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The Difference Between Aggressive And Non-Aggressive Hospitalized Adolescents In Their Projected Aggression And Developmental Levels Of Object Relations Functioning

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THE DIFFERENCE BETWEEN AGGRESSIVE AND NON-AGGRESSIVE HOSPITALIZED ADOLESCENTS IN THEIR PROJECTED AGGRESSION AND DEVELOPMENTAL LEVELS OF OBJECT RELATIONS FUNCTIONING

BY

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Seton Hall University

2000
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DEDICATION

This dissertation is dedicated to my mother, Lou. My belief in your love and support pulled me through... Thank you, mom.
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CHAPTER I

INTRODUCTION

This chapter serves as an introduction to the present study and discusses the research problem. This study investigated the relationship between a recent history of aggressive behavior, developmental level of object relations functioning, and projected aggression in adolescents who were admitted to a psychiatric hospital in New York State and referred for a standard clinical assessment. The chapter initially presents a statement of the problem and reviews theoretical and empirical components of the study. Following a section outlining conceptual and operational definitions of terms, the chapter delineates hypotheses. The concluding sections discuss the significance of the study and set delimitations.

Statement of the Problem

Given that the incidence of aggressive and violent behavior is on the rise in young people (Butts, 1996; “Female Offenders,” 1996; Grossman, 1999; Harway & Liss, 1999; Kelly, 1997; Snyder, 1997), the identification and treatment of youth at risk for such behavior has emerged as a significant public risk and clinical concern. The purpose of this investigation was to determine the relationship between hospitalized adolescents’ recent history of aggressive behavior, the developmental level of their internal representations of themselves, others, and relationships, and their projected aggression. This study also attempted to determine if scoring the subjects’ Rorschach responses for either developmental level of object relations functioning (Tuber, 1992; Urist, 1977) or
projected aggression (Exner, 1993; Gacono & Meloy, 1994) can be used to differentiate between hospitalized adolescents who have a recent history of aggressive behavior and those who do not.

**Aggression**

The clinical-empirical study of aggression and its manifestations, whether constructive as in non-destructive or assertive behavior, or destructive as in disruptive or harmful behavior, has become an established research domain (Lyons-Ruth, 1996). The definition of aggression, however, is poorly and inconsistently conceptualized and operationalized. The DSM-IV (American Psychiatric Association, 1994) has incorporated manifestations of aggression into its definitions of such disorders as oppositional-defiant disorder, conduct disorder, attention-deficit/hyperactivity disorder, and antisocial personality disorder. Nevertheless, children and adolescents with disruptive behavior disorders are a heterogeneous group manifesting a wide range of aggression, with some individuals displaying severely aggressive behavior and others evidencing little if any aggression.

The measurement of aggression is problematic (Edmunds & Kendrick, 1980; Kay, Wolkenfield & Murrill, 1988; Klama, 1988; Lochman, 1984). Aggression as a term in ordinary speech conveys a wide variety of meanings and definitions, and the many scales used to rate “aggressiveness” reflect the diversity of definitions (Kruesi, Hibbs, Hamburger, Rappaport, Keysor, & Elia, 1994). Items on rating scales often include emotions, thoughts, and activity associated with anger (Achenbach & Edelbrock, 1981; Buie, Meissner, Rizzuto, & Sashin, 1983; Buss & Durkee, 1957). Their relevance to
actual physical aggressive acts is, however, speculative (Edmunds & Kendrick; Kruesi et al.). Moreover, it appears that the construct of aggression that is assessed via rating scales based on factor-analytically derived measures (e.g., Youth Self Report (YSR); Achenbach, 1991c) reflects a more broad and perhaps less well-defined concept (Brunshaw & Szatmari, 1988; Kruesi et al.).

Given this, some researchers (Gacono & Meloy, 1994; Greco & Cornell, 1992; Holt, 1975) prefer to define aggressive behavior separately from the intentions, thoughts, and feelings that underlie such behavior. Physical injury or damage to people, animals, or objects belonging to others, and violent and overtly hostile behavior is of obvious clinical salience and plausible as a definition of aggressive behavior. A goal of research can then be to understand more about such behavior in terms of its relationship to characterological traits, malignant or deviant internal thoughts or images, primitive self and object representations, and extant psychopathology (Gacono & Meloy, 1994; Greco & Cornell, 1992).

**Aggression and Object Relations Theory**

Some researchers have considered aggressive behavior to be primarily related to biological influences, brain neurochemistry, cognitive modeling, socioeconomic factors, and environmental influences (Feshbach & Zagrodzka, 1997). Other researchers, who are primarily interested in psychological correlates of aggression, have proposed that, indeed, violent, hostile, and disruptive behavior is related to psychodynamic factors such as object relations functioning (Blatt, Tuber, & Auerbach, 1990; Cicchetti & Toth, 1995; Crittenden, 1995; Crowell & Feldman, 1988; Gacono & Meloy, 1994; Greco & Cornell, 1992; Kelly, 1986; Lyons-Ruth, 1996; Meloy, 1992; Sroufe, 1983; Sroufe, Carlson, &
Schulman, 1993). Unfortunately, while some studies have shown that more primitive levels of object relations functioning are related to increased incidences of behavioral problems in young children (Carlson, Jacobvitz, & Sroufe, 1995; Gacono & Meloy, 1994; Lyons-Ruth, 1991; Meyer & Tuber, 1989; Ornduff, Freedmanfeld, Kelsey, & Critelli, 1994; Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989), few studies have investigated this relationship in adolescents (Gacono & Meloy, 1994; Gavazzi, 1994; Goldfarb, 1947; Goldstein, 1997; Greco & Cornell, 1992; Kelly, 1986; Kruesi et al., 1994; LeCroy, 1988; Westen, Klepser, Ruffins, Silverman, Lifton, & Boekamp, 1991).

A psychodynamic conceptualization of developmental processes is particularly useful for understanding aggressive adolescents. Part-object relations, primitive defensive operations, and primary process thought often manifest on both symbolic and observable levels (Gacono & Meloy, 1994). These pre-oedipal psychodynamics provide a poignant view of the inner turmoil that these individuals are likely to be experiencing (Rabinovitch, 1949). It is thought that aggressive drives in conduct disordered adolescents reign over libidinal ones, and that this subsequently contributes to the disruption of the normal processes of identification, internalization, attachment, and quality of object relations (Bowlby, 1973, 1982; S. Freud, 1931, 1933/64; Jacobson, 1954, 1957; Kernberg, 1982, 1986, 1993; Meloy, 1992; Morrison, 1978; Winnicott, 1965/72, 1984). Given this, Weber, Meloy, and Gacono (1992) suggest that for the aggressive adolescent, the strength of their object ties is likely to be overridden by the primitive defenses and part-object representations; leading to a need to act out their intrapsychic aggression against others.
Testosterone, a hormone that defines "maleness", rises much more in males than in females during adolescent development. This androgen not only enhances body growth, but is thought to have a bearing on increases in aggressive impulses normally seen during this period (Kestenberg, 1980). Kestenberg hypothesizes that the management of the intensified aggressive impulses depends on the strength and flexibility of the ego mechanisms, the pressure of peer and other influences in the environment, and the specific superego attitudes. Kestenberg believes that aggression may be discharged in sublimations such as athletics, playful jousting and boisterousness; self-assertion and demand for autonomy; as well as the energetic involvement in intellectual endeavors. Likewise, it may be expressed in the antisocial, destructive, or rebellious behavior that represents the behavior problems, delinquency, and violence frequently encountered in this age group (Dubas & Peterson, 1993; Gacono & Meloy, 1994; Sklansky, 1980).

In noting the stability of multiple problem behaviors and the progression into more serious difficulties from childhood through adolescence, Allen and associates (Allen, Aber, & Leadbeater, 1990; Allen, Houser, & Borman-Spurrell, 1996) point to the need to focus on developmental correlates of aggressive behaviors, such as internalized self and object representations. Allen and colleagues propose that both the failure to achieve central developmental tasks and the development of primitive and inflexible internal psychic structures frequently lead to an enduring risk for problem behaviors. According to object relations theory and psychodynamic formulations based on infant research, children develop internal representations of themselves in relationship to others. When those internal representations are based on relationships with unpredictable, unavailable, or abusive parents, children learn a model of behavior in which insecurity,
anger, aggression, and violence are the central features (Allen, Aber, & Leadbeater, 1990).

Object Relations Functioning

The present study aimed to illuminate the links between underlying psychic structures and manifest behavior in adolescents. Both the psychoanalytic (A. Freud, 1965; Hartmann, 1964; Pine, 1990; S. Freud, 1930) and the object relations (Blanck & Blanck, 1974; Fairbairn, 1954; Kernberg, 1976, 1985; Mahler, Pine, & Bergman, 1975; Stern, 1985; Winnicott, 1964, 1965/72) theoretical perspectives have emphasized the significant role object relations functioning plays in human development. These theoretical perspectives suggest that the ability to form relationships with others will be more disturbed and less secure if the internalized self and object representations are primitive, inflexible, and based on abusive or maladaptive relationships with primary caretakers (Atwood & Stolow, 1984; Cicchetti, Toth, & Lynch, 1995; Gacno & Meloy, 1994; Greco & Cornell, 1992; Meloy, 1992; Sroufe, Egeland, & Kreutzer, 1990; Urban, Carlson, Egeland, & Sroufe, 1991). These theories further suggest that a disturbed ability to form adaptive relationships with others contributes to psychopathology and maladaptive behavior (Atwood & Stolow, 1984; Cicchetti, 1991; Gacno & Meloy, 1994; Kelly, 1997; Mahler, 1963, 1974; Sroufe, 1983; Urist, 1977).

Bridging the gap between object relations theory and observable behavior provides us with a viable prototype for integrating developmental research with an understanding of psychopathology. A growing number of researchers have begun to integrate object relations theory when elucidating clinical issues of assessment and treatment of psychological disorders (Allen, Hauser, & Borman-Spurrell, 1996; Blatt,
Tuber, & Auerbach, 1990; Gacono & Meloy, 1994; Gacono, Meloy, & Berg, 1992; Kelly, 1997). Moreover, constructive intervention has been shown to evolve from the clinician’s accurate awareness of the patient’s developmental level of object relations functioning and its relationship to both adaptive functioning and disruptive behavior (Carter, Osofsky, & Hann, 1991; Cicchetti, 1991; Cicchetti & Toth, 1995; Davidow & Bruhn, 1990; Greenberg, Speltz, & DeKlyen, 1993; Lieberman, 1992; Stuart, Westen, Lohr, Silk, Becker, Vorus, & Benjamin, 1990).

**Object Relations Functioning and Adolescence**

Although many researchers believe that major object relations development transpires over the course of the first five years (Bowlby, 1969/1982; Kernberg, 1985; Klein, 1932; Kohut, 1971, 1977; Mahler, 1963, 1974; Mahler, Pine, & Bergman, 1975; Winnicott, 1965/1972, 1986), several authors (Pine, 1990; Rutter, 1989; Vaillant, 1987; Westen, 1990; Westen et al., 1991) have suggested that this process continues to take place until much later in the developmental cycle. In fact, recent research has suggested that an individual’s developmental level of object relations functioning continues to grow far beyond the preoedipal-oedipal years and continues to expand and flourish throughout latency and adolescence (Blatt & Ford, 1994; Westen et al., 1991).

Kelly (1997) proposes two considerations with respect to object relations functioning and adolescence. First, although the preoedipal years provide a solid and defined bedrock that shapes and directs much of the child’s later object relations development, it is important to suspend diagnostic judgment around the finality or completeness of her/his object relations functioning at this point in time. The opportunity exists for critical modification and growth well beyond the early years. As Westen (1990)
observed, most object relations theories have neglected to study functioning in the
postadolescent years despite the considerable opportunities for maturation. Second, object
relations capacity continues to develop well into and throughout the adolescent period
because of the cognitive (Harter, 1977; Piaget, 1954, 1965), physiological (Blos, 1962,
1967), societal (Kaplan, 1980; Shore & Massimo, 1980), and psychological factors
(Erikson, 1980; Laufer & Laufer, 1976; Winnicott, 1972) that emerge and coalesce during
adolescence. These factors can provide continued opportunity for healthy object relations
development, or contribute to the development of primitive self and object
representations.

Object Relations Functioning and Gender

Adolescent development has until recently been conceptualized predominantly
according to a male model of separation-individuation that is considered a journey toward
the development of an increasingly autonomous self (Blos, 1962, 1967; Laufer & Laufer,
1976). More recently, however, theoretical formulations of development have suggested
that there are separate lines of development for females (Gilligan, 1993, 1994; Jordan,
Kaplan, Miller, Stiver, & Surrey, 1991; Miller, 1976, 1994; Notman, Zilbach, Miller, &
Nadelson, 1986). In contrast to an emphasis on separation-individuation problems and
difficulties achieving autonomy, recent formulations of female development emphasize
interdependence, mutuality, affiliation, connection, continuity, and the development of a
female "relational" self (Chodorow, 1978; Gilligan, 1993, 1994; Miller, 1994). This
research emphasizes the different experience of growing up female; how the maturing self
is organized around an ability to make and maintain connections with others; how the loss
of a relationship is often experienced as a loss of the self; and how the self is defined by
interdependence and interaction with others (Gilligan, 1993; Jordan et al., 1991; Miller, 1976). While there is a quest for separateness in female adolescents, there is also a strong pull toward adopting parental ways (especially the mother's) and seeking their continued advice, criticism, and reassurance (Gilligan, 1993; Rosenbaum, 1993; Zilbach, 1993).

Bergman (1991), who is reinterpreting male development from the "self-in-relation" model, claims that males develop from a profoundly different relational perspective; one that is not typically acknowledged in traditional theories of male development. Bergman believes that from early childhood on males experience an emotional disconnection from the mother; a disconnection that is fostered by societal influences and expected of mothers to encourage. Bergman suggests that it is this "disconnection" in the development of the "relational process," not the disconnection from the mother per se, that leads to a different way of relating to others. Thus, even though most males "want" to be in a relationship, their developmental path stresses more a "turning away from the relational mode," which increases the likelihood of isolation, avoidance, dominance, and distance from others. Bergman believes such relatedness, in turn, defeats the very desire males have to achieve and maintain intimate, mutually connective relationships. Bergman suggests that males tend to develop more one-way or "partially-related" relationships. Such relationships, however, are experienced as a sense of felt loss, resulting in feelings of sadness, anger, and depression.

Empirically, it is suggested that the relationship between images of self and significant others as experienced and as carried in memory reflects the interaction between an individual's ability to form and sustain close relationships with others and their manifest behavior, whether normal or pathological. Theory suggests that an
individual's developmental level of object relations functioning, which ranges on a continuum from undifferentiated and primitive self-object representations to differentiated and flexible self and object definitions, will be related to manifest aggressive behavior. Individuals with a lower developmental level of object relations functioning are thought to be rigid, inflexible, and dominated by negative and aggressive affect. Theory also suggests that an individual's subjective internal experience of aggression, which may be projected onto others and the environment, underlies aggressive behavior. Given this, it is thought that investigation of the relationship between a recent history of aggressive behavior, projected aggression, and developmental level of object relations functioning may yield data that would facilitate a better understanding of the antecedents of the aggressive and violent behavior in adolescence.

Hypotheses

1.0 The general prediction is that projected aggression and developmental level of object relations functioning are both different but related constructs, and that both of these constructs will differentiate between hospitalized adolescents with a recent history of aggressive behavior and those without such a history. Included in this general hypothesis will be the following specific hypotheses:

1.1 Increased amounts of projected aggression as reflected by the subjects' scores on the four Rorschach aggression variables (AG, Exner, 1993; AgC, AgPast, & AgPot, Meloy & Gacono, 1992) will differentiate between hospitalized adolescents who have a recent history of aggressive behavior and those who do not.

1.2 Lower developmental levels of object relations functioning as reflected by the subjects' mean (MOA Mean), low (MOA Low), and high (MOA High) scores on the
Mutuality of Autonomy Scale (Tuber, 1992; Urist, 1977; Urist & Shill, 1982) will differentiate between hospitalized adolescents who have a recent history of aggressive behavior and those who do not.

Definition of Terms

Aggressive Behavior

Aggression as a form of behavior is typically directed outward. For the purposes of this study, behavior was classified as aggressive if it (a) included violent behavior that caused physical harm to other people or animals, (b) involved conduct that caused property loss or damage, or (c) included overt hostility such as the direction of hostile comments towards others.

Operationally, current history of aggressive behavior was assessed in two ways. First, it was determined whether or not there was a recent history of aggressive or violent behavior. This information was obtained from the subject’s medical record. Second, the hostility rating (Likert scale from 0= None to 6= Extreme) from the Hopkins Psychiatric Rating Scale (HPRS; DeRogatis, 1978) was used as a measure of overt hostility at the time of admission to the hospital.

Projected Aggression

In studying the relationship between aggression and subjects’ Rorschach responses, Rapaport, Gill and Schafer (1968) hypothesized that direct or implicit aggressive content in the Rorschach implies “a great tension of aggressions within the subject” (p. 460). Currently, Exner’s aggressive movement response is the only measure of aggression included in the Comprehensive System for scoring Rorschach responses (Exner, 1993). Meloy and Gacono (1992; Gacanon & Meloy, 1994) investigated the subtle
motivational and object relational meanings of intrapsychic aggression. Based on the
work of Schafer (1954) and Rapaport, Gill, and Schafer (1968), Gacono and Meloy
(1994; Gacono, 1990; Meloy & Gacono, 1992) developed three additional aggressive
scoring categories. These include the aggressive content (AgC), aggressive past
(AgPast), and aggressive potential (AgPot) content categories. AgC includes content
popularly perceived as predatory, dangerous, malevolent, injurious, or harmful (Gacono
& Meloy, 1994). AgPast includes any response in which the aggressive act has occurred
or the object has been the target of aggression (Gacono, 1990). AgPot includes any
response in which an aggressive act is about to occur.

Operationally, projected aggressive experience was assessed by scoring the
subjects’ Rorschach responses for aggressive movement (AG; Exner, 1993), and
aggressive content, aggressive past, and aggressive potential (AgC, AgPast, & AgPot;
Gacono & Meloy, 1994).

Developmental Level of Object Relations Functioning

General consensus suggests that object relations theory refers to images of the
self, others, and relationships which are internalized as memories (conscious or
unconscious) (Pine, 1990) and which subsequently inform, direct, and guide interactions
with others (Kelly, 1997). What is initially internalized in memory as representations of
the self, others, and relationships are the child’s experiences with primary caregiver(s). It
is proposed, however, that what is laid down in memory is not necessarily an entirely
accurate representation, but rather what the child experiences as a function of the affects,
defense processes, drives, and thoughts present at the moment of the experience (Pine,
1990).
Operationally, developmental level of object relations functioning was defined by the mean, low, and high scores on the Mutuality of Autonomy Scale (MOA), an object relations scale developed by Urist (1977) and colleagues (Urist & Shill, 1982) and later modified for use with children and adolescents by Tuber (1992). This scale is an attempt to define and articulate structural and relational aspects of the internalized representations. The mean MOA score represents the most likely and preferred relationship template, or “representational world” (Sandler & Rosenblatt, 1962) of the self, others, and relationships, which presumably guides the individual’s current ways of relating with others. The low (MOA Low) and high (MOA High) scores represent the adolescent’s range or repertoire of object representation responses. MOA Low represents the subject’s highest developmental level of object relations functioning, while MOA High represents the subject’s lowest developmental level.

Significance of the Study

By examining the relationship between a recent history of aggressive behavior, projected aggression, and developmental level of object relations functioning, this study attempts to provide a comprehensive picture of the relationship between adolescents’ manifest behavior and their internal psychic structures. Moreover, previous studies on the motivations behind aggressive behavior have focused primarily on biological, environmental, and cognitive aspects. Problems in object relations have been only briefly noted in the phenomenological and diagnostic profiles posited for individuals with behavior problems and those who are diagnosed with some form of psychopathology. Previous research has generally overlooked the importance of object relations,
psychoanalytic, and developmental psychopathological theory; all of which have addressed these aspects of aggression.

In addition to the dearth of literature on the relationship between aggression and object relations functioning, most empirical research in the domain has failed to consider projected experience of aggression. Moreover, results of studies investigating the relationship between aggressive imagery on the Rorschach and real-world aggressive behavior have produced mixed results (Baity & Hilsenroth, 1999; Elizur, 1949; Finney, 1955; Gacono, 1988, 1990; Gacono & Meloy, 1994; Goldstein, 1997; Margolis, 1992; Meloy & Gacono, 1992; Rose & Bitter, 1980; White, 1998). The equivocal results may be related, at least in part, to the fact that most of the studies have used criminals as subjects. Two studies have gone beyond the criminal domain (Baity & Hilsenroth, 1999; Goldstein, 1997). While Goldstein did not find any significant relationships between the aggression scores (AG, AgC, AgPast, AgPot) and different types of observed aggressive behavior in hospitalized adolescents, she did find that aggressive adolescents gave a significantly higher number (p<.05) of aggression scores. In their study on adult outpatients with Axis II diagnoses (character pathology), Baity and Hilsenroth demonstrate that: (a) the aggression scores can be scored reliably, (b) AgC is empirically related to DSM-IV (APA, 1994) diagnostic criteria for antisocial personality disorder, and (c) AgC and AgPast are empirically related to a self-report measure of anger and antisocial practices. By further investigating projected aggressive experience in aggressive and non-aggressive groups of hospitalized adolescents, this study contributes to clinical research on the use of the Rorschach as an important tool in examining the construct of aggression (Exner, Kazaoka, & Morris, 1979, cited in Exner, 1993; Finney,

Adolescence would appear to afford a continued view of significant structural-developmental growth and change in the object relations domain (Kelly, 1997). Increased understanding of gender similarities and differences in developmental level of object relations functioning in conjunction with projected aggressive experience should lead to a greater clinical understanding of the potential for aggressive and violent behavior. These findings will thus be pertinent in the formulation of therapeutic expectations and goals geared towards males and females; rather than assuming both genders should be treated similarly. The growing body of empirical literature on aggression and its manifestations in young people will thus be augmented.

Limitations of the Study

Subjects for this investigation are limited to a sample of young people ages 13 to 18 who were hospitalized at a psychiatric hospital in upstate New York. Subjects who have a major systemic illness or known mental retardation have been excluded. While these results were derived specifically from the use of the research instruments with the subjects as described above, they may be generalizable by analogy to different subjects in other samples with comparable demographics who have demonstrated similar psychopathology.
CHAPTER II

REVIEW OF THE LITERATURE

Introduction

One of the most controversial issues in contemporary psychodynamic thinking concerns the nature of the fundamental ties that bind people together. The term "object relations theory," in its broadest sense, refers to attempts to understand the potentially confounding observation that people live simultaneously in an external and an internal world, and that the relationship between the two ranges from the most fluid intermingling to the most rigid separation (Greenberg & Mitchell, 1983). No observer of human behavior can fail to notice that people act on the basis of the meaning they attribute to their experiences of themselves, others, and the world around them. A deeper understanding of the nature of these experiences, their internalization and representation, would add to our ability both to understand their impact on manifest behavior and to treat psychopathology.

Within the framework of the psychodynamic theories there appears to be a general consensus that a strong connection exists between aggression and object relations functioning earmarked by rigid, polarized, and age-inadequate differentiation and integration. In effect, whether the theories have posited the primacy of drive/impulse or affect (S. Freud (1915/57, 1923, 1926/59); Hartman (1939, 1964); Jacobson (1964); Kernberg (1976, 1980, 1993), these various frameworks have all emphasized the extent
to which aggression reflects behavioral, affective, and self-object constructs derivative of early developmental levels.

The intent of this chapter is first to present theoretical positions on the structure and content of internal images. The second part of the chapter considers the contributions of alternative frameworks to the understanding of object relations, and aggression and its vicissitudes and encompass a review of relevant research.

Psychoanalytic Foundations

Freud’s fundamental vision of the human condition is embodied in the drive/structure model. The core concept of the model, however, is the idea of drive. In his most widely used definition, drive is a concept on the frontier between the psychic and the somatic. It is an endogenous source of stimulation that impinges on the mind by virtue of the mind’s connection with the body. According to Freud (1905), the drive is a “demand made upon the mind for work” (p. 168), the activator of the psychic apparatus (1905, 1915/57).

From its origins, his drive/structure model was a dual drive theory (1905, 1909, 1915/57, 1920, 1926/59). The libidinal (sexual) drive always operated alongside of, or in conflict with, another independently derived drive. Viewed in this way, the drives are not only the mechanisms of the mind; they are also its contents. Initially, Freud (1915/57) proposed that “two groups of such primal instincts should be distinguished: the ego, or self-preservative, instincts and the sexual instincts” (p. 124). Although Josef Breuer called his attention to the possibility of an aggressive drive in Studies on Hysteria (Freud & Breuer, 1895, cf. Spotnitz & Meadow, 1976), Freud renounced its separateness and preferred “for the present to adhere to the usual view, which leaves each instinct its own
power of becoming aggressive” (1909, pp. 140-141). Freud stated further that “every act
of hate issues from erotic tendencies” (Nunberg & Federn, 1962, p. 164).

According to Freud’s early theory, drives are objectless until certain objects
become associated with their gratification. The object may “be changed any number of
times in the course of the vicissitudes which the instinct undergoes during its existence;
and highly important parts are played by...displacement of instinct (S. Freud, 1915/57,
pp. 122-23). Thus, the particular object(s) that becomes associated with gratification
is(are) always subordinate to the need for drive reduction. Given this, manifestations of
the aggressive and libidinal drives in behavior, thoughts, or feelings appear to be related
more to the drive and the character of the individual than the object.

Freud (1920) believed that the aggressive and libidinal drives are each
independent energy sources that originate as tensions within the body. The physical
tension produced by the drive affects the psyche, which in turn attempts to eliminate the
tension in order to preserve a state of homeostasis. Drive tension can evidence itself
through fantasies, thoughts, feelings, or manifest behavior. According to Freudian
theory, defenses such as repression, the exclusion of certain ideas from awareness, and
sublimation, the replacement of one thing with another, are employed when direct
gratification is not possible. The content of any action is thus understood by the quality
of the drive that underlies it as well as the nature of the defenses against the original
impulse.

Freud’s (1917, 1923) introduction of the structural model heralded a new
emphasis on object relations. By postulating the existence of the ego and superego,
structures with a developmental history, Freud increased the role of the object in
psychological functioning. Although the ego and superego are genetically tied to the id, their development is strongly influenced by reality figures. While the superego represents a further differentiation within the ego and is developed later in the child’s life, it is fueled by the id’s cathexes which have been drawn from lost objects. Functioning in opposition to the id, the superego is, however, often characterized by a harshness reminiscent of the nature of the id’s demands. Consistent with his original drive theory, Freud (1930) states that “the original severity of the super-ego does not—or does not so much—represent the severity which one has experienced from it [the object], or which one attributes to it; it represents rather one’s own aggressiveness towards it” (pp. 129-130).

Although Freud did not openly address aggression until 1920 with the publication of Beyond the Pleasure Principle, Adler introduced the concept of an aggressive drive in 1908 in a theoretical paper titled “The Aggressive Drive in Life and Neurosis.” This drive was associated with a quest for power and mastery and was tied to the developmental tasks of childhood. Adler also suggested that interpersonal relationships have either a positive or negative impact on the child’s development. With this postulation, Adler was, in essence, suggesting that the nature of the aggressive drive is influenced by interpersonal aspects (Anscombe & Ansbacher, 1956). Not surprisingly, Freud criticized Adler and suggested that he was attempting to substitute an interpersonal motive for an instinctual one. Adler subsequently subsumed the aggressive instinct under the larger concept of striving for overcoming (Anscombe & Ansbacher). Later object relations and psychoanalytic theorists (Brenner, 1971, 1974, 1975; Holt, 1976; Mahler, 1946, 1963, 1968; McDevitt, 1980, 1983; Parens, 1979; Spitz, 1949, 1957; Stone, 1971)
would expand on this idea as they embraced the notion that striving for overcoming is constructive aggression with the aim of mastery.

Fenichel (1945), Nunberg (1948), and Reik (1948) followed Freud's basic concept of the aggressive drive, although each introduced his own variation. Fenichel described the aggressive impulse as a manifestation of a single libidinal drive. Aggression is the opposite of one's sexual desire for a love object. Fenichel agreed with Freud's views on the need to maintain homeostasis within the individual, and given this belief that aggressive drives, as a response to frustration have no instinctual aims of their own. Thus, aggression functions to help rid the individual of tension resulting from an insufficient ability to tolerate frustration.

The writings of Nunberg (1948) and Reik (1948) bridged drive theory with object relations by introducing the concept that both the self and the object are important and play significant roles in the vicissitudes of the aggressive and libidinal drives. Linking aggression to psychopathology, Nunberg observed that:

In a state of narcissistic identification in which there was "no longer a boundary between us" the patient experienced aggressive (cannibalistic) impulses and fantasies of sacrifice. In one situation the patient said, "It seems to me that I am to hit somebody, to tear out somebody's hair." Thereupon he struck his own head with his fist and started to pull out his hair. Here the defense against aggressive impulses was enacted by the instinct turning against his own person and changing into its opposite....Nevertheless, the aggressive tendency continued to exist beside the passive tendency and even increased in violence (1948, p. 24).

Reik (1948) provided a similar illustration of the schizophrenic tendency to direct aggressive impulses against the self as he described a session with one of his patients who explained that "Instead of knowing that you want to kill someone else, you wipe yourself out" (cf. Spotnitz & Meadow, 1976, p. 21). Thus, by the middle of the 1900's, Freudian drive theory had evolved to suggest not only the existence of the aggressive
drive but to suggest that the object is no longer subservient to the drive. His theories were to be further expanded, however, as a result of growing interest in the structure and function of the ego.

The Perspective of Ego Psychology

With the advent and elaboration of the structural model, new problems arose concerning the understanding of the individual’s relationship with reality. Freud’s later clinical insights had led to a formulation in which the ego played a greater role in personality functioning. Psychoanalysts soon began to realize, however, that Freud’s theories provided inadequate explanations of empirical data. Drive theory alone was unable to provide a cohesive explanation of personality structure and of the normalities and abnormalities in relationships between people.

Theorists such as Hartmann (1939), Anna Freud (1966, 1969, 1974), Nunberg (1948), Sullivan (1953), and Thompson (1950) contributed toward recognition of the ego’s strengthening role. At the same time, the focus on reality was furthered by the proliferation of direct psychoanalytic observations of both normal and pathological child development (Ainsworth, 1967, 1969; Mahler, 1946, 1952; Spitz, 1945, 1946, 1957). The systematic study of children demonstrated that the outside world, particularly the world of adults in the child’s environment, significantly influenced development more directly than had previously been imagined (Ainsworth, 1967, 1969; Bowlby, 1973, 1969/82; A. Freud, 1966; Jacobson, 1946, 1954, 1964; Mahler, 1946, 1963; Spitz, 1957, 1959).

Similar to Freud, Hartmann (1939, 1964) believed that object relations derive from the survival needs of the infant. It was not until later in Hartman’s writings (1964)
that he began exploring the contributions of significant others to development. Hartmann followed Freud somewhat more closely than Jacobson (1946, 1954, 1964, 1971), Spitz (1945, 1946, 1959, 1965), and Mahler (1946, 1968, 1971, 1974) as he relegated the role of human relationships secondary and subordinate to the libidinal and aggressive drives. Moreover, he believed that the social bond that develops between mother and child derives primarily from the child’s need for physical survival.

Hartmann (1939, 1964) postulated the concept of neutralization as both a reworking of Freud’s theory of sublimation and as an acceptance of the importance of aggressive drive energy. Neutralization involves a de-instinctualization of the two primary sources of energy—libido and aggression. It is seen as a continuous process whose function is viewed as more than simply defensive. Neutralization, which is not merely a deflection of aim toward socially acceptable goals, involves a transformation of the quality of the drive energy. Hartmann postulated that neutralized aggressive energy is at least as important as libidinal energy, and is also available for use by the ego and superego. Object relations are then built by transferring energy—which was formerly invested only in the unneutralized drives—to the ego for negotiation with the environment (Blanck & Blanck, 1974). While neutralized aggression is an energy source for the ego, unneutralized aggression is viewed as destructive and a frequent contributor to conflict (Rizzuto, Sashin, Buie, & Meissner, 1993).

Anna Freud’s (1966) concept of “identification with the aggressor” is an example of one idea that challenged the conception of motivation as dependent exclusively on internal drives and their vicissitudes. She derived the specific behaviors constituting this defense from a conception of drive theory that was expanded to include the influence of
the relationship between self and object since the aggressor who is identified with is, at least to some extent, a figure in reality.

Anna Freud (1966, 1974) discussed aggression in terms of an overly harsh superego and its impact on adaptive functioning. In a personality structure with this type of superego, the ego is deprived of its independence and reduced to the status of an instrument that merely executes the superego’s wishes and instructions. Such a demanding and indignant superego sets up an ideal standard according to which aggression is denounced and prohibited. Recognizing the need for this aggression to have an outlet so as not to evolve into a personality structure defined by acrimonious, cruel, and angry characteristics, Anna Freud postulated various defense mechanisms (e.g., sublimation, intellectualization, rationalization) that individuals develop in order to cope with the challenge.

For example, she deferred to the defense mechanism of sublimation to explain personality characteristics in overly helpful or altruistic individuals (A. Freud, 1966). The altruistic individual’s actions serve to liberate superego-inhibited activity and secure the fulfillment of the original instinctual wishes, whose gratification was originally prohibited by the superego. Moreover, the object against which the liberated aggression is directed (i.e., the benefactor(s)) is invariably representative of the authority figure who imposed renunciation of the instinct upon the subject in infancy and/or childhood. With these additions to Freud’s drive theory, her conception of the use of the sublimation defense with the aggressive instinct formed the bedrock upon which later theorists could build when describing constructive and destructive aggression.
Sullivan (1953) and Thompson (1950), representatives of the interpersonal psychoanalytic movement, voiced several objections to Freud’s theories of the aggressive and libidinal drives. Sullivan introduced a new interpretive framework for understanding human experience and difficulties in living. He argued that we can only meaningfully study what we can observe, and that we can only observe what we can see and hear. This is his basis for focusing on individual experience and relationships, and for placing less emphasis on philosophical presumptions such as drives. Following Sullivan, Clara Thompson introduced an interpersonal aspect to Freud’s drive theory. Contrary to Freudian theory which suggested that a child born into a perfectly benign environment should still have a seriously destructive force within himself, Thompson believed that aggressive behavior appears to develop out of malevolent environments (Blum, 1953). Furthermore, suicide and aggression toward others were considered to be related to frustrations of living and develop out of interpersonal difficulties.

In sum, each of these theorists has attempted to preserve ties with the drive model by retaining its motivational aspects while at the same time giving more consideration to the impact of reality on the origins and ultimate characteristics of the aggressive and libidinal drives. Moreover, Anna Freud’s defense mechanisms and theories of child development and Hartmann’s concept of neutralization appear to have opened the door for the emergence of more expanded theories of the aggressive and libidinal drives and the impact of early relationships.

The Impact of the Object Relations Perspectives

1982, 1986) spanned the conceptual positions of psychoanalytic and object relations theory. In general, within their frameworks object relations directed the drives and sought out specific channels for drive gratification. Simultaneously, object relations influenced the development of new and higher levels of psychological functioning, organizing affects and the developments of specific ego functions such as perception, judgment, and semantic communication. In addition, increasing levels of distinction between drive and affect were considered indicative of progression through the developmental stages of object relations functioning.

In Jacobson’s (1946, 1954) view the infant’s experiences of pleasure (gratification) or unpleasure (frustration) constitute the beginning of object relations development. She believed that images of the gratifying (good) and frustrating (bad) mother are formed from infant/mother interactions. She highlighted the importance of disappointment and frustration, both of which occur when the mother does not respond adequately to the infant’s needs. While she agreed with Freud’s interpretation of frustration (i.e., frustration occurs in response to the thwarting of gratification), she addressed the importance of disappointment. According to Jacobson, disappointment refers to the infant’s experience of the quality of the object relationship and can lead to devaluation of the object if aggressive drive energy is released in frustrating situations.

For Jacobson (1954, 1964), the evolution of images of the self and others can lead to either normal or pathological development. Normal development occurs when these images are maintained as solid, stable, realistic, and separate especially during critical periods. Fixation at a specific developmental period refers not to gratification/frustration of drive, but to the quality of object relatedness at the time of the disappointment. If
disappointments are harsh and occur at an early age, such as before the consolidation and differentiation of the self and object representations, aggressive devaluation of the object will occur, along with a corresponding devaluation of the as yet undifferentiated self. The result will be a merger of idealized self and object images into a wished-for but unattainable goal, with progressive devaluation of other, merged, hated self and object representations. To the extent that the idealized images are established as a kind of precocious ego ideal, a forerunner of the superego, the superego itself will be comprised of archaic self and object representations and will ultimately be unduly harsh and punitive. The quality of these structures can give rise to aggression, depression, or other psychopathology.

In essence, Jacobson departed from Freud's drive theory in her postulation that both libido and aggression are brought into being by good and bad experiences. Although her views "may be reminiscent of the frustration-aggression theory, it should be noted that the transformation of undifferentiated psychophysiological energy into two qualitatively different kinds of psychic drives is here regarded as psychobiologically predetermined and as promoted by internal maturational factors as well as by external stimuli" (Jacobson, 1964, p. 14).

In sum, with the advent of Jacobson's theories, conceptions of development had advanced well beyond Freud's drive theory. Object relations theory had developed into a school of thought with the position that self and object images are codetermined by both reality experiences and interpersonal relations. In fact, a comparison of Hartman's formulations with her writings on early development highlights the distance Jacobson has
moved the drive/structure model toward a fuller integration of the impact of the experience and meaning of early interpersonal relations.

Spitz and Mahler formulated their theories of development based on observation of infants and young children. Spitz (1959, 1965) wrote about the process of drive fusion, the coming together of the libidinal and aggressive drives. Fusion occurs in the context of the relationship between the infant and the libidinal object at the point when there is realization that the formerly gratifying (good) and the frustrating (bad) object are, in fact, one in the same person. Thus, the fusion of the two drives and the two object representations is a double process. Fusion is adaptive, according to Spitz (1949, 1957), as long as the libidinal drive dominates the aggressive. The predominance of gratifying over frustrating experiences in the neutralization process allows for the postponement of drive discharge (i.e., the expression of rageful responses toward the libidinal object) as memory traces of gratification and of the gratifying object continue to accumulate. Furthermore, Spitz (1959, 1965) believed that with delay of discharge, thought could be interposed before action—a process that ultimately leads to a capacity to weigh consequences and consider alternatives.

For Spitz (1965), identification with the aggressor in order to preserve the object assists in the creation of a self-regulating structure. Where the complex processes of fusion and neutralization have failed, aggression predominates and makes for rage, noncompliance, and even violence:

From the societal aspect, disturbed object relations in the first year of life, be they deviant, improper, or insufficient, have consequences which imperil the very foundation of society. Without a template, the victims of disturbed object relations subsequently will themselves lack the capacity to relate. They are not equipped for the more advanced, more complex forms of personal and social interchange without which we as a species would be unable to survive. They
cannot adapt to society. . . . The only path which remains open to them is the destruction of social order of which they are victims. Infants without love, they will end as adults full of hate (Spitz, 1965, p. 300).

In sum, Spitz's theories highlight the relationship between the libidinal drives and object representations, as well as the pitfalls which tend to veer development in pathological directions.

Mahler (1963, 1968) emphasized the importance of interpersonal relations in her theories of the aggressive and libidinal drives. For her, the benchmark of successful development is the progression through the developmental stages and the achievement of a stable individual identity within a world of predictable and realistically perceived others. Mahler (1946) saw the parents as the objects of the infant's aggressive and libidinal drives; thus she emphasized the importance of their ability to interact with the child and provide an optimal environment for development. The function of the parents is to "give the child the object-related opportunity for channelization, i.e., utilization and amalgamation of his love and aggressive tendencies" (1946, p. 47). Thus, normal ego development, childhood neuroses, and the expression of affect are all described as resultants of the interaction between the needs of the child and the personalities of the parents, particularly the mother (Mahler, 1963, 1968, 1971, 1974).

Mahler (1963, 1968) discussed the importance of achieving libidinal object constancy. Once this developmental milestone has been achieved, the child is able to work toward the achievement of a stable concept of self and other. In normal development the child attains a sense of her/his own individuality as well as a sense of the other as an internal, positively cathexed presence. Libidinal object constancy presupposes the unification of good and bad representations of the object as well as the
fusion of the libidinal and aggressive drives with which they are cathected. These achievements depend on constitutional givens, the innate strength of the drives and their vicissitudes, and on prior developmental experiences.

Mahler (1968) echoed Hartmann's theory of neutralization, although she argued that even optimal mothering does not guarantee that adequate neutralization will occur. For her, even in the presence of an adequately comforting parent, neutralization of aggressive drive energy may fail to occur for an infant who is constitutionally burdened with an increased amount of aggressive drive energy.

Kernberg's (1976) definition of aggression is similar to that of classical drive theorists: "The term aggression...is restricted to the direct instinctual drive derivatives, as typically related to early, primitive rage reactions; it refers to aggression as opposed to libido" (p. 30). Going beyond the classical approach to drive theory, he proposes that the aggressive and libidinal drives are derivatives of the affect present at the time the object relations images are initially internalized (otherwise known as affective coloring). "From a clinical viewpoint, one might say that evolving affect states and affect dispositions actualize, respectively, libidinal and aggressive drive derivatives" (Kernberg, 1976, p. 64). Thus, contrary to drive theory, Kernberg states that the affect is the primary quality; it is not a result of the instinctual drive. Furthermore, it is the affect that determines the valence (i.e., positive/negative or good/bad) of the self and object representations.

Kernberg (1976) states that for the infant, images of the self and object are initially internalized based upon early experience with the primary caregiver. He emphasizes the importance of the affect present at the time of interaction—the affective
coloring is internalized and organizes the images. These internalized images then provide the basis for the individual's expectations of future relationships throughout life.

Kernberg (1982) believes that love and hate are genetically determined intrapsychic structures and are stable across developmental stages. He adds that through their development, these object-directed affects consolidate into and give rise to libido and aggression. This is in direct contrast to Freud (1915/57, 1931, 1933/64) who stated that love and hate evolve out of the drives as a consequence of object cathexis.

Kernberg (1976) believes that disturbed individuals are pathologically fixated at an early stage of psychic structure formation and have been unable to integrate the images of the self and other. Rather, the images are separated according to the affective coloring (i.e., good or bad) and their primitive egos rely on defensive splitting as these individuals interact with others. Kernberg describes three levels of organization of internalized representations. The most primitive form is "introjection," which represents the internalization of the least organized, least differentiated self and object images in the context of the most violent, least modulated affective coloration. The next level of internalization, "identification," occurs when the child is able to appreciate the role played by her/himself and by the object in significant interactions. The components of this level consist of images of the object and the self each in a specific role; and an affective coloring determined by an already somewhat modulated drive derivative. The most mature level of internalization, "ego identity," refers to "the overall organization of identifications and introjections under the guiding principle of the synthetic function of the ego" (1976, p. 32). The components are consistent with reality and reflect a consolidated sense of the self and the object world.
In 1993, Kernberg wrote a comprehensive formulation of his beliefs on hatred and rage as vicissitudes of aggression. He considers rage the central affect of aggression. In the unconscious fantasies that develop around rage reactions, rage comes to signify both the activation of an all-bad object relationship and the wish to eliminate it and restore an all-good one.

In contrast to the acuteness of rage reactions, hatred is more chronic and stable. According to Kernberg (1993), hatred presents with a characterological anchoring that includes powerful rationalizations and corresponding distortions of ego and superego functioning. The primary aim of one consumed by hatred is to destroy the object. Kernberg emphasizes the intense ambivalence the individual experiences as s/he needs and desires the object, and at the same time needs and wishes to destroy the object. An extreme form of hatred frequently leads to homicide, the physical elimination of the object. This extreme hatred may also be expressed in the form of suicide when the self is identified with the hated object and self-elimination is seen as the only way to destroy the object. Kernberg notes that at the surface, the hatred of the unconsciously and consciously envied object is usually rationalized as fear of the object’s destructive potential. This destructive potential of the hated object derives both from actual aggression inflicted by others in the individual’s past (e.g., individuals with a history of abuse or severe trauma) and the projection of her/his own rage and hatred upon that object.

The origin of the transformation of rage into hatred lies in an intense attachment to a frustrating object, frequently the mother (Kernberg, 1993). The ultimate cause of this transformation is fixation on this relationship as the object is fundamentally needed
psychological functioning. Although the ego and superego are genetically tied to the id, their development is strongly influenced by reality figures. While the superego represents a further differentiation within the ego and is developed later in the child’s life, it is fueled by the id’s cathexes which have been drawn from lost objects. Functioning in opposition to the id, the superego is, however, often characterized by a harshness reminiscent of the nature of the id’s demands. Consistent with his original drive theory, Freud (1930) states that “the original severity of the super-ego does not—or does not so much—represent the severity which one has experienced from it [the object], or which one attributes to it; it represents rather one’s own aggressiveness towards it” (pp. 129-130).

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Hartmann (1939, 1964) postulated the concept of neutralization as both a reworking of Freud's theory of sublimation and as an acceptance of the importance of aggressive drive energy. Neutralization involves a de-instinctualization of the two primary sources of energy—libido and aggression. It is seen as a continuous process whose function is viewed as more than simply defensive. Neutralization, which is not merely a deflection of aim toward socially acceptable goals, involves a transformation of the quality of the drive energy. Hartmann postulated that neutralized aggressive energy is at least as important as libidinal energy, and is also available for use by the ego and superego. Object relations are then built by transferring energy—which was formerly invested only in the unneutralized drives—to the ego for negotiation with the environment (Blanck & Blanck, 1974). While neutralized aggression is an energy source for the ego, unneutralized aggression is viewed as destructive and a frequent contributor to conflict (Rizzuto, Sashin, Buie, & Meissner, 1993).

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the relationship between self and object since the aggressor who is identified with is, at least to some extent, a figure in reality.

Anna Freud (1966, 1974) discussed aggression in terms of an overly harsh superego and its impact on adaptive functioning. In a personality structure with this type of superego, the ego is deprived of its independence and reduced to the status of an instrument that merely executes the superego’s wishes and instructions. Such a demanding and indignant superego sets up an ideal standard according to which aggression is denounced and prohibited. Recognizing the need for this aggression to have an outlet so as not to evolve into a personality structure defined by acrimonious, cruel, and angry characteristics, Anna Freud postulated various defense mechanisms (e.g., sublimation, intellectualization, rationalization) that individuals develop in order to cope with the challenge.

For example, she deferred to the defense mechanism of sublimation to explain personality characteristics in overly helpful or altruistic individuals (A. Freud, 1966). The altruistic individual’s actions serve to liberate superego-inhibited activity and secure the fulfillment of the original instinctual wishes, whose gratification was originally prohibited by the superego. Moreover, the object against which the liberated aggression is directed (i.e., the benefactor(s)) is invariably representative of the authority figure who imposed renunciation of the instinct upon the subject in infancy and/or childhood. With these additions to Freud’s drive theory, her conception of the use of the sublimation defense with the aggressive instinct formed the bedrock upon which later theorists could build when describing constructive and destructive aggression.
Sullivan (1953) and Thompson (1950), representatives of the interpersonal psychoanalytic movement, voiced several objections to Freud’s theories of the aggressive and libidinal drives. Sullivan introduced a new interpretive framework for understanding human experience and difficulties in living. He argued that we can only meaningfully study what we can observe, and that we can only observe what we can see and hear. This is his basis for focusing on individual experience and relationships, and for placing less emphasis on philosophical presumptions such as drives. Following Sullivan, Clara Thompson introduced an interpersonal aspect to Freud’s drive theory. Contrary to Freudian theory which suggested that a child born into a perfectly benign environment should still have a seriously destructive force within himself, Thompson believed that aggressive behavior appears to develop out of malevolent environments (Blum, 1953). Furthermore, suicide and aggression toward others were considered to be related to frustrations of living and develop out of interpersonal difficulties.

In sum, each of these theorists has attempted to preserve ties with the drive model by retaining its motivational aspects while at the same time giving more consideration to the impact of reality on the origins and ultimate characteristics of the aggressive and libidinal drives. Moreover, Anna Freud’s defense mechanisms and theories of child development and Hartmann’s concept of neutralization appear to have opened the door for the emergence of more expanded theories of the aggressive and libidinal drives and the impact of early relationships.

The Impact of the Object Relations Perspectives

1982, 1986) spanned the conceptual positions of psychoanalytic and object relations theory. In general, within their frameworks object relations directed the drives and sought out specific channels for drive gratification. Simultaneously, object relations influenced the development of new and higher levels of psychological functioning, organizing affects and the developments of specific ego functions such as perception, judgment, and semantic communication. In addition, increasing levels of distinction between drive and affect were considered indicative of progression through the developmental stages of object relations functioning.

In Jacobson's (1946, 1954) view the infant's experiences of pleasure (gratification) or unpleasure (frustration) constitute the beginning of object relations development. She believed that images of the gratifying (good) and frustrating (bad) mother are formed from infant/mother interactions. She highlighted the importance of disappointment and frustration, both of which occur when the mother does not respond adequately to the infant's needs. While she agreed with Freud's interpretation of frustration (i.e., frustration occurs in response to the thwarting of gratification), she addressed the importance of disappointment. According to Jacobson, disappointment refers to the infant's experience of the quality of the object relationship and can lead to devaluation of the object if aggressive drive energy is released in frustrating situations.

For Jacobson (1954, 1964), the evolution of images of the self and others can lead to either normal or pathological development. Normal development occurs when these images are maintained as solid, stable, realistic, and separate especially during critical periods. Fixation at a specific developmental period refers not to gratification/frustration of drive, but to the quality of object relatedness at the time of the disappointment. If
disappointments are harsh and occur at an early age, such as before the consolidation and differentiation of the self and object representations, aggressive devaluation of the object will occur, along with a corresponding devaluation of the as yet undifferentiated self. The result will be a merger of idealized self and object images into a wished-for but unattainable goal, with progressive devaluation of other, merged, hated self and object representations. To the extent that the idealized images are established as a kind of precocious ego ideal, a forerunner of the superego, the superego itself will be comprised of archaic self and object representations and will ultimately be unduly harsh and punitive. The quality of these structures can give rise to aggression, depression, or other psychopathology.

In essence, Jacobson departed from Freud’s drive theory in her postulation that both libido and aggression are brought into being by good and bad experiences. Although her views “may be reminiscent of the frustration-aggression theory, it should be noted that the transformation of undifferentiated psychophysiological energy into two qualitatively different kinds of psychic drives is here regarded as psychobiologically predetermined and as promoted by internal maturational factors as well as by external stimuli” (Jacobson, 1964, p. 14).

In sum, with the advent of Jacobson’s theories, conceptions of development had advanced well beyond Freud’s drive theory. Object relations theory had developed into a school of thought with the position that self and object images are codetermined by both reality experiences and interpersonal relations. In fact, a comparison of Hartman’s formulations with her writings on early development highlights the distance Jacobson has
moved the drive/structure model toward a fuller integration of the impact of the experience and meaning of early interpersonal relations.

Spitz and Mahler formulated their theories of development based on observation of infants and young children. Spitz (1959, 1965) wrote about the process of drive fusion, the coming together of the libidinal and aggressive drives. Fusion occurs in the context of the relationship between the infant and the libidinal object at the point when there is realization that the formerly gratifying (good) and the frustrating (bad) object are, in fact, one in the same person. Thus, the fusion of the two drives and the two object representations is a double process. Fusion is adaptive, according to Spitz (1949, 1957), as long as the libidinal drive dominates the aggressive. The predominance of gratifying over frustrating experiences in the neutralization process allows for the postponement of drive discharge (i.e., the expression of rageful responses toward the libidinal object) as memory traces of gratification and of the gratifying object continue to accumulate. Furthermore, Spitz (1959, 1965) believed that with delay of discharge, thought could be interposed before action—a process that ultimately leads to a capacity to weigh consequences and consider alternatives.

For Spitz (1965), identification with the aggressor in order to preserve the object assists in the creation of a self-regulating structure. Where the complex processes of fusion and neutralization have failed, aggression predominates and makes for rage, noncompliance, and even violence:

From the societal aspect, disturbed object relations in the first year of life, be they deviant, improper, or insufficient, have consequences which imperil the very foundation of society. Without a template, the victims of disturbed object relations subsequently will themselves lack the capacity to relate. They are not equipped for the more advanced, more complex forms of personal and social interchange without which we as a species would be unable to survive. They
cannot adapt to society....The only path which remains open to them is the
destruction of social order of which they are victims. Infants without love, they
will end as adults full of hate (Spitz, 1965, p. 300).

In sum, Spitz’s theories highlight the relationship between the libidinal drives and object
representations, as well as the pitfalls which tend to veer development in pathological
directions.

Mahler (1963, 1968) emphasized the importance of interpersonal relations in her
theories of the aggressive and libidinal drives. For her, the benchmark of successful
development is the progression through the developmental stages and the achievement of
a stable individual identity within a world of predictable and realistically perceived
others. Mahler (1946) saw the parents as the objects of the infant’s aggressive and
libidinal drives; thus she emphasized the importance of their ability to interact with the
child and provide an optimal environment for development. The function of the parents
is to “give the child the object-related opportunity for channelization, i.e., utilization and
amalgamation of his love and aggressive tendencies” (1946, p. 47). Thus, normal ego
development, childhood neuroses, and the expression of affect are all described as
resultants of the interaction between the needs of the child and the personalities of the

Mahler (1963, 1968) discussed the importance of achieving libidinal object
constancy. Once this developmental milestone has been achieved, the child is able to
work toward the achievement of a stable concept of self and other. In normal
development the child attains a sense of her/his own individuality as well as a sense of
the other as an internal, positively cathected presence. Libidinal object constancy
presupposes the unification of good and bad representations of the object as well as the
fusion of the libidinal and aggressive drives with which they are cathexed. These achievements depend on constitutional givens, the innate strength of the drives and their vicissitudes, and on prior developmental experiences.

Mahler (1968) echoed Hartmann’s theory of neutralization, although she argued that even optimal mothering does not guarantee that adequate neutralization will occur. For her, even in the presence of an adequately comforting parent, neutralization of aggressive drive energy may fail to occur for an infant who is constitutionally burdened with an increased amount of aggressive drive energy.

Kernberg’s (1976) definition of aggression is similar to that of classical drive theorists: “The term aggression...is restricted to the direct instinctual drive derivatives, as typically related to early, primitive rage reactions; it refers to aggression as opposed to libido” (p. 30). Going beyond the classical approach to drive theory, he proposes that the aggressive and libidinal drives are derivatives of the affect present at the time the object relations images are initially internalized (otherwise known as affective coloring). “From a clinical viewpoint, one might say that evolving affect states and affect dispositions actualize, respectively, libidinal and aggressive drive derivatives” (Kernberg, 1976, p. 64). Thus, contrary to drive theory, Kernberg states that the affect is the primary quality; it is not a result of the instinctual drive. Furthermore, it is the affect that determines the valence (i.e., positive/negative or good/bad) of the self and object representations.

Kernberg (1976) states that for the infant, images of the self and object are initially internalized based upon early experience with the primary caregiver. He emphasizes the importance of the affect present at the time of interaction—the affective
coloring is internalized and organizes the images. These internalized images then provide the basis for the individual's expectations of future relationships throughout life.

Kernberg (1982) believes that love and hate are genetically determined intrapsychic structures and are stable across developmental stages. He adds that through their development, these object-directed affects consolidate into and give rise to libido and aggression. This is in direct contrast to Freud (1915/57, 1931, 1933/64) who stated that love and hate evolve out of the drives as a consequence of object cathexis.

Kernberg (1976) believes that disturbed individuals are pathologically fixated at an early stage of psychic structure formation and have been unable to integrate the images of the self and other. Rather, the images are separated according to the affective coloring (i.e., good or bad) and their primitive egos rely on defensive splitting as these individuals interact with others. Kernberg describes three levels of organization of internalized representations. The most primitive form is "introjection," which represents the internalization of the least organized, least differentiated self and object images in the context of the most violent, least modulated affective coloration. The next level of internalization, "identification," occurs when the child is able to appreciate the role played by her/himself and by the object in significant interactions. The components of this level consist of images of the object and the self each in a specific role; and an affective coloring determined by an already somewhat modulated drive derivative. The most mature level of internalization, "ego identity," refers to "the overall organization of identifications and introjections under the guiding principle of the synthetic function of the ego" (1976, p. 32). The components are consistent with reality and reflect a consolidated sense of the self and the object world.
In 1993, Kernberg wrote a comprehensive formulation of his beliefs on hatred and rage as vicissitudes of aggression. He considers rage the central affect of aggression. In the unconscious fantasies that develop around rage reactions, rage comes to signify both the activation of an all-bad object relationship and the wish to eliminate it and restore an all-good one.

In contrast to the acuteness of rage reactions, hatred is more chronic and stable. According to Kernberg (1992), hatred presents with a characterological anchoring that includes powerful rationalizations and corresponding distortions of ego and superego functioning. The primary aim of one consumed by hatred is to destroy the object. Kernberg emphasizes the intense ambivalence the individual experiences as s/he needs and desires the object, and at the same time needs and wishes to destroy the object. An extreme form of hatred frequently leads to homicide, the physical elimination of the object. This extreme hatred may also be expressed in the form of suicide when the self is identified with the hated object and self-elimination is seen as the only way to destroy the object. Kernberg notes that at the surface, the hatred of the unconsciously and consciously envied object is usually rationalized as fear of the object’s destructive potential. This destructive potential of the hated object derives both from actual aggression inflicted by others in the individual’s past (e.g., individuals with a history of abuse or severe trauma) and the projection of her/his own rage and hatred upon that object.

The origin of the transformation of rage into hatred lies in an intense attachment to a frustrating object, frequently the mother (Kernberg, 1993). The ultimate cause of this transformation is fixation on this relationship as the object is fundamentally needed
but is experienced as all-bad and as having destroyed the ideal or all-good object. Thus, the aim of revengeful destruction is to magically restore the all-good object. In this transformation, the individual may also identify with the mother-victimizer—the contemptuously destructive object. The individual then searches out others onto whom the “attacked, depreciated, teased, and mistreated self can be projected” (p. 70). Furthermore, in identifying with both the suffering self and sadistic object, the individual is swallowed up by all-encompassing aggression in relationships.

The Contributions of the British Object Relations School

While ego psychology evolved into a theoretical perspective that placed increasing emphasis on the development of self and object representational worlds derived from interpersonal experiences with external objects, the British school, initiated by Melanie Klein (1932, 1964), emphasized representational worlds developed early in infancy from images derived from fantasized objects (Goldberg, 1987). In general, British object relations theory considers the effect of the parents’ personalities on the child, the impact of the child’s impression of the parents as real others, and the possibility that problematic features in the personalities may contribute to the child’s aggression and the establishment of bad internal objects.

In contrast to Freud (1915/57, 1923, 1930, 1931), Klein (1932) shifted to an experiential level and viewed drives as psychological forces related to their objects. The aggressive and libidinal drives utilize the physical body merely as a vehicle of expression. For Klein these drives, contained within the child as psychic imagery and fantasy, color personal experience. While Klein agreed with Freud that the reduction of bodily tensions is important, she emphasized the sense of relatedness experienced with
the object. Klein stated that "gratification is as much related to the object which gives the food as to the food itself" (Envy and Gratitude and Other Works, 1952; cf. Greenberg & Mitchell, 1983, p. 141).

By the 1930's, the importance of aggression in Klein's writings became paramount. She described aggression as a complex negative emotion that becomes important to the individual because of its relation to specific other(s). Shifting to a belief that the libidinal drive is no longer of primary importance in emotional life, Klein (1932) wrote that in many ways the libidinal instinct is reactive to aggressive motives.

Klein's view of the Oedipus complex changed from Freud's conception of a struggle over illicit pleasures and the fear of punishment to a struggle for power and destruction and the fear of retaliation. Thus, the child feels anxiety and guilt not because of lust for the forbidden object but because of internal aggressive fantasies that accompany and frequently dominate the libidinal impulses.

Klein's formulations of the origins of envy and greed (1932) are rooted in her presupposition of constitutional aggression. As hatred directed toward objects that are satisfying, envy emanates from a wish to spoil the object not because it is bad, but because it is good. Klein hypothesized that when aggression is based on envy, it is basically a reaction to the object's goodness that is out of the individual's control. In contrast, greed exists when the individual wants to have everything. Thus, destruction becomes a consequence of greed rather than a motive for it.

By redefining the nature of drives and their essential properties, Klein sowed the seeds from which developed the relational/structural model theories of the British School: Fairbairn, Winnicott, Guntrip, and Bowlby. While for Klein libido and aggression are
inherent traits within the individual, future object relational theorists sought to explain the
internalization of bad objects within the child’s psyche and the connection to aggression
and psychopathology.

Placing great emphasis on the importance of aggression in development, Fairbairn
(1954) saw the aggressive drive as having its own distinct energy. Contrary to Freud
(1923, 1930, 1931), Fairbairn postulated that this energy exists only as a potential rather
than as a drive demanding expression. In contrast to Klein, he stated that aggression is
not a primary motivational factor, but rather arises spontaneously as a reaction to the
frustration of the primary motivational aim—the striving for contact with objects.

Thus, Fairbairn (1954) reformulated aggression as a secondary derivative of the
failure of satisfying object relations. Given that the root of psychopathology lies in
deprivation that results in grave threats to the ego, the primary motivational force in
object relations then becomes the protection of the tie to the object in the face of
deprivation. Given this, all psychopathology is understood as deriving from the ego’s
fragmentation that occurs while attempting to protect the tie between the self and object.

Although Winnicott (1964, 1965, 1984) did not postulate a systematic theory,
emphasis on the importance of aggression in adaptive development is apparent
throughout his work. Referring to aggression as a life force rather than a specific
instinctual drive, he states that it is the basis for motility: “at origin, aggressiveness is
almost synonymous with activity” (Through Paediatrics to Psycho-Analysis, 1958, cf.
Aggression is described as a developmental force that in healthy individuals
accomplishes the distinction between self and non-self. Moreover, aggressive energy prompts behaviors that bring with them pleasure in movement in utero, as well as in the exploration of the world after birth.

Although for Winnicott (1958a, 1964, 1984), aggression is something outside the self to be encouraged and worked through, it does not always entail anger or hate. In children, aggressive energy becomes a relational thrust that is either facilitated by the mother or squelched, turning it into destructiveness (1958a).

Winnicott (1964, 1965/72) believed that the inability to integrate aggressiveness and libido was seen frequently in character-disordered individuals. If the child is unable to express her/his aggressive reactions, unresolved guilt eventually ensues and is expressed in defensive reaction. The aggressive impulse is then split off from the rest of the personality. For Winnicott, splitting is characteristic of any condition in which depressive anxiety causes aggression to be kept separate. Individuals who must maintain this split are then forced to deploy aggression toward other objects. This frequently leads to a continual search for objects toward whom aggression can be directed (Summers, 1994).

Similar to the preceding clinicians of the British object relations school, but also bearing a strong imprint of ethology and the developmental psychology of Piaget (1954), Bowlby (1969/82, 1973, 1979, 1980) stressed the child’s development through the establishment of affective bonds in object relationships. The quality of these affectional bonds formed between the increasingly differentiated self and primary caretaker was conceptualized as being directly related to the caretaker’s capacity to respond to the needs of the infant with appropriate emotional maturity.
Bowlby’s (1973) concept of “internal working models” embodies one conceptualization of aggression. A child’s expectations about the environment, the availability and responsiveness of others, and the worthiness of the self are derived from early interactive experience. Thus, an infant who has experienced reliable, sensible care (i.e., responsiveness to its signals, overtures, moods, and states) will come to expect not only that the caregiver is available but that s/he (the infant) is effective in eliciting care. In short, the infant will be secure in the attachment relationship. Very different models of self, other, and relationships will derive from experiences of chronic rebuff or inconsistent, haphazard care (Renken, et al., 1989).

According to Bowlby (1969/82, 1973, 1977a), these internal working models provide guiding frameworks for further transactions with the environment, including the selection and interpretation of experience and the way one approaches others. A child who expects to be rebuffed by others may not seek them out when needy, may interpret benign behavior as hostile, and may strike out aggressively. Thus, Bowlby’s ideas are different from those of other drive and object relational theorists in that he believes that continuity in individual adaptation is not due so much to the presence of static traits in the child as to a transactional process guided by experience.

**The Contributions of Contemporary Psychodynamic Thinking**

The developmental history of aggression and its vicissitudes has recently moved to the forefront of clinical interest as present-day theorists and clinicians have focused on the significance of pre-oedipal development in the evolution of psychopathology and aggressive behavior. Some contemporary theorists (Dodge, 1991; Holt 1976; McDevitt, 1980, 1983; Rizzuto, Sashin, Buie, & Meissner, 1993) advance the notion of aggression
in developmental and motivational terms, while others (Brenner 1971, 1974, 1975; Glasser, 1986; Parens, 1979; Stone, 1971) consider aggression a reaction to unpleasure or frustration. Spotnitz and his colleagues (Meadow, 1996, 1997; Spotnitz, 1961, 1988; Spotnitz & Meadow, 1976) suggest that aggressive individuals who act out, rather than symbolize intrapsychic experience, have poorly organized and inadequately integrated personalities, impaired ego and object relations functioning, and primitive defense operations. Other psychoanalysts (Kohut, 1977; Rochlin, 1973) theorize about aggression from the point of view of narcissism and the development of the self.

Brenner’s (1971, 1974, 1975) view of aggression is articulated in his theoretical formulation of affects. He follows Hartmann, Kris, and Loewenstein’s (1949) view that both libido and aggression operate according to the pleasure principle in normal functioning and in the formation of symptoms. He suggests that the aggressive instinct is represented as a striving to overcome unpleasure or unpleasant (i.e., depressive or anxious) affect. Although his position does cast aggression in motivational terms, it appears to limit it to a connection with dysphoric affects.

Stone (1971), however, believes that in most cases aggression is a motivated reaction to external stimuli. Aggression involves an “aggregate of diverse acts, having diverse origin, and bound together, sometimes loosely, by the nature of their impact on objects rather than by a demonstrably common and unitary drive” (p. 195). Adding that aggression may be seen as serving the ego, he sees it to play an instrumental role in achieving various goals, especially exploration, manipulation, and mastery of reality. Glasser (1986) connects aggression to the ego’s capacity to perceive a threat and its need for self-preservation under conditions that arouse anxiety. Aggressive acts are seen as
self-preservation—their aim is to protect the individual from a threat rather than a threatening object. According to Glasser, “aggression is concerned with survival” (p. 67).

Although not in disagreement with Brenner (1974, 1975) and the motivational theorists, Buie, Meissner, Rizzuto and Sashin (1983; Meissner, Rizzuto, Sashin, & Buie, 1987; Rizzuto, Sashin, Buie, & Meissner, 1993) propose that the antecedent motivational basis for aggression need not be limited to unpleasure. It might include pleasure as well. Meissner et al. suggest that “aggression may arise in any context in which the natural attainment of a goal is impeded by an obstacle, of whatever nature, internal or external, fantasized or factual” (1987, p. 453). If an obstacle interferes with the attainment of a goal, any available psychic maneuver may be used to overcome it. Thus, aggression utilizes any resource, from physical force to defense mechanism in its persistence toward reaching the motivational goal.

An essential aspect of their approach is the distinction between aggression and its accompanying affects. Meissner et al. (1987) suggest that “aggressive acts may be accompanied by a variety of affective states, whether fear, anxiety, lust, love, or even anger and rage” (p. 454). Furthermore, frustration plays no role in the theory because it is assumed to be an affective state distinct from aggression itself. A second important distinction is made between aggression and its associated actions. In their view, aggression comes into play only at that point at which an action that is otherwise naturally or easily effected is impeded or otherwise inhibited by an obstacle.

Linking aggression to motivation and behavior, Holt (1976) and McDevitt (1980, 1983) focus on the proactive and reactive nature of drives. Proactive forms of the
aggressive drive serve as an organizer of behavior and include constructive aggression expressed as mastery, pursuit of knowledge, and exploration (Holt; McDevitt, 1983; Paren, 1979). Such forms are goal-oriented and require neither provocation nor anger. Alternatively, reactive forms are seen as destructive and include angry outbursts in response to provocation, frustration, or narcissistic injury (Dodge, 1991; Holt; McDevitt). Reactive aggression becomes inherently a part of the individual's repertoire of reactions because there is no way in life to avoid such interferences and frustrations (Holt; McDevitt).

Internal representations of relationships colored by aggression are formed within the psyche when a child is subjected to aggressive and abusive behavior by primary caretakers (Holt, 1976; McDevitt, 1980, 1983). Achieving motivational status, these internalized images provide the foundation for expectations of relationships, as well as a motivation for future aggressive, threatening, and destructive behavior. In infancy, aggressive outbursts are generally reactive and relatively short-lived. When the source of interference is terminated, the aggressive response is usually terminated. As the child develops and object constancy occurs, aggressive and angry reactions tend to be sustained over time. Believing that the more mature toddler can hold onto the idea of the frustrator after the specific frustration terminates, McDevitt (1983) states that the foundation for potential aggressive, rageful, and violent acts is layed down in early memory. As these children grow, reactive aggressive behavior is then observed in response to interferences with directed activity, restraint, limit setting, and abuse. This suggests that the intent to inflict hurt is not a part of the original aim of the aggressive act,
but rather the primary motivation is to eliminate an obstacle or change an unpleasant situation. The infliction of pain and harm is secondary.

Other psychoanalysts (Kohut, 1977; Rochlin, 1973) draw upon Freud’s view of narcissistic personalities in their formulations of aggression by focusing on narcissism and the development of the self. Rochlin proposes that aggression arises specifically in defense of the self. Responding to humiliation and injured narcissism, aggressive reactions include expressions spanning the entire range of destructiveness—from mild anger to rage, revenge, and possibly violence. Kohut proposes that “elemental aggression” is non-destructive and exists from the beginning of life in the service of establishing a rudimentary self. This form of aggression represents the healthy anger used by the immature and developing psyche to define itself. Under normal circumstances it develops into mature forms of assertiveness at the service of specific tasks. Thus, for Kohut (1977), under normal circumstances “…nondestructive aggressiveness is a part of the assertiveness of the demands of the rudimentary self and it becomes mobilized…whenever optimal frustrations (non-traumatic delays of the empathic responses of the self-object) are experienced” (pp. 120-121).

Destructive aggression, on the other hand, is not a primary drive but a “disintegration product” resulting from responses to empathic failures of the self-object that are experienced as injuries to the self (Kohut, 1977, p. 114-115). Ascribing rage reactions to forms of narcissistic pathology, Kohut sees them as a consequence of disillusionment within the self-object relationship.

Basing his two-fold pattern of development on clinical data, Stechler (1985) proposes that one pattern involves the capacity for assertion and the other for aggression.
Assertion involves an "inherent tendency to be active, to reach out, and to engage the world" (p. 537). In contrast, aggression derives from a different biopsychological subsystem that involves a self-protective mechanism whose purpose is to defend the individual against threats to its integrity. This protective-aggressive subsystem is primarily dormant and reactive, in contrast to the activity-assertion subsystem. Thus, from the beginning these two subsystems differ with regard to their origins, their functions, and in their associated affects.

Substantial consideration of the nature of aggression lies in the study of its early development by Parens (1979). Holding to a drive theory of aggression, he regards its various types as forms of drive discharge. His typology of variant forms of aggressive behavior extends along a continuum ranging from destructive to non-destructive poles. This includes both destructive and non-destructive aims and both affective and non-affective forms of expression. Similar to Kohut (1977), Parens describes different forms of aggression—hostile and non-hostile—which undergo different developmental vicissitudes. Non-hostile aggression is primary and an integral constituent of healthy assertiveness. Alternatively, hostile aggression is a secondary or reactive byproduct that emerges from the non-optimal frustration emanating from an unempathic environment.

Modern psychoanalysts (Meadow, 1996, 1997; Spotnitz 1961, 1988; Spotnitz & Meadow, 1976) consider dammed up frustration-aggression to be at the core of psychopathology. Agreeing with Freud that the aggressive drive is present from birth, Spotnitz (1961) suggests that the organization of the mind and the potential for its expression depends upon the infant’s constitution as well as that of the primary caretakers. If the child’s primitive ego believes that the release of aggression is
undesirable, s/he may bottle her/his aggressive feelings and impulses inside (Spotnitz, 1961, 1988). When this defense is no longer effective, the aggression is discharged upon internalized ego and object representations in the mind in ways that are frequently harmful to the self, but preserve the real object. Maturational development is interrupted or reversed and some form of psychopathology may result (Spotnitz & Meadow, 1976). Thus, according to Spotnitz, the aggressive drive destroys the ego unless it has an adequate outlet. “When destructive drives are mobilized, libidinal energies are tied up in a struggle to process destructive urges. If the infant’s aggressive energy is not redirected to the motor system and the cumulative tension in the mental system is too great, the structure may be overwhelmed” (Spotnitz & Meadow, p. 37). Moreover, “the highway to depression is paved with frustration-aggression poured characteristically into the superego, which then attacks the ego” (Spotnitz, 1961, p. 1).

For Spotnitz (1961), the ability to experience aggressive feelings and impulses and not act upon them leads to a progression toward adaptive functioning and healthy development. Modern analytic theory has evolved into a therapeutic philosophy/paradigm that considers: (a) it is the therapist’s task to meet the individual at her/his developmental level of functioning and assist in the development of new patterns for controlling and regulating the discharge of aggressive impulses, and (b) the ability to express constructively aggressive feelings prevents destructive manifestations in the form of aggressive behavior and psychopathology (Meadow, 1997; Spotnitz, 1961, 1988; Spotnitz & Meadow, 1976).
Conclusions

In sum, theory strongly suggests that a connection exists between aggression and object relations functioning. Moreover, in psychopathology this connection is characterized by inflexible, polarized, and inadequate differentiation and integration. According to Freud's early theory (1915/57), object relationships were considered subordinate to the need for drive reduction. However, his introduction of the structural model (1917, 1923) increased the role of the object in psychological functioning by postulating the existence of the ego and superego. Following upon Freud, theorists such as Hartmann (1939), Anna Freud (1966, 1969, 1974), Sullivan (1953), and Thompson (1950) contributed toward recognition of the ego's important role in the development of healthy object relations functioning and the ability to manage aggressive and libidinal impulses. Within the frameworks of Jacobson (1954, 1971), Spitz (1945, 1965), Mahler (1963, 1971), and Kernberg (1976, 1993), object relations directed the drives and sought out specific channels for drive gratification. Increasing levels of distinction between drive and affect were considered indicative of progression through the developmental stages of object relations functioning. Kernberg (1976) placed specific emphasis on the importance of the affect present at the time of interaction with the primary caregiver(s), and suggested that internalized object relations images provide the basis for the individual's expectations of future relationships. In effect, whether the theories have posited the primacy of drive/impulse or affect/object relationships, these various frameworks have all emphasized the extent to which aggression reflects behavioral, affective, and self-object constructs derivative of early developmental levels.
Adolescence

Adolescent Development

Over the past 20 years there has been a dramatic increase in the amount of attention paid to adolescent development. "Few developmental periods are characterized by so many changes at so many different levels—changes due to pubertal development, social role redefinitions, cognitive development, school transitions, and the emergence of sexuality" (Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan, & MacIver, 1993, p. 90). The inability of some adolescents to manage the stress of their developmental changes is perhaps no more evident than in the violent adolescent behavior seen in the past few years (e.g., the Columbine shootings in May, 1999; the shootings in Pearl, MS, Stamps, AR, Paducah, KY, & Springfield, OR in 1997 & 1998; & the school massacre in 1998 in Jonesboro, AR) (Grossman, 1999).

Based on her clinical observations and the work of others (e.g., Aichorn, 1935; Blos, 1967; Erikson, 1980; Jones, 1922), A. Freud (1958) described this developmental period as a time in which "it is normal for an adolescent to behave for a considerable length of time in an inconsistent and unpredictable manner; to fight his impulses and to accept them; to ward them off successfully and to be overrun by them" (p. 275). Overall, the central organizing feature of these earlier psychoanalytic perspectives suggests that individual psychic restructuring, secondary to massive biological, social, and psychological changes, reflects the ego's inability to gain sufficient stability until late adolescence. The implication is that adolescents need to experience these intrapsychic alterations to reduce symptomatology in adulthood. Erikson (1980) stated that although the identity of the young adolescent is still very much defined by the same familial and
cultural factors that contributed to development during the latency years, the seams of character structure and the inner definition of identity undergo redefinition during this tumultuous period.

In contrast, several other researchers (Eccles, et al., 1993; Johnson & Roberts, 1999; Kaplan, 1980; Offer & Offer, 1975; Offer, Ostrov, & Howard, 1981; Orvin, 1995; Rutter, 1989; Rutter & Garmezy, 1983) challenge the long-standing traditional view of the inevitable turbulence of adolescence. They suggest that such upheaval is not universal, and that the stress experienced by most adolescents is frequently manageable and undebilitating. Overall, these investigators theorize that many adolescents (a) are able to maintain psychic equilibrium while struggling with developmental tasks, (b) demonstrate positive social relatedness with family and peers, (c) reveal only mild forms of depression and anxiety, and (d) have only minor altercations with authority figures. Offer, Ostrov and Howard (1981) describe most adolescents as self-assured individuals who are able to meet the demands of maturation with relative ease and maintain satisfying relationships with parents and others.

Others suggest that some of the negative experiences associated with adolescent development result from a mismatch between the needs of developing adolescents and the opportunities afforded them by their social environments. Higgins and Parsons (1983) suggest that the unique transitional nature of early adolescence results, at least in part, from an interaction between developmental changes at both the individual and social environmental levels. Furthermore, it has been suggested that the problems experienced by some adolescents are related to the coincidence of the timing of multiple life changes (Eccles et al., 1993). Still other clinicians who choose to discredit the “tumult view” of
adolescence (Masterson 1967a, 1967b, 1968; Masterson & Washburne, 1966; Rinsley, 1963) believe that the extreme symptomatic behaviors such as those expressed by A. Freud and colleagues represent pathological manifestations of severe emotional disturbance.

**Aggression and Adolescent Development**

In an attempt to delineate a basis of aggressive and violent behavior in youth, Aichorn (1935/52) differentiated between latent and manifest delinquency. He used the term manifest delinquency to describe overt aggressive or hostile behavior. Alternatively, the term latent delinquency suggests that although the potential for such behavior exists, genetic, situational, and constitutional circumstances allow it to remain suppressed. In order to determine the cause(s) of aggressive behavior, not only the provocation but the original cause(s) of the latent aggressive tendencies must be identified. It follows, therefore, that both latent and manifest aggressive behavior in adolescence may be influenced by exposure to the heightened changes during this period of development—physiological and sexual development, social pressures, and those pressures related to rapid personality change (Blos, 1962; Laufer & Laufer, 1976; Spotnitz, 1987; Tremblay, Schaal, Boulerice, Arseneault, Soussignan, & Perusse, 1997, 1999). While in agreement with the importance of developmental changes, clinicians and researchers (Bandura, 1999; Bandura, Ross, & Ross, 1963; Gorman-Smith & Tolan, 1998; Grossman, 1999; Pettit, 1997a; Spotnitz, 1987; Tremblay et al., 1999; vanIJendoon, 1997) stress the importance of the environmental influences on aggressive and violent behavior: “Children don’t naturally kill. It is a learned skill. They learn it
from violence in the home and most pervasively, from violence as entertainment in television, movies, and interactive video games" (Grossman, p. 2).

The pressures to which adolescents are predisposed are numerous and intense, and frequently lead to fleeting states of ego fragmentation, as well as an accumulation of undischarged frustration-aggression (Spotnitz, 1987). In certain situations this may serve as a final impetus to push a fragile and defectively functioning ego into psychopathology characterized by part-object relations, primitive defense operations, and excessive primary process thought (A. Freud, 1958, 1965; Klein, 1932, 1964). Spotnitz suggests that this is determined by three interacting factors—heredity, constitution, and life experience. An adolescent’s upbringing, and particularly how s/he has learned to manage the frustration-aggression is a crucial aspect of the life experience. If, in the absence of adequate emotional nourishment, the adolescent discharges the frustration-aggression into the body, a psychosomatic complaint may develop. While depression is likely to develop if s/he discharges the frustration-aggression into the superego, frequently maladaptive, aggressive, and even violent behavior may result if it is discharged outward via inadequate channels (Spotnitz).

The aggressive drive reigns over the libidinal in aggressive adolescents, disrupting the normal processes of identification, internalization, and the formation of flexible and healthy object relations images (S. Freud, 1931, 1933/64; Gacono & Meloy, 1994; Jacobson, 1954, 1957; Kernberg, 1982, 1986, 1993; Winnicott, 1958a, 1965/72, 1984). For these children and adolescents, aggressive and libidinal impulses are unsublimated and regulated by pre-oedipal defenses (Gacono & Meloy, 1994). These drives are frequently discharged along a line of least resistance, which results in
aggressive and maladaptive behavior (Aichorn, 1935/52). According to Aichorn, although aggressive behavior is influenced by the environment, “there must be something in the child himself which the environment brings out in the form of delinquency” (p. 40). However, given that heredity, alone, appears to be inadequate in explaining aggressive behavior, Aichorn suggests that both (a) the first experiences with the environment, and (b) identification with primary caregiver(s) are important in determining later development. Aichorn considers that the first identifications formed early in the child’s life are the most effective and permanent because they are the most sharply imprinted on the still weak and dependent ego. Without the necessary childhood templates of adaptive object relations functioning, the aggressive adolescent is frequently unable to complete the task of adolescence and establish an integrated ego identity (Erikson, 1980). Residual part-self and part-object representations, impaired internalization processes, aggressive identifications, and bonding deficits from childhood (Meloy, 1988; Weber, 1990) impede the process of positive identification.

For some adolescents, major childhood disappointments and a predominance of shame have extinguished the capacity for interpersonal attachment and formation of healthy self and object representations. These adolescents take on aggressive identifications (A. Freud, 1936) which compensate for vulnerability, protect the self from shameful feelings (the basis for narcissism), and provide justification for aggressive behaviors (Gacono & Meloy, 1994). As Bilmes (1967) noted, “One may identify with what is evil but never with what is shameful...the more we associate it with evil—the more dramatic and heroic a model it becomes for certain of our youth. We create a highly idealized and desirable image” (p. 123).
In some adolescents, it is possible to detect a very powerful sense of guilt which existed prior to their aggressive behavior (S. Freud, 1923). The guilt therefore becomes a motivator for behavior rather than a result. In these cases it is the superego, sitting in judgment upon the ego, which appears to create the powerful sense of guilt or shame. If the guilt feeling becomes unbearable, the ego may defend itself by repressing these feelings into the unconscious. Once the youngsters engages in aggressive behavior, however, the unconscious guilt feeling can attach itself to an actual deed. Thus, the punishment that follows produces pleasure instead of pain. Providing temporary relief, this allows the adolescent to remain aggressive, as well as rebellious and hostile to discipline (Aichorn, 1935/52).

Frequently aggressive adolescents struggle with narcissistic vulnerability (Aichorn, 1935/52). "They cope with the hurt, angry, frightening belief that no one really cares about them, they act as if they do not care about anybody else" (Willock, 1986, p. 63). Thus, the aggressive drive, at the forefront of psychic functioning and fueled by narcissistic vulnerabilities, acts as an impetus to disruptive and even violent behavior (Gacono & Meloy, 1994).

Winnicott (1964) holds that many of the adolescent difficulties for which professional help is sought derive from environmental failure. A child who is harmed through excessive disappointment or indulgence in early relationships builds up reaction patterns which are often fragile, damaged, and incomplete (Aichorn, 1935/52). Given this, s/he may be incapable of forming libidoinal object relationships that are considered normal by society. Her/his unpreparedness for life, her/his inability to regulate conscious and unconscious libidoinal strivings and to confine libidoinal expectations within normal
bounds, creates an insecurity in relation to others which constitutes an important
c condition for the development of aggressive and maladaptive behavior (Aichorn).

**Gender and Adolescent Development**

Traditional psychological theories of development were based primarily on
principles of male development; seemingly cast as universal principles for both genders.
The formation of a distinct and separate identity was described as deriving from
separation from (a) the mother at early stages of childhood (Mahler, 1974), (b) the family
during adolescence (Erikson, 1980), and (c) other significant persons in adulthood
(Levinson, 1978). According to classical theory (Blos, 1962; Erikson, 1980; A. Freud,
1966; Hartmann, 1964; Kernberg, 1976; Laufer & Laufer, 1976), optimal resolution of
these maturational processes depended upon the achievement of autonomy, self-reliance,
independence, and self-actualization. Blos (1967), initiating the departure from these
early theories, contended that adolescents must learn, once again, to manage the tension
between ego growth and the desire to regress. He added that males have established a
greater separation early on; and in adolescence they tend to retest oedipal issues as they
find a sphere of power and freedom separate and distinct from that of their parents.
Given that adolescent girls have not previously undergone similar separation processes,
they are likely to be more concerned with preoedipal, often romanticized, issues of inner-
relatedness (Yates, 1993).

More recent formulations of female adolescent development emphasize a separate
line of development for women based on the unfolding of a female "relational" self
rooted in interdependence, mutuality, affiliation, and connection (Gilligan, 1993, 1994;
Miller, 1994). Gilligan (1993) observed that feminine identity is based on a continuous
process related to attachment. Females separate from the mother and then identify with her; whereas male identity is based on a discontinuous process equated with separation and detachment. The male process, which leads to increased competition and aggression, appears to be characterized by “an identity defined in the negative, by what is not feminine” (Chodorow, 1978; Gilligan, 1994; Miller, 1994). “From very early, then, because they are parented by a person of the same gender...girls come to experience themselves as less differentiated than boys, as more continuous and related to the external object-world, and as differently oriented to their inner object-world as well” (Chodorow, 1978, p. 167). Their internal object relations images are likely to be more flexible, interconnected, mutual, and cooperative. Those of males, on the other hand, are likely to be more rigid, parallel, or influenced by power/control and aggression. Miller (1976) suggests that both (a) the ability to form healthy relationships, and (b) healthy self and object representations are based on initial and ongoing attachments with caretaker(s). Emphasizing that even though males undergo similar experiences and develop similar internalized representations, Miller suggests that they are frequently expected to give up the belief and desire for attachments and reward themselves for a sense of alienation and separation. Thus, males are molded and encouraged to displace, devalue, and disengage themselves from emotional bonds and relationships.

In conclusion, research suggests that maladaptive or destructive aggressive behavior represents one of the departures from the normal in psychic processes, and for this reason a solution to the problem of inappropriate aggressiveness depends on understanding psychic content. Given the developmental tasks of adolescence, it appears that maladaptive aggressive behavior can result from disturbed psychic patterns and
abnormal accumulation of affect and drive (Aichorn, 1935/52; Spotnitz, 1987). Thus, theory suggests that the process in which latent aggression becomes manifest in adolescence might be better understood by studying the relationship between internalized aggressive images, developmental level object relations functioning, and overt aggressive behavior.

Review of Empirical Studies

Research on aggression has investigated the nature of the construct from a variety of perspectives. Although many empirical studies have focused on the biopsychosocial isomorphism of the behavior (Bandura, Ross, & Ross, 1963; Berkowitz, 1993; Dodge & Coie, 1987; Feshbach & Zagrodzka, 1997; Lefkowitz, Eron, Walder, & Huesmann, 1977), the examination of aggression and related constructs has recently become a popular focus in social psychological research (Bandura, 1999; Dawson, Frey, Panagiotides, Yamada, Hessl, & Osterling, 1999; Downey & Coyne, 1990) and personality assessment literature (Epkins & Meyers, 1994; Gacono & Meloy, 1994; Kalliospuska, 1992; Meloy & Gacono, 1992; Netter, Janke, & Erdmann, 1995; Saunders, 1991). Brief reviews of empirical work in the biopsychosocial domain will be presented first. This will be followed by a review of research using the Comprehensive System (Exner, 1993) to delineate object representations and inner cognitive representative schema.

Neurobiological Studies

Neurobiological Substrates of Aggression.

Studies have suggested that violent or aggressive tendencies originate in certain brain areas (Amen, Stubblefield, Carmichael, & Thisted, 1996; Convit, Czobor, &
Volavka, 1991; Tonkonogy, 1991) and may be associated with deficiencies of one or more neurotransmitters (Kruesi, Rappaport, & Hamburger, 1990; Linnoila, Virkkunen, & Scheinin, 1983). Neuropsychological tests have also demonstrated that impairments lateralized to the dominant hemisphere are more prevalent in samples of aggressive psychopathic patients and violent offenders than in control populations (McGuire & Troisi, 1989; Nachshon, 1988; Yeudall, 1977; Yeudall & Fromm-Auch, 1979). In a review of the literature, Volavka (1995) concluded that dysfunction in the left hemisphere is likely to elicit aggressive behavior. Convit, Czobor, and Volavka reported significant findings from EEG (electroencephalogram) power spectra analysis in 21 right-handed adult male psychiatric inpatients selected for their violent behavior. In this study the level of violence was positively related to the amount of activity in the dominant hemisphere.

Although studies of frontal lobe functioning in aggressive individuals using brain imaging techniques (e.g., computerized tomography (CT) scans, magnetic resonance imaging (MRI) & positron emission tomography (PET)) have produced mixed results, they have generally provided some support for a pre-frontal deficit theory of aggressive and violent behavior (Miller, 1987). Seguin, Pihl, Harden, Tremblay, and Boulerice (1995) studied physically aggressive boys and concluded that executive functioning has a strong association with physical aggression. They also found evidence of impaired language processing in delinquent boys, although they hypothesized that this was related to overall executive functioning deficits involving frontal-lobe dysfunction. Mills and Raine (1994) reviewed 20 neuroimaging studies and concluded that frontal lobe dysfunction may be associated with violent offending, while temporal lobe dysfunction
appears to be associated with sexual offending. They also suggested that a combination of frontal-temporal dysfunction typifies violent sexual offenders.

In his review of the literature covering medical concepts of violence, Weller (1986) cited several studies that suggest a relationship between select neurotransmitters and aggression. Specifically, decreased levels of serotonin and acetylcholine in the brain have been associated with greater levels of aggression (Alpert, Cohen, & Shaywitz, 1981; Sahakian, 1981; Virkkunen, Dejong, & Bartko, 1989). The orbital and anterior medial portions of the frontal lobes, which are innervated by serotonergic nerve fibers, have both been implicated in aggressive behavior. Linnoila, Virkkunen, and Scheinin (1983) reported low CSF 5-HIAA levels in Finnish prisoners who exhibited aggressive and suicidal behavior, had a history of alcohol abuse, and were incarcerated for murder or attempted murder. The offenders with low CSF 5-HIAA levels also showed unusual cruelty to their victim. The relationship between low CSF 5-HIAA and aggression was further observed in a group of children and adolescents diagnosed with ADHD and oppositional or conduct disorder (Kruesi, Rappaport, & Hamburger, 1990).

Acetylcholine and γ-aminobutyric acid (GABA) have also been implicated in aggressive behavior in children and adolescents (Kruesi, Hibbs, & Zahn, 1992; Raine, Venables, & Williams, 1990; Valzelli, 1981).

Bryant, Scott, Golden, and Tori (1984) found that brain impaired individuals were more likely to aggress against others and commit violent crimes. Yeudall and Fromm-Auch (1979) found evidence of anterior neuropsychological dysfunction in violent offenders. Miller (1987) concluded that “developmental derangements in frontal system substrates...may lead to disorders...that shape the expression of behaviors we call
antisocial” (p. 121). Stuss and Benson (1986, 1987) found that patients who have suffered bilateral lesions to the orbital frontal areas are frequently disinhibited and socially inappropriate. Described as demonstrating a “pseudopsychopathic syndrome” (Cummings, 1985), such patients appear to be insensitive and indifferent to the needs of others and have been found to engage in antisocial behavior. Furthermore, these researchers and others (e.g., Eslinger, Grattan, Damasio, & Damasio, 1990) have noted that although these patients’ measured intelligence may be superior, they generally lacked insight into the social or emotional consequences of their behaviors.

Elliott (1982) has stressed that aggressive behavior may well have neurological correlates, and that not all aggressive or violent behavior should be explained in terms of psychological or social factors. In his study of 286 adult patients with a history of recurring attacks of uncontrollable rage, he noted that “episodic dyscontrol had developed in 102 formerly stable individuals after a specific brain insult” (p. 685). Although these findings do not provide direct evidence that brain damage is the sole cause of episodic dyscontrol, they suggest that the potential for aggressive behavior after brain injury can be affected by underlying brain lesions and/or the individual’s limited cognitive resources for coping with environmental demands.

Alternatively, Heinrich (1989) observed that little evidence exists to indicate that frontal lobe lesions, per se, cause aggression. He suggests that these lesions are associated with significant cognitive impairment that results in behavioral rigidity and reduction in self-appraisal. Heinrich adds that the lesions are sequelae that increase the likelihood of social difficulties as the patient has a reduced repertoire of adaptive behaviors to deal with ordinary conflict.
Other research with adolescents has examined the involvement of brain
dysfunction in subjects evidencing a history of pronounced social disinhibition and
delinquency (Apeloff & Augustine, 1986; Brickman, McManue, Grapentine, & Alessi,
1984; Bryant, Scott, Golden, & Tori, 1984; Fitzhugh, 1973; Hurt & Naglieri, 1992;
Satterfield & Schnell, 1984). Overall, study results suggest that deficits in normal
inhibitory mechanisms reflect impairment in cognitive processing, which in turn put the
adolescent at higher risk for acting out aggressively.

Characteristics including impulsivity, cognitive rigidity, and difficulty integrating
information from multiple modalities have been found in profiles of conduct disordered
adolescents. This suggests that compromises in frontal lobe functioning may contribute
to social disinhibition and the ability to organize behavior and plan appropriate responses
(Das, Naglieri, & Kirby, 1993; Hurt & Naglieri, 1992). Harmon-Jones, Barratt, and
Wigg (1997) found a relationship between aggressive behavior between two functions
related to the frontal lobe: (a) attentional impulsiveness and (b) weakness in the ability to
plan. Aggressive individuals are more likely to behave impulsively and thus are expected
to have poor planning and problem solving skills. In her study of interpersonal problem
solving styles of aggressive and victimized children, Bernstein (1999) found that
aggression was related to impulsivity, defining problems in hostile ways, refraining from
seeking additional information before deciding on responses, and favoring aggressive
solutions. She also found that aggression was related to believing that aggressive
solutions would be successful and easy to enact.

Feshbach and Zagrodska (1997) suggest that it is erroneous to consider aggression
and violent behavior to be solely related to biological influences. Supporting this
position, Feshbach and Zagrodska add that biological structures—including genes—function within an environment. Thus, their effects are as much dependent upon the environment as they are upon the structure. Therefore, in the case of social behaviors as complex as aggression and violence, it is important to recognize that behavior depends upon both biological and social influences, and that people are self-reflective and deliberating creatures.

**Interaction of Neurobiology and the Environment.**

Advances in neuroscience have led researchers to question how and to what extent environmental influences affect cortical development. Reite (1987) proposes that varying environmental experiences can result in alterations of the micro-architecture of the brain. This in turn impacts emotional growth and the development of skills necessary for either adaptive or psychopathological behavior. Although the structure of the brain is, to an important degree, specified by genetic and developmental processes, the pattern of interconnections between neurons also depends upon experience (Greenough, 1986; Reite). Thus, at certain stages of development (i.e., early experience and learning), the integrative action of the brain and its cellular structure are dependent on interaction with the environment, (Greenough, Black, & Wallace, 1987; Harlowe, Dodsworth, & Harlowe, 1965; Lorenz, 1966; Reite).

Frontal lobe studies have established that external stimuli of any kind, including those provided by caregiver(s), activate widely distributed networks of neurons in the cerebral cortex (Mazziotta, Phelps, Carson, & Kuhl, 1982; Roland, 1982). While certain neurons appear to be specialized for discriminating and analyzing physical attributes of a stimulus, others respond to attributes that the stimulus has acquired by experience, the
latter being more widely distributed and mediated by the association regions of the brain. Thus, neuronal networks which include internal representations of past interactive experiences become the basis for the individual’s present reactions to the environment (Edelman, 1987).

To explain the differences found between genetic and environmental influences on behavior problems in children and adolescents, Moffitt (1993) offers a developmental taxonomy of aggressive and antisocial behavior. This theory posits two etiologically distinct subtypes of aggressive behavior. The first subtype is life-course-persistent where the individual presents with aggressive and antisocial behavior throughout the lifespan. Neuropsychological deficits and difficult temperament result in interactions between the individual and the environment that promote and sustain such behavior. The second subtype, adolescence-limited aggressive and antisocial behavior, is described in terms of social mimicry and reinforcement, and is seen as part of the normal developmental trajectory of adolescence. Such behavior includes attempts to gain peer group respect and autonomy from parents and other authority figures. Since life-course-persistent aggressive and antisocial behavior is related to heritable aspects of temperament, it is likely to be more strongly influenced by genetic factors. Alternatively, adolescence-limited aggressive and antisocial behavior is likely to be more strongly influenced by environmental factors. These relationships were demonstrated in a longitudinal study of children from the ages of three to 15 years (Caspi, Henry, McGee, Moffitt, & Silva, 1995). Lack of control at three and five years was found to correlate significantly with a measure of conduct disorder reflecting “aggressive and interpersonally alienated
behaviors,” but not with a measure of “socialized delinquency,” that reflected norm-violating tendencies of adolescents.

Several twin studies investigating the etiology of antisocial behavior, conduct disorder, and externalizing behaviors in middle childhood and adolescence found heritabilities of 40% to 50%, with the shared environment accounting for 20% to 30% of the variance (Edelbrock, Rende, Plomin, & Thompson, 1995; Gjone, Stevenson, Sundet, & Ellertsen, 1996; Rowe, 1983; Rowe & Flannery, 1994; Schmitz, Fulker, & Mrazek, 1995; Silberg, Erickson, Meyer, & Eaves, 1994). Other studies (Deater-Deckard & Plomin, 1999; Edelbrock, Rende, Plomin, & Thompson, 1995; Schmitz, Fulker, & Mrazek, 1995; Van den Oord, Boomsma, & Verhulst, 1994) that have discriminated between aggressive and non-aggressive antisocial behavior have produced some support for the hypothesis that life-course-persistent aggressive antisocial behavior is heritable. In twins aged three years, parent-reported aggressive behavior was found to be highly heritable (Van den Oord, Boomsma, & Verhulst). Two twin studies of middle childhood and adolescence that discriminated between aggressive and non-aggressive antisocial behavior by using the aggression and delinquency scales from the Child Behavior Checklist (CBCL; Achenbach, 1991a) both found high heritability for aggressive symptoms (approx. 60%), with the shared environment accounting for only a small proportion of the variance (approx. 15%; Edelbrock, Rende, Plomin, & Thompson; Schmitz, Fulker, & Mrazek).

Studies of juvenile delinquency and aggressive and antisocial behavior limited to adolescence (Deater-Deckard & Plomin, 1999; Edelbrock, Rende, Plomin, & Thompson, 1995; McGuffin et al., 1994; Rutter et al., 1990) are mixed with respect to the influence
of genetic and shared environmental factors. In one twin study, 37% of the variance in the CBCL Delinquency Scale (Achenbach, 1991a) was found to be due to the shared environment, with genetic factors accounting for 35% (Edelbrock, Rende, Plomin, & Thompson). Variance in both parent-reported and teacher-reported delinquency in the Colorado Adoption Project (Deater-Deckard & Plomin) was accounted for equally by genetic factors and the shared environment (36% and 22%, respectively, for parent report; 17% and 13%, respectively, for teacher report). Another twin study found, however, that the heritability of the CBCL Delinquency Scale (Achenbach; 1991a) was 79%, with no detectable influence of the shared environment (Schmitz, Fulker, & Mrazek, 1995).

In summary, there appears to be good theoretical reason to expect that aggressive antisocial behavior is heritable. Limited empirical evidence confirms this position. In contrast, although theory predicts that adolescence-limited aggressive and antisocial behavior is likely to be strongly influenced by the shared environment, the empirical evidence is equivocal (Eley, Lichtenstein, & Stevenson, 1999).

Relational Studies

Object Relations Functioning and Psychopathology.

A vast amount of research exists in the area of object relations, attachment organization, psychopathology, and aggressive and disruptive behavior. Given this, the selection of studies in this section is based on empirical and clinical interest in aggressive behavior and its connection to (a) object relations functioning and attachment, (b) relationship(s) with caregiver(s), (c) caregiver behavior and psychopathology, and (d) aspects of the caregiver environment. This is followed by a discussion of gender
differences and aggressive behavior described in terms of socialization and quality/purpose of relationships.

Tuber (1983, 1989a, 1989b, 1992; Tuber & Coates, 1989) and others (Goldberg, 1989; Ryan, Avery, & Grolnick, 1985; Thomas, 1987) directed their efforts toward a nomothetic approach to the investigation of younger children's object representations. Their findings suggested that the Mutuality of Autonomy Scale (MOA; Urist, 1977; Urist & Shill, 1982; Tuber, 1992) scores could be utilized as predictors of later object relations functioning (Tuber, 1983, 1989b) and healthy adaptation (Goldberg; Ryan, Avery, & Grolnick). Specifically, these investigators found that (a) more adaptive MOA scores were positively correlated with high ratings of self-esteem, ability to work cooperatively with others, and academic competency (Ryan, Avery, & Grolnick); (b) depressed inner-city girls demonstrated lower developmental levels of object relations functioning than did less depressed counterparts (Goldberg); and (c) children diagnosed with attentional or borderline personality disorders produced fewer Rorschach responses containing MOA scale scores suggestive of higher developmental levels of object relations functioning (Tuber, 1983).

The MOA was also employed in research involving preadolescents with gender identity disorder (Coates & Tuber, 1988; Tuber & Coates, 1989). Responses on their Rorschach protocols suggested that the self and object representations were less autonomous in boys with gender identity conflicts. Furthermore, the data indicated that the clinical group produced Rorschach responses containing significantly more malevolent interpersonal interactions when compared to control subjects. Goddard and Tuber (1989) compared MOA scale scores of boys with separation anxiety disorder to
those of control subjects. They found that the clinical group of boys could be differentiated from the controls when mean and modal MOA scale scores were compared. The anxious boys produced four times as many scale point 3 responses as did their normal counterparts. As the authors noted, the significant congruence between the manifest symptomatology of the anxious child is impressively mirrored by the clinging and leaning Rorschach responses. This appears to illustrate an important connection between inner object representations and external relatedness (Goddard & Tuber).

Hart and Hilton (1988) used the MOA in conjunction with measures of personality characteristics (Piers-Harris Children’s Self-Concept Scale) (Piers & Harris, 1983/1996) in a study comparing adolescents who are sexually active and at risk for pregnancy with those who are not at risk. Results suggested that adolescents who used birth control had higher levels of object representation (more adaptive MOA scale scores), possessed a clear sense of personal autonomy, and respected the autonomy of others. Evaluation of the MOA object representation scores of adolescents who were sexually active and did not use birth control measures revealed somewhat variable findings. According to the authors, some of these latter young women appeared more like pregnant adolescents, a group whose object representations frequently suggest developmental arrest and regressive phenomena. Furthermore, in this latter group having a baby appeared to be equated with having some purpose in life, realizing a sense of connection, and providing an opportunity for restoring affective ties to lost others (Hart & Hilton).

Turning toward a more idiographic approach to MOA interpretation, Tuber (1989a, 1992) demonstrated the utility of the MOA in evaluating the effectiveness of
treatment of latency-age children. Findings suggested that MOA scale responses paralleled actual interactions with the therapist. This finding suggests a theoretical/clinical link between object representations and manifest relatedness, as well as cogent diagnostic information.

In a study of MOA scale scores in sexually abused female children and adolescents, Leifer, Shapiro, Martone, and Kassem (1991) found that they produced more disturbed perceptions of interpersonal contact when compared to a control group. While sexually abused subjects could be differentiated from controls when the lowest object representation scores (LORS) were compared, the two groups could not be differentiated based on comparisons between the highest object representation scores (HORS). The authors concluded that although sexually abused girls are capable of socially appropriate behavior, as suggested by the HORS index, their internal models of relationships show obvious disturbance as reflected by the disparate mean, median, and lowest MOA scale scores.

Greco and Cornell (1992) employed three different object representation measures: (a) the Differentiation Scale (DACOS; Blatt, Brenneis, Schimek, & Glick, 1976) which categorizes human responses on a 4-point scale, (b) the MOA scale, and (c) an aggressive content measure (Holt, 1975) in an investigation of the object relations functioning of homicidal adolescents. Results did not suggest significant group differences based on the mean MOA score or the aggressive content measures. Scores from the DACOS did, however, identify a subgroup of adolescents who committed homicide in the context of another crime. These adolescents produced Rorschach responses that suggested the use of lower developmental levels of object representations.
In an effort to validate a Rorschach measure of object relations, Perry and Viglione (1991) combined human representational variables from the Comprehensive System (Exner, 1993) to create the Human Experience Variable (HEV). To validate the HEV, Burns and Viglione (1996) had 105 non-patient women and their spouses complete the Bell Object Relations Inventory (Bell, 1991) and the Rorschach. Burns and Viglione found that the HEV was significantly related to the quality of interpersonal relatedness, after considering Rorschach measures of psychopathology and “nonhuman” Rorschach images. Results indicated that representations of self and other accessed through the Rorschach account for unique variance in the prediction of the quality of interpersonal relationships.

**Caregiver(s), Environment, Relationships, and Behavior.**

Research emanating from the object relations and attachment perspectives has emphasized the formative impact of infant attachment quality and internalized images of self and other in the development of interpersonal orientations and behavioral styles (Greenberg, Speltz, & Deklyen, 1993). Infants who are classified as securely attached to their primary caregivers are presumed to acquire adaptive representational models of self and others that serve to guide behavior in future interpersonal encounters. These models derive from the responsive, sensitive caregiving that provides the foundation for the development of secure attachment and healthy object relations functioning. Anxious, insecure attachments are presumed to contribute to the development of representational models that are maladaptive and may underlie beliefs that the world is a malevolent place and others are suspect. Anxious attachments have been linked to insensitive, intrusive, and inconsistent patterns of early caregiving (Cicchetti, Toth, & Lynch, 1995; Crittenden,
1995; Cummings & Cicchetti, 1990; Erickson, Sroufe, & Egeland, 1985; Gacono & Meloy, 1994; Lyons-Ruth, 1996; Sroufe, Carlson, & Schulman, 1993). Significant relationships between adolescents who are insecurely attached and later aggression and disruptive behavior have been found in studies of high-risk families (Carlson, Cicchetti, Barnett, & Braunwald, 1989b; Erikson, Sroufe, & Egeland; Toth & Cicchetti, 1996b), while results from studies using more heterogeneous community samples are equivocal (e.g., Bates & Bayles, 1988; DeJesus, 1997; Greco & Cornell, 1992).

The diathesis-stress model assumes that genetic vulnerability and environmental stressors work together to produce psychopathology and maladaptive behavior (Bellack, 1984). Walker, Downey, and Bergman (1989) have utilized this model to explore the simultaneous effects of parental psychopathology and maltreatment on aggression and social withdrawal in children. They determined that boys from maltreating homes displayed significantly more aggression when compared with a normal sample of children of similar demographics. Rutter, MacDonald, Le Couteur, Harrington, Bolton, and Bailey (1990) suggest that stress exposure increases risk for a range of socioemotional and behavior problems. Furthermore, the effects of stress exposure appear to be multiplicative rather than additive.

The literature on childhood psychopathology suggests that a recursive relationship may exist between and among child behavior problems, maternal depression, and maternal sense of competence (Breen & Barkley, 1989; Weissman et al., 1987; Wolkind & DeSalis, 1982). Regardless of the cause, the presence of maternal depression and an impaired sense of competence relative to the parenting role appear to result in mothers being less available, less responsive to the child, and less capable of interacting with the
child in an authoritative manner. Webster-Stratton and Hammond (1988) found that such behavioral and attitudinal deficits were related to the manifestation of conduct-disordered behavior in male children. Other researchers (Dawson, Grofer Klinger, Panagiotides, Hill, & Spieker, 1992a, Dawson, Grofer Klinger, Panagiotides, Spieker, & Frey, 1992b, 1999; Field, Fox, Pickens, & Nawrocki, 1995; Field, Healy, Goldstein, Perry, Bendall, Schandberg, Zimmerman, & Kuhn, 1988) have demonstrated that the depressed behavior shown by infants of mothers with depression generalizes to interactions with both familiar persons outside the family and to strangers. It appears that children of depressed mothers are at heightened risk for psychopathology in childhood, including affective disorders, behavioral problems, poor school performance, and poor peer relationships in childhood (Coghill, Caplan, Alexandra, Robson, & Kumar, 1986; Dawson et al., 1999; Redding, Harmon, & Morgan, 1990).

Describing the individual psychodynamics of adolescent behavioral problems has a long history. Aichorn (1935) applied Freud's psychoanalytic discoveries to the "wayward youth" of Vienna and first described the idealizing transference and the role of primitive narcissism in deviancy (Marohn, 1977). Aichorn wrote that adolescents often change as a result of allying with admired adults who supply a consistent environment. Winnicott (1984) described the "antisocial tendency" of the delinquent as the youth's attempt to "try out his power to disrupt, to destroy, to frighten, to wear down, to waste, to wrangle, and to appropriate" (1984, p. 115). "If the home can stand up to all the child can do to disrupt it" (p. 115), then s/he is aware that her/his aggression can be managed, and that caring and stable relationships will continue to exist. Redl (1966) and colleagues (Redl & Wineman, 1957) wrote repeatedly about the possibility of understanding
impulsive behavior and reversing the process by providing auxiliary psychological functions through caregivers.

Research has consistently shown that the lack of consistency in parental response to child behavior frequently contributes to disruptive behavior in the children. Wahler and Dumas (1986) have used the term “indiscriminate” to describe the style of interaction shown by mothers of behavior-problem children. In essence, an indiscriminate style is one in which few predictable contingencies exist between what the child does and how the parent responds. According to Wahler and Dumas, human beings find unpredictability in social relations to be highly aversive. Children reared in such environments are motivated to seek predictability, even if the only way to do so is to entrap parents in a coercive (but predictable) cycle.

Aggression and related behavior problems have been found to be associated with low levels of positive parenting behaviors. Indicators of positive parenting vary widely by study, but typically include responsiveness, warmth, social teaching, and proactive guidance (Pettit, 1997b). Pettit, Dogde, and Brown (1988) found that the mothers of children rated as having externalizing behavior problems showed less responsive involvement in infancy, and engaged in fewer episodes of teaching and social conversation. Snyder (1977) found that, compared with families of non-aggressive children, families of aggressive children were characterized by more aversive consequences for negative behavior and fewer positive consequences for compliance. Evidence supporting the notion that parental punishment orientation (i.e., harsh vs. lax) may affect children and adolescents differentially depending on attributes of the parent-child relationship was provided by Deater-Deckard and Dodge (in press). The relevant
data, drawn from the Child Development Project, an ongoing, multi-site longitudinal investigation (Bates, Pettit, & Dodge, 1995; Dodge, Bates, & Pettit, 1990), contained detailed, in-home interviews conducted with a community sample of mothers. Results suggested that harsh maternal discipline was associated significantly with externalizing behaviors in adolescence for the subsample showing low warmth. In high-warmth families, there was no association between harsh discipline and later externalizing problems. Frick and colleagues (Frick, Lahey, Loeber, Stouthamer-Loeber, Christ, & Hanson, 1992) and Patterson and Stouthamer-Loeber (1984) also found a relationship between child conduct problems and harsh or abusive forms of discipline.

In an early epidemiological study investigating the environmental experiences of seriously delinquent children, Lewis, Shanok, and Balla (1979) found a significant lack of protective and supportive family environmental resources. The authors compared the medical histories of incarcerated and non-incarcerated delinquent adolescents and discovered that by age two, the incarcerated adolescents were significantly more likely to have sustained severe head and face injury. Perinatal trauma, physical abuse and/or neglect, as well as psychiatric impairment were also more prevalent for the incarcerated delinquents. The authors proposed that the combination of early CNS trauma, parental psychopathology, and social deprivation contributed to the development of delinquent behavior.

A comprehensive review of the literature by Loeber and Stouthamer-Loeber (1986) found that two of the strongest correlates with severe conduct problems in children were poor parental supervision and lack of parental involvement in their child’s activities. These findings have been supported in more recent studies of delinquent
children (Rey & Plapp, 1990; Voorhees, Cullen, Mathers, & Garner, 1988). Many other researchers (Belsky, 1984; Belsky, Herzog, & Bovine, 1986; Crnic, Greenberg, Robinson, & Ragozin, 1984; Dunn, 1988; Goldberg & Easterbrooks, 1984; Shaw & Emery, 1987) have found that limited parental responsiveness is associated with negative developmental outcomes. Crum (1972) interviewed 20 junior high school boys exhibiting aggressive antisocial behavior and their mothers to determine if a significant relationship existed between the boys' behavior and maternal acceptance, overprotection, overindulgence, and rejection. Her findings included a positive correlation between maternal rejection and the boys' aggressiveness. Rohner (1975, 1991) reports that common patterns of parental rejection include hostile physical or verbal abuse, parental indifference to the physical and emotional needs of the child, and bipolarity in which the parent's responses fluctuate between love/hate, closeness/distance, and concern/neglect. In Rohner's perspective, the child's interpretation of the world is based on her/his experiences with it, including interactions with primary caregiver(s). Even though a child who has experienced such negative interactions with the parent(s) may want to reach out to others, s/he has little basis from which to form satisfying relationships with others as s/he may view the very nature of the interpersonal world as unfriendly and hostile. Rohner concludes that in the absence of opportunity for positive, corrective experiences, the child who has experienced parental rejection is likely to grow into an adult who is hostile, aggressive, and lacking in the ability to adequately regulate her/his behavior.

When children serve exaggerated regulating or other sustaining functions for their parents, the degree of narcissistic injury parallels the kind experienced by the neglected child (Marohn, 1982). Although many studies measure and attempt to correlate parental
and adolescent histories and behavior in an effort to explain psychopathology, the crucial issue is how the child or adolescent experiences the parent and the parent's actions. The parent trying to be empathic may not be experienced as such; the indifferent parent may be felt as vitally involved. Given this, it appears that fundamental to the psychiatric explanation of adolescent behavioral problems is the realization that behavior has psychological meaning and can presumably be understood psychodynamically (Marohn, Dalle-Molle, & McCarter, 1980; Offer, Marohn, & Ostrov, 1979).

Social learning theory has emphasized the role of the environment in the development and maintenance of aggressive behavior (Bandura, 1976; Miller & Dollard, 1941). Miller and Dollard attempted to link modeling to the general framework of behavior theory with their hypothesis that an individual imitates a model if the model is successful in using the behavior to reach her/his goal (i.e., positive vicarious reinforcement). Learning is further supported if the behavior is reinforced through tangible rewards (i.e., money or advancement in social and/or status level). Negative reinforcement, such as what would occur when aggression is utilized to escape a distressing situation, may also serve as a behavioral reinforcer (Bandura, 1976). The specific conditions which have been shown to be the most conducive to the learning and maintenance of aggression are those in which the child is (a) reinforced for her/his aggressive behavior (e.g., Patterson, 1986), (b) provided many opportunities to observe the aggression (e.g., Bandura, 1973; Huesmann, Eron, Lefkowitz, & Walder, 1984), (c) given few opportunities to develop positive affective social bonds with others (Hawkins & Weis, 1985), and (d) the object of the aggression (Dodge, Bates, & Pettit, 1990).
Bjorkqvist and Osterman (1992) expanded upon social learning theory and suggested that modeling also occurs in situations when the model does not achieve their goals through the use of her/his behavior. Fraczek (1989) had earlier coined the term habitual aggression to describe hostile actions that are unconnected with the purpose of attaining specific goals or rewards. He added that individuals may be habitually aggressive even though their aggressiveness is a hindrance to, rather than a promotion of, goal achievement.

A large body of theory and research suggests that individuals learn many of their social behavior patterns in their family of origin (Maccoby & Martin, 1983). The negative impact of parental psychopathology and aggressive behavior on children’s development has been shown in studies of maltreated infants who demonstrate a combination of approach and avoidance behavior, apathy, and aggression toward their caregivers (Cicchetti, 1987; Cicchetti & Barnett, 19914; Egeland & Sroufe, 1981; Lyons-Ruth, 1996).

**Gender Differences and Aggressive Behavior.**

Research suggests that aggressive and antisocial behaviors appear with markedly different prevalence in females and males (Eley, Lichtenstein, & Stevenson, 1999). Conduct disorder is about twice as common in boys (approx. 16%) as in girls (approx. 7%) (American Psychiatric Association, 1994; Cohen, Cohen, Kasen, Velez, Hartmark, Johnson, Rojas, Brook, & Streuning, 1993; Kashani, Orvaschel, Rosenberg, & Reid, 1989), and mean levels of externalizing symptoms are significantly higher in boys than in girls (Gjone, Stevenson, Sundet, & Eilertsen, 1996; Zahn-Waxler, 1993).
Although biological differences may set in motion the development of gender differences, these effects may be mediated by social experiences (Pettit, 1997a). That is, early appearing, biologically based gender differences may help to create differential socialization niches that contribute to differences in levels of aggression. These socialization niches may be reflected in differential parental treatment or in differential peer group experiences. Even though both boys and girls have been found to display aggressive behavior, boys more commonly display physical aggression whereas girls more likely show relational aggression (e.g., teasing, social exclusion, reputation damaging; Crick & Grotmester, 1995, Pettit).

Recent studies that have considered the etiology of aggressive and antisocial behavior in females and males separately have not reached a consensus of opinion as to whether there are gender effects, and, if so, what these may be. Results from two studies, one a twin study of externalizing symptoms in children and adolescents, the other an adoption study of problem behaviors in middle childhood and early adolescence, found that the influence of genetic factors was greater for boys on externalizing behaviors, especially aggression (Silberg, Erickson, Meyer, & Eaves, 1994; Van den Oord, Boomsma, & Verhulst, 1994). In contrast, wo further studies, one an adoption study of aggressive behavior in adolescence, the other a twin study of externalizing symptoms in middle childhood and early adolescence, found that the parameter estimates were the same for both genders (Cadoret, Yates, Troughton, & Woodworth, 1995; Gjone, Stevenson, Sundet, & Eilertsen, 1996). These inconsistent results, coupled with the marked prevalence difference between females and males, make the role of gender in the
etiology of aggressive and non-aggressive behavior an issue that needs to be examined further.

**Rorschach-Related Studies**

**The Rorschach and Aggression.**

The dramatic developments in clinical theory and practice of the last 25 years have significantly influenced the evolution of Rorschach psychology. Contemporary developments in Rorschach use and interpretation reflect the emerging rapprochement of two divergent and at times antagonistic philosophies: (a) the nomothetic approach represented by the work of Exner (1986, 1991, 1993), and (b) idiographic and content analytic approaches derivative of psychoanalytic theory (Acklin, 1997). Exner’s empirically driven atheoretical, score-based approach has done much to strengthen the psychometric foundations of the Rorschach. Parallel developments in clinical psychoanalysis and their application to Rorschach theory and practice, particularly in the structural-developmental and object relations theories, have also exercised a significant influence (Acklin). The work of Mayman (1967, 1977), Blatt and his colleagues (Blatt, Brenneis, Schimek, & Glick, 1976; Blatt, & Lerner, 1983; Blatt, Tuber, & Auerbach, 1990), P. and H. Lerner (Kwwer, Lerner, Lerner, & Sugarman, 1980; Lerner & Lerner, 1980), Urist (1977), and Meloy and Gacono (Gacono & Meloy, 1994; Meloy & Gacono, 1992) are noteworthy.

Although the role of aggression and its manifest Rorschach derivatives have been frequently used when studying aggressive and acting-out personalities (Gacono & Meloy, 1994), there has been much confusion regarding the relationship between aggressive imagery and real-world aggressive behavior. Exner (1993) suggested that the aggressive
movement (AG) score was related to the likelihood of aggressive behavior. At the same time, he also cautioned that the mere presence of an elevated AG score does not guarantee the individual will act out in an aggressive manner. The Rorschach measurement of aggression and its correlation to behavior has been of interest to other researchers who have studied the following: destructive content (Finney, 1955; Rose & Bitter, 1980; Storment & Finney, 1953), white space (Carlson & Drehmer, 1984), color responses (Sommer & Sommer, 1958), hostile content (Murstein, 1956; Towbin, 1959; Walker, 1951), hostile and anxious content (Gorlow, Zimet, & Fine, 1952), aggressive drive and inhibitory controls (Rader, 1957), and differences between patients and non-patients (Wirt, 1956). Although the findings of these studies demonstrated trends, they were often equivocal as markers for behavioral aggression.

Early on, Rapaport, Gill and Schafer (1946/1968) proposed that content scoring on the Rorschach should include information about aggression and that such content would imply “a great tension of aggression within the subject” (p. 460). Although Phillips and Smith (1953) advocated for the examination of aggressive content on the Rorschach, they also cautioned that “the extremely important question arises then as to when the personality correlates of content will be expressed in behavior. This question cannot be answered by an analysis of content” (p. 113).

Despite this cautionary statement, many researchers through the years have attempted to develop accurate content scoring systems. Elizur (1949) utilized a content analysis approach to the Rorschach in his attempt to identify anxiety and hostility. He developed the Rorschach Content Test (RCT) to differentiate between anxious content and expressive and covert expressions of hostility. Elizur hypothesized that anxiety and
hostility constitute tension states that would manifest in Rorschach responses. Results suggested that (a) covert expressions of hostility and anxious content were significantly correlated, (b) covert expressions of hostility were correlated with self and interview indications of hostility, and (c) all three scores differentiated between patients and non-patients. Although Elizur concluded that the RCT was a valid technique for assessing anxiety and hostility, he suggested that further research involving the comparison between an individual’s RCT scores and behavior patterns was warranted. While the methodology of Elizur’s study and the validity of his conclusions have been criticized (Crain & Smoke, 1981), his work has provided the groundwork for future research on anxiety, hostility, and aggression.

Walker (1951) compared clinical manifestations of hostility as rated by therapists of patients receiving psychotherapy at a Veterans Administration hospital with Rorschach responses and Make A Picture Story (MAPS) test performances. Basing his work on Elizur’s (1949) research, Walker found a significant relationship between hostility inferred from the Rorschach and therapists’ ratings of patient hostility. He also obtained patient self-reports of hostility and noted that they were not related to therapists’ hostility ratings. Given this, he suggested that projective tests such as the Rorschach tend to measure hostility of which the patient may be unaware.

Gorlow, Zimet and Fine (1952) were among the first to study adolescents and hostility. Utilizing Elizur’s scoring system with delinquent and non-delinquent adolescents, they found that the Rorschach protocols for the delinquent adolescents contained significantly more anxiety and hostility content. Towbin (1959) utilized Elizur’s (1949) scoring system to develop his own scoring procedure in order to examine
hostility in Rorschach content and overt aggressive behavior. He suggested that
differentiating types of hostility in the Rorschach is meaningful and that Rorschach
aggressive content is related to behavioral aggression. Murstein (1956) also expanded
upon Elizur’s (1949) scoring system and developed a 7-point scale called the Rorschach
Hostility Scale (RHS). Using both the RCT (Elizur) and the RHS, the author studied
college students grouped according to (a) level of friendliness or hostility, and (b) insight
into their style of presentation. Murstein found that the projection of hostility on the
Rorschach was dependent upon the actual possession and self-acceptance of the trait.
The hostile-noninsightful group projected more hostility than the hostile-insightful group.

Around the same time, two other scoring systems were independently under
development. In 1952, DeVos developed a scale that included “intentions, acts and
implementation methods” inferentially linked to aggression. Storrent and Finney (1953)
created an instrument (which later became known as the Palo Alto Destructive Content
Scale) which differentiated between different types of aggression. They included five
categories of aggressive responses: (a) passive; (b) mild but not extremely passive; (c)
neutral or popular responses; (d) responses indicating boldness, authority, or those
tending toward aggressiveness; and (e) openly aggressive or hostile. The authors found
that these categories effectively discriminated between groups of assaultive and non-
assaultive hospitalized psychiatric patients. Taken together, these three scales (DeVos;
Elizur, 1949; Storrent & Finney) provided for systematic scoring of Rorschach content
and emphasized the significance of projected aggression.

Maitra (1985) used Elizur’s (1949) constructs of hostility and aggression along
with content categories suggested by Phillips and Smith (1953) in a study of 100
delinquent and 100 non-delinquent boys. His indicators of aggression, sadism, and hostility included aggressive movement, aggressive objects, stain, smoke, fire, blood, and aggressive animal contents. Maitra used these indicators to attempt to predict group membership and found that the delinquent group did have significantly higher frequencies of aggressive movement, stain, smoke, fire, and blood in their Rorschach protocols. He concluded that the use of this scoring approach was useful in differentiating between aggressive and non-aggressive adolescents.

In 1960 Holt built upon Elizur’s (1949) work and altered the system to include measurements of libidinal as well as aggressive responses. Holt counted the number of aggressive responses and weighted them on a six-point scale, as he felt that better results could be obtained by using qualitative distinctions. Holt distinguished between responses containing either sadistic or masochistic content and subdivided them according to implicit identification of the subject with the aggressor (called “Subject Aggression”) or with the victim (called “Object Aggression”). He also noted whether the aggression was seen as a potential threat or was actively occurring. Holt did not score the results or aftermath of aggression. This is consistent with Exner’s (1993) scoring system, as aggression that has already occurred (i.e., death or destruction) is not scored as an aggressive response (AG).

Crain and Smoke (1981) examined Rorschach aggressive content in normal and problematic (those who had been referred for psychological evaluations) children. Using the Elizur (1949) scale, it was found that the two groups did not differ on global measures of aggression and that the normal group gave more responses involving fighting. In contrast to the normal group’s responses containing concrete aggressive activity, the
problematic children gave responses of an overwhelming and objectless nature, which appeared to represent their greater sense of victimization and hopelessness in the world. The authors concluded that the quality of aggressive imagery must be examined and that a more comprehensive system must be developed.

Kalliopuska (1992) explored the aggressive impulses of delinquent girls (N=13) and boys (N=23) on the Rorschach and TAT. The Hafner-Kaplan Hostility Index was used to measure hostility on the TAT. Aggression on the Rorschach was divided into aggression turned inward, aggression acted out, fantasy aggression, and primary process (oral or phallic) aggression. The author reported significant correlations between aggression turned outward and phallic content, and between aggression turned inward and hostility. Based on these findings, she surmised that in her subjects aggression turned inward was related to self-blame, while aggression turned outward was a form of sexual acting out.

The Comprehensive System and the Addition of the Aggressive Content Scores.

The Comprehensive System (Exner, 1993) includes only one special score related to aggression. The Aggressive Movement (AG) response is coded for “any movement response (M, FM, or m) in which the action is clearly aggressive...The aggression must be occurring in the response: “It’s two people pulling a crab apart” (p. 528). Exner believed that increased numbers of AG responses correlate with increased likelihood for aggressive behavior because “people with elevations in AG see the social environment as marked by aggressiveness, and...have incorporated that attitude or set, so that it has become a feature of their own personality, and consequently a feature that marks some of their behavior” (p. 528).
Exner's (1993) aggressive movement score (AG) originated from Piotrowski's work. Piotrowski (1957) talks about "assertive M" and how "M with aggressive content implies difficulties in assertiveness, as well as a desire to retain assertiveness in spite of severe difficulties" (p. 166). In the first of two validation studies, Kazaoka, Sloane, & Exner (1978) studied inpatients in occupational and recreational therapy tapes and rated them for verbal and non-verbal aggression. Each subject was also given a Rorschach. They found that the groups did not differ significantly for AG on the basis of verbal aggressive behavior, but did differ more substantially on the basis of physically aggressive behavior. The combination of AG scores for the verbally and physically aggressive behavior resulted, however, in non-significant findings. A comparable study (Exner, Kazaoka, & Morris, 1979) using 33 sixth grade children as subjects yielded similar mixed results.

Heaven (1988) looked at the Rorschach protocols of psychopathic Antisocial Personality Disorder (ASPD) and non-psychopathic ASPD subjects and found that both ASPD groups gave fewer AG responses than either normal or character-disordered groups. He hypothesized that the paucity of AG responses in ASPD subjects "may be due to Exner's requirement that the aggression must be presently occurring in the percept. Responses which clearly indicated that aggression had occurred...or responses involving potentially aggressive objects...were given frequently by more psychopathic individuals" (p. 88).

Gacono (1988, 1990) and Meloy and Gacono (1992) found that non-patient normal populations reported in Exner (1986) were likely to exhibit more AG responses than severe psychopaths as determined by the Hare Psychopathy Checklist, Revised
(PCL-R; Hare, 1991). Low frequencies of AG responses were found in all of Gacono and Meloy’s (1994) Conduct Disorder (CD) and ASPD samples. Only 33% of CD children (Gacono & Meloy, 1994) exhibited AG responses, compared to an average of 84% of the norms for five- to 12-year-old non-patient children reported in Exner (1993). Similarly, only 35% of CD adolescents (ages 13 to 17 years) produced AG responses, compared to an average of 78% of the norms for 13- to 15-year-olds reported in Exner (1993). Moreover, Exner’s (1993) character-disordered sample produced fewer AG responses than non-patients (31% versus 67%).

Gacono, Meloy, and Berg (1992) explored the differences between psychopathic ASPD (P-APD), non-psychopathic ASPD (NP-APD), Narcissistic Personality Disorder (NPD), and Borderline Personality Disorder (BPD) subjects on selected Rorschach variables, including AG. They reported that NPDs (50%), P-APDs (41%), and NP-APDs (33%) had fewer AG responses than Exner’s (1986) non-patient male sample (69%). Conversely, their BPD subjects produced more AG responses than Exner’s (1986) non-patients. The authors hypothesized that “because APDs and especially psychopaths manifest high levels of violent behavior, interpretations from the AG response to real world aggression are not supported within these forensic populations” (Gacono, Meloy, & Berg, 1992, p. 47). They also noted that the AG response was not helpful in their attempt to differentiate between ASPD, borderline, and narcissistic individuals.

In order to account for the paucity of AG responses, Gacono and Meloy (Gacono, 1988, 1990; Gacono & Meloy, 1994; Meloy & Gacono, 1992) proposed that there is either an ego-syntonic or ego-dystonic relationship between the individual and her/his generation of such responses on the Rorschach. They theorized that the presence of
aggressive movement (as depicted by the AG score) corresponded to an ambivalence or tension of aggression within the subject that indicates an ego-dystonic relationship. Conversely, aggression in the psychopath “is used... in a deliberated, or at least partially conscious manner to intimidate and control others.” For psychopaths who exhibit predatory behavior, aggression is ego-syntonic and does not contribute to intrapsychic tension (Gacono & Meloy, 1994, p. 260). Thus, responses to projective tests such as the Rorschach are influenced by need state and allow individuals to project uncomfortable feelings outward (Exner, 1993). Individuals who act on their aggressive impulses eliminate intrapsychic tension. ASPDs and psychopaths, therefore, may not produce responses in which aggression is currently occurring on the Rorschach. For this reason, Gacono & Meloy (1988, 1994) suggested that “the elimination of other categories of aggression in the Comprehensive System... has grossly reduced the usefulness of aggression responses to the Rorschach as a source of nomothetic comparison and idiographic understanding” (1994, p. 263).

Based on clinical observations and the theoretical formulations of Holt (1976, 1977) and Schafer (1954, 1958, 1976), Meloy and Gacono (1992; Gacono & Meloy, 1994) developed four additional scoring categories: Aggressive Content (AgC), Aggressive Past (AgPast), Aggressive Potential (AgPot), and Sadomasochistic (SM). Gacono and Meloy (1994) suggested that these categories may provide additional information about the type of aggression expressed and the ego nature (syntonic or dystonic) of aggressive responses in antisocial populations. Meloy and Gacono (1992) compared groups of psychopaths and non-psychopath antisocial individuals using the extended aggression indices. The only significant differences found between the
psychopathic and non-psychopathic ASPDs were on the SM variable. Psychopaths produced significantly more SM responses (41%) than non-psychopathic individuals (14%). They later found, however, that both criminal groups produced more AgPast, AgPot, and AgC when compared with a non-patient sample (Gacono & Meloy, 1994).

Gacono, Meloy and Berg (1992) suggested that their finding of higher ratios of AgPast responses in the ASPD populations (P-APD, AgPast=59%; NP-APD, AgPast=57%) relates to high rates of childhood victimization and abuse in these groups. The authors also noted a relationship between Exner’s MOR and the AgPast response, with AgPast responses often found paired with the MOR response. Both responses relate to individuals retaining damaged self-identities and feeling aggressed against (Gacono, Meloy, & Berg). Based on this hypothesis, they suggested that “NPDs’ self-identity is damaged (MOR=67%), but possibly not the result of being aggressed against” (NPD, AgPast=28%) (Gacono, Meloy, & Berg, p. 46), while BPD individuals exhibit indications of feeling both damaged (MOR=78%) and aggressed against (AgPast=44%). Their concept is consistent with Holt’s (1976, 1977) system of differentiating between what he termed “aggression-inward” and “aggression-outward” responses.

The aggression indices also provide useful information about the relationship between diagnosis and a potential for behaving aggressively. For example, in Gacono and Meloy’s (1994) sample, BPD individuals produced high percentages of both MOR and AgPast responses, while Sexual Homicide perpetrators produced a greater number of AgPot responses. Gacono and Meoloy found that Schizophrenic ASPDs, like other antisocial groups, produce less AG than non-patient samples. When these protocols were scored using Meloy and Gacono’s extended scoring system (1992), the Schizophrenic
ASPDs produced more aggression responses. The authors found that for this group there was a “relative balance of AgPot and AgPast responses” (p. 202), which they concluded was consistent with an oscillation “between prey and predator” (p. 202). As Margolis (1992) suggested, use of the extended aggression scoring criteria with individuals with documented histories of aggression provides additional information about these individuals, as well as affording opportunities for valuable hypothesizing about their inner dynamics. The relationship between these scores and real-world aggression is, however, currently tenuous. As Gacono and Meloy (1994) note, “without comparable non-patient data and other real-world correlates of violence, questions of validity remain unanswered” (p. 272).

In a more recent study examining several Rorschach aggression variables, Baity and Hilsenroth (1999) found AgC to be a reliable and valid measure of aggression. Specifically, AgC was found to be a variable with interrater reliability (agreement = 99%, $\kappa = .95$), a significant predictor of the total number of DSM-IV (APA, 1994) criteria for ASPD ($R = .35$, $R^2 = .12$) and a significant predictor of scores on the Antisocial Practices Scale of the MMPI-2 (Butcher et al., 1989; $R = .40$, $R^2 = .16$). Due to the strong relation of the Rorschach AgC variable to clinical levels of psychopathology, Baity and Hilsenroth recommended (a) the exact definition of the AgC variable be presented to raters, (b) a new sample of raters be used to evaluate the test-retest reliability for these aggressive objects, and (c) a new sample of raters be used to evaluate the content validity of these aggressive objects. They also suggested that the addition of the AgC variable to the Comprehensive System (Exner, 1993) might aid clinicians in further defining an
aggressive response and help to extend the usefulness of the Rorschach as a sensitive
diagnostic measure (Baity, McDaniel, & Hilsenroth, 2000).

Baity, McDaniel, and Hilsenroth (2000) followed up on the recommendations of
Baity & Hilsenroth (1999) and replicated the AgC list from Gacono and Meloy (1994)
using a quantitative and qualitative ranking system. Eighty-five aggressive, 19
potentially aggressive, and 22 neutral (non-aggressive) objects were rated for
aggressiveness based on the definition of AgC. Two hundred seventy-six participants
rated objects on the Object Rating Scale (0-6), where a score of 0 indicated that an object
does not fit the definition of AgC. In addition, objects rated a 4 (moderately aggressive)
or higher were then classified into five qualitative groupings (weapons, animal/part
animal, environmental danger, fictional creature, and other). Analysis of the results
indicated that the AgC list can be replicated and that objects rated as at least moderately
aggressive can be reliably classified into distinct categories. One-month test-retest
reliability (r = .99) suggested that objects can be scored consistently using the definition
of AgC and provides support for the utility of the AgC variable. Based on the results of
the two studies (Baity & Hilsenroth, 1999; Baity, McDaniel, & Hilsenroth),
recommendations for the addition of the AgC variable to the list of content categories of
Exner’s Comprehensive System (1993) were made.

While descriptions of the neurobiological and relational influences on the
development of aggressive and psychopathological behavior have been supported by
research, explanation of their effects remains unclear. Research has suggested that the
interaction of these factors confounds understanding of the contribution of biological,
relational, and environmental influences on aggressive behavior. Furthermore, research
on gender differences in aggressive behavior and developmental level of object relations functioning in childhood and adolescence are limited as there have been no studies with substantial sample sizes of both male and female adolescents. Thus, the purpose of this research is to contribute to a better understanding of aggression in adolescents with recognized psychopathology by studying the relationship between their projections of internal representations and their behavior. It is hypothesized that in hospitalized adolescents both (a) greater amounts of projected aggression, and (b) lower developmental levels of object relations functioning will differentiate between those with a recent history of aggressive behavior and those without.
CHAPTER III

METHODOLOGY

Introduction

The purpose of this chapter is to describe the methods and procedures used in this investigation. A description of the sample and research setting is presented, followed by the procedures used in the administration of the instruments. The instruments, the methods used for scoring them, and their reliability and validity are then presented. The remainder of the chapter discusses the methods that were used to analyze the data.

Subjects

Data for the two-hundred adolescents that were used in this study were selected from a large archival database that includes standard psychological test data on 1,000 adolescent participants collected during a 5-year period from June 1995 to June 1999. The adolescents included in this archival database were between 13 and 18 years of age at the time of their testing, and were admitted as patients to a private psychiatric hospital in New York State.

The hospital serves primarily children and adolescents between the ages of 4 and 18. The child and adolescent service of the hospital accepts patients from the tri-state area: including the five boroughs of New York City, New Jersey, upstate New York, and Connecticut. A variety of races and cultures are represented. Demographic data about the patients that the hospital serves are provided in Table 1.
Table 1

**Demographic Characteristics of Adolescent Admissions June, 1995 – June, 1999**

<table>
<thead>
<tr>
<th>Age (years)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>15.02</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>1.70</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sex</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>1766</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>1701</td>
<td></td>
</tr>
<tr>
<td>% Female</td>
<td>50.9</td>
<td></td>
</tr>
<tr>
<td>% Male</td>
<td>49.1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Average LOS (days)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean (Female)</td>
<td>27.95</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>40.81</td>
<td></td>
</tr>
<tr>
<td>Mean (Male)</td>
<td>28.31</td>
<td></td>
</tr>
<tr>
<td>SD</td>
<td>36.65</td>
<td></td>
</tr>
</tbody>
</table>

*Note. LOS = Length of Stay*

Adolescents are admitted to the hospital at a rate of approximately 700 per year and an estimated two-thirds undergo psychological testing to assist with differential diagnosis, assessment of risk, treatment planning, and/or discharge. Subjects tested between the years 1995 and 1999 were eligible for inclusion in the archival database. While the majority of adolescents admitted to this setting during this period of time did undergo psychological testing and were therefore eligible for inclusion in the database, a number of factors could have led to a patient not being tested. This occurred most often as a result of a patient having an unusually short length of stay in the hospital. Other factors include the patient being unable or unwilling to cooperate, and testing being determined to be clinically unnecessary.
As part of the admission process, patients and their parents or guardians sign a consent form stating that they have been given written notice of their status and rights. This document (See Appendix A) informs the patients and their parents or guardians that data from records, including psychological test data, may be used for archival research “conducted by...Hospital or individuals associated with...Hospital. This information will be presented as part of group data only and will not include any information that would identify an individual patient” (Four Winds Hospital, p. 2). Therefore, no additional consent form specific to this study is required.

From the pool of 1,000 subjects included in the archival database, data for 200 were selected for inclusion in this study. Selection was based on the presence or absence of recent aggressive behavior. For the Aggressive sample, subjects were selected based on a combination of a clear documented history of physical aggression prior to hospitalization and clinical observations of overt hostility, and verbal assaultive and physically combative behavior at the time of admission. The Non-Aggressive subjects were selected on the basis of no documented history of physical aggression and the absence of significant overt hostility at the time of admission. Subjects were excluded from this study if their Full Scale Wechsler IQ (WISC-III, WAIS-R, or WAIS-III) was below 70. Based on these criteria, 53 Aggressive females, 85 Aggressive males, 78 Non-Aggressive females, and 50 Non-Aggressive males emerged from the pool of 1,000 subjects. The examiner then used the random selection process through SPSS to select 50 subjects for each of the Aggressive and Non-Aggressive female and male groups.

The archival database contains psychological test data on approximately 1,000 adolescents. The demographic characteristics of this database are presented in Table 2.
As shown, the mean age of the females and males included in the database is approximately 15 years; approximately 52% are female, 48% are male. Approximately 60% of the females and 65% of the males are White, 16% of the females and males are Black, and 17% of the females and 14% of the males are Hispanic. Approximately 52% of the females and 70% of the males had a history of aggressive behavior prior to their hospitalization, while 47% of the females and 28% of the males did not. Finally, approximately 15% of the females and 19% of the males were rated as hostile at the time of their admission to the hospital.
Table 2

Demographic Characteristics of Adolescent Archival Database

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total # (%)</strong></td>
<td>563 (52.0)</td>
<td>520 (48.0)</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>14.76</td>
<td>14.89</td>
</tr>
<tr>
<td>SD</td>
<td>1.13</td>
<td>1.34</td>
</tr>
<tr>
<td>Range</td>
<td>13 – 17</td>
<td>12 – 18</td>
</tr>
<tr>
<td><strong>Ethnicity # (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>340 (60.4)</td>
<td>339 (65.2)</td>
</tr>
<tr>
<td>Black</td>
<td>88 (15.6)</td>
<td>83 (16.0)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>98 (17.4)</td>
<td>73 (14.0)</td>
</tr>
<tr>
<td>Other</td>
<td>37 (6.5)</td>
<td>25 (4.8)</td>
</tr>
<tr>
<td><strong>Inclusion Criteria</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hx of aggr behav</td>
<td></td>
<td></td>
</tr>
<tr>
<td>prior to hosp’n # (%)</td>
<td>291 (51.7)</td>
<td>366 (70.4)</td>
</tr>
<tr>
<td>No hx of aggr behav</td>
<td></td>
<td></td>
</tr>
<tr>
<td>prior to hosp’n # (%)</td>
<td>263 (46.7)</td>
<td>145 (27.9)</td>
</tr>
<tr>
<td>Missing data # (%)</td>
<td>9 (1.6)</td>
<td>9 (1.7)</td>
</tr>
<tr>
<td><strong>HPRS rating at adm’n</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hostile</td>
<td>84 (14.9)</td>
<td>99 (19.0)</td>
</tr>
<tr>
<td>Not hostile</td>
<td>142 (25.2)</td>
<td>129 (24.8)</td>
</tr>
<tr>
<td>Some hostility</td>
<td>271 (48.1)</td>
<td>253 (48.6)</td>
</tr>
<tr>
<td>Missing data</td>
<td>66 (11.8)</td>
<td>41 (7.5)</td>
</tr>
<tr>
<td><strong>FSIQ (mean)</strong></td>
<td>90.35</td>
<td>95.63</td>
</tr>
<tr>
<td><strong>SD</strong></td>
<td>18.36</td>
<td>16.21</td>
</tr>
</tbody>
</table>

*Note. HPRS = Hopkins Psychiatric Rating Scale; FSIQ = Full Scale IQ value*
The demographic characteristics of the sample included in this study are presented in Tables 3 and 4. The mean age of the Aggressive girls is 14.5 years and 14 years for the Aggressive boys. The mean age for the Non-Aggressive girls is 15 years and 15.5 years for the Non-Aggressive boys. Sixty-seven percent (67%) of the Aggressive girls and 60% of the Aggressive boys are White, 15% of the Aggressive girls and 23% of the Aggressive boys are Black, and 18% of the Aggressive girls and 12% of the Aggressive boys are Hispanic.

Table 3

Demographic Characteristics of Aggressive Sample

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total #</strong></td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>14.50</td>
<td>14.25</td>
</tr>
<tr>
<td>SD</td>
<td>1.08</td>
<td>1.29</td>
</tr>
<tr>
<td>Range</td>
<td>13 – 17</td>
<td>12 – 17</td>
</tr>
<tr>
<td><strong>Ethnicity # (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>36 (66.7)</td>
<td>44 (60.3)</td>
</tr>
<tr>
<td>Black</td>
<td>8 (14.8)</td>
<td>17 (23.3)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10 (18.5)</td>
<td>9 (12.3)</td>
</tr>
<tr>
<td>Other</td>
<td>0</td>
<td>3 (4.1)</td>
</tr>
<tr>
<td><strong>FSIQ</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>91.48</td>
<td>95.85</td>
</tr>
<tr>
<td>SD</td>
<td>13.62</td>
<td>16.30</td>
</tr>
<tr>
<td>Range</td>
<td>70 - 124</td>
<td>70 - 143</td>
</tr>
</tbody>
</table>

**Note.** # = number; FSIQ = Full Scale IQ value.
Seventy-seven (77%) of the Non-Aggressive girls and 76% of the Non-Aggressive boys are White, 8% of the Non-Aggressive girls and 6% of the Non-Aggressive boys are Black, and 13% of the Non-Aggressive girls and 16% of the Non-Aggressive boys are Hispanic. The Aggressive girls’ mean Wechsler Full Scale IQ (FSIQ) was 91 while the Aggressive boys’ mean FSIQ was 96. Finally, the Non-Aggressive girls’ mean FSIQ was 99 and the Non-Aggressive boys’ mean FSIQ was 103.

Table 4

<table>
<thead>
<tr>
<th></th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total #</strong></td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td><strong>Age (years)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>15.06</td>
<td>15.54</td>
</tr>
<tr>
<td>SD</td>
<td>1.19</td>
<td>1.18</td>
</tr>
<tr>
<td>Range</td>
<td>13 - 17</td>
<td>13 - 18</td>
</tr>
<tr>
<td><strong>Ethnicity # (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>60 (76.9)</td>
<td>38 (76.0)</td>
</tr>
<tr>
<td>Black</td>
<td>6 (7.7)</td>
<td>3 (6.0)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>10 (12.8)</td>
<td>8 (16.0)</td>
</tr>
<tr>
<td>Other</td>
<td>2 (2.6)</td>
<td>1 (2.0)</td>
</tr>
<tr>
<td><strong>FSIQ</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean</td>
<td>98.86</td>
<td>103.44</td>
</tr>
<tr>
<td>SD</td>
<td>14.52</td>
<td>14.40</td>
</tr>
<tr>
<td>Range</td>
<td>70 - 133</td>
<td>74 - 136</td>
</tr>
</tbody>
</table>

**Note.** FSIQ = Full Scale IQ value.
Procedures

During the period of data collection, approximately 75% of the adolescents admitted to the hospital were referred for psychological testing. The psychological test battery was administered by psychometric technicians under the supervision of licensed psychologists. Each technician is highly trained on the standardized administration procedures of all the instruments, and has also received extensive training and detailed supervision in the administration of the Rorschach protocols according to the rules of the Comprehensive System (Exner, 1993).

For the purposes of this study, two research assistants were trained by the author in the scoring of the four Rorschach aggression variables (AG, AgC, AgPast, & AgPot) and developmental level of object relations functioning scores (MOA Mean, MOA Low, & MOA High). The raters practiced scoring Rorschach protocols that were excluded from the study until they demonstrated at least 90% agreement on all variables. Interrater reliability was analyzed and the reliability coefficients obtained on sample protocols (N=40) were: (a) Rorschach aggression variables AG (r=.91, p≤.001), AgC (r=.93, p≤.001), AgPast (r=.92, p≤.001), AgPot (r=.96, p≤.001); and (b) the MOA scores MOA Mean (r=.93, p≤.001), MOA Low (r=.90, p≤.001), and MOA High (r=.91, p≤.001). Interrater reliability was again analyzed for 20 randomly selected sets of protocols included in the actual study, balanced across the Aggressive and Non-Aggressive groups. The reliability coefficients obtained for the aggression content scores were: AG (r=.95, p≤.001), AgC (r=.92, p≤.001), AgPast (r=.98, p≤.001), and AgPot (r=1.00). The reliability coefficients obtained for the MOA scores were: MOA Mean (r=.93, p≤.001), MOA Low (r=.91, p≤.001), and MOA High (r=.93, p≤.001).
A chart review procedure was performed for each of the adolescents included in the archival database. The procedure involved a comprehensive review of each subject's hospital record by three trained raters who completed a standardized checklist that included ratings of the presence or absence of aggressive and violent behavior. The data that was reviewed included the face page, admission notes, nursing notes, psychosocial assessment, and discharge/referral notes. Ten percent of the medical records were scored by two raters to demonstrate at least 80% interrater reliability on cases that are not part of the archival database. A standardized form developed by Powis (in press) and based upon William and Butcher's (1989) recommendations was used to ensure thorough coverage of medical record data. A Kappa statistic ($\kappa=.78$) and percentage agreement (91%) for interrater reliability for the variable representing the history of aggressive and violent behavior were found. According to Fleiss (1981) who established guidelines for the interpretation of Kappa statistics, Kappa values greater than .75 are considered excellent. He states that Kappa statistics below .40 are considered poor, between .40 and .59 are considered fair, and between .60 and .74 are considered good.

The Hopkins Psychiatric Rating Scale (HPRS; DeRogatis, 1978) was routinely completed for each subject by the primary therapist within 72 hours of admission. These data were also extracted from the archival database.

Research Instruments

This study used several different clinical measures to assess the hypothesized relationship between recent aggressive behavior and overt hostility, developmental level of object relations functioning, and projected aggression.
1. Recent aggressive behavior was obtained from information contained in the adolescent's medical chart. These data were provided by the patient, parents or guardians, referral source, or the admissions staff and include information on whether or not the adolescent was involved in: (a) violent behavior, (b) physical fights, or (c) court proceedings for violent non-status offense(s) (e.g., assault, rape, murder, or armed robbery) prior to hospitalization or during the admission procedure.

2. The Hostility item from the Hopkins Psychiatric Rating Scale (HPRS; DeRogatis, 1978) was used as the rating of the adolescent's overt hostility and verbally assaultive or physically combative behavior at the time of hospitalization.

3. Projected aggression was assessed by scoring the adolescents' Rorschach responses for aggressive movement (AG; Exner, 1993), aggressive content (AgC), aggressive past (AgPast), and aggressive potential (AgPot) (Meloy & Gacono, 1992).

4. The Mutuality of Autonomy Scale (MOA; Urist, 1977; Urist & Shill, 1982; Tuber, 1992) was used to assess the schema or template that defines salient aspects of the adolescent's developmental level of object relations functioning.

_Hopkins Psychiatric Rating Scale_

The HPRS (Appendix B) is a dimensional psychiatric rating scale designed to quantify and standardize expert clinical judgment. This type of clinical rating scale is frequently useful because it allows for clinical experience to serve as a baseline for judging the severity of a patient's behavior and complaints (DeRogatis, 1978).

The HPRS evaluates 17 symptom dimensions, and also generates an overall measure of functioning (Global Pathology Index). The items and definitions presented on the HPRS represent the symptom configurations commonly observed among
psychiatric patients (DeRogatis, 1977). This scale was completed by the primary therapists on all the subjects included in the archival database after their admission and prior to referral for psychological testing.

This study used the rating on the Hostility item of the HPRS. This item (number 6) is worded as follows: “Hostility is defined as a negative emotional state characterized by irritability, anger, aggression and hostile feelings. Manifestations may be in terms of thoughts, feelings, or actions overt or covert, verbally or behaviorally expressed” (HPRS: DeRogatis, 1978, p. 2). It is scored on a seven point Likert-type scale ranging from absent (0) to extreme (6). A score of 0 represents “None” and indicates that the individual has only occasional bouts of irritability, anger, and hostile thoughts. A score of 3 represents “Moderate” and indicates that the individual is negativistic and uncooperative, and clearly reveals anger and aggression in her/his thoughts or behavior. Lastly, a score 4, 5 or 6 represents “Marked,” “Severe,” and “Extreme” levels of hostility and suggests that the patient is enraged, verbally assaultive, and physically combative.

Reliability and Validity

Given that this instrument is utilized in clinical practice and research as a standardized symptom checklist, little information exists in the literature with respect to reliability and validity of the HPRS (personal communication with National Computer Systems, October 1999). Two studies are reported, however, both of which found a significant correlation between self-report and therapist/physician assessment of symptoms. Perconte and Wilson (1994) found that therapist measures of pathology and distress on the HPRS and self-reports were significantly correlated in a group of 40 Vietnam combat veterans participating in a weekly outpatient PTSD therapy program.
Winokur, Guthrie, Rickels, and Siavash (1982) found a high rate of agreement between the HPRS and the self-report instrument, Hopkins Symptom Checklist (HSCL), for groups of patients and non-patients. The authors suggest that both the HSCL and the HPRS appeared to be of value in detecting anxiety and depression in non-psychiatric medical patients.

**Rorschach Aggression Variables**

Gacono and Meloy (1994) state that “when aggressive impulses produce intrapsychic tension...they are more likely to be articulated on the Rorschach” (p. 270). Several studies beginning in the late 1940’s have identified Rorschach variables for the prediction of aggression and hostility, and for differentiating between assaultive and non-assaultive groups of individuals (Elizur, 1949; Finney, 1955; Goldstein, 1997; Gordon, Zimet, & Fine, 1952; Levine, 1973; Rader, 1957; Rose & Bitter, 1980; Sommer & Sommer, 1958; Storment & Finney, 1953; Towbin, 1959). Other authors have continued to explore the utility and convergent validity of different Rorschach variables (Baity & Hilsenroth, 1999; Exner, 1985, 1986, 1993; Exner, Kazaoka & Morris, 1979, cited in Exner, 1993; Fowler, Hilsenroth, & Handler, 1995; Gacono, 1990; Gacono & Meloy, 1994; Hare, 1991; Hilsenroth, Hibbard, Nash, & Handler, 1993; Holt, 1977; Margolis, 1992; Meloy & Gacono, 1992; Saunders, 1991; Westen, 1990; White, 1998). The Rorschach aggression variables chosen for investigation in this study includes those proposed by Exner (1993), Gacono and Meloy (1994), and Holt (1977). In the following sections, the aggression variables will be presented by author. Following a discussion of the reliability and validity of each author’s set of variables is a description of the scoring system that was used.
Perhaps the most well-known Rorschach variable utilized to evaluate aggression thus far has been developed by Exner. Prior to 1985, there was no mention of an aggression variable in the Comprehensive System. In his 1985 workbook, Exner listed aggression under “Special Content Characteristics,” and stated that this new scoring category reflects “the characteristics of projection.” Currently, Exner (1993) defines aggressive movement (AG) as “any movement response in which the action is presently occurring and is clearly aggressive...for example: fighting, breaking, tearing, stalking, exploding, arguing, looking angrily, etc.” (p. 46). An example of this response might be “it looks like a bullet smashing through something.”

Exner (1985) states that his idea for aggressive movement grew out of Piotrowski’s work. Piotrowski (1957) discusses “assertive M” and how “M with aggressive content implies difficulties in assertiveness, as well as a desire to retain assertiveness in spite of severe difficulties” (p. 166). He believed that early in one’s life, frequently there were influences that could undermine expression of self-confident assertiveness. Given this, Piotrowski suggested that children might have more aggressive than compliant M responses. This does not appear to be true, however, for the normative data compiled in the Comprehensive System, (Exner, 1993).

What, then, does an aggressive response on the Rorschach measure? Exner (1993) states that:

an increased number of aggressive responses signifies an increased likelihood for aggressive behavior, either verbal or nonverbal, and that they also indicate attitudes towards others that are more negative and/or hostile than is customary. Quite likely, people with elevations in AG see the social environment as marked by aggressiveness, and they have incorporated that attitude or set, so that it has
become a feature of their own personality, and consequently a feature that marks some of their behavior (p. 528).

Unfortunately, Exner has only participated in two validity studies (Exner, Kazaoka, & Morris, 1979, cited in Exner, 1993; Kazaoka, Sloane, & Exner, 1978, cited in Exner, 1993) that have utilized the Comprehensive System to score such responses. This suggests the need for further validity studies using the AG response in the Rorschach Comprehensive System.

Research that has utilized this variable suggests that inpatients who were rated high for verbal and physical aggressiveness produced significantly more AG responses than those who were rated low for aggressiveness (Kazaoka, Sloane, & Exner, 1978, cited in Exner, 1993). In addition, Exner, Kazaoka, and Morris (1979, cited in Exner, 1993) found that in a sample of sixth grade children, those who received high scores for verbal and physical aggressiveness also produced significantly more AG responses. Finally, Exner (1993) reported on research that utilized outpatient records from a treatment process study in which 82 individuals were identified as having at least three AG scores on the Rorschach. A separate group of 82 patients was randomly drawn as a comparison group. Forty-one of the 82 patients with high AG scores exhibited hostility in at least two of three psychotherapy sessions compared to 15 patients from the comparison group. Additionally, the therapists of the participants with three or more AG scores reported that 51 of these individuals showed very hostile attitudes toward people in general compared to 22 persons in the comparison group (Baity & Hilsenroth, 1999).
**AgC, AgPast, and AgPot**

As the Comprehensive System (Exner, 1993) has become more widely utilized, it has become apparent that by restricting the aggression score to actions which are presently occurring, various categories of aggressive responses which may further identify and/or delineate degrees of aggression are probably being overlooked (Baity & Hilsenroth, 1999). Consequently, Meloy and Gacono (1992) have proposed four additional categories for scoring the aggressive response on the Rorschach.

1) **Aggressive Content (AgC)** – “Any content popularly perceived as predatory, dangerous, malevolent, injurious, or harmful, with the exclusion of responses scored as ‘Popular’ in the Comprehensive System” (Meloy & Gacono, 1992, p. 105). An example of this response would be “a lion,” “a shotgun,” or “it’s a battle axe” (Baity & Hilsenroth, 1999, p. 96).

2) **Aggressive Potential (AgPot)** – describes responses in which aggressive acts are about to happen. An example of this response [to Card I] would be “It looks like a dog that’s about to bite someone” (Meloy & Gacono, 1992, p. 105). Another example would be “they don’t know these crab-like creatures are about to lop their heads off” (Baity & Hilsenroth, 1999, p. 96).

3) **Aggressive Past (AgPast)** – “Any response in which an aggressive act has occurred or the object has been a target of aggression. An example of this response [to Card III] would be ‘It looks like an animal hanging from a rope with one leg cut off’” (Meloy & Gacono, 1992, p. 105). Another example would be “looks like a bug, someone used a drill press on him” (Baity & Hilsenroth, 1999, p. 96).

4) **Sado-Masochism (SM)** – “describes responses in which devalued, aggressive, or morbid content is accompanied by pleasurable affect expressed by the subject. An example of this response [to Card X] would be ‘It looks like two people torturing someone… they seem to be enjoying themselves’” (Meloy & Gacono, 1992, p. 107).

In order to determine the words to be included in the original aggressive content list as well as interrater and content validity, Meloy and Gacono (1992) asked mental health professionals and undergraduate female college students to rate 280 objects for
aggression. Of these objects, 240 were taken from the Comprehensive System Workbook
(Exner, 1985) and 40 were identified in Rorschach protocols of psychopathic individuals.
Of the 280 total objects, 85 were identified as matching the definition of AgC (described
above, listed in Appendix C) by a majority of at least one of the two rating groups.
Margolis (1992), however, did not find support for the hypothesis that the 85 objects
chosen for the AgC list were replicable and reliable. Since Margolis (1992) and Gacono
and Meloy (1994) found methodological flaws in the experimental design, her findings
were discounted. Based on 30 protocols obtained from incarcerated men with antisocial
personality disorder, Gacono and Meloy (1994) reported the interrater reliability scores
for the aggressive content variables as follows: AG = 92%, AgC = 95%, AgPast = 96%,
and AgPot = 100%. The interrater reliability scores for Sado-Masochism were “unable to
be determined due to the Rorschach examiner’s need to observe the examinee to score
this variable” (p. 266).

Given the conflicting information regarding the reliability scoring of AgC, White
(1998) assessed the criterion-related validity of Exner’s (1993) and Meloy and Gacono’s
(1992) aggression variables with a more stringent definition of aggressive content that
was suggested by Gacono and Meloy (1994). According to these criteria, all the items
that were not perceived as meeting the criteria as harmful, dangerous, or malevolent by a
majority of both groups in Meloy and Gacono’s (1992) original list were deleted.
Secondly, content which are considered to be “populars” in the Exner (1993) system were
not scored as AgC unless spoiled by addition of aggressive imagery (Baity, McDaniel, &
Hilsenroth, 1999; Gacono, personal communication, November, 1999; Viglione, personal
communication, January, 2000; White, 1998). White calculated interrater reliability to be
81% for AG, 73% for AgC, 86% for AgPast, and 50% for AgPot. In their study of reliability and validity of Rorschach aggression variables, Baity and Hilsenroth (1999) report both percentage agreement and Kappa coefficients (Kessel & Zimmerman, 1993) for interrater reliability in order to minimize the likelihood that high percentage agreements were due to chance scoring (AG: % agreement=98, $\kappa=.64$; AgC % agreement=99, $\kappa=.95$; AgPast % agreement=99, $\kappa=.79$; AgPot % agreement=100, $\kappa=1.0$).

Very little research has been conducted in determining the construct and concurrent validity of these aggression variables. Moreover, in the studies that have been reported in the literature thus far (e.g., Baity & Hilsenroth, 1999; Gacono (1988, 1990); Gacono & Meloy, 1991; Gacono, Meloy, & Berg, 1992; Goldstein, 1998; Margolis, 1992; Meloy & Gacono, 1992; White, 1998), all except Goldstein and Baity and Hilsenroth have studied Rorschach protocols from criminal subjects.

In studying construct validity, Gacono and Meloy (1994) compared the aggression variables on protocols from a sample of incarcerated men diagnosed with antisocial personality disorder. This sample was divided into psychopaths and non-psychopaths as determined by the Hare Psychopathy Checklist-Revised (Hare, 1991). Results revealed a trend toward greater frequencies of aggressive responses from the psychopathic group. In addition, when aggression scores from the incarcerated men were compared to a non-patient sample, both psychopaths and non-psychopaths had significantly greater occurrences of AgC, AgPast, and AgPot (Gacono & Meloy, 1994).

Baity and Hilsenroth (1999) investigated the extent to which those Rorschach variables used in their study (AG; Exner, 1993), (AgC, AgPast, & AgPot; Gacono &
Meloy, 1994) (A1 & A2; Holt, 1977) as well as MOR (Exner, 1993) are related to (a) one another, (b) the DSM-IV (APA, 1994) Cluster B personality disorder criteria, and (c) self-report measures of anger, aggression, and antisocial behavior. They found that AgC and MOR both contributed as non-redundant, significant predictors of the total number of antisocial personality disorder criteria ($r=.35, F[2,74]=5.0, p=.009$). In studying the relationship between these variables and the scales from the MMPI-2 (Butcher, Dahlstrom, Graham, Tellegen, & Kaemmer, 1989), AgPast was found to be a significant predictor of scores on the anger (ANG) scale ($r=.37, F[1,43]=7.0, p=.01$), and AgC was found to be a significant predictor of scores on the antisocial practices (ASP) scale ($r=.40, F[1,43]=8.0, p=.007$). These results suggest that a greater number of AgPast responses on the Rorschach are related to an increased score on the ANG scale. Moreover, the relationship between AgC and antisocial pathology is supported in two ways. The authors concluded that the AgC score appears to have a significant relation to both behavioral criteria of symptoms and a self-report measure of antisocial psychopathology (Baity & Hilsenroth, 1999).

White (1998) examined the relationship between level, frequency, and type of behavioral aggression; gender, diagnosis, type of criminal offense, status as a violent sexual offender and frequency of AG, AgC, AgPast, and AgPot in a sample of 391 criminal offenders. She was unable to find any significant relationships between measures of real-world aggressive behavior and the extended aggression scoring categories. Rosenstein (1992) investigated the relationship between different types of observed aggressive behavior and Rorschach findings in an adolescent inpatient population. Her sample consisted of 47 Rorschach protocols. She correlated numerous
Comprehensive System (Exner, 1993) variables as well as Gacono and Meloy's (1992) Rorschach aggression variables with different categories of observed aggression. Correlation and multiple regression analyses found that neither the AG score nor Gacono and Meloy's aggression scores correlated with any of the categories of observed aggression. A t-test comparing patients with aggressive versus non-aggressive chief complaints found, however, that the aggressive group gave a significantly (p < .05) higher number of aggression scores when both Exner (1993) and Gacono and Meloy's (1992) aggression scoring approaches were used.

**Scoring**

For each subject, the total number of responses containing aggression variables were recorded along with totals for each of the Rorschach aggression variables (AG, AgC, AgPast, & AgPot). The scoring template and guidelines for the Rorschach aggression variables proposed by Gacono and Meloy (1992) are listed in Appendix C.

**Mutuality of Autonomy Scale**

The Mutuality of Autonomy Scale (MOA) is popular in empirical work with children and adolescents (Donahue & Tuber, 1993; Leifer et al., 1991; Tuber, 1989; Tuber & Coates, 1989), as well as adults (Berg, Packer, & Nunno, 1993; Blatt, Ford, Berman, Cook, & Meyer, 1988; Blatt, Tuber, & Auerbach, 1990; Strauss & Ryan, 1987). The MOA focuses on developmental movement toward separation-individuation by assigning scores to human, animal, and inanimate object relationships described in Rorschach responses. Theoretically anchored in the work of Kernberg (1966, 1976), Kohut (1966, 1971), and Mahler (1963, 1971, 1974), this Rorschach-based scale emphasizes developmental progression along a continuum that "corresponds to the
various stages in the development of object relations, ranging from primary narcissism to empathic object-relatedness” (Urist, 1977, p. 3). The scores are based on a 7-point continuum ranging from “mutual empathic relatedness” at the most adaptive to “malevolent engulfment and destruction” at the least adaptive end (Exner, 1995, p. 78).

The concept of object representations as perceived on the Rorschach has received increased attention in the psychoanalytic, object relations, and testing literature over the past thirty years. Mayman (1967) and a number of psychologists (Allen, 1977; Athey, 1974; Lerner & Lerner, 1980; Piotrowski, 1957; Sugarman, 1977) have focused attention on the usefulness of object relations concepts in diagnostic assessment of a broad variety of patients. Colleagues and students of Mayman have drawn on the work of British and American object relations theorists to measure the thematic qualities of the object relations paradigms expressed in the content of Rorschach responses (Urist, 1977), early memories (Mayman & Faris, 1960; Ryan, 1970), and dreams (Hatcher & Krohn, 1980; Krohn & Mayman, 1974). Blatt and his colleagues have assessed the structural dimensions of object representations from a developmental perspective on the Rorschach (Blatt, Brenneis, Schimek, & Glick, 1976; Spear, 1980), in parental descriptions (Blatt, Wein, Chevron, & Quinlan, 1979), and in dreams (Brenneis, 1971). Two comprehensive approaches based on differing theories have emerged, however, as valid and effective in assessing the concept of developmental capacity for object relations and the structure of an individual’s self and object world.

Blatt and his colleagues (Blatt & Ford, 1994; Blatt & Lerner, 1983; Blatt, Tuber, & Auerbach, 1990; Blatt et al., 1976) developed an assessment approach that incorporates tenets of developmental psychoanalysis (Freud, A., 1965; Jacobson, 1964;
Mahler, Pine, & Bergman, 1975) and cognitive developmental psychology (Piaget, 1954, Werner, 1957; Werner & Kaplan, 1963). This model emphasizes definition and understanding of cognitive parameters and the structural aspects of object representations. The model attempts to integrate facets of cognitive psychology, contemporary object relations theory, developmental psychoanalysis, and ego psychology (Kelly, 1997). "Emphasizing structural characteristics, they have considered (a) the type of figure represented, be it full human, quasi-human, or human/quasi-human detail; (b) the perceptual and functional characteristics of the figure presented, such as its sex, age, size, clothing, etc.; and (c) the nature of integration between the object and its activity (i.e., active or passive) in terms of the orthogenetic principle of increasing differentiation, articulation, and integration" (Goldberg, 1987, pp. 84-85). Blatt’s Developmental Analysis of the Concept of the Object Scale (DACOS: Blatt, Brenneis, Schimek, & Glick, 1976) has been used empirically by Blatt and Berman (1984), Blatt and Lerner (1983), Blatt and Ford (1994), Kavanagh (1985), and Spear and Lapidus (1980), among others.

Equally important and impressive are the contributions and research generated by Mayman and colleagues at Michigan (Krohn, 1972; Krohn & Mayman, 1974; Mayman, 1967, 1968; Mayman & Ryan, 1972; Ryan, Avery, & Grolnick, 1985; Urist, 1977). In contrast to the previously mentioned efforts, weighted toward investigation and definition of structural aspects of the self and others, this approach stresses the concept of ego state (Federn, 1952) as a central theoretical organizing principle, along with the theory of psychosexual development. Anchored in ego psychological theories, Mayman’s efforts were also influenced by developmental psychoanalysis and reflect Mahler’s (1963;
Mahler, Pine, & Bergman, 1975) and Kernberg’s (1966, 1985) theoretical and clinical formulations regarding object relations functioning. Finally, the influence of self psychology provides a central theoretical reference point, as represented by the writings of Kohut (1966, 1971, 1977). From this perspective, attention has focused on the thematic components of object interactions perceived in early memories, dreams, and/or Rorschach responses as representations of prototypical paradigms of inner object relations (Krohn, 1972; Krohn & Mayman, 1974; Mayman, 1967, 1968; Ryan, 1973; Ryan, Avery, & Grolnick, 1985; Urist, 1977; Urist & Shill, 1982).

A critical distinction between Blatt’s and Mayman’s work lies in the emphasis paid to the assessment of the content and affective themes of object representations as embodied in the work of Mayman and colleagues. This emphasis is a deliberate and distinct attempt to move away from a structural approach, gravitating toward one stressing a more humanistic direction by way of the interpretation of object representation material (Kelly, 1997).

Thus, several scales which assess the increasing developmental level of subjects’ interpersonal capacities by assessing their representational worlds have emerged from this framework. Both the Developmental Analysis of the Concept of the Object Scale (DACOS) developed by Blatt and associates (Blatt, et al., 1976) and the Mutuality of Autonomy Scale (MOA) developed by Urist (1977) and colleagues (Urist & Shill, 1982) represent attempts to define and articulate structural and relational aspects of the self and others. Spear and Sugarman (1984) note that the scale points have appeared to correspond closely to the autistic, symbiotic, and separation-individuation phases of
object relations development articulated by Mahler (1963; Mahler, Pine, & Bergman, 1975).

Of all the object representation scales from both systems, the only one that has permitted the assessment of developmental level of object relations through the evaluation of percepts which may be animate, but not necessarily human, has been the Mutuality of Autonomy Scale (MOA). Therefore, since the object relations to be assessed were those of hospitalized adolescents for whom the perception of animate, but not necessarily human, figures was developmentally expected (Exner & Weiner, 1994; Hertz, 1935, 1940), the MOA became the instrument of choice.

**Scoring**

The MOA (Appendix D) was developed to evaluate the thematic content of kinetic responses depicted on the Rorschach. Responses in which a relationship is stated or implied are scored by rating all human, animal, and inanimate movement along a 7-point ordinal scale continuum. The continuum ranges from 1 (positive, empathic, separate, and autonomous relatedness) to 7 (representations of relatedness characterized by malevolence, overpowering, envelopment, and fear of incorporation) (Kelly, 1997).

Scale points 1 and 2, the highest and healthiest levels of object representation, are assigned to responses that depict autonomous figures that are either reciprocally interactive or engaged in parallel activities, respectively. The score of 3 is given to percepts that depict an absence of autonomy in the interaction, such as one figure leaning on another. The score of 4 indicates increasing absence of autonomy and is given to percepts in which a figure is seen as being merely a reflection, imprint, or mirror image of the other. Developmentally lower and more pathological object relations are ascribed
scores of 5, 6, or 7. These ratings apply to percepts that portray not only the absence of mutuality and autonomy, but also an increasing lack of differentiation, boundary intrusion, and imbalance of power or control in the relationships between the figures (Goldberg, 1987).

While the types of final scores derived for subjects have varied across studies, this investigation is based on the scoring recommended by Urist (1977) and Tuber (1989a, 1989b) and outlined extensively for use with adolescents in Kelly (1997). The lowest and highest MOA scores indicate the individual’s current range of object relations functioning. The mean or average MOA score indicates the individual’s currently dominant level of self-object differentiation and mutuality of autonomy.

Although Urist (1977; Urist & Shill, 1982) has indicated acceptable reliability for the scale, interrater reliability were evaluated for the three scores obtained (lowest, highest, & mean MOA, refer to the Procedures section of this chapter). Two raters independently scored each Rorschach protocol on the MOA. The scoring template and guidelines for the MOA are listed in Appendix D.

Reliability and Validity

The initial studies of Urist (1977; Urist & Shill, 1982) aimed to establish construct validity—i.e., the capacity of the scale to assess “developmentally crucial aspects of the structure of the patients’ object relations” (Urist, 1977, p. 3). In the earlier study (Urist, 1977), MOA scale ratings were correlated with independent measures of mutuality of autonomy obtained from a written autobiography and ward staff ratings. While the results based on this sample of 40 inpatients (ages 17 to 57, 18 males & 22 females) indicated a very high correlation among the measures, Urist (1977, p. 8) noted that his
use of Fisher’s Z to test the significance of differences among his three multiple R’s yielded an incorrect statistic that needed to be treated conservatively. Even so, there appeared to be sufficient consistency among the variables to indicate that: (a) there was an aspect of a patient’s capacity for object relations that presented across a range of measures, and (b) the MOA scale was able to assess this aspect in a measurable way.

Since 1982, the MOA scale has obtained additional validation through its use in studies with both clinical and non-clinical, male and female, as well as child, adolescent, and adult subjects (Goldberg, 1989; Lubow, 1998; Miller, 1998; Pinto, 1998; Ryan, Avery, & Grolnick, 1985; Thomas, 1987). Tuber (1983) used the scale as a predictor of later adjustment (psychiatric re-hospitalization or its avoidance) in a child clinical population. The MOA scores were found to be significantly related to the outcome criterion for boys (N=58) on their lowest score (p<.003) and highest score (p<.008), and for girls (N=12) on their median score (p<.047). Indicating the need for further research with the scale on a large sample of girls, Tuber conjectured that the greater effectiveness of the MOA scale as a predictor with males might have been a function of the small female sample size and/or the relative homogeneity of the two female groups.

Investigations with adult clinical populations in which the MOA scale was used as a measure of object representation generally revealed variable findings. Overall, there is ample indication of reasonably good construct validity. Harder, Greenwald, Wechsler, and Ritzler (1984), in a nomothetic study comparing 59 schizophrenic, depressed, and non-psychotic inpatients, found that MOA scale results were significantly correlated with ratings of severity of psychopathology derived from checklists and clinical assessments based on criteria related to the DSM-III (APA, 1980). Unfortunately, this study used
only a four-card Rorschach (Cards I, II, VI, & VIII). As a result, its findings that MOA scale scores were significantly related to the subject’s classification of diagnostic severity (r=.431, p<.001) and degree of maximum psychosis (r=.406, p<.001) but not her/his global assessment level (r=.101, n.s.) have to be viewed speculatively.

In contrast, Spear and Sugarman’s study (1984) presented a thorough exploration of internalized object relations as assessed both on a version of Urist’s MOA scale (revised into a 10-point version for greater sensitivity in the borderline range) and on Blatt’s Developmental Analysis of the Concept of the Object Scale (DACOS; Blatt et al., 1976) in a young adult clinical population (N=54). Focusing primarily on borderline psychopathology as defined by Kernberg (1976, 1985), the authors attempted to clarify and differentiate borderline subtypes on the basis of the two scales. Tukey-paired-comparisons done as follow-up analysis to the analyses of covariance on four measures of mutuality of autonomy (mean, worst, best, and range scores) yielded significant differences between the “infantile” and the “obsessive-paranoid” borderline groups: Mean, F(2,52)=3.76, p<.05; Worst, F(2,52)= 7.71, p<.01; Range, F(2,52)=6.33, p<.01. Moreover, no significant differences were observed on any of the measures between the “obsessive-paranoid” borderlines and the schizophrenics, although the “infantiles” proved significantly more developmentally advanced than the schizophrenics on both their mean and their worst thematic scores. The authors concluded that while their findings supported Kernberg’s emphasis on borderline psychopathology as a structural diagnosis, a global borderline classification could not be considered sufficiently discriminating.
Ryan, Avery, and Grolnick's (1985) study explored construct validity of the MOA scale with a non-clinical child population of fourth to sixth graders (N=60). Children with developmentally higher mean object relations scores were perceived by their teachers to have (a) had higher self-esteem ($r=.26$, $p<.05$); (b) worked better with others ($r=-.33$, $p<.05$); and (c) demonstrated better attention ($r=-.33$, $p<.05$). Discriminant validity for these teacher ratings was supported by the non-significant relationship between the MOA scale and teacher ratings of intelligence and achievement. Suggesting that current patterns of object relations might influence children's school-related outcomes, mean and highest scale scores were also found to be related to student grades ($p<.05$), but not to WISC-R scores. Ryan, Avery, and Grolnick also found that children with developmentally lower scores were more likely to perceive powerful others or unknown sources as controlling outcomes, particularly in the social sphere on the self-report Multidimensional Measure for Children's Perceptions of Control (MMCPC: Ryan & Grolnick, 1984, unpub.). They found the following correlations: ($r=0.32$, $p<.05$) for the mean score for powerful others, ($r=0.29$, $p<.05$) for the mean score for unknown sources-cognitive, and ($r=.35$, $p<.01$) for the mean score for unknown sources-social. In effect, these findings suggest that more primitive internalized object relations may set the stage for enduring depressogenic attributional styles.

Research focusing on interrater reliability with adult subjects revealed fairly consistent results. Urist (1977) found that interrater reliability ranged from 0.52 (for exact agreement) to 0.86 (agreement within 1 point). Stricker and Healey (1990), in reviewing MOA interrater reliability with adult subjects, reported that most studies found that 1-point agreement was generally reflected by results ranging from 0.72 to 0.98. Blatt
et al. (1990), in commenting on the issue of reliability with respect to the MOA, concluded that it appears to be a reliable and useful measure with children, adults, and adolescents in both non-clinical and clinical settings (Kelly, 1997).

In conclusion, extensive supportive empirical findings have suggested the fruitfulness of the MOA as a research tool. In addition, its strong theoretical framework has merited its choice as the scoring system for assessment of developmental level of object relations functioning.

Method of Data Analysis

Because the purpose of this study was to determine whether or not significant differences exist between two groups on several dependent variables, a comparison group design was employed. Thus, the Rorschach scores for projected aggression and developmental level of object relations functioning were analyzed through the use of a multivariate analysis of variance. Multivariate analysis of variance is the preferred statistical technique used to test the significance of differences between groups on multiple dependent variables that are correlated. Moreover, this technique could best answer the question set forth in the purpose of the study; namely, can the Rorschach measures of projected aggression and developmental level of object relations functioning significantly differentiate between groups of aggressive and non-aggressive hospitalized adolescents.

According to Tabachnick and Fidell (1989), the goal of multivariate analysis is to determine if mean differences among groups on a series of dependent variables are likely to have occurred by chance. This technique allows for the analysis of the difference between groups while at the same time, accounting for intercorrelations among the
dependent variables. This sort of analysis therefore improves the likelihood of uncovering relationships that may exist between groups as well as the interactions between the variables. In addition, a multivariate analysis technique has the advantage over univariate analysis of multiple dependent variables because it protects against the excessive increase Type I and Type II errors (Tabachnick & Fidell).

A correlation matrix was first computed to examine the relationships between the dependent variables (demographic, descriptive, and Rorschach aggression and developmental level of object relations). Given that a demographic (age at admission) and a descriptive (FSIQ) variable were correlated with the study variables, multivariate analysis of covariance (MANCOVA) was chosen to test the hypotheses. Age at Admission and Full-scale IQ (FSIQ) were used as covariates to control for the effects of these variables on the dependent variables.

Data were evaluated in terms of the assumptions for a multivariate analysis of variance design. This included occurrence of outliers, evaluation of normality, multicollinearity, singularity, and homogeneity of variance. The study sample size (200 subjects) satisfies the minimum number of subjects required for a multivariate analysis according to the guidelines set forth in Tabachnick and Fidell (1989). This formula is based upon a power level of .80, an alpha level of .05 (two-tailed test), and an effect size of .25. A small effect was anticipated because: (a) the psychological constructs and their Rorschach measures are inferential, (b) the possibility that the aggressive behavior noted in the subject's medical chart is transient, and (c) the possibility of inaccurate therapist reports of hostility. It was assumed that although the relationship between projected
aggression, developmental level of object relations functioning, and aggressive behavior might be relatively small and hard to detect, it would be real and significant.

In addition to the analyses above, basic descriptive statistics were generated on demographic variables including subjects’ age, gender, ethnicity, and FSIQ. Frequency distributions were presented on these variables and include the number and percent of subjects at each category of the variable.
CHAPTER IV

RESULTS

Introduction

The present study explored the relationship between a recent history of aggressive behavior, projected aggression, and developmental level of object relations functioning in hospitalized adolescents between the ages of 13 and 18. The empirical focus was on the relationship between recent behavior and projections of internal representations and images. The general prediction was that projected aggression and developmental levels of object relations functioning are both different but related constructs, and that both of these constructs will differentiate between hospitalized adolescents with a recent history of aggressive behavior and those without such a history. In addition, an attempt was made to explore salient differences in the relationship between aggressive behavior, projected aggression, and developmental level of object relations functioning in female and male adolescents.

The purpose of this chapter is to present the statistical analysis results on the data that were analyzed as a part of this study. The chapter begins with a complete description of basic descriptive statistics that were generated on the subjects' demographic variables. Descriptive data are also presented on the primary study variables. This is followed by the results of hypotheses testing and results in terms of gender differences.
Descriptive Statistics on Demographic Variables

Data for the 200 adolescents (age range=13 to 18; \(X = 14.81\)) were selected from a large archival database that included standard psychological test data on 1,000 adolescent participants collected from June 1995 to June 1999. The adolescents included in this archival database were admitted as patients to a private psychiatric hospital in New York State. The sample was divided into two groups—Aggressive and Non-Aggressive—depending on whether or not they (a) had a recent history of aggressive behavior (as recorded in their medical chart), and (b) were perceived as hostile and aggressive at admission. Each group contained 100 adolescents (50 females and 50 males).

A breakdown of the sample by ethnicity is presented in Table 5. This table indicates that a majority of the entire subject population 142 (71%) were White, 26 subjects (13%) were Black, 30 (15%) were Hispanic, and two (1%) were of mixed racial background. In the Aggressive group 65 were White, 18 were Black, 17 were Hispanic, and none were of mixed racial background. In the Non-Aggressive group 77 were White, eight were Black, 13 were Hispanic, and two were of mixed racial background.

Table 6 presents a frequency distribution of the subjects’ ages at admission. The Aggressive group contained 100 subjects (ages 13 to 17; \(X = 14.33\)), as did the Non-Aggressive group (ages 13 to 18; \(X = 15.28\)). The data in this table indicate that most of the 200 subjects (182, 91%) were 16 years of age were younger. Only 17 subjects (8.5%) were 17-years-old and only one subject (0.5%) was 18-years-old. In the Aggressive group, 32 were 13-years-old, 25 were 14-years-old, 24 were 15-years-old, 16 were 16-years-old, and three were 17-years-old. In the Non-Aggressive group, 11 were 13-years-
old, 11 were 14-years-old, 33 were 15-years-old, 30 were 16-years-old, 14 were 17-years-old, and one was 18-years-old.

The subjects’ Full Scale IQ (FSIQ) values are presented in Table 7. FSIQ values ranged from 70 to 136. Overall, twenty-six (13%) subjects had IQs in the Borderline range (70 to 79), 39 (19.5%) subjects had IQs in the Low Average range (80 to 89), 91 (47.5%) subjects had IQs in the Average range (90 to 109), 26 (13%) subjects had IQs in the High Average range (110 to 119), and 14 (7%) subjects had IQs in the Superior range (120 to 139). In the Aggressive group, 19 subjects had IQ’s in the Borderline range, 23 in the Low Average range, 44 in the Average range, seven in the High Average range, and seven in the Superior range. In the Non-Aggressive group, seven had IQ’s in the Borderline range, 16 in the Low Average range, 47 in the Average range, 19 in the High Average range, and seven in the Superior range.
### Table 5

**Frequency Distribution on Ethnicity**

<table>
<thead>
<tr>
<th>Ethnicity</th>
<th>Aggressive</th>
<th></th>
<th>Non-Aggressive</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>White</td>
<td>65</td>
<td>65</td>
<td>77</td>
<td>77</td>
<td>142</td>
<td>71</td>
</tr>
<tr>
<td>Black</td>
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<td>18</td>
<td>8</td>
<td>8</td>
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<td>13</td>
</tr>
<tr>
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<td>13</td>
<td>13</td>
<td>30</td>
<td>15</td>
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<tr>
<td>Other</td>
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<td>2</td>
<td>2</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>200</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Table 6

Frequency Distribution on Age at Admission

<table>
<thead>
<tr>
<th>Age</th>
<th>Aggressive</th>
<th>Non-Aggressive</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
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</tr>
<tr>
<td>13</td>
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</tr>
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<td>0</td>
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</tr>
<tr>
<td>Total</td>
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<td>100</td>
<td>100</td>
</tr>
<tr>
<td>FSIQ Level</td>
<td>Aggressive N</td>
<td>Aggressive %</td>
<td>Non-Aggressive N</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------</td>
<td>--------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Borderline 70-79</td>
<td>19</td>
<td>19.0</td>
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</tr>
<tr>
<td>Low Average 80-89</td>
<td>23</td>
<td>23.0</td>
<td>16</td>
</tr>
<tr>
<td>Average 90-109</td>
<td>44</td>
<td>44.0</td>
<td>47</td>
</tr>
<tr>
<td>High Average 110-119</td>
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<td>19</td>
</tr>
<tr>
<td>Superior 120-139</td>
<td>7</td>
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<td>7</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Note:** FSIQ = Full Scale IQ value
Tables 8 and 9 present the frequency distributions of the Aggressive and Non-Aggressive groups by age and gender. In the Aggressive group (see Table 8), 11 percent of the 13-year-old subjects were female and 21 percent were male, 15 percent of the 14-year-olds were female and 10 percent were male, 13 percent of the 15-year-olds were female and 11 percent were male. Finally, 10 percent of the 16-year-olds were female and six (6%) percent were male, and one (1%) of the 17-year-old subjects was female and two (2%) percent were male. In the Non-Aggressive group (see Table 9), 7 percent of both the 13- and 14-year-old subjects were female and four (4%) percent were male. Nineteen (19%) percent of the 15-year-olds were female and 14 percent were male. Lastly, 12 percent of the 16-year-olds were female and 18 percent were male, and five (5%) percent of the 17-year-olds were female and nine (9%) percent were male. One male subject (1%) was 18-years-old.
Table 8

**Distribution of the Aggressive Group by Age and Gender**

<table>
<thead>
<tr>
<th>Age</th>
<th>Females N</th>
<th>Females %</th>
<th>Males N</th>
<th>Males %</th>
<th>Total N</th>
<th>Total %</th>
</tr>
</thead>
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<td>0</td>
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</tr>
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<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

**Note:** Age = Age at Admission
Table 9

Distribution of the Non-Aggressive Group by Age and Gender

<table>
<thead>
<tr>
<th>Age</th>
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<th>Males</th>
<th>Total</th>
</tr>
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</tbody>
</table>

Note: Age = Age at Admission
Descriptive Statistics on Study Variables

Tables 10 through 13 present frequency distributions on the four Rorschach aggression variables: (a) aggressive movement (AG; Exner, 1993), (b) aggressive content (AgC; Meloy & Gacono, 1992), (c) aggressive past (AgPast; Meloy & Gacono), and (d) aggressive potential (AgPot; Meloy & Gacono). The data in Table 10 indicate that 92 subjects in the Aggressive group and 90 subjects in the Non-Aggressive group had Rorschach protocols containing one or fewer AG scores. While Table 11 indicates a little more dispersion in AgC than AG, AgPast, and AgPot, still 77 Aggressive subjects and 72 Non-Aggressive subjects had Rorschach protocols containing four or fewer AgC scores. Finally, Table 12 indicates that 88 Aggressive and 87 Non-Aggressive subjects had one or fewer AgPast scores, and Table 13 indicates that 98 Aggressive and 99 Non-Aggressive subjects had one or fewer AgPot scores.
Table 10

Frequency Distribution on Aggressive Movement (AG)

<table>
<thead>
<tr>
<th># AG</th>
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<th>Total</th>
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<td>%</td>
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<td>4.0</td>
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<td>8.0</td>
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<td>1.0</td>
<td>3</td>
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<td>2.0</td>
<td>1</td>
<td>1.0</td>
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</tr>
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<td>Total</td>
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<td>100</td>
<td>100</td>
<td>100</td>
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</table>

Note: # = number
Table 11

Frequency Distribution on Aggressive Content (AgC)

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<th>Non-Aggressive</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
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<td>2.0</td>
<td>3</td>
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<td>0.5</td>
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<td>1.0</td>
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<td>2</td>
<td>1.0</td>
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</table>

Note. # = number
Table 12

Frequency Distribution on Aggressive Past (AgPast)

<table>
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<th># AgPast</th>
<th>Aggressive</th>
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<th>Non-Aggressive</th>
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<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
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<td>62.0</td>
<td>126</td>
<td>63.0</td>
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<td>24.5</td>
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<td>2</td>
<td>9</td>
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<td>19</td>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>200</td>
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</tr>
</tbody>
</table>

Note: # = number
Table 13

Frequency Distribution on Aggressive Potential (AgPot)

<table>
<thead>
<tr>
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<th>Aggressive</th>
<th></th>
<th>Non-Aggressive</th>
<th></th>
<th>Total</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
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<td>8.0</td>
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<td>6.0</td>
<td>14</td>
<td>7.0</td>
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<tr>
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<td>2.0</td>
<td>1</td>
<td>1.0</td>
<td>3</td>
<td>1.5</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>200</td>
<td>100</td>
</tr>
</tbody>
</table>

Note: # = number
Tables 14 through 16 present frequency distributions on the three object relations variables: MOA mean, low, and high (MOA Mean, MOA Low, MOA High; Urist, 1977; Urist & Shill, 1982; Tuber, 1992). The data in Tables 14 and 15 resemble a normal curve. The data in Table 14 also suggest that the MOA Mean values are similar for both the Aggressive and Non-Aggressive subjects—suggesting that these scores do not discriminate between the two groups. According to these data, over half the subjects had MOA Mean scores between 2.00 and 3.99. Thirty-seven (37%) of the Aggressive and 40% of the Non-Aggressive subjects had a MOA Mean score between 2.00 and 2.99, and 29% of the Aggressive and 27% of the Non-Aggressive subjects had MOA Means between 3.00 and 3.99. Table 15 indicates that nearly 95% of the Aggressive and Non-Aggressive subjects had MOA Low scores below 2.99. Sixty-three percent (63%) of the Aggressive and 66% of the Non-Aggressive subjects had MOA Low scores between 1.00 and 1.99, and 25% of the Aggressive and 26% of the Non-Aggressive subjects had MOA Lows between 2.00 and 2.99. While the data shown in Table 16 do not appear to resemble a normal curve, they do indicate that the MOA High scores between the two groups are similar. These data indicate that 32% of the Aggressive and 33% of the Non-Aggressive subjects had MOA High values between 6.00 and 6.99.
Table 14

Frequency Distribution on MOA Mean Scores

<table>
<thead>
<tr>
<th>MOA Mean</th>
<th>Aggressive N</th>
<th>%</th>
<th>Non-Aggressive N</th>
<th>%</th>
<th>Total N</th>
<th>%</th>
</tr>
</thead>
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<td>3.0</td>
<td>9</td>
<td>4.5</td>
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<tr>
<td>1.00 - 1.99</td>
<td>17</td>
<td>17.0</td>
<td>16</td>
<td>16.0</td>
<td>33</td>
<td>16.5</td>
</tr>
<tr>
<td>2.00 - 2.99</td>
<td>37</td>
<td>37.0</td>
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<td>40.0</td>
<td>77</td>
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<td>27.0</td>
<td>56</td>
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<td>4.00 - 4.99</td>
<td>7</td>
<td>7.0</td>
<td>11</td>
<td>11.0</td>
<td>18</td>
<td>9.0</td>
</tr>
<tr>
<td>5.00 - 5.99</td>
<td>2</td>
<td>2.0</td>
<td>3</td>
<td>3.0</td>
<td>5</td>
<td>2.5</td>
</tr>
<tr>
<td>6.00 - 6.99</td>
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<td>2.0</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>7.00</td>
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<td>100</td>
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<td>100</td>
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</tbody>
</table>
### Frequency Distribution on MOA Low Scores

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</thead>
<tbody>
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<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>0 – 0.99</td>
<td>6</td>
<td>6.0</td>
<td>3</td>
<td>3.0</td>
<td>9</td>
<td>4.5</td>
</tr>
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<td>64.5</td>
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<td>25.5</td>
</tr>
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<td>3.00 – 3.99</td>
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<td>3</td>
<td>3.0</td>
<td>4</td>
<td>2.0</td>
</tr>
<tr>
<td>4.00 – 4.99</td>
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<td>2.0</td>
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<td>1.0</td>
<td>3</td>
<td>1.5</td>
</tr>
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<td>1.0</td>
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Table 16

Frequency Distribution on MOA High Scores

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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
<td>N</td>
<td>%</td>
</tr>
<tr>
<td>0 – 0.99</td>
<td>6</td>
<td>6.0</td>
<td>3</td>
<td>3.0</td>
<td>9</td>
<td>4.5</td>
</tr>
<tr>
<td>1.00 – 1.99</td>
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<td>0</td>
<td>0</td>
<td>2</td>
<td>1.0</td>
</tr>
<tr>
<td>2.00 – 2.99</td>
<td>18</td>
<td>18.0</td>
<td>19</td>
<td>19.0</td>
<td>37</td>
<td>18.5</td>
</tr>
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<td>7.5</td>
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<td>14.0</td>
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<td>100</td>
<td>100</td>
<td>100</td>
<td>200</td>
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</tr>
</tbody>
</table>
Table 17 presents the means and standard deviations on the demographic, aggression, and object relations variables. The data in this table indicate that significant mean differences were found between the Aggressive and Non-Aggressive groups on Age at Admission and FSIQ. For Age at Admission, the mean age for the Non-Aggressive group was significantly higher than the mean age of the Aggressive group (15.28 vs. 14.33). Additionally, the mean FSIQ value for the Non-Aggressive group was significantly higher than the mean FSIQ for the Aggressive group (101.46 vs. 93.23).
Table 17

Means and Standard Deviations on Age, FSIQ, Aggression, and Object Relations Variables

<table>
<thead>
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<th>Variable</th>
<th>Aggressive X</th>
<th>SD</th>
<th>Non-Aggressive X</th>
<th>SD</th>
<th>Total X</th>
<th>SD</th>
<th>t</th>
<th>df</th>
<th>Sign.</th>
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<td>101.46</td>
<td>14.26</td>
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</tr>
<tr>
<td>AgC</td>
<td>3.35</td>
<td>2.83</td>
<td>3.43</td>
<td>2.42</td>
<td>3.39</td>
<td>2.63</td>
<td>0.21</td>
<td>198</td>
<td>.83</td>
</tr>
<tr>
<td>AgPast</td>
<td>0.51</td>
<td>0.78</td>
<td>0.54</td>
<td>0.80</td>
<td>0.53</td>
<td>0.79</td>
<td>0.26</td>
<td>198</td>
<td>.78</td>
</tr>
<tr>
<td>AgPot</td>
<td>0.12</td>
<td>0.38</td>
<td>0.08</td>
<td>0.31</td>
<td>0.01</td>
<td>0.35</td>
<td>0.81</td>
<td>198</td>
<td>.41</td>
</tr>
<tr>
<td>MOA Mean</td>
<td>2.62</td>
<td>1.19</td>
<td>2.68</td>
<td>1.04</td>
<td>2.65</td>
<td>1.12</td>
<td>0.35</td>
<td>198</td>
<td>.72</td>
</tr>
<tr>
<td>MOA Low</td>
<td>1.41</td>
<td>1.02</td>
<td>1.36</td>
<td>0.73</td>
<td>1.38</td>
<td>0.88</td>
<td>0.39</td>
<td>198</td>
<td>.69</td>
</tr>
<tr>
<td>MOA High</td>
<td>4.15</td>
<td>1.91</td>
<td>4.42</td>
<td>1.80</td>
<td>4.28</td>
<td>1.86</td>
<td>1.02</td>
<td>198</td>
<td>.30</td>
</tr>
</tbody>
</table>

Note: Age = Age at Admission; FSIQ = Full Scale IQ
Table 18 shows the means and standard deviations of the variables broken down for males and females across the Aggressive and Non-Aggressive groups. The data depicted in this manner show a comparison of the main effect of group and gender.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Aggressive Females</th>
<th>Aggressive Males</th>
<th>Aggressive Total</th>
<th>Non-Aggressive Females</th>
<th>Non-Aggressive Males</th>
<th>Non-Aggressive Total</th>
<th>Total Females</th>
<th>Total Males</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>X</td>
<td>SD</td>
<td>X</td>
<td>SD</td>
<td>X</td>
<td>SD</td>
<td>X</td>
<td>SD</td>
</tr>
<tr>
<td>Age</td>
<td>14.50</td>
<td>1.11</td>
<td>14.16</td>
<td>1.22</td>
<td>14.33</td>
<td>1.17</td>
<td>15.02</td>
<td>1.17</td>
</tr>
<tr>
<td>AG</td>
<td>0.38</td>
<td>0.68</td>
<td>0.37</td>
<td>0.77</td>
<td>0.40</td>
<td>0.83</td>
<td>0.42</td>
<td>0.69</td>
</tr>
<tr>
<td>AgC</td>
<td>3.39</td>
<td>2.90</td>
<td>3.30</td>
<td>2.74</td>
<td>3.35</td>
<td>2.83</td>
<td>3.04</td>
<td>1.91</td>
</tr>
<tr>
<td>AgPast</td>
<td>0.42</td>
<td>0.68</td>
<td>0.54</td>
<td>0.74</td>
<td>0.51</td>
<td>0.78</td>
<td>0.46</td>
<td>0.68</td>
</tr>
<tr>
<td>AgPot</td>
<td>0.14</td>
<td>0.45</td>
<td>0.10</td>
<td>0.30</td>
<td>0.12</td>
<td>0.38</td>
<td>0.10</td>
<td>0.36</td>
</tr>
<tr>
<td>MOA Mean</td>
<td>2.59</td>
<td>1.01</td>
<td>2.64</td>
<td>1.35</td>
<td>2.62</td>
<td>1.19</td>
<td>2.57</td>
<td>0.95</td>
</tr>
<tr>
<td>MOA Low</td>
<td>1.26</td>
<td>0.56</td>
<td>1.46</td>
<td>1.02</td>
<td>1.41</td>
<td>1.02</td>
<td>1.36</td>
<td>0.60</td>
</tr>
<tr>
<td>MOA High</td>
<td>4.08</td>
<td>1.86</td>
<td>4.22</td>
<td>1.97</td>
<td>4.15</td>
<td>1.91</td>
<td>4.30</td>
<td>1.71</td>
</tr>
</tbody>
</table>

Note: Age = Age at Admission; FSIQ = Full Scale IQ
Table 19 shows the results of a Chi² analysis \( (X^2) \) that was conducted to examine the distribution of ethnicity in the Aggressive and Non-Aggressive groups. Two subjects whose ethnicity was identified as "Other" were withheld from the analysis as their inclusion would have resulted in two cells with expected values of less than five, which is not recommended when conducting a Chi² analysis (Tabachnick & Fidell, 1989).

Table 19

<table>
<thead>
<tr>
<th>Group</th>
<th>White (Obs.)</th>
<th>Black (Obs.)</th>
<th>Hispanic (Obs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Expect.)</td>
<td>(Expect.)</td>
<td>(Expect.)</td>
<td></td>
</tr>
<tr>
<td>Aggressive</td>
<td>65 (71.7)</td>
<td>18 (13.1)</td>
<td>17 (15.2)</td>
</tr>
<tr>
<td>Non-Aggressive</td>
<td>77 (70.3)</td>
<td>8 (12.9)</td>
<td>13 (14.8)</td>
</tr>
</tbody>
</table>

*Note.* Obs. = Observed Values; (Expect.) = Expected Values; \( X^2 = 5.37, df = 2, p = .07 \)

A non-significant \( X^2 \) was found \( \chi^2 = 5.37, df = 2, p = .07 \) which indicates that no significant differences were found in the distribution of ethnicity across the Aggressive and Non-Aggressive groups.

Table 20 presents a matrix of Pearson correlation coefficients between FSIQ, Age at Admission, the aggression variables, and the object relations variables. The correlations displayed in this table indicate that multiple significant relationships exist between the aggression and object relations variables. Significant positive relationships exist between AG and the three aggression content variables proposed by Meloy and
Gacono (1992): AG and AgC ($r=.45$, $df=198$, $p≤.001$), AG and AgPast ($r=.14$, $df=198$, $p≤.05$), and AG and AgPot ($r=.19$, $df=198$, $p≤.01$). AG is also significantly related to MOA Mean ($r=.25$, $df=198$, $p≤.001$) and MOA High ($r=.32$, $df=198$, $p≤.001$). AgC is significantly related to MOA Mean ($r=.18$, $df=198$, $p≤.01$) and MOA High ($r=.23$, $df=198$, $p≤.001$). A significant positive correlation exists between AgPast and both MOA Mean ($r=.47$, $df=198$, $p≤.001$) and MOA High ($r=.49$, $df=198$, $p≤.001$). As would be expected, a less significant positive relationship exists between AgPast and MOA Low ($r=.14$, $df=198$, $p≤.05$). AgPot is less significantly related to both MOA Mean and MOA High ($r=.15$, $df=198$, $p≤.05$). Finally, FSIQ correlated significantly with only one score, MOA High ($r=.19$, $df=198$, $p≤.05$). There were no significant inverse correlations between the aggression and object relations variables.
Table 20

Pearson Correlation Coefficients Between Age, FSIQ, Aggression, and Object Relations Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Age</th>
<th>FSIQ</th>
<th>AG</th>
<th>AgC</th>
<th>AgPast</th>
<th>AgPot</th>
<th>MOA Mean</th>
<th>MOA Low</th>
<th>MOA High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>1.00</td>
<td>.12</td>
<td>-.03</td>
<td>.01</td>
<td>.04</td>
<td>-.02</td>
<td>.05</td>
<td>-.04</td>
<td>.03</td>
</tr>
<tr>
<td>FSIQ</td>
<td>1.00</td>
<td>.12</td>
<td>.07</td>
<td>.03</td>
<td>.00</td>
<td>.13</td>
<td>.01</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>AG</td>
<td>1.00</td>
<td></td>
<td></td>
<td>.45***</td>
<td>.14*</td>
<td>.19**</td>
<td>.25***</td>
<td>-.01</td>
<td>.32***</td>
</tr>
<tr>
<td>AgC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.11</td>
<td></td>
<td>.18**</td>
<td>-.06</td>
<td>.23***</td>
</tr>
<tr>
<td>AgPast</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.06</td>
<td></td>
<td>.47***</td>
<td>.14*</td>
<td>.49***</td>
</tr>
<tr>
<td>AgPot</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.10</td>
<td>.15*</td>
</tr>
<tr>
<td>MOA Mean</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.84***</td>
</tr>
<tr>
<td>MOA Low</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.30***</td>
</tr>
<tr>
<td>MOA High</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Note. * p ≤ .05; ** p ≤ .01; *** p ≤ .001, Age = Age at Admission, FSIQ = Full Scale IQ*
Analysis of Hypotheses

The general prediction is that projected aggression and developmental levels of object relations functioning are both different but related constructs, and that both of these constructs will differentiate between hospitalized adolescents with a recent history of aggressive behavior and those without such a history. Included in this general hypothesis will be the following specific hypotheses:

Hypothesis 1.1: Increased amounts of projected aggression as reflected by the subjects’ scores on the four Rorschach aggression variables (AG, Exner, 1993; AgC, AgPast, & AgPot, Meloy & Gacono, 1992) will differentiate between hospitalized adolescents who have a recent history of aggressive behavior and those who do not.

Hypothesis 1.2: Lower developmental levels of object relations functioning as reflected by the subjects’ mean (MOA Mean), low (MOA Low), and high (MOA High) scores on the Mutuality of Autonomy Scale (Urist, 1977; Urist & Shill, 1982; Tuber, 1992) will differentiate between hospitalized adolescents who have a recent history of aggressive behavior and those who do not.

Multivariate analysis of covariance (MANCOVA) was used to test the two hypotheses given the multiple significant relations found between the dependent variables (see Table 20). Analysis of variance is the preferred statistical technique to test the significance of the differences between groups on multiple dependent variables that are correlated (Tabachnick & Fidell, 1989). Given the significant mean differences between the groups on Age at Admission and FSIQ, MANCOVA was used to control for the possible effects of these variables on the dependent variables prior to significance testing. MANCOVA was used with group (Aggressive or Non-Aggressive) as the independent
variable, and the aggression (AG, AgC, AgPast, AgPot) and object relations variables (MOA Mean, MOA Low, MOA High) as dependent variables. Age at admission and FSIQ were used as covariates.

Prior to conducting the statistical tests, the data were checked to evaluate conformance to MANCOVA assumptions including outliers, multicollinearity and singularity, normality, and homogeneity of variance. The data were satisfactory with the assumptions regarding multicollinearity and singularity. Regarding normality, the frequency distributions indicate that the data were not normally distributed for some dependent variables. However, Tabachnick and Fidell (1989, p. 324) have found that MANCOVA is robust with regard to this assumption if the error degrees of freedom is 20 or greater. This statistical test had error degrees of freedom of 190. Homogeneity of variance, which was evaluated with Box’s M, was found to be non-significant (Box’s M=41.44, df=28, 136609, p=.07). Outliers were found for six cases on AG and AgPast, for four cases on MOA Low, and in one case for MOA Mean and AgC. Rather than eliminate these cases and lose useful data for these cases on other variables, the outlier scores were converted to scores at the third standard deviation.

The MANCOVA results indicate that the covariates were not significant. Age at admission [F(7,190)=1.18, p=.31] and FSIQ [F(7,190)=1.24, p=.28] did not have a significant covariate effect on the dependent variables. The results of the MANCOVA test also indicate that no significant differences were found for the main effect of group, either Aggressive or Non-Aggressive, [F(7,190)=.64, p=.72]. In other words, these results indicate that the Aggressive and Non-Aggressive subjects did not differ on (a) the four Rorschach aggression variables (AG, AgC, AgPast, AgPot) and (b) the three object
relations variables (MOA Mean, MOA Low, MOA High). Thus, the hypotheses were not confirmed.

As a follow-up analysis to the MANCOVA, a discriminant function analysis was conducted to examine the relationships among the dependent variables with reference to group membership, either Aggressive or Non-Aggressive. In discriminant function analysis the canonical correlation is computed which, when squared, indicates the proportion of variance that is common between the groups and the predictors. Using group membership as the dependent variable, the discriminant function was computed using the predictors in a manner that separates the groups, essentially identifying the variables on which the groups differ. In this analysis the predictors were analyzed together, which provides important information about the relationships between the groups and the predictors.

A combined hierarchical and stepwise discriminant function analysis was computed to analyze these data. In this discriminant analysis, group membership (Aggressive or Non-Aggressive) was the dependent variable and the aggression and object relations variables were the predictors. Since group differences did exist on Age at Admission and FSIQ, these variables were entered as a block on the first step to extract related variance in the dependent variable. Essentially, this analysis utilized Age at Admission and FSIQ similar to covariates. Next, the aggression and object relations variables were entered as a stepwise analysis.

The stepwise process scans the independent variables to identify the variable on which the groups differ most. Using the minimization of Wilks' Lambda as the variable selection guide, the variable with the smallest Wilks' Lambda is selected first, as a small
Wilks' Lambda is associated with large group differences. When the first variable is selected, the remaining predictors are scanned to identify variables which, together with those already selected, are capable of making a significant change in the Wilks' Lambda. 

Regarding the discriminant function analysis assumptions, homogeneity of variance was satisfactory, and multicollinearity is controlled by the stepwise process. Multivariate normality is desirable, but discriminant function analysis is robust with respect to this assumption for analysis with more than 20 cases in the smallest group (Tabachnick & Fidell, 1989), p. 511-512).

A significant function was established on the first step with Age at Admission and FSIQ [$F(2,197)=23.66$, $p=.001$]. A canonical correlation of .44 was found, which indicates that 22% of the variance between the groups can be explained by these two variables. This finding replicates the results of the t-test analysis where the Aggressive and Non-Aggressive groups were found to differ significantly on these variables. When the stepwise process was included with the aggression and object relations variables, none of these variables were entered. Thus, the aggression and object relations variables were unable to account for any unique variance between the groups that was not already explained by the Age at Admission and FSIQ variables.

The structure matrix displayed in Table 21 shows the correlations between the scores on the predictors and the discriminant function scores. These correlations are useful in determining the contributions of the variables to the discriminant function. As expected, Age at Admission and FSIQ had the largest contributions, with very small contributions from the aggression and object relations variables. These results therefore
confirm the non-significant findings from the MANCOVA and indicate that the groups did not differ on the aggression and object relations variables.

### Table 21

**Discriminant Function Analysis Structure Matrix**

<table>
<thead>
<tr>
<th>Study Variable</th>
<th>Correlations between Study Variables and the Discriminant Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>.82</td>
</tr>
<tr>
<td>FSIQ</td>
<td>.58</td>
</tr>
<tr>
<td>MOA Mean</td>
<td>.11</td>
</tr>
<tr>
<td>MOA High</td>
<td>.11</td>
</tr>
<tr>
<td>AgC</td>
<td>.05</td>
</tr>
<tr>
<td>AgPast</td>
<td>.04</td>
</tr>
<tr>
<td>AG</td>
<td>.03</td>
</tr>
<tr>
<td>MOA Low</td>
<td>.01</td>
</tr>
<tr>
<td>AgPot</td>
<td>.00</td>
</tr>
</tbody>
</table>

*Note: Age = Age at Admission; FSIQ = Full Scale IQ*

**Supplemental Analyses**

In addition to the hypotheses analyzed above, salient differences in the relationship between aggressive behavior, projected aggression, and developmental level of object relations functioning in female and male adolescents were explored. Specifically, the question of whether or not gender had any effect on the (a) projections
of aggressive imagery, and (b) developmental level of object relations functioning in aggressive and non-aggressive females and males. MANCOVA analyses were conducted to compare (a) aggressive and non-aggressive females, (b) aggressive and non-aggressive males, (c) aggressive females and aggressive males, and (d) non-aggressive females and non-aggressive males.

**Aggressive Females and Non-Aggressive Females**

A one-way MANCOVA was conducted to compare the Aggressive to the Non-Aggressive females on the aggression and object relations variables. The homogeneity of variance was satisfied, as Box's M was not significant (Box's M=39.07, df=28, 33466, p=.14). The MANCOVA results revealed that the covariates were not significant. Age at admission [F(7,90) = .85, p=.54] and FSIQ [F(7,90) = .97, p=.45] did not have a significant covariate effect on the dependent variables. The results for the MANCOVA indicated that no significant effect was found between the groups [F(7,90) = 1.20, p=.30]. These data therefore suggest that the Aggressive and Non-Aggressive females did not differ on the aggression and object relations variables.

**Aggressive Males and Non-Aggressive Males**

A one-way MANCOVA was conducted to compare the Aggressive to the Non-Aggressive males on the aggression and object relations variables. The homogeneity of variance was satisfied, as Box's M was not significant (Box's M=34.06, df=28, 33466, p=.29). The MANCOVA results revealed that the covariates were not significant. Age at admission [F(7,90) = .30, p=.94] and FSIQ [F(7,90) = .93, p=.64] did not have a significant covariate effect on the dependent variables. The results for the MANCOVA indicated that no significant effect was found between the groups [F(7,90) = .18, p=.98].
These data therefore suggest that the Aggressive and Non-Aggressive males did not differ on the aggression and object relations variables.

**Aggressive Females and Aggressive Males**

A one-way MANCOVA was conducted to compare the Aggressive females to the Aggressive males on the aggression and object relations variables. The homogeneity of variance was not satisfied, as Box’s M was significant (Box’s \( M = 44.97 \), \( df = 28 \), 33466, \( p = .04 \)). The Levine test of the equality of variance was used to identify the variable(s) that contributed to the violation of the assumption. Results indicated that MOA Low was significant \( [F(1,98) = 9.91, p = .002] \). The MANCOVA was again conducted with MOA Low withheld and the homogeneity of variance assumption was satisfied (Box’s \( M = 34.21 \), \( df = 21 \), 35323, \( p = .06 \)). The MANCOVA results revealed that the covariates were not significant. Age at admission \([F(6,91) = .62, p = .71]\) and FSIQ \([F(6,91) = 1.69, p = .13]\) did not have a significant covariate effect on the dependent variables. The results for the MANCOVA indicated that no significant effect was found between the groups \([F(6,91) = .27, p = .94]\). These data therefore suggest that the Aggressive females and the Aggressive males did not differ on the aggression and object relations variables.

**Non-Aggressive Females and Non-Aggressive Males**

A one-way MANCOVA was conducted to compare the Non-Aggressive females to the Non-Aggressive males on the aggression and object relations variables. The homogeneity of variance was not satisfied, as Box’s M was significant (Box’s \( M = 44.45 \), \( df = 28 \), 33466, \( p = .05 \)). The Levine test of the equality of variance was used to identify the variable(s) that contributed to the violation of the assumption. Results indicated that AgPot was significant \( [F(1,98) = 1.32, p = .01] \). The MANCOVA was again conducted
with AgPot withheld and the homogeneity of variance assumption was satisfied (Box's $M=28.19$, $df=21$, 35323, $p=.19$). The MANCOVA results revealed that the covariates were not significant. Age at admission [$F(6,91) = .28$, $p=.94$] and FSIQ [$F(6,91) = .58$, $p=.74$] did not have a significant covariate effect on the dependent variables. The results for the MANCOVA indicated that no significant effect was found between the groups [$F(6,91) = .72$, $p=.63$]. These data therefore suggest that the Non-Aggressive females and the Non-Aggressive males did not differ on the aggression and object relations variables.
CHAPTER V
DISCUSSION

Overview of the Study

The present study explored the relationship between a recent history of aggressive behavior, projected aggression, and developmental levels of object relations functioning in hospitalized adolescents between the ages of 13 and 18. Based on contemporary psychodynamic theory, it was hypothesized that hospitalized adolescents with recent histories of aggressive behavior would have more projections of aggressive imagery and lower developmental levels of object relations functioning than those without such histories. Projected aggression was measured using two different Rorschach scoring systems which included: (a) Exner's (1993) aggressive movement score (AG), and (b) Meloy and Gacono's (1992) scoring guidelines for aggressive content (AgC, AgPast, & AgPot). The Mutuality of Autonomy Scale (Urist, 1977; Urist & Shill, 1982; Tuber, 1992) was used to measure the mean and range of developmental level of object relations functioning. The specific hypotheses tested were:

**Hypothesis 1.0:** The general prediction is that projected aggression and developmental level of object relations functioning are both different but related constructs, and that both will differentiate between hospitalized adolescents with a recent history of aggressive behavior and those without such a history. Included in this general hypothesis are the following specific hypotheses:
Hypothesis 1.1: Increased amounts of projected aggression as reflected by the subjects' scores on the four Rorschach aggression variables (AG; Exner, 1993; AgC, AgPast, & AgPot; Meloy & Gacono, 1992) will differentiate between hospitalized adolescents who have a recent history of aggressive behavior and those who do not.

Hypothesis 1.2: Lower developmental levels of object relations functioning as reflected by the subjects' mean (MOA Mean), low (MOA Low), and high (MOA High) scores on the Mutuality of Autonomy Scale (Urist, 1977; Urist & Shill, 1982; Tuber, 1992) will differentiate between hospitalized adolescents who have a recent history of aggressive behavior and those who do not.

In addition, an attempt was made to explore salient differences in the relationships between a recent history of aggressive behavior, projected aggression, and developmental levels of object relations functioning based on gender. Although no directional hypotheses were proposed, the empirical goal was that the data would be sufficient to delineate any differences between the females and males.

To investigate these hypotheses, data for 200 adolescents ranging in age from 13 to 18 years of age were selected from a large archival database containing standard psychological test data on 1,000 adolescent participants collected from June 1995 to June 1999. The adolescents included in this archival database were admitted as patients to a private psychiatric hospital in New York State. The sample was divided into two groups—Aggressive and Non-Aggressive—depending on whether or not they (a) had a recent history of aggressive behavior (as recorded in their medical chart), and (b) were perceived as hostile and aggressive at the time of admission. Each group contained 100 adolescents, 50 females and 50 males.
To obtain projections of aggressive imagery, Exner's (1993) aggressive movement score (AG) was retrieved from the database and the adolescents' Rorschach protocols were scored according to the scoring system for aggressive content (AgC), aggressive past (AgPast), and aggressive potential (AgPot) as defined by Meloy and Gacono (1992). To obtain the mean, low, and high developmental levels of object relations functioning, the Rorschach protocols were scored according to the guidelines set forth in the Mutuality of Autonomy scale (MOA; Urist, 1977; Urist & Shill, 1982; Tuber, 1992).

Analysis of Research Hypotheses

The multiple significant relationships found between the aggression and object relations variables (i.e., AG & AgC, p<.001; AG & MOA Mean, p<.001; AgC & MOA Mean, p<.01; AgC & MOA High, p<.001) suggested the use of multivariate analysis of variance. Given the significant mean differences between the groups on Age at Admission and FSIQ, MANCOVA was used to control for the possible effects of these variables on the dependent variables prior to significance testing. MANCOVA was used with group (Aggressive or Non-Aggressive) as the independent variable, and the aggression (AG, AgC, AgPast, AgPot) and object relations variables (MOA Mean, MOA Low, MOA High) as the dependent variables. Age at Admission and FSIQ were used as covariates.

The MANCOVA results indicated that the covariates were not significant. Age at Admission (p=.31) and FSIQ (p=.28) did not have a significant covariate effect on the dependent variables. The results of the MANCOVA test further indicated that no significant differences were found for the main effect of group, either Aggressive or Non-
Aggressive ($p=.72$). In other words, these results indicated that the Aggressive and Non-Aggressive subjects did not differ on (a) the four Rorschach aggression variables (AG, AgC, AgPast, AgPot), and (b) the three object relations variables (MOA Mean, MOA Low, MOA High).

A combined hierarchical and stepwise discriminant function analysis was then computed to analyze these data. A significant function was established on the first step with Age at Admission and FSIQ ($p=.001$). A canonical correlation of .44 was found, which indicated that 22% of the variance between the groups could be explained by these two variables. When the stepwise process was included with the aggression and object relations variables, no variables were entered. Given this, the aggression and object relations variables were unable to account for any unique variance between the groups that was not already explained by the Age at Admission and FSIQ variables.

Supplemental Gender Analyses

In addition to the hypotheses discussed above, the data were analyzed to determine any gender effects on the relationships between a recent history of aggressive behavior, projected aggression, and developmental levels of object relations functioning. MANCOVA analyses were again conducted and produced the following results.

**Aggressive and Non-Aggressive Females.** The MANCOVA results revealed that the covariates Age at Admission ($p=.54$) and FSIQ ($p=.45$) did not have a significant covariate effect on the dependent variables. The results also indicated that no significant effect was found between the groups on the aggression and object relations variables ($p=.30$).

**Aggressive and Non-Aggressive Males.** The MANCOVA results revealed that the covariates Age at Admission ($p=.94$) and FSIQ ($p=.64$) did not have a significant covariate effect on the dependent variables. The results also indicated that no significant effect was found between the groups on the aggression and object relations variables ($p=.98$).
**Aggressive Females and Aggressive Males.** The MANCOVA results revealed that the covariates Age at Admission ($p=.71$) and FSIQ ($p=.13$) did not have a significant covariate effect on the dependent variables. The results also indicated that no significant effect was found between the groups on the aggression and object relations variables ($p=.94$).

**Non-Aggressive Females and Non-Aggressive Males.** The MANCOVA results revealed that the covariates Age at Admission ($p=.94$) and FSIQ ($p=.74$) did not have a significant covariate effect on the dependent variables. The results also indicated that no significant effect was found between the groups on the aggression and object relations variables ($p=.63$).

**Discussion of Hypotheses**

The results of this study do not support the prediction that there should be significant differences in projected aggression and developmental levels of object relations functioning in Aggressive and Non-Aggressive groups of hospitalized adolescents. While it could be argued that (a) the measures did not accurately assess the theoretical constructs, and (b) the sample was restricted given that all the subjects were hospitalized; the failure to find significance could also be related to theoretical concerns. Historically, researchers have produced equivocal results in their attempt to validate or predict behavior from specifically coded verbalizations on the Rorschach (Gacono & Meloy, 1994; Goldstein, 1997; Exner, 1993; Margolis, 1992; Meloy & Gacono, 1992; White, 1998). These ideas are discussed in more detail below.

**Restrictions of the Rorschach Scoring Systems**

One might speculate that the Rorschach's truer value lies in its entirety or totality rather than in its edification in separate codes or scores. This study used two separate scoring systems for aggressive content. The first was Exner's (1993) code for aggressive movement (AG) and the second was proposed by Meloy and Gacono (1992) and included three separate scores: AgC, AgPast, and AgPot. If one believes that a more coherent
interpretation of personality functioning and its relationship to behavior should be based on interpreting the Rorschach as a whole (Aronow & Reznikoff, 1976; Dies, 1995; Exner, 1993, 1995; Klopfer, Ainsworth, Klopfer, & Holt, 1954; Schafer, 1954), then the researcher and clinician must consider the various scores independently and in relationship to one another. This is a more idiographic method of interpretation that does not lend itself to quantitative analyses. Furthermore, studies that have used these particular scoring systems for aggressive content to validate behavior have produced equivocal results (Baity & Hilsenroth, 1999; Elizur, 1985; Finney, 1955; Gacino, 1988, 1990; Gacino & Meloy, 1994; Goldstein, 1997; Margolis, 1992; Meloy & Gacino, 1992; Rose & Bitter, 1980; White, 1998).

The same argument might also be extended to the implementation of object relations functioning by the Mutuality of Autonomy Scale (Urist, 1977; Urist & Schill, 1982; Tuber, 1992). This scale limits the interpretation of this concept to a determination of only the mean and range of developmental level of object relations functioning. One could advance the suggestion that a more accurate description of object relations functioning might be obtained from an idiographic consideration of all the scorable responses in relation to one another, scorable responses in relationship to the Rorschach card eliciting the response, and the relationship of the MOA scores to other Rorschach variables and clusters.

One might ask the question whether or not the measures of aggressive content (AG, AgC, AgPast, & AgPot) and developmental level of object relations functioning (MOA Mean, Low, & High) depend on the relationship between the subject and the examiner. Does this relationship influence the ability of the subject to produce
Rorschach responses that can be scored for aggressive content and object relations functioning? For example, many of the protocols used in this study can be described as brief and barren. Although they contain the required number of responses (14) as defined by Exner (1993), the responses and inquiries were considerably brief. At the same time, other protocols contain elaborate responses and inquiries. In the more elaborate protocols, there were many more opportunities to code for aggressive content and object relations functioning. Although theory and research addressing this issue is limited (Kelly, 1997; Klopfer, Ainsworth, Klopfer, & Holt, 1954; Lord, 1950; Schafer, 1954), the relationship between the subject and examiner could be considered a confounding factor that might influence the quantity and quality of the subjects’ Rorschach responses.

Exner’s (1993) standardized guidelines for Rorschach administration suggest that if subjects produce fewer than 14 responses, the Rorschach should be re-administered. Therefore, some subjects were administered more than one Rorschach Response phase until they gave the required number of responses. Although the effect of whether or not more than one administration for this reason is not considered important (Exner, 1993), it could also have had an effect on the quantity and quality of the subjects’ verbal output.

**Subject Pool**

The adolescents included in this study were all hospitalized. Given this, it can be assumed that their levels of psychopathology were elevated. It is a well-documented fact that aggression, projected and otherwise, increases with psychopathology (Bowlby, 1973, 1982; Freud, 1931, 1933/64; Gacono & Meloy, 1994; Jacobson, 1954, 1957; Kernberg, 1982, 1986, 1993; Weber, Meloy, & Gacono, 1992; Winnicott, 1965/72, 1984). Therefore, there was likely an insufficient variance in range of functioning as reflected by
the two measures of psychopathology included in this study—projected aggression and
developmental levels of object relations functioning. Given this, it is possible that the
shared variance due to psychopathology might have masked the unique variance due to
aggression.

Theoretical Concerns

The equivocal findings of this study raise questions about contemporary
psychodynamic and object relations theory (described in detail in Chapter 2) as they
pertain to projected aggression and overt behavior. These results do not appear to
support the (a) translation of these theoretical constructs into aggressive content and
developmental levels of object relations functioning, and (b) attempt to correlate these
psychological data with a recent history of aggressive behavior. To date, investigations
on the correlation of Rorschach projections and aggressive behavior have been equivocal
(Baity & Hilsenroth, 1999; Bates & Bayles, 1988; Carlson, Cicchetti, Barnett, &
Braunwald, 1989b; DeJesus, 1997; Erikson, Sroufe, & Egeland; Finney, 1955; Goldstein,
1997; Greco & Cornell, 1992; Margolis, 1992; Meloy & Gacono, 1992; Rosel & Bitter,
1980; Toth & Cicchetti, 1996b; White, 1998). Results from this study suggest that some
subjects who did not have recent histories of aggressive behavior did have a significant
amount of aggressive projections on the Rorschach. At the same time, those who did
have histories of aggressive behavior did not have significantly more aggressive
projections. This is depicted in the non-significant differences in AG, AgC, AgPast, and
AgPot between the Aggressive and Non-Aggressive groups. Taken together, these
results suggest that other processes mediate the relationship between the (a) projected
aggressive content and the relationships specified in the percept (saying), and (b) recent history aggressive behavior (doing).

Previous research (Bandura, Ross, & Ross, 1963; Berkowitz, 1993; Dodge & Coie, 1987; Downey & Coyne, 1990; Gacono & Meloy, 1994; Kallipuska, 1992) also supports the suggestion that other factors have an effect on this relationship. These factors, discussed in detail in Chapter II, include neurological anomalies, genetic composition, and environmental influences. For example, studies have suggested that violent and aggressive tendencies originate in certain brain areas (Amen, Stubblefield, Carmichael, & Thisted, 1996; Convit, Czobor, & Volavka, 1991; Tonkonogy, 1991) and may be associated with deficiencies in neurotransmitters (Kruesi, Rappaport, & Hamburger, 1990; Linnoila, Virkkunen, & Scheinin, 1983). Other studies such as that of Bryant, Scott, Golden, and Tori (1984) have found that brain impaired individuals were more likely to aggress against others and commit violent crimes.

Characteristics including impulsivity, cognitive rigidity, and difficulty integrating information from multiple modalities have been found in profiles of conduct disordered adolescents. This suggests that compromises in frontal lobe functioning may contribute to social disinhibition and the ability to organize behavior and plan appropriate responses (Das, Naglieri, & Kirby, 1993; Hurt & Naglieri, 1992).

Reite (1987) proposed that varying environmental experiences can result in alterations of the micro-architecture of the brain. This in turn impacts emotional growth and the development of skills necessary for either adaptive or pathological behavior. Although the structure of the brain is, to an important degree, specified by genetic and
developmental processes, the pattern of interconnections between neurons also depends upon experience (Greenough, 1986; Reite).

It appears, therefore, that there are other factors and processes that make a difference between (a) the youngster who verbalizes or projects aggression and acts it out, and (b) the youngster who may verbalize or project aggression but would not act it out. While research such as that described above and in Chapter II looks into neurological factors which likely influence the relationship between saying and doing, other investigations should look into alternative psychodynamic factors. In particular, one of the factors is the type and adequacy of defenses that the individual is likely to use against anxiety, frustration, and aggression.

Another consideration that was not addressed in this study lies in the nature of the adolescents' psychopathology. It is possible that the nature of psychopathology—i.e., psychosis, depression, anxiety, psychopathy, etc.—might have an effect on whether or not projected aggression and object relations functioning can be correlated with recent aggressive behavior. Previous investigations have explored the relationship between object relations and personality functioning and various forms of psychopathology. Studies have found correlations between object relations and (a) depression (Armsden, McCauley, Greenberg, Burke, & Mitchell, 1990; Carnelley, Pietromonaco, & Jaffe, 1994), (b) anxiety (Papini & Roggman, 1992), (c) psychopathology (Pianta, Egeland, & Adam, 1996; Rosenstein & Horowitz, 1996), (d) self-esteem and competence (Henry & Paterson, 1995; Hill & Holmbeck, 1986), (e) maladaptive child-parent relationships (Cowan, Cohn, Cowan, & Pearson, 1996; Gavazzi, 1994), and (f) disturbed peer relationships (Ellicker, Englund, & Sroufe, 1992; Kerns, Klepac, & Cole, 1996).
Taken together, it appears that the difficulty might lie in attempting to make a connection from Rorschach response to actual behavior. As suggested above, consistent findings have been found when research has attempted to demonstrate a correlation between Rorschach response and personality structure, but not to behavior. It is likely that the process that mediates the relationship between Rorschach projection and behavior might include aspects of personality functioning.

**Significant Findings**

**FSIQ and Age at Admission**

Results indicated that the groups of Aggressive and Non-Aggressive hospitalized adolescents differed on two demographic variables: Full Scale IQ (FSIQ) and Age at Admission. The mean FSIQ of the Non-Aggressive group was significantly higher than that of the Aggressive group (101.46 vs. 93.23). The mean Age at Admission of the Non-Aggressive group was significantly higher than the Aggressive group (15.28 vs. 14.33).

If higher IQ values are taken as measures of more adaptive functioning, then it can be inferred that adolescents with higher IQs have (a) the capacity to function at a higher level, and therefore (b) a greater likelihood of refraining from acting out aggressively. Non-Aggressive adolescents will purportedly have more adaptive ways of expressing their aggressive impulses (Weiner, 1970). At the same time, adolescents with lower IQs may be more prone to act out aggressively rather than to sublimate their aggression into more adaptive channels.

While it appears that this argument should be extended to include projected aggression and developmental levels of object relations functioning, it falls short with respect to providing an adequate explanation of the results obtained in this research. The
Non-Aggressive group of hospitalized adolescents did not have significantly lower amounts of projected aggression and higher developmental levels of object relations functioning than the Aggressive group. This suggests that perhaps the discussion of theoretical concerns presented earlier in this Chapter—namely the difficulty using specifically coded verbalization on the Rorschach to measure psychodynamic constructs—might explain the inability to find a significant differences in projected aggression and developmental level of object relations functioning between the Aggressive and Non-Aggressive groups.

The mean Age at Admission was significantly higher for the Non-Aggressive adolescents. Examination of the data indicates that the Aggressive group contained more 13- and 14-year-olds than the Non-Aggressive group. This significant difference might be explained by considering the suggestion that professionals are more apt to hospitalize younger adolescents who engage in aggressive behavior than their older counterparts. Aggressive behavior appears to be more accepted in older rather than younger adolescents (Grossman, 1999). Moreover, both professionals and members of our society tend to be quite concerned about violence in youth, and this might lead to an increased rate of hospitalization for younger adolescents who begin acting out aggressively.

Theoretically, one might consider the effects of development in adolescence. Laufer and Laufer (1976) and others (A. Freud, 1958; Blatt & Ford, 1994; Blos, 1962, 1967; Westen et al., 1991) suggest that disorganization of puberty accompanies early adolescence. Although such changes continue throughout adolescence, in the early years these changes are new and abrupt. Early adolescents may therefore have fewer resources
for the management of their impulses, less mature defenses and coping mechanisms, and less well-organized behavioral reactions.

**Relationships Between Dependent Variables**

These results suggest that a relationship exists between projected aggression and developmental levels of object relations functioning. Those adolescents who had greater amounts of aggressive movement (AG), aggressive content (AgC), aggressive past (AgPast), and aggressive potential (AgPot) had greater MOA High and MOA Mean scores (Note. Larger MOA Mean and MOA High values are reflective of lower developmental levels of object relations functioning. Conversely, smaller MOA Mean and MOA High values are reflective of higher developmental levels of object relations functioning). These results suggest that even though a relationship exists between projected aggression and developmental levels of object relations functioning, it does not extend to acting out behavior. This supports the speculation that an alternative process that includes multiple factors (e.g., neurological and environmental influences, genetics, maturity, cognitive factors, ego developmental level, defense structure) is likely to be present; and that this process affects whether or not individuals act out their projected aggression.

**Discussion of Gender Analyses**

Over the past 20 years, and in particular since violent acts among teens have been on the rise, there has been a dramatic increase in the amount of attention paid to adolescent development. Traditional theories of development were based primarily on principles of male development; seemingly cast as universal principles for both genders. The formation of a distinct and separate identity was described as deriving from
separation (a) from the mother at early stages of childhood (Mahler, 1974), (b) from the family during adolescence (Erikson, 1980), and (c) from other significant persons in adulthood (Levinson, 1978). More recent formulations of female adolescent development emphasize a separate line of development for women based on the unfolding of a female "relational" self rooted in interdependence, mutuality, affiliation, and connection (Gilligan, 1993, 1994; Miller, 1994). Gilligan (1993) observed that feminine identity is based on a continuous process related to attachment. Females separate from the mother and then identify with her; whereas male identity is based on a discontinuous process equated with separation and detachment. "From very early, then, because they are parented by a person of the same gender... girls come to experience themselves as less differentiated than boys, as more continuous and related to the external object-world, and as differently oriented to their inner object-world as well" (Chodorow, 1978, p. 167). Their internal object relations images are likely to be more flexible, interconnected, mutual, and cooperative. Those of males, on the other hand, are likely to be more rigid, parallel, or influenced by power/control and aggression.

Given the current thinking of the research surmised above, it seems likely that there would be a difference in projected aggression and developmental levels of object relations functioning between the female and male subjects. The results of this study suggest otherwise. The study sample contained 50 females and 50 males in each of the Aggressive and Non-Aggressive groups. This was sufficient to detect a medium effect size (ES=.50) at a power of .80. It is possible that the effect size in projected aggression and developmental levels of object relations functioning between the two groups of subjects was small (i.e., .35 or less) if at all. Thus a larger number of females and males
(i.e., 100 females and 100 males) would be needed in each of the two groups before any
difference could be detected. At the same time, however, it is also possible that the
difficulty of using specifically coded verbalizations on the Rorschach to measure
psychodynamic and object relations constructs could explain the inability to find
significant differences in projected aggression and developmental level of object relations
functioning between the females and males.

Limitations of the Study

Exner (1993) states that caution must be exercised when using Rorschach
interpretations to predict behavior.

It is true that a higher frequency of AG is not uncommon among prisoners
convicted of antisocial crimes of violence, but higher frequencies of AG are also
common in the protocols of surgeons, police officers, professional football
players, and even among clergymen. This is one of the reasons that many other
Rorschach variables must be considered before formulating any conjecture about
above-average values for AG (p. 528).

The likelihood that multiple factors influence the expression of aggressive and violent
behavior suggests that Rorschach interpretations should be made with caution,
particularly when attempting to predict behavior. This appears to be a significant
limitation of not only this particular study, but of the use of specifically coded
verbalizations on the Rorschach and quantitative analyses to measure psychodynamic
theoretical constructs. The use of two simplified scoring systems in isolation also
appears to be a limitation of this research.

As discussed previously, given that the adolescents were all hospitalized, it can be
assumed that their levels of psychopathology were elevated. The insufficient variance in
range of functioning with respect to projected aggression and developmental levels of
object relations functioning might have contributed to the inability to obtain significant results.

Although much literature exists on object relations theory, it is possible that either (a) the theory is insufficiently formulated, or (b) this particular implementation of the theory as it pertains to projected aggression and object relations functioning was not sufficient to detect significant differences in hospitalized adolescents with and without histories of aggressive behavior. Nevertheless, it is suggested that research into both the theoretical formulation and its implementation coincide to develop constructs that can be consistently validated and applied.

Recommendations for Future Research

Consistent with previous research, this study demonstrates the difficulty in attempting to validate behavior from psychological data obtained from specifically coded verbalization on the Rorschach. The purpose of this study was to determine if it was possible to identify youth at risk for violence from their Rorschach projections of aggression and object relations functioning. Unfortunately, this was not borne out. The need to identify adolescents who are at risk for displaying aggressive and violent behavior, however, continues to exist.

These results suggest that these Rorschach scoring systems (Meloy & Gacono, 1992; Urist, 1977; Urist & Shill, 1982; Tuber, 1992) were unable to differentiate between hospitalized adolescents with and without histories of aggressive behavior. At the same time, various empirical studies have been conducted which have shown significant relationships between: (a) projected aggression and personality functioning (Baity & Hilsenroth, 1999; Gacono & Meloy, 1994; Meloy & Gacono, 1992), and (b) object
relations functioning and healthy adaptation (Goddard & Tuber, 1989; Goldberg, 1989; Ryan, Avery, & Grolnick, 1985; Tuber, 1985). Rather than attempting to predict behavior, research focusing on areas of Rorschach projections in relation to personality functioning might be more fruitful.

Other methods for categorizing subjects into aggressive and non-aggressive groups should be utilized in future investigations. One method for classifying adolescents into these categories might include the use of self-reports of aggressive behavior. The Aggression Scale on the Youth Self-Report (YSR; Achenbach, 1991c) would be one way of differentiating between those adolescents who report a recent history (within the last six months) of aggressive behavior from those who do not. Other methods for categorizing the adolescents could include standardized instruments completed by the parent(s) or guardians at admission (e.g., Devereux Scale of Mental Disorders (DSMD; The Devereux Foundation, 1996)).

One might speculate that a more constructive approach to testing the hypotheses would be to include a control group of non-hospitalized, non-aggressive adolescents. A future investigation might also consider utilizing the MMPI-A (Archer, 1997) to differentiate psychopathology. One might also consider comparing Rorschach projections between different groups of subjects, for example; depressive, anxious, psychopathic, and neurotic individuals. In particular, it is possible that further exploration of subjects who are depressed might yield fruitful information regarding internalized aggression.

This study demonstrated significant mean differences between the Aggressive and Non-Aggressive groups on IQ. Given this, it is suggested that future studies should
examine the relationship between Rorschach projections, cognitive factors (e.g., IQ, reading and comprehension levels, learning disabilities, planning, attention, and impulse control), and behavior. This would provide important information as to what cognitive factors might be related to both projected and overt expressions of aggression.

An investigation examining the relationship between aggressive projections, object relations functioning, and use of defense mechanisms would further contribute to Rorschach research. Theory suggests that a control group of adolescents would (a) have fewer aggressive projections, (b) have higher developmental levels of object relations functioning, and (c) utilize higher and more adaptive defense mechanisms than those adolescents with demonstrated psychopathology.

In psychopathology, aggression appears to be the dominant affect (Bowlby, 1973, 1982; S. Freud, 1931, 1933/64; Jacobson, 1954, 1957; Kernberg, 1982, 1986, 1993; Winnicott, 1965/72, 1984). At lower developmental levels of object relations functioning, feelings other than aggression tend to be less well-represented. Thus, individuals will likely demonstrate more destructive aggression. At higher developmental levels, aggression is apt to be expressed in constructive ways. These individuals tend to be more flexible, related, empathic, and to use higher level defenses. Given this, in psychopathology, the more disturbed the individual is, the more likely s/he is to be aggressive and to have lower developmental levels of object relations functioning. A study examining the differences in projected aggression and object relations functioning in (a) adolescents with demonstrated psychopathology, (b) adolescents who are engaged in activities oriented toward the expression of aggression in constructive ways, and (c) a control group of non-aggressive adolescents would be of
interest. While theory suggests that the control group would have less projected aggression than the destructive and constructive groups, this idea has yet to be consistently validated (Exner, 1993; Holt, 1976; Lyons-Ruth, 1996; Paren, 1979; McDevitt, 1983).

This investigation failed to produce significant findings with respect to the hypothesized relationships among projected aggression, developmental levels of object relations functioning, and recent aggressive behavior in hospitalized adolescents. Given the continuing incidences of violence exhibited by youth, the identification of young people at risk for aggressive and violent behavior continues to be a significant clinical concern. Therefore, future research in this area would appear to be essential. Careful consideration of the theoretical bases and their implementation in clinical research is strongly suggested.
REFERENCES


Devereux Foundation (1996). Devereux Scale of Mental Disorders. San Antonio, TX: The Psychological Corporation.


Exner, J., Kazaoks, K., & Morris, H. (1979). *Verbal and non-verbal aggression among sixth grade students during free periods as related to a Rorschach Special Score for aggression*. Unpublished manuscript, Workshops Study No. 255, Rorschach Workshops.


Appendix A

Patient Care Manual

Patient Rights and Responsibilities
I. PATIENT RIGHT POLICY

Four Winds Hospital recognizes the value, worth and uniqueness of each individual. Four Winds Hospital shall provide considerate, respectful and effective treatment in response to each patient's health care needs.

It is a primary responsibility for the hospital to endeavor to assure that a person's basic rights for independence of expression, decisions and actions, and concern for personal dignity and human relationships be preserved.

We recognize the importance of personal dignity and human relationships and that the care of the patient includes consideration of the psychosocial, spiritual and cultural variables that influence the perceptions of illness.

The hospital shall provide written notice of rights to each patient and when applicable, to the patient's guardian, next of kin or legally authorized responsible person upon admission. The patient bill of rights shall be posted in each patient unit.

The patient may exercise to the extent permitted by law, the rights delineated. Those persons legally authorized may act on behalf of the patient in accordance with the law.

The following rights may not be limited as a punishment or for the convenience of the staff. Any limitations on the rights enumerated shall only be permitted for an individual patient upon written order in the patient’s medical record. (See policy Restrictions on Patient Privileges)

The following basic right of patients are applicable to all patients:

1. The right to considerate, respectful care at all times under all circumstances with recognition of personal dignity.

2. The right to impartial access to treatment or accommodations that are available or medically indicated, regardless of race, creed, sex, national origin, or sources of payment for care.

3. The right of the patient to hospital’s response to his/her requests and needs for treatment and service within the hospital’s capacity, stated mission and applicable law and regulation.

4. The right to express spiritual beliefs and cultural practices that do not harm other or interfere with the planned course of treatment for the patient.

5. The right, within the law, to personal and information and privacy, as manifested by:  
a. the right to refuse to talk with or see anyone not officially connected with the hospital, including visitors or persons officially connected with the hospital but not directly involved in his/her care.
   b. the right to wear appropriate personal clothing and religious or other symbolic items, as long as they do not interfere with diagnostic procedures or treatment.
   c. the right to expect that any discussion or consultation involving his/her case will be conducted discreetly and that individuals not directly involved in his/her care will not be present without his/her permission.
   d. the right to have his/her medical record read only by individuals directly involved in his/her treatment or in the monitoring of its quality, or otherwise associated with Four Winds Hospital and by other individuals only with his/her written authorization or that of his/her legally authorized representative. Information from the medical records may be used as part of research studies.
conducted by Four Winds Hospital or individuals associated with Four Winds Hospital. This information will be presented as part of group data only and will not include any information that would identify an individual patient.

e. the right to expect all communications and other records pertaining to his care, including the source of payment for treatment, to be treated as confidential.

f. the right to request a transfer to another room if another patient or a visitor in the room is unreasonably disturbing him/her and if another room equally suitable for his/her care and needs is available.

g. the right to be interviewed and examined in surroundings designed to assure reasonable, usual and auditory privacy. This includes the right to have a person of one’s own sex present during certain parts of a physical examination, treatment or procedure performed by a health professional of the opposite sex and the right not to remain disrobed any longer than is required for accomplishing the medical purpose for which the patient was asked to disrobe.

h. the right to be placed in protective privacy when considered necessary for personal safety.

6. The right to expect reasonable safety and a sanitary environment insofar as the hospital practices are concerned.

7. The right to know the identity and professional status of individuals providing service to him/her and to know which physician or other practitioner is primarily responsible for his/her care. This includes the patient’s right to know of the existence of any professional relationship among individuals who are treating him/her, as well as the relationship of any other health care or educational institutions involved in the care.

8. The right to obtain from the practitioner responsible for coordinating his/her care, complete and current information concerning his/her diagnosis (to the degree known), treatment and any known prognosis. This information should be communicated in terms the patient can reasonably be expected to understand. When it is not medically advisable to give such information to the patient, the information should be made available to a legally authorized individual.

9. The right to know the reasons for any proposed change in professional staff responsible for the patient.

10. Consent:

a. the right to reasonable informed participation in decisions involving his/her health care. To the degree possible, this should be based on a clear, concise explanation of his/her condition and of all proposed technical procedures, including the possibilities of any risk of mortality or serious side effects, problems related to recuperation, and probability of success. The patient should not be subjected to any procedure without his/her voluntary, competent, and understanding consent or the consent of his/her legally authorized representative. Where medically significant alternatives for care or treatment exist, the patient shall be so informed.

b. the right to know who is responsible for authorizing and performing the procedures or treatment.

c. the right to be informed if the hospital proposes to engage in or perform human experimentation or other research/educational projects affecting his/her care or treatment; the patient has the right to refuse to participate in any such activity.
Appendix B

Hopkins Psychiatric Rating Scale (HPRS)
(now known as Derogatis Psychiatric Rating Scale (DPRS))

Permission to reproduce this measure could not be obtained by the copyright holder. A copy of this measure can be obtained from:

National Computer Systems, Inc.
P O Box 1416
Minneapolis, MN  55440
800-627-7271
Appendix C

Rorschach Aggressive Content Scoring Template and Guidelines
Aggressive Content (AgC)

Scoring for aggressive content (AgC) is fairly straightforward. Only one AgC code is assigned per response object as long as the features given to the response object are those which are realistic. Multiple AgC codes are possible for (a) separate response objects, and (b) a response object ascribed with unrealistic and aggressive features. Coding for AgC consists of assigning scores if the object is either included or is similar to an item in the list (Table C1). Refer to the following examples:

| It looks like a bullet                      | AgC |
| An angry face                               | AgC |
| A hovering demon                            | AgC |
| An evil spider with fangs                    | 2 AgC’s (evil spider & fangs) |
| A face                                      | Not AgC |
| That looks like a stuffed teddy bear         | Not AgC |
| A dog                                       | Not AgC |

AgC codes should be assigned according to the above-stated general guideline with the following two exceptions.

1. Objects such as animal horns, animal trunks, teeth, bee, Bigfoot, eagle, owl, etc. are not entirely aggressive in nature. They should not be assigned an AgC score unless the subject (a) explicitly states that the object is involved in an aggressive act, or (b) describes the object or a feature such that it is perceived as threatening.

For example, animal horns and trunks may be used for aggressive purposes such as killing or threatening competitors, or they may be considered a representation of status or strength. While BigFoot is a fantasy creature, it is not clearly an aggressive being. Bees are not always aggressive—while stinging an individual is aggressive, pollinating flowers is not aggressive or threatening. Finally, while eagles and owls are birds of prey, they also are not always aggressive, attacking animals. Therefore, objects such as these are not coded AgC unless the individual elaborates on an aspect of the object making it appear to the examiner as aggressive, threatening, dangerous, or destructive. Consider the following examples:

| Teeth                        | Not AgC |
| Sharp teeth                  | AgC    |
| Horns                        | Not AgC |
| Pointed horns                | AgC    |
| BigFoot                      | Not AgC |
| BigFoot with claws           | AgC    |
2. Do not score AgC if the content is listed as a popular for that particular blot area according to the Comprehensive System (Exner, 1993). However, if the subject elaborates on the content so that it is perceived as aggressive, dangerous, or threatening, then an AgC score should be assigned. Consider the following examples for Card VIII, D1:

- Lion or bear
- Lion with sharp teeth
- Bear with razor sharp claws

Consider the following examples for Card IV, W:

- BigFoot
- BigFoot with sharp teeth and claws

Consider the following examples for Card X, D1

- A crab
- A crab with huge claws

Object type is also coded with each AgC according to the following guidelines:

<table>
<thead>
<tr>
<th>Weapon</th>
<th>Animal / Other</th>
<th>Environmental</th>
<th>Fictional Creature</th>
</tr>
</thead>
<tbody>
<tr>
<td>W</td>
<td>A</td>
<td>E</td>
<td>F</td>
</tr>
<tr>
<td>O</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The following list of Rorschach content used in scoring AgC and assigning an object type was obtained from Gacono and Meloy (1994, pp. 264-265) and Viglione (personal communication, January, 2000). It should be used solely as a guideline for scoring AgC. The exceptions listed above must be considered prior to assigning each score.

Table C1

Aggressive Content

<table>
<thead>
<tr>
<th>Object Type</th>
<th>Object Type</th>
<th>Object Type</th>
<th>Object Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angry*</td>
<td>O</td>
<td>Gun</td>
<td>W</td>
</tr>
<tr>
<td>Arrow</td>
<td>W</td>
<td>Hammer</td>
<td>W</td>
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<tr>
<td>Axe</td>
<td>W</td>
<td>Hatchet</td>
<td>W</td>
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<tr>
<td>Barracuda</td>
<td>A</td>
<td>Hurricane</td>
<td>E</td>
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<tr>
<td>Bat</td>
<td>A</td>
<td>Jackal</td>
<td>A</td>
</tr>
<tr>
<td>Battleship</td>
<td>W</td>
<td>Jellyfish</td>
<td>A</td>
</tr>
<tr>
<td>Bear*</td>
<td>A</td>
<td>Killer whale</td>
<td>A</td>
</tr>
<tr>
<td>Beast</td>
<td>A</td>
<td>King Kong</td>
<td>F</td>
</tr>
<tr>
<td>Black widow spider</td>
<td>A</td>
<td>Knife</td>
<td>W</td>
</tr>
<tr>
<td>Blade</td>
<td>W</td>
<td>Lion</td>
<td>A</td>
</tr>
<tr>
<td>Bomb</td>
<td>W</td>
<td>Mean*</td>
<td>O</td>
</tr>
<tr>
<td>Bullet</td>
<td>W</td>
<td>Missile</td>
<td>W</td>
</tr>
<tr>
<td>Cage</td>
<td>O</td>
<td>Medusa</td>
<td>F</td>
</tr>
<tr>
<td>Claws</td>
<td>A</td>
<td>Mummy</td>
<td>O</td>
</tr>
<tr>
<td>Club</td>
<td>W</td>
<td>Monster</td>
<td>F</td>
</tr>
<tr>
<td>Cobra</td>
<td>A</td>
<td>Mushroom cloud (explosion)</td>
<td>E</td>
</tr>
<tr>
<td>Copperhead</td>
<td>A</td>
<td>Needle</td>
<td>O</td>
</tr>
<tr>
<td>Crocodile</td>
<td>A</td>
<td>Noose</td>
<td>W</td>
</tr>
<tr>
<td>Demon</td>
<td>O</td>
<td>Nuclear cloud</td>
<td>E</td>
</tr>
<tr>
<td>Devil</td>
<td>O</td>
<td>Nuclear warhead</td>
<td>W</td>
</tr>
<tr>
<td>Devil's sign</td>
<td>O</td>
<td>Octopus*</td>
<td>A</td>
</tr>
<tr>
<td>Dive bomber</td>
<td>W</td>
<td>Panther</td>
<td>A</td>
</tr>
<tr>
<td>Dracula</td>
<td>F</td>
<td>Pick</td>
<td>W</td>
</tr>
<tr>
<td>Dragon</td>
<td>F</td>
<td>Pincers</td>
<td>A</td>
</tr>
<tr>
<td>Evil*</td>
<td>F</td>
<td>Rats</td>
<td>A</td>
</tr>
<tr>
<td>Explosion</td>
<td>W</td>
<td>Rattlesnake</td>
<td>A</td>
</tr>
<tr>
<td>Fangs</td>
<td>A</td>
<td>Reptile*</td>
<td>A</td>
</tr>
<tr>
<td>Fire</td>
<td>E</td>
<td>Rifle</td>
<td>W</td>
</tr>
<tr>
<td>Fist</td>
<td>W</td>
<td>Saw</td>
<td>W</td>
</tr>
<tr>
<td>Forest fire</td>
<td>E</td>
<td>Scary*</td>
<td>O</td>
</tr>
<tr>
<td>Frankenstein</td>
<td>F</td>
<td>Scorpion</td>
<td>A</td>
</tr>
<tr>
<td>Frightening*</td>
<td>O</td>
<td>Shark</td>
<td>A</td>
</tr>
<tr>
<td>Garrote</td>
<td>W</td>
<td>Sharp teeth</td>
<td>A</td>
</tr>
<tr>
<td>Goblins</td>
<td>F</td>
<td>Shotgun</td>
<td>W</td>
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<tr>
<td>Object Type</td>
<td>Object Type</td>
<td>Object</td>
<td>Object</td>
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</tr>
<tr>
<td>Sledgehammer</td>
<td>W</td>
<td>Torch</td>
<td>W</td>
</tr>
<tr>
<td>Snake</td>
<td>A</td>
<td>Vampire</td>
<td>F</td>
</tr>
<tr>
<td>Spear</td>
<td>W</td>
<td>Vampire bat</td>
<td>A</td>
</tr>
<tr>
<td>Spider</td>
<td>A</td>
<td>Venus fly trap</td>
<td>O</td>
</tr>
<tr>
<td>Spike</td>
<td>W</td>
<td>Volcano (erupting)</td>
<td>E</td>
</tr>
<tr>
<td>Sticker bush</td>
<td>O</td>
<td>Volcano</td>
<td>E</td>
</tr>
<tr>
<td>Stinger*</td>
<td>A</td>
<td>Wasp</td>
<td>A</td>
</tr>
<tr>
<td>Syringe</td>
<td>W</td>
<td>Water moccasin</td>
<td>A</td>
</tr>
<tr>
<td>Tarantula</td>
<td>A</td>
<td>Witch*</td>
<td>F</td>
</tr>
<tr>
<td>Tiger</td>
<td>A</td>
<td>Wolf</td>
<td>A</td>
</tr>
<tr>
<td>Tire-iron</td>
<td>W</td>
<td>Wolfman</td>
<td>F</td>
</tr>
<tr>
<td>Tornado</td>
<td>E</td>
<td>Yellow jacket</td>
<td>A</td>
</tr>
<tr>
<td>Torpedo</td>
<td>W</td>
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</tbody>
</table>

Note. * Vignione (personal communication, January, 2000). The remaining items were obtained from Table 8.2 (pp. 264-265; Gaciono & Meloy, 1994).

**Aggressive Past (AgPast) and Aggressive Potential (AgPot)**

Scoring for aggressive past (AgPast) and aggressive potential (AgPot) are also straightforward. Again, either AgPast or AgPot are assigned per response object according to the guidelines specified below. It should be noted, however, that one response can be assigned an AgC score, as well. Multiple AgPast and/or AgPot codes are possible for separate response objects. Refer to the following guidelines and examples:

**Aggressive Past (AgPast)** — “Any response in which an aggressive act has occurred or the object has been a target of aggression. An example of this response [to Card III] would be “It looks like an animal hanging from a rope with one leg cut off”’ (Meloy & Gaciono, 1992, p. 105). Another example would be “looks like a bug, someone used a drill press on him” (Baity & Hilsenroth, 1999, p. 96).

**Aggressive Potential (AgPot)** — describes responses in which aggressive acts are about to happen. An example of this response [to Card I] would be “It looks like a dog that’s about to bite someone” (Meloy & Gaciono, 1992, p. 105). Another example would be “they don’t know these crab-like creatures are about to lop their heads off” (Baity & Hilsenroth, 1999, p. 96).
Appendix D

Scoring Criteria for the Mutuality of Autonomy Scale (MOA)
### Mutuality of Autonomy

<table>
<thead>
<tr>
<th>Card</th>
<th>Resp</th>
<th>Description</th>
<th>Score</th>
<th>Card</th>
<th>Resp</th>
<th>Description</th>
<th>Score</th>
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<table>
<thead>
<tr>
<th>Low MOA</th>
<th>Mean MOA</th>
<th>Mean MOA</th>
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<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>High MOA</th>
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<table>
<thead>
<tr>
<th>Modal MOA</th>
<th></th>
<th>Total # cards w/ scorahle content</th>
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</table>
Mutuality of Autonomy Scale (MOA; Urist, 1977; Urist & Shill, 1982; Tuber, 1992)

**Scale Point 1**

Scale point 1, the highest level of object-relatedness in the scale, reflects the depiction of a figure(s) in a relationship that is separate, autonomous, but aware of, and interacting with another autonomous figure(s). The conveying of a reciprocal acknowledgement of each figure’s respective individuality is critical to achieve such a score. The scale is used in such a way that it maximizes the “healthiness” of this scale point, so that it is to be scored conservatively. Urist gives as an example to be scored a 1 the following response to Card II: “Two bears toasting each other, clinking glasses.” Words or phrases such as “each other,” “one another,” “both of them,” and “together” are often helpful in deciding if a response should be scored 1. These phrases connote distinct individuality in the context of a mutually positive encounter. Other examples of responses scored a 1 include:

- Card II: Two people dancing, sticking their tongues out at each other.
- Card II: Two bears giving high-fives.
- Card III: Two ladies rocking a baby. Each of them taking turns and laughing.
- Card VII: Two women turning around to look at each other.
- Card VII: Two women about to kiss each other.
- Card IX (D3 areas): Two witches...they’re laughing...as if sharing a secret about someone.

**Scale Point 2**

To receive a scale score of 2, the figure(s) should be engaged together in some relationship or parallel activity; there is no stated emphasis or highlighting of mutuality,
nor on the other hand, is there any sense that this dimension is compromised in any way within the relationship (Urist, 1977, p. 4). It should be noted that scale points 1 and 2 are clearly given a positive valence; they are the only scale points in which the autonomy of the figures are not distorted. They may therefore be viewed as representing “neurotic” or higher-level object representations.

A further distinction of the guidelines for differentiating scale scores 1 and 2 is as follows: For a response to receive a score of 1, the unique contributions of each individual to the mutual interaction need to be highlighted. Thus “Two people dancing” would receive a 2 because there is no stated emphasis on the mutuality of their endeavor. Their activity could be parallel (e.g., perhaps that they are dancing on opposite sides of the room, with their backs to each other) rather than more interactive. However, “Two people dancing a pas de deux” would qualify for a 1.

Examples of responses scored as 2 include:

Card II: Two people saluting.
Card III: Two women doing their laundry.
Card III: Two ladies cooking something.
Card VII: Two children waving.
Card X: Two spiders walking up a little wall.

**Scale Point 3**

Scale points 3 and 4 reveal an emerging loss of autonomy in interaction. Both points imply a need for another figure to allow for a sense of structural cohesion. For a percept to receive a score of 3, the figure(s) must be seen as leaning on or supporting one another. Figures described as “leaning,” “hanging,” “catching,” “holding,” or “grabbing”
connote the need for dependence and reliance on another. The sense here is that objects do not “stand on their own two feet,” or that in some way they require some external source of support or direction (Urist, 1977, p. 5). Examples of response scored as 2 include:

Card I: Two animals clinging to a telephone pole, maybe birds.
Card I (D2 areas): A half-man, half-animal holding on to something.
Card III (D2 areas): A fetus tied to mother with its umbilical cord.
Card IV: Two dead trees leaning against each other.
Card VIII: Panthers or cats...grasping these arms that are attached to these bushes.
Card IX (D1 areas): Beavers. They’re dead and their heads are hanging up on someone’s house, no, just staring somewhere because they’re alive.
Card X: Two spiders sleeping against a dead tree.

Scale Point 4

A scale point of 4 on the MOA scale is scored when one figure is seen as the reflection or imprint of another. The relationship between subjects here conveys a sense that “the definition or stability of an object exists only insofar as it is an extension or reflection of another” (Urist, 1977, p. 5). Percepts involving reflection responses, mirror images, shadows, or footprints would earn scale point 4 responses. Key words and phrases include “identical,” “reflection,” “both the same...identical.”

While a scale point of 3 implies that autonomy is precariously bound to the availability of an “other,” the two figures are still tangible beings, often without any indication that one being is any less fragile or impaired than the other (cf. “Two figures leaning on each other”). In contrast, a scale point of 4 conveys the vivid sense that at best
only one solid being is present. Indeed, the essence of this type of percept is often one of a figure gazing into its reflection to validate or actuate itself. Scale points 3 and 4 do share a depiction of self in which narcissistic issues are pivotal. The difference between the points seems to lie in the extent to which the mirroring, cohesion-building “other” can maintain a degree of physical viability. Examples of responses scored as 4 include:

Card II: Bear looking in the mirror...yawning and stretching.

Card III: Double image of a woman.

Card VII: One girl is looking in the mirror and seeing itself (sic) because they are identical.

Card VIII: All these cards are just the same on both sides, two of everything.

Two bears, or maybe it’s one bear reflected in the water.

Scale Point 5

Scale points 5, 6, and 7 reflect not only the loss of the capacity for separateness, but increasing malevolence of one figure towards another. While points 3 and 4 may be tentatively linked to “narcissistic” disturbances in Kohut’s terms, the final three points of the scale refer to “borderline” or “psychotic” modes of experiencing others. These low scores reflect an experience of object relations where the autonomy of the self is under siege. Representations of self and others are therefore avoided entirely or depicted as experiences of malevolence, depletion, or disintegration.

A scale score of 5 is appropriate when the nature of the relationship between figures

is characterized by a theme of malevolent control of one figure by another. Themes of influencing, controlling, or casting spells may be present. One figure may literally be in the clutches of another. Such themes portray a severe
imbalance in the mutuality of relations between figures. On the other hand, figures may be seen as powerless and helpless, while at the same time, others are omnipotent and controlling (Uri, 1977, p. 5).

Also scoreable within this scale point are responses in which fighting between figures becomes a clear violation of both figures’ intactness. Thus, a score of 2 is given for “Two cats fighting” but a score of 5 is given for “Two cats fighting, the red looks like their blood” as the latter response indicates that one or both of the cats’ intactness has been violated.

Similarly, figures trying to kill each other are scored 5 because this reflects the effort of one or both to dominate and destroy the other. Thus “Two bears trying to kill each other” on Card II is a 5, unless the aggression is more malevolently one-sided, in which case the score of 6 would be more appropriate (see below). Other examples of responses scored a 5 include:

Card II: Two bears fighting...kicking...blood there.
Card III: Puppets...they’re just there like someone has them on strings.
Card III: Belly dancers...they’ve changed somebody into a skeleton...at the bottom...a skeleton.
Card VI: A sea monster ready to attack.
Card VIII: A wolf stalking its prey.
Card VIII: A victim.
Card IX (D3 areas): Two witches, they’ve cast a cruel charm against someone.
Card X: Two spiders. Shooting poison at each other.
Scale Point 6

Malevolent, one-sided aggression and domination is a major difference between responses receiving a scale point score of 5 and those scored as 6. In a scale point score of 6, not only is there a severe imbalance in the mutuality of relations between figures, but here the imbalance is cast in decidedly destructive terms. Two figures simply fighting is not destructive in terms of the individuality of the figures, whereas a figure being strangled by another is considered to reflect a serious attack on the autonomy of the object. Similarly included here are relationships that are portrayed as parasitic, where a gain by one figure results by definition in the diminution or destruction of another” (Urist, 1977, p. 5).

Percepts emphasize as serious and dire assault on the autonomy of the object.

Examples of responses scored 6 include:

Card II: Two bears stomping on that dead animal. Because of all the blood there.

Card II: Two people feasting after killing an animal.

Card III: Two cannibal ladies tearing apart that animal. Want to drink the blood...maybe vampire cannibals.

Card VI: This looks like a jackhammer, splintering through rock (the autonomy or wholeness of the rock is destroyed by the violent penetration of the jackhammer.)

Card VI: A dead white bear slit in two by someone.

Card IX: Witches...shooting lasers...this one here explodes. She’s the new Queen of the witches.

Card X: A leech, stuck onto that man, sucking up his blood.

As a further clarification of how aggressive interactions of varying intensity and content can be scored with this scale, please consider the following:
Scale point 1: Two people fighting about politics. This one is a Liberal and this one is a Conservative and they are arguing over whether hunger really exists in this country. It’s a heated debate.

**Note.** Here the response reflects the mutual but independent, or differentiated concerns of the two people.

Scale point 2: Two people fighting.

**Note.** Here there is not attempt to hurt, control, or dominate the other.

Scale point 5: Two people fighting, they want to kill each other.

**Note.** The wish or attempt to hurt or destroy is implied.

Scale point 6: Two people fighting, blood all over the place, his arm’s been broken and he’s going to die.

**Note.** Here the malevolence results in the realization of the wish to destroy one of the figures.

**Scale Point 7**

A scale point score of 7 is given when relationships are characterized by an overpowering, enveloping force. “Figures are seen as swallowed up, devoured, or generally overwhelmed by forces completely beyond their control” (Urist, 1977, p. 5).

The destructive element is “larger than life” in a 7 response. The force is described as overpowering, malevolent, perhaps even psychotic. Frequently, the force is described as existing outside of the relationship between the figures or objects, underscoring the massiveness of its power, its overwhelming nature and the complete
helplessness of the figures or objects involved. Given the severe level of disturbance evidenced by such a response, the score of 7 should be given conservatively, saved solely for responses in which the malevolence or aggression is explicitly stated in human, grossly overwhelming terms. Examples of responses scored as 7 include:

Card II: Two bears...all burnt up...just stood up...stepped on a land mine. Smoke and fire there.

Card III: Megaforce...just disintegrated...nothing left of those two ladies...burnt to a crisp. Can't even tell who they were.

Card IX: This is something being consumed by fire, can't even see what it is, just the color of a raging fire.

Card IX: A violent God, up in the sky. He's so angry, he's breathing fire and that's what all the red is, and it's pouring down on the people below. God's wrath. The people are not to survive.

Card X: Debris. It's just scattered things. Maybe a tornado threw everything apart and it's all asunder, just remnants of things. Maybe houses, trees, just parts of them, because everything has been torn apart.

Card X: Spiders...crabs...people...big explosion...maybe plane crash...arms there...head...rabbit...all dead...blood. Nothing left...looks like guy's face...smushed all up.
Appendix E

IRB Proposal
January 9, 2000

Joanna Landau, RN, Ph.D.
Internal Review Board

Dear Dr. Landau:

I am writing to request permission to use Psychological Test data for my doctoral dissertation at Seton Hall University. From September 1997 until September 1998, I was employed by the Hospital as a Psychology Intern; and from September 1998 until September 1999, I was employed as a Psychology Fellow in the Psychological Assessment Service. I am currently working for Dr. David Pogge as a research assistant involved in collecting child outcome study data, as well as other ongoing research projects.

My proposed topic is "The Prediction of Aggressive Behavior in Hospitalized Adolescents From Projected Aggression and Object Relations Functioning." Specifically, I am attempting to predict aggressive behavior from Rorschach indicators of aggressive experience and a Rorschach measure of developmental level of object relations functioning. At present, there is very little empirical data in this area with adolescents. This study would contribute toward a better understanding of aggressive and violent behavior in adolescents, thus facilitating the identification and treatment of young people at risk for becoming violent.

This project involves examination of archival data that has already been collected as psychological testing data. All data will be carefully coded to protect the confidentiality of the participants, and all identifying information as to subject identity will be removed. Upon admission to the hospital, patients and their parents or guardians were informed that data from records may be used for archival research; therefore, no additional consent form specific to this study is required. Throughout the project design, and data collection and analysis, this study will be closely supervised by Dr. David Pogge.

Thank you for considering this project. I would be happy to meet with you and answer any questions or discuss specifics in greater detail at your convenience. I can be reached either at home, or through the Research Lab in the Psychological Assessment Service (x2575).

Sincerely,

Suzannah L.B. Espinosa, M.S.
Research Technician

encl.
February 15, 2000

Suzannah Espinosa

Dear Ms. Espinosa,

I am pleased to inform you that the Four Winds Hospital Research Committee has approved your study "The Prediction of Aggressive Behavior in Hospitalized Adolescents From Projected Aggression and Object Relations Functioning". Your plan for protection of human subjects and protection of confidentiality meets our requirements.

Good luck in your endeavors. Please feel free to call me if I can be of any further assistance.

Sincerely,

Joanna Landau, Ph.D., NPP, CS

Cc: Janet Z. Segal, CSW, COO
    David Pogge, PhD
    Jonathan Bauman, MD
THE DIFFERENCE BETWEEN AGGRESSIVE AND NON-AGGRESSIVE HOSPITALIZED ADOLESCENTS IN THEIR PROJECTED AGGRESSION AND OBJECT RELATIONS FUNCTIONING

A proposal submitted to the Hospital Internal Review Board

Suzannah L.B. Espinosa, Seton Hall University, Principal Investigator
Cheryl Thompson-Sard, Ph.D., David L. Pogge, Ph.D., & Arnold P. DeRosa, Ph.D., Dissertation Committee

Introduction

In light of the violence recently exhibited by youth, the identification and treatment of young people at risk for becoming violent has emerged as a significant public and clinical concern. According to one aspect of psychological theory (Blatt, Tuber, & Auerbach, 1990; Ciechetti & Toth, 1995; Gacino & Meloy, 1994; Lyons-Ruth, 1996; Sroufe, Carlson, & Schulman, 1993), individuals’ internal conflicts with aggression, as well as their internal representations of themselves, others, and relationships established in the early formative years have a determining influence upon present functioning. It is thought that a deeper understanding of the content, nature, and quality of these representations would add to our ability both to understand their impact on manifest behavior and to treat psychopathology. The purpose of this research is to contribute to a better understanding of aggression in hospitalized adolescents by studying the relationship between their projections of internal representations and images and their manifest behavior. It is hypothesized that in hospitalized adolescents, greater amounts of projected aggression (Exner, 1993; Gacino & Meloy, 1994; Holt, 1977) in the presence of a lower developmental level of object relations functioning (Tuber, 1992; Urist, 1977) will predict aggressive behavior.
The clinical-empirical study of aggression and its manifestations, whether constructive as in non-destructive or assertive behavior, or destructive as in disruptive or harmful behavior, has become an established research domain (Lyons-Ruth, 1996). The definition of aggression, however, is poorly and inconsistently conceptualized and operationalized. The DSM-IV (APA, 1994) has incorporated manifestations of aggression into its definitions of such disorders as oppositional-defiant disorder, conduct disorder, attention-deficit/hyperactivity disorder, and antisocial personality disorder. Nevertheless, children and adolescents with disruptive behavior disorders are a heterogeneous group manifesting a wide range of aggression, with some individuals displaying severely aggressive behavior and others evidencing little if any aggression.

The measurement of aggression is problematic (Edmunds & Kendrick, 1980; Kay, Wolkenfield & Murrill, 1988; Klama, 1988). Aggression as a term in ordinary speech conveys a wide variety of meanings and definitions, and the many scales used to rate "aggressiveness" reflect the diversity of definitions (Kruesi et al., 1994). Items on rating scales often include emotions, thoughts, and activity associated with anger (Achenbach & Edelbrock, 1981; Buss & Durkee, 1957). Their relevance to actual physical aggressive acts is, however, speculative (Edmunds & Kendrick; Kruesi et al.). Moreover, it appears that the construct of aggression that is assessed via rating scales based on factor-analytically derived measures (e.g., Youth Self Report (YSR); Achenbach, 1991) reflects a more broad and perhaps less well-defined concept (Kruesi et al.).

Given this, some researchers (Gacono & Meloy, 1994) prefer to define aggressive behavior separately from the intentions, thoughts, and feelings that underlie such behavior. Physical injury or damage to people, animals, or objects belonging to others, and violent and
overtly hostile behavior is of obvious clinical salience and plausible as a definition of aggressive behavior. A goal of research can then be to understand more about such behavior in terms of its relationship to characterological traits, malignant or deviant internal thoughts or images, primitive self and object representations, and extant psychopathology (Gacono & Meloy).

Method

Subjects

Data for the adolescents that will be used in this study will be selected from a large archival database stored in Psychological Services at Four Winds Hospital. These data include standard psychological test data on approximately 1,000 adolescent participants collected during a five-year period from June 1995 to June 1999. The adolescents included in this archival database were between 13 and 17 years of age at the time of their testing, and were admitted as patients to Four Winds Hospital. Upon admission to the hospital, patients and their parents or guardians were informed that data from records, including psychological test data, may be used for archival research under conditions of strict confidentiality. Therefore, no additional consent form specific to this study is required. Finally, these data have been carefully coded to protect confidentiality of all participants.

Procedure

From the pool of subjects included in the archival database, data for approximately 200 adolescents will be selected and divided into Aggressive and Non-Aggressive groups. Selection for each group will be based on the presence or absence of recent aggressive behavior. For the Aggressive sample, subjects will be selected based on a combination of a clear documented history of physical aggression prior to hospitalization and clinical observations of overt hostility, and verbal assaultive and physically combative behavior at the time of admission. The Non-Aggressive subjects will be selected on a basis of no documented history of physical aggression
and the absence of significant overt hostility at the time of admission. Subjects will be excluded from this study if their Full Scale Wechsler IQ (WISC-III, WAIS-R, or WAIS-III) is below 70.

During the period of data collection, approximately 75% of the adolescents admitted to the hospital were referred for psychological testing. The psychological test battery was administered by psychometric technicians under the supervision of licensed psychologists. Each technician was highly trained on the standardized administration procedures of all the instruments, and also received extensive training and detailed supervision in the administration of the Rorschach protocols. For the purposes of this study, two research assistants will be trained in the scoring of the additional Rorschach variables used in this study. The additional scoring of the Rorschach protocols and the collection of the data will be supervised by the Director of Psychology, David L. Pogge, Ph.D. All files have been coded by hospital investigators through use of research numbers that are kept separate from the patient name and other identifying information. Data are archival and this investigator will not have access to real identities as part of the study. At all times the data will remain on site, securely maintained, and complete confidentiality of the subjects will be ensured.

Benefits

As these data are archival, there are no direct benefits to those adolescents who participated.

Risks

Because this study proposes to collect data already coded to protect confidentiality, there is no identifiable risk to the subjects included in this study. Furthermore, as described above, the data required are archival and a subset of a larger archival database at Four Winds Hospital.
Instruments

This study will use several different clinical measures to assess the hypothesized relationship between recent aggressive behavior and overt hostility, developmental level of object relations functioning, and projected aggression.

1. Recent aggressive behavior will be obtained from information contained in the adolescent’s medical chart. These data were provided by the patient, parents or guardians, referral source, or the admissions staff and include information on whether or not the adolescent was involved in: (a) violent behavior, (b) physical fights, or (c) court proceedings for violent non-status offense(s) (e.g., assault, rape, murder, or armed robbery) prior to hospitalization or during the admission procedure.

2. The Hostility item from the Hopkins Psychiatric Rating Scale (HPRS; DeRogatis, 1978) will be used as the rating of the adolescent’s overt hostility and verbally assaultive or physically combative behavior at the time of hospitalization.

3. Projected aggression will be assessed by scoring the adolescents’ Rorschach responses for aggressive movement (AG; Exner, 1993), aggressive content (AgC), aggressive past (AgPast), aggressive potential (AgPot) (Meloy & Gacono, 1992), as well as primary (A1) and secondary (A2) process aggression (Holt, 1977).

4. The Mutuality of Autonomy Scale (MOA; Urist, 1977; Urist & Shill, 1982; Tuber, 1992) will be used to assess the schema or template that defines salient aspects of the adolescent’s developmental level of object relations functioning.

Hypotheses

1.0 The general prediction is that projected aggression and developmental levels of object relations functioning are both independent but related constructs, and that both of these
constructs will contribute uniquely to the prediction of aggressive behavior in hospitalized adolescents. Included in this general hypothesis will be the following specific hypotheses:

1.1 Increased amounts of projected aggression, as reflected by the subject’s scores on the six Rorschach aggression variables (Exner, 1993; Meloy & Gacono, 1992; Holt, 1977), will be related to a recent history of aggressive behavior in hospitalized adolescents.

1.2 Lower developmental levels of object relations functioning, as reflected by the subject’s mean score on the Mutuality of Autonomy Scale (MOA; Urist, 1977; Urist & Shill, 1982; Tuber, 1992), will be related to a recent history of aggressive behavior in hospitalized adolescents.

Significance of the Study

By examining the relationship between recent history of aggressive behavior, projected aggression, and developmental level of object relations functioning, this study will attempt to provide a comprehensive picture of the relationship between adolescents’ manifest behavior and their internal psychic structures. Moreover, previous studies on the motivations behind aggressive behavior have focused primarily on biological, environmental, and cognitive aspects. Problems in object relations have been only briefly noted in the phenomenological and diagnostic profiles posited for individuals with behavior problems and those who are diagnosed with some form of psychopathology. Previous research has generally overlooked the importance of object relations, psychoanalytic, and developmental psychopathological theory; all of which have addressed these aspects of aggression.

In addition to the dearth of literature on the relationship between aggression and object relations functioning, most empirical research in the domain has failed to consider projected experience of aggression. Moreover, results of studies investigating the relationship between
aggressive imagery on the Rorschach and real-world aggressive behavior have produced mixed results (Baity & Hilsenroth, 1999; Elizur, 1985; Finney, 1955; Gacno & Meloy, 1994; Goldstein, 1997; Margolis, 1992; Meloy & Gacno, 1992; White, 1998). The equivocal results may be related, at least in part, to the fact that most of the studies have used criminals as subjects. Two studies have gone beyond the criminal domain (Baity & Hilsenroth, 1999; Goldstein, 1997). While Goldstein did not find any significant relationships between the aggression scores (AG, AgC, AgPast, AgPot) and different types of observed aggressive behavior in hospitalized adolescents, she did find that aggressive adolescents gave a significantly higher number (p<.05) of aggression scores. In their study on adult outpatients with Axis II diagnoses (character pathology), Baity and Hilsenroth demonstrate that: (a) the aggression scores can be scored reliably, (b) AgC is empirically related to DSM-IV (APA, 1994) diagnostic criteria for antisocial personality disorder, and (c) AgC and AgPast are empirically related to a self-report measure of anger and antisocial practices. By further investigating projected aggressive experience in aggressive and non-aggressive groups of hospitalized adolescents, this study will contribute to clinical research on the use of the Rorschach as an important tool in examining the construct of aggression (Exner, Kazaoka, & Morris, 1979, cited in Exner, 1993; Gacno & Meloy, 1994; Hilsenroth, Fowler, Padawer, & Handler, 1997; Holt, 1977; Kalliopuska, 1992; Meloy & Gacno, 1992; Rader, 1957; Towbin, 1959; Westen, 1990).

References


