1.93
M- > 0	.24	.59	.14	.45
Mp	.34	.59	.46	.65
Ma	1.20	.99	2.76	1.41**
Intellect > 5	.36	.69	.56	1.25
Examining oneself				
Fr + rF >	0.20	.67	.28	.23
3r + (2)/R > .43	.28	.23	.45	.10**
FD > 2	.24	.52	.26	.53
Feeling comfortable in interpersonal relationships				
P	.65	.86	1.16	1.07*
a + 1	3.63	2.10	5.92	2.44**
T	.22	.58	.24	.48
Pure H	1.36	1.12	2.74	1.12**
(H) + Hd + (Hd)	2.16	1.68	2.28	1.09
Social identification				
POP < 4	2.68	.94	4.02	.51**
PAIRS < 8	4.14	2.61	8.26	1.78**
FM < 3	1.70	1.25	3.16	1.46**
FV > 0	.58	.67	0.00	0.00**
ISOLA TEIR > .24	.16	.10	.09	.08**
p	.65	.86	1.16	1.07*
a + 1	3.63	2.10	5.92	2.44**
Pure H	1.36	1.12	2.74	1.12**

*p < .05. **p < .001.

Appendix Q

Longitudinal Changes for Selected Rorschach Variables Among 88 Patients in Long-Term Dynamic Psychotherapy

	First Testing months		1st Retest 12-14 months		2nd Retest 27-31 months		3rd Retest 46-50	
Average number of sessions			121.5		224		452	
Terminations			-		15		59	
Variables Related to	n	%	n	%	n	%	n	%
Managing stress								
D < 0	31	35	35	39	15	17**	4	5*
AdjD < 0	27	31	34	39	15	17**	4	5*
EA < 7	30	34	24	27	9	10**	3	3
CDI < 3	28	32	11	13**	7	8	5	6
Dealing with experience								
Ambitence	31	36	26	29	9	10*	7	7
Zd < -3.0	34	39	8	9**	12	14	0	10
Lambda > 0.99	25	29	16	18*	11	13	5	6*
X+% < 7	19	21	6	7**	2	2	3	3
X-% > 20	26	30	12	14*	9	10	7	8
Modulating affect								
Sum Shading > FM + m	29	32	22	25	2	2**	1	1
DEPI = 5	40	45	16	18**	10	11	5	6
DEPI > 5	13	15	11	13	9	10	7	8
Afr < .50	30	34	18	20*	14	16	9	10
CF + C > FC + 1	53	60	26	30**	12	14*	11	10
Using ideation								
Sum 6 Sp Sc > 6	27	31	22	25	13	15*	10	11
M - > 0	41	47	24	27**	9	10**	6	7
MP > Ma	37	42	24	27*	11	13**	10	11
Intellect > 5	21	24	7	8**	6	7	6	7

Appendix Q (continued)

	First Testing months		1st Retest 12-14 months		2nd Retest 27-31 months		3rd Retest 46-50	
Average number of sessions				121.5		224		452
Terminations				-		15		59
Variables Related to	n	%	n	%	n	%	n	%
Examining oneself								
Fr + rF > 0	12	14	12	14	9	10	6	7
3r + (2)/R > .43	24	27	20	23	11	13*	8	9
3r + (2)/R < .33	28	32	24	27	16	18*	13	
15								
FD > 2	12	14	23	26**	10	11*	8	9
Feeling comfortable in interpersonal relationships								
p > a + 1	30	34	17	19**	15	17	10	
11								
T = 0	27	31	22	25	13	15**	7	8
T > 1	19	22	4	5**	2	2	2	2
Pure H < 2	28	31	15	17**	4	5*	2	2
H < [(H) + Hd + (Hd)]	48	52	37	42	29	33*	27	
						31		

*Significantly different from previous test, $p < .05$. **Significantly different from previous test, $p < .01$

Appendix R

Longitudinal Changes for Selected Rorschach Variables Among 88 Patients in Short-Term Psychotherapy

	First Testing		1st Retest 12-14 months		2nd Retest 27-31 months		3rd Retest 46-50 months	
Average number of sessions			41.2		62.1		62.1	
Terminations			49		88		-	
Variables Related to	n	%	n	%	n	%	n	%
Managing stress								
D < 0	46	52	13	15**	14	16	11	13
AdjD < 0	20	3	11	13*	12	14	10	11
EA < 7	21	24	15	17	11	10***	12	14
CDI < 3	31	35	9	10**	10	11	12	14
Dealing with experience								
Ambitence	38	43	27	30*	28	31	26	29
Zd < -3.0	29	32	10	11**	8	9	9	10
Lambda > 0.99	22	25	13	15*	12	14	14	16
X+% < 70	41	46	24	27**	19	21	21	23
X-% > 20	35	39	17	19**	18	20	16	18
Modulating affect								
Sum Shading > FM + m	29	32	22	25	2	2**	1	1
DEPI = 5	44	50	11	10**	8	9	10	11
DEPI > 5	8	9	10	11	6	7	7	8
Afr < .50	29	33	12	14**	15	17	13	15
CF + C > FC + 1	58	65	32	36**	27	31	24	27
Using ideation								
Sum 6 Sp Sc > 6	21	24	17	19	18	20	16	18
M - > 0	33	38	26	29	19	22***	20	23
MP > Ma	31	35	18	20*	15	17	19	22
Intellect > 5	14	16	11	13	12	14	15	17
Examining oneself								
Fr + rF > 0	10	11	11	13	10	11	10	11
3r + (2)/R > .43	29	33	21	24	24	27	11	25
3r + (2)/R < .33	30	34	13	15**	11	13	10	11
FD > 2	14	16	27	31**	20	23	10	11*

Appendix R (continued)

	First Testing		1st Retest 12-14 months		2nd Retest 27-31 months		3rd Retest 46-50 months	
Average number of sessions			41.2		62.1		62.1	
Terminations			49		88		-	
Variables Related to	n	%	n	%	n	%	n	%
Feeling comfortable in interpersonal relationships								
p > a + 1	23	26	11	13**	14	16	12	14
T = 0	21	23	17	19	18	20	16	18
T > 1	26	29	8	9**	6	7	7	8
Pure H < 2	37	42	27	30*	20	23	23	26
H < [(H) + Hd + (Hd)]	55	63	33	38**	26	30*	27	31

*Significantly different from previous test, $p < .05$. **Significantly different from previous test, $p < .01$. **Significantly different from baseline test, $p < .01$.

45Q

Vita

Robert Riethmiller currently lives in Somerville, MA and is completing an Advanced Fellowship in Acute Child and Adolescent Services at Cambridge Hospital. Before beginning doctoral training in Clinical Psychology at the University of Tennessee Robert received his Masters Degree at Fairleigh Dickinson University in Madison, NJ. It was during this training that Robert first developed interests in psychodynamic treatment, and in projective personality assessment from a psychoanalytic perspective. He continued to pursue these interests throughout his graduate training. During his graduate training he co-authored several journal articles published in the *Journal for Personality Assessment*, and a chapter on graphical methods of personality assessment in L. Handler (Ed.) & M. Hilsenroth's (Ed.), *Teaching and learning personality assessment* Mahwah, NJ: Erlbaum Associates.

Robert's interest in conduct disordered adolescents, and in residential treatment, developed after he began a two-year practicum at Peninsula Village in Louisville, TN. While working at this facility Robert conducted intensive, twice a week psychodynamic psychotherapy with conduct disordered adolescents, and he learned about every facet of the residential treatment program. Following this experience, Robert continued to study the psychodynamic use of milieu treatment for chronic patients when he interned at Cambridge Hospital on an acute inpatient unit for adults.

During this upcoming year Robert will continue his training at Cambridge Hospital. He will provide supervision and teaching to graduate students in personality assessment. He will also receive training in neuropsychological assessment. Ultimately

Robert plans to receive formal psychoanalytic training. He is interested in learning ways to integrate neuropsychological and psychoanalytic theory in clinical practice.

