

CHAPTER 25

Pathologies of Attachment, Violence, and Criminality

J. REID MELOY

THE ORIGINS OF ATTACHMENT THEORY AND RESEARCH 509

THE PSYCHOBIOLOGY OF ATTACHMENT 510

- Attachment as a Behavioral System 510
- Biology and Attachment 511
- Emotion and Cognition 511
- Attachment and Exploration 512
- Attachment and Fear 512
- Attachment and Socialization 512
- Attachment and Caregiving 512
- Attachment Behavior and the Attachment Bond 512

PATHOLOGIES OF ATTACHMENT 513

ATTACHMENT AND VIOLENCE 514

- Intimate Partner Violence 514
- Violence and Criminality 518

NEW AVENUES OF FORENSIC RESEARCH AND APPLICATION 519

- Stalking: The Preoccupied Crime 519
- Psychopathy: The Dismissive Criminal 521

CONCLUSION 521

REFERENCES 522

One of the great paradoxes of human existence is that most interpersonal violence occurs between people who are attached or bonded to each other. Proximity seeking toward another and acute distress when unpredictably or permanently separated, the empirical components of attachment, appear to be the most fertile territory for physical combat. This is an association filled with irony, reminding one that the tendency to “debasement in the sphere of love” (Freud, 1912, p. 177) is a widely observed phenomenon.

Violent attachments (Meloy, 1992) are not lost in the commonsense behavior of those professionals charged with risk managing violent individuals: Judges are most likely to issue protection or restraining orders to prevent domestic violence; homicide detectives first suspect sexually or affectionately intimate members of the victim’s kinship network when investigating a murder; and child abuse as a form of interpersonal violence has received an enormous amount of publicly funded legal, clinical, and research attention during the past quarter-century.

The clinical and forensic investigation of the relationship among attachment, violence, and criminality is quite recent and very promising. In this chapter, I summarize and highlight this situation, argue for its relevance on the basis of

clinical and empirical evidence in two emerging areas of criminality, develop theoretical links to other areas of forensic knowledge, and suggest directions for both future forensic research and practical applications.

THE ORIGINS OF ATTACHMENT THEORY AND RESEARCH

Attachment is a biologically rooted, species-specific behavioral system that, when activated, maintains close proximity between a child and his or her caretaker. It was first proposed and investigated by John Bowlby, James Robertson, and Mary Ainsworth at the Tavistock Clinic in London following World War II (Ainsworth & Bowlby, 1954; Bowlby, 1953; Robertson & Bowlby, 1952). Attachment behaviors are evident in both birds and mammals, but are generally absent in reptiles. Individuals with reptiles as pets often misinterpret their thermotropic (heat-seeking) behavior as an emotion related to attachment or bonding and project on the animal their own affectionate feelings.

John Bowlby was the fourth child born to a London surgeon and a country parson’s daughter. He was trained as a child psychiatrist and joined the British Psychoanalytic Society at a time when there was great turmoil between the followers of Melanie Klein and those of Anna Freud. Bowlby’s personal analyst was Joan Riviere, and one of his

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supervisors was Klein. Troubled by the dogmatism of psychoanalysis at the time, its extrapolations from the couch to the crib, and its dismissive attitude toward empirical investigation of normal development, Bowlby's long-standing interests in Darwinism led him to the new science of ethology. This provided him with a truly scientific framework within which to reformulate his psychoanalytic knowledge. Attachment theory began (Holmes, 1995).

The origins of attachment theory are found in three psychoanalytic papers (Bowlby, 1958, 1960, 1961) which were later expanded into Bowlby's trilogy of books: *Attachment* (1969), *Separation* (1973), and *Loss* (1980). The early papers emphasized three findings: (a) There is a primary attachment between mother and child that is "hard-wired" and whose evolutionary purpose is to protect the infant from predators; (b) anxiety is an affective response to either separation from a loved one or external threat; and (c) infants and children experience grief when they experience loss. Although these postulates are accepted by most contemporary psychologists, they were revolutionary during their time because they challenged the primacy of sexuality in development and emphasized the impact of evolution and biology on personality. Attachment theory was an interpersonal theory of mind that stressed an essential harmony between mother and child unless it was disturbed. Bowlby unified the psychoanalytic world against him for nearly 20 years; he began to achieve a rapprochement only after his appointment as Freud Memorial Professor of Psychoanalysis at University College in London, an appointment now held by his heir-apparent, Peter Fonagy.

Mary Salter Ainsworth, a Canadian psychologist who studied at the University of Toronto, accompanied her husband to London in 1950 and answered a job advertisement in the *London Times* for a research position investigating the impact of maternal separation on personality development. This serendipitous event changed her life, and she collaborated with Bowlby for many years to come. She left for Africa with her husband in 1953 and conducted the first empirical study of normal attachment among 26 families with unweaned babies in Uganda. It was here that she began to validate Bowlby's ethological theory of attachment and also the importance of maternal sensitivity in attachment quality. The genesis of secure and insecure attachment can be found in the "Ganda data" (Ainsworth, 1967).

While mulling over the findings from Africa, Ainsworth began a second observational study with 26 families after she relocated to Baltimore in 1963. She collected 72 hours of data during home visits that spanned the first year of the newborns' lives. These meticulous narratives documented the difficulties some mothers had responding to their baby's cues, and the interactions in the first quarter of observation

predicted the nature of the mother-infant relationship in the last quarter. The Baltimore work also led to the formulation of the "Strange Situation," a 20-minute contrived naturalistic experiment that examined attachment and exploration under minimal and maximal stress. Mother and baby would play, a stranger would enter the room, mother would leave briefly and then return. The various stages of this experiment allowed Ainsworth to discern differences in the infants' reunion behavior with their mother. Most of the infants were immediately soothed by their mother's return and quickly responded to her nurturing. A few, however, were very angry, cried and wanted contact, but would not cuddle and accept the nurturing. They were markedly ambivalent. Others would dismiss and ignore the mother even if they searched for her until she returned. They were avoidant. Robertson (1953) had documented similar behaviors in his film, *A Two Year Old Goes to Hospital*, and Harlow (1961) had noticed similar patterns in some monkeys. The Baltimore studies are remembered for the development of the Strange Situation classification system, which identified three attachment styles: secure, avoidant, and ambivalent/resistant (Ainsworth, Blehar, Waters, & Wall, 1978).

THE PSYCHOBIOLOGY OF ATTACHMENT

Secure or normal attachment assures proximity of the child to the attachment figure, usually the mother. Smiling, vocalizing, and approaching are signaling behaviors that communicate a desire on the part of the child for interaction; other behaviors, most notably crying, are aversive events for the mother and bring her close to the child to terminate them, a negative reinforcement for both caregiver and child through the alleviation of their mutual distress.

From an evolutionary perspective, attachment behavior ensures the survival of the child by protecting him or her from predators. Although Bowlby (1969) originally emphasized survival of the species as the goal of attachment, contemporary evolutionary thinking has refocused on the reproductive fitness of the child if he or she grows up, thus increasing the probability that the genes of the individual will survive into the next generation. If the child is eaten, a seemingly universal and unconscious fear that has sparked both intellectual curiosity (Freud, 1919) and enormous cinematic success (*Jaws*), there will be no future children.

Attachment as a Behavioral System

Attachment is a species-specific system of behaviors that leads to certain predictable outcomes through *organization*. It

“goal-correct,” depending on the behavior of the caregiver. My dog Rubin shows this very clearly. If I call him from a distance, he begins running toward me; if I move from my original location, he will adjust the vector of his approach to most efficiently arrive next to me. His goal—proximity to his caretaker—does not change but his adaptation is fluid. This is theory based on a control-systems perspective (Ashby, 1956). Bowlby (1969) emphasized that the goal is not the object, but rather behavioral homeostasis: optimal distance from the caregiver. The attachment system is activated in many contexts, two of which are danger and stress. If the child is hungry, in pain, or ill, he or she will approach the caretaker; if the child is threatened by a stranger, he or she will also approach the caretaker.

Biology and Attachment

There is a growing body of research indicating that attachment behavior is influenced by and causes changes in various biological mechanisms. Hofer (1995; Polan & Hofer, 1999) has made significant contributions in his study of rat pups in his laboratory. For example, milk and other nutrients reduce the rate of calling behavior of the pups for their mother due to stimulation of intraoral sensory receptors, an effect that is mediated by endogenous opioids. This connects attachment behaviors organized around suckling to less vocalization during comforting, and strengthens the association between oral ingestive behavior and the formation of a bond. In other research, human infants who appear stressed during Ainsworth's Strange Situation are likely to exhibit increases in measurable cortisol levels in saliva (Nachmias, Gunnar, Mangelsdorf, Parritz, & Buss, 1996). Individual differences in infant temperament, a largely heritable characteristic, show distinct physiological markers when the infant is distressed in the Strange Situation, which likely influence attachment behavior and attachment classification (Fox & Card, 1999). Based on a growing body of empirical evidence, Fisher (1998) theorized that the primary neuroregulators of attachment in humans are the hormones oxytocin and vasopressin, what she has termed the “cuddly chemicals.” She has developed a model of three relatively independent, evolutionarily evolved psychobiological systems that regulate behaviors related to lust, attraction, and attachment.

Emotion and Cognition

Bowlby (1979) was very clear on the importance of emotions in relation to attachment. He observed that the most intense emotions arise during the formation, maintenance, disruption, and renewal of attached relationships: “Threat of loss

arouses anxiety and actual loss gives rise to sorrow; whilst each of these situations is likely to arouse anger. The unchallenged maintenance of a bond is experienced as a source of joy” (p. 130). The evolutionary purpose of emotion in relation to attachment is that humans actively work to maintain a bond to another due to the pleasure it brings, which, in turn, enhances their reproductive fitness or success: their likelihood of mating. Emotions serve as conscious regulators of attachment behavior, and when conditioned in a secure context as an infant, provide a template for approach and avoidance behavior in adulthood.

Cognitions have played an increasingly complex role in the development of attachment theory and research. Bowlby (1969) originally proposed that cognitions, which he referred to as “internal working models” or “representational models,” were derived from actual experience of the self, the caretaker, and the environment. They also serve a regulatory function, and are active motivational schematas that internally represent the external world, more or less accurately, and predict future interpersonal experience. When the child is operating from a secure base, internal working models can be adaptively updated with new experience. “Defensive exclusion,” however, may be used to ward off perceptions, feelings, and thoughts that provoke anxiety or suffering. Bowlby's rethinking of the psychoanalytic term “defense” is broader and more active than the Freudian construct; it postulates that children, because of the frequency and intensity of their attachment arousal, are especially vulnerable to defensive exclusion. A consequence is that different and incompatible sets of internal working models may begin to operate that, in themselves, may cause contradictory behavior and maladaptation later in life: for example, the conscious idealization of a mother by a criminal, who was, in fact, severely neglected by her, and subsequently as an adult has become a serial rapist. As Bowlby wrote in 1979:

The more details one comes to know about the events in a child's life, and about what he has been told, what he has overheard and what he has observed but is not supposed to know, the more clearly can his ideas about the world and what may happen in the future be seen as perfectly reasonable constructions. (p. 23)

Bowlby's work on cognitions drew from his psychoanalytic training and is somewhat convergent with contemporary object-relations theory (Fonagy, 1999c). It was also heavily influenced by George Herbert Mead's (1934) symbolic interactionism and the social psychologists Kurt Lewin (1933) and Fritz Heider (1958). Fonagy's (1999b) work on “mentalizing” and the reflective capacity is an important extension of the role of thought and feeling in attachment. He has been

able to empirically measure the parent's capacity to mentally represent the child as a whole, real, and meaningful human being, and has shown its causative impact on the child's secure or insecure attachment behavior.

Attachment and Exploration

There is an exploratory behavioral system that is biologically based and complements attachment. When a child feels secure, what Ainsworth (1963) called a secure base from which to explore, the attachment system is not activated and the child can go forth and gather new information about how the world works. This dynamic equilibrium is mutually inhibiting; when there is a threat or a potential hazard, exploratory behavior will diminish or cease altogether as the attachment system activates. Empirical research has demonstrated that the infant's belief that the mother will be available when needed enhances exploration (Sorce & Emde, 1981). In several studies (Ainsworth & Wittig, 1969; Carr, Dabbs, & Carr, 1975), the mother's physical or psychological presence was experimentally manipulated, producing data that strongly supported the theoretical association between maternal availability and infant exploration, what Ainsworth referred to as an "attachment-exploration balance" (Ainsworth, Bell, & Stayton, 1971).

Attachment and Fear

Although fear is evoked when there is a real threat, there appears to be a fear behavioral system that initiates attachment seeking when danger is *likely*. Bowlby (1973) called the stimuli that trigger this system "natural clues to danger." He included such things as high places, darkness, loud noises, aloneness, and sudden looming movements. These clues are not inherently dangerous, but provoke attachment behaviors that, in turn, diminish fear if the caretaker is accessible. These clues are distinguishable from other objects that provoke fear that are inherently dangerous to infants, such as poisonous and predatory creatures (some spiders, snakes, and large mammals). The infant's capacity to experience fear in all of these situations is an evolutionarily adaptive trait that contributes to its survival and eventual reproductive success.

Attachment and Socialization

Individuals in the company of others are much less likely to be killed by predators (Eisenberg, 1966). In addition, there are other important survival advantages to spending time with people, including food gathering, building shelters, learning, and finding a mate. Affiliative or social behavior,

however, is *not* attachment, although it does appear to be a behavioral system that is activated under certain circumstances. Children, for example, engage in more playful activity with their peers when their attachment to a primary caretaker is secure (Bowlby, 1969). Harlow (1969) showed, moreover, that monkeys reared with their mother but without peers were subsequently impaired in their adult social, mating, and parenting behavior. Bowlby understood affiliation as a broader concept than attachment, the former covering all "friendliness and goodwill, of the desire to do things in the company of others," but without the object specificity of attachment (p. 229).

Attachment and Caregiving

There also appears to be a biologically based caregiving system that protects the child and works in concert with attachment. When caregiving is activated by the parent, the child's attachment seeking is unnecessary and deactivated. When the child is an infant, the chief caregiving behavior is retrieval. Exploratory behavior is also enhanced if caregiving is activated. Cassidy (1999) noted that a child exploring a park will cover much more territory if the mother actively follows. Caregiving is activated by a variety of internal (hormones, beliefs, fatigue states, emotions, and attachment style of the mother) and external clues (familiarity of the environment, presence of danger, and behavior of the infant). Cassidy proposed that soothing also facilitates caregiving by ensuring the monitoring of potential or real dangers to the child; for instance, continued holding of the child after his or her distress subsides may reveal a splinter in the child's finger.

Attachment Behavior and the Attachment Bond

Attachment behavior is not the same as a bond to another person. Empirical research has substantiated that attachment behavior exists throughout the human life cycle, and early attachment experiences predict to a certain degree later attachment expectancies and behaviors (Cassidy & Shaver, 1999). Crowell, Fraley, and Shaver (1999) caution, however, that measurement of attachment across methods (interview versus self-report) and domains (parent versus romantic partner) produces different correlations, averaging $r = .39$ and $r = .31$, respectively. Ainsworth (1989) described six criteria for an attachment bond: (a) it is persistent; (b) it involves a specific person; (c) it is emotionally significant; (d) proximity with the person is wished for and sought; (e) distress is felt when there is involuntary separation; and (f) the relationship brings security and comfort. Although activation of the attachment behavioral system is situational, and often initiated by an

Internal or external threat, an attachment bond exists over time and can be inferred, but not observed.

The importance of this distinction is clear if we assume, for a moment, that there is no distinction. Then we would wrongfully conclude that a child who fearfully clings to his or her mother is securely bonded to her; a child who has lost his or her mother and temporarily seeks comfort from a stranger is bonded to the stranger; and a child who confidently plays with another child in the presence of his or her mother, but does not seek her comfort, is not bonded to her. The difference is even more apparent when we turn to abnormal or pathological attachments. Paradoxically, the absence of a secure bond activates the attachment behavioral system in unusual, strange, and sometimes dangerous ways.

PATHOLOGIES OF ATTACHMENT

Two pathological forms of attachment were first discovered by Ainsworth et al. (1978) in the Strange Situation. The avoidant infants (Type A) were exploratory without paying attention to mother's location, were minimally distressed when she left, and largely ignored her when she returned.

The secure infants (Type B) competently expressed their needs and accepted maternal care. The ambivalent/resistant infants (Type C) had difficulty separating from their mother and exploring or playing in the environment, were also very distressed when mother left, but could not "settle in" with her when she returned. Separation distress did not distinguish secure from insecure (avoidant or ambivalent) infants; all three groups evidenced such distress to one degree or another. The reunion behaviors most clearly demarcated the groups.

These three forms of attachment behavior worked well in research for many years and were used to successfully test the hypothesis that attachment types were generally stable from childhood to adulthood (Goldberg, Muir, & Kerr, 1995). There were always some subjects, however, who could not be classified, especially in research with clinical samples. Main and Solomon (1986, 1990) subsequently developed criteria for a fourth type: disorganized/disoriented attachment (Type D). These infants had no organized strategy for managing arousal during the activation of their attachment behavioral system while seeking comfort and security. Behaviors included apprehensiveness, helplessness, depression, unexpected alterations in approach or avoidance toward mother, prolonged "freezing," and psychomotor slowing. Cortisol levels remained significantly elevated and higher than other, more organized attachment types, whether secure or insecure (Spangler & Grossman, 1993).

Disorganized attachment in infants has been associated with severe maternal psychosocial problems, including depression, history of violence or abuse, inpatient psychiatric history, and the mother's own abuse of the infant (Lyons-Ruth, Repacholi, McLeod, & Silva, 1991). By 6 years of age, disorganized attachment often becomes controlling behavior toward the mother, either caregiving or coercive, and this role reversal is often accompanied by childhood aggression and a disparity between verbal and performance IQ (Lyons-Ruth et al., 1991). It appears strongly related to diagnoses of oppositional defiant disorder, conduct disorder, and other externalizing problems in childhood (Lyons-Ruth, 1996). Most interestingly, disorganized attachment in infants is reliably predicted by the mother's lack of resolution of a previous loss or trauma, measured before the birth of the child (van Ijzendoorn, 1995). For example, a mother who suffered from posttraumatic stress disorder due to chronic physical abuse by her ex-boyfriend is at great risk to raise a child who evidences disorganized attachment within the first few years of life. Main and Hesse (1990) theorized that this intergenerational transmission of attachment is related to frightening or frightened parental behavior and may be a product of dissociation in the parent. Other psychiatric disorders in parents may also be strongly related to risk of disorganized attachment in infants (Lyons-Ruth, 1996).

Models of adult attachment have been developed by Hazan and Shaver (1987), Main, Kaplan, and Cassidy (1985), and Bartholomew (1990, 1994, 1997). The latter's work is most promising because it is consistent with earlier infant and childhood theories of attachment, further delineates avoidant strategies, and incorporates an object- and self-representational perspective. It contains three pathological types:

1. *Preoccupied* individuals have a negative perception of self and a positive perception of others. Attachment behaviors and internal regulation of arousal have been conditioned by inconsistent parenting in childhood. They blame themselves for a lack of love and appear to be very dependent in their attempts to gain others' approval and acceptance.
2. *Fearful* individuals have a negative perception of both self and others and avoid close contact, usually due to a history of rejecting or unresponsive parents. Others are viewed as uncaring due to the fearful individual's unlovable nature. Although they desire acceptance, they fear rejection.
3. *Dismissing* individuals have a positive perception of self and a negative perception of others. They have managed rejecting or unresponsive parents by distancing and becoming self-reliant, inoculating themselves against the devaluation they have learned to expect.

Bartholomew has used a circumplex model of interpersonal behavior to validate her attachment prototypes along dimensions of control and affiliation (Bartholomew & Horowitz, 1991). There has also been substantial research on both concurrent and predictive validity of her model (Bartholomew, 1997). The fourth type of adult attachment pathology, which is not included in her model, is the *disorganized* individual. Although research with such adults is limited, it appears closely associated with severely disturbed clinical and forensic samples of individuals (Fonagy, 1999b).

These four adult attachment pathologies—preoccupied, fearful, dismissing, and disorganized—are becoming keys to unlocking the *raison d'être* for violent attachments.

ATTACHMENT AND VIOLENCE

Although there have been many models proposed for classifying violence, converging lines of theory and empirical research have divided violence into two modes: predatory (instrumental, premeditated, attack) and affective (impulsive, reactive, defensive). Labels have varied, but the underlying characteristics have been similarly described and, in some cases, measured by different research groups (Barratt, Stanford, Felthous, & Kent, 1997; Cornell et al., 1996; Meloy, 1988, 1997; Raine et al., 1998). *Predatory violence* is planned, purposeful, and emotionless, with absent autonomic arousal. *Affective violence* is a reaction to a threat, accompanied by anger and fear, and involves high levels of autonomic (sympathetic) arousal. The evolutionary basis of predatory violence is hunting; affective violence is rooted in a protective and defensive response to an imminent threat. Both serve reproductive success and genetic viability. In other words, our ancestors thousands of years ago were adept at both predatory and affective violence (more so than their neighbors who did not survive to reproduce and raise their young).

Research on attachment and violence during the past decade has largely focused on intimate partner, or domestic, violence. There has been limited research on attachment and violent criminality. The discoveries are new and very promising.

Intimate Partner Violence

In July 2000, the U.S. Department of Justice published findings from the National Violence Against Women Survey concerning the extent, nature, and consequences of intimate partner violence (Tjaden & Thoennes, 2000). Risk factors associated with intimate partner violence were discerned using logistic regression on separate samples of women (N = 4,896)

and men (N = 5,056). The strongest predictor of victimization by an intimate partner for both men and women was physical assault as a child by a caretaker. Other predictors included unmarried (but cohabitating) status, African American race, verbal abuse by the partner, jealousy or possessiveness, and educational or racial disparities between the partners. The authors wrote, "Violence perpetrated against women by male partners is part of a systematic pattern of dominance and control, or what some researchers have called 'patriarchal terrorism'" (p. 34). Despite the merit of these empirical findings, attachment theory, even the word attachment, was never used throughout this study. Instead, the authors chose to interpret their findings in a narrower feminist sense, which begs the question: If American society is suffused with "patriarchal terrorism," why is it that most men do not assault their intimate partner?

I think the psychosocially deeper and more comprehensive answer to this question is that most men form secure attachments. The ones who are not capable of forming such attachments are at greatest risk for intimate partner violence. Research continues to accumulate that empirically supports the general hypothesis that insecure attachments are significantly associated with, and in some cases intergenerationally predict (Adamson, 1998), intimate partner violence (Holtzworth-Munroe, Stuart, & Hutchison, 1997). Most studies have focused on the male's attachment pathology (Dutton, 1995a), but some recent studies indicate that securely attached individuals are more likely to form sexual pair bonds, devoid of violence, with each other. The sexual intimates of insecurely attached individuals, on the other hand, are also likely to have a history of insecure attachment, thus embarking on a pathogenic dance that is at greater risk of violence (Babcock, Jacobson, Gottman, & Yerington, 2000; Irwin, 1999). Birds of a feather appear to flock together. Tjaden and Thoennes (2000) also found that intimate partner violence was highest among homosexual males and lowest among homosexual females, an important point of reference that underscores the biological propensity of men to be more violent than women regardless of their target. Such findings also contradict the argument that any psychopathology, including attachment, in the (usually) female victim of domestic violence is irrelevant to understanding the violence, and is nothing more than "blaming the victim." Attachment pathology in the male perpetrator of domestic violence also appears to be a more stable correlate than any one specific personality disorder (Tweed & Dutton, 1998; Waltz, Babcock, Jacobson, & Gottman, 2000).

Several researchers and their colleagues dominate the work in this area, and despite different foci, each has shaped scientific thinking about intimate partner violence and attachment.

Kesner conducted two studies (Kesner, Julian, & McKenry, 1997; Kesner & McKenry, 1998) drawing on Bowlby's (1984) notion that intimate violence may be a product of maladaptive anger to keep the partner from separating. In his first study of violent male spouses (Kesner et al., 1997), he found that attachment variables served as unique predictors of male intimate violence: (a) the male's recollection of his relationship with his mother (a perceived deficiency in love and caring), and (b) his perceived relationship support from his spouse. In his second study (Kesner & McKenry, 1998) of heterosexual couples, he found that attachment factors of both the male and female partners were unique predictors of male violence; specifically, the males were more fearfully attached and less secure, and their female partner had more of a dismissing attachment and were less secure. He wrote, "The anger that acts to communicate fear of separation in the secure relationship intensifies into violent behavior by the fearful individual in a gross escalation of this anger" (p. 429). Concurrent life stressors failed to predict violence. Kesner's work empirically supports the importance of a negative maternal transference in male batterers and the contribution to the violence of the victim's insecure attachment, and also emphasizes the affective, rather than predatory, mode of violence in the couples whom he has studied.

Downey and her colleagues have made similarly important contributions. In two recent papers (Downey & Feldman, 1996; Downey, Feldman, & Ayduk, 2000), she has studied "rejection sensitivity" as predictive of male violence toward romantic partners. Defining her construct as "the disposition to anxiously expect, readily perceive, and intensely react to rejection by significant others" (p. 45), Downey has shown that it is a vulnerability factor for two maladaptive styles of coping with intimacy: fearful avoidance of such an intimate, and a preoccupied search for an unconditionally supportive intimate. The latter style predicted relationship violence, usually affective, in a large nonclinical sample of college males (Downey et al., 2000). Rejection sensitivity (what Gabbard, 1989, termed "hypervigilant narcissism") may be an important personality trait that is a product of insecure attachment. In a related study, Oderberg (1995) found in a sample of college undergraduates that witnessing parental violence as a child was positively associated with insecure attachment as a young adult.

Dutton (1995a, 1998) and his colleagues have made enormous contributions to our understanding of domestic violence. Their discoveries have emerged along three lines of research: the etiology of intimate violence; the perpetuation of intimate violence (in particular, the reasons why a victim stays in the abusive relationship); and typologies of intimately violent men.

Dutton's work is unique among these researchers because he has used both attachment and object-relations theories to propose hypotheses concerning batterers, developed instruments when needed to measure his hypotheses, and then tested them on various samples of batterers in treatment programs and in prisons around Vancouver, Canada. He has shown that the etiology of battering is not simply child abuse of the batterer when he was a young boy. Instead, shaming of a child by a caretaker, witnessing violence directed toward the self or mother, and insecure attachment (fearful or preoccupied) form a triad that predicts battering as an adult (Dutton, 1999). All contribute to the formation of a borderline personality organization (Kernberg, 1984) that stimulates an "intimacy anger" when in a relationship. This largely impulsive group of batterers are prone to experience rejection anxiety, which is quickly converted into abandonment rage when loss is imminent and is then violently expressed to diminish tension (Dutton, 1994, 1995a, 1995b, 1995c). His empirical findings using various predictive statistical models have validated his etiological theories (Dutton, 1998).

The continuation of violence by the batterer, largely through the inability of the victim to leave the relationship, led Dutton and his colleagues to apply the theory of traumatic bonding to such phenomena. Drawing on the social psychology hypothesis of a traumatic bond that forms between hostage and hostage taker, the so-called Stockholm Syndrome, he and his student (Painter & Dutton, 1985) posited that reinforcement mechanisms interact with extreme power differentials to constitute traumatic bonding. For example, both intermittent punishment (the onset of violence) and negative reinforcement (the termination of violence) can further cement the relationship. In a subsequent study (Dutton & Painter, 1993), their hypothesis was empirically tested and demonstrated that 55% of the variance in their attachment measure of female victims six months after separation was accounted for by the traumatic bonding variables. They emphasized the prolonged effects of abuse and dismissed other, more static, theories of female victimization, such as masochism.

Another area in which Dutton has made important contributions is the development of a typology for batterers. Drawing on the earlier work of Hamberger and Hastings (1986) and Holtzworth-Munroe and Stuart (1994), which identified three subgroups of batterers—the generally violent/antisocial, dysphoric/borderline, and family only/overcontrolled—his work has refined our understanding of the first two groups. Dutton (1998) has referred to the dysphoric/borderline group of batterers as the "abusive personality." Characteristics of this subgroup include a fearful attachment style, borderline personality organization, chronic anger, and

impulsivity. They are withdrawn, asocial, moody, hypersensitive to slights, volatile, reactive, and oscillate rapidly between indifference and rage. The modal *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV*; American Psychiatric Association, 1994) diagnosis appears to be borderline personality disorder. Saunders (1992) referred to them as the Type 3, Emotionally Volatile group. I earlier described the etiology of this group, which appear to make up 25% of batterers in treatment. Their violence is affective rather than predatory.

The generally violent/antisocial group is the most psychopathic of the batterers. Although psychopathy has yet to be directly measured in a study of spousal batterers, this group tends to elevate on the Antisocial, Narcissistic, and Aggressive-Sadistic scales of the Millon Clinical Multiaxial Inventory II (MCMI-II; Millon, 1981). They are also more severely physically violent, are narcissistically entitled, and manipulative. In contrast to the dysphoric/borderline group, they exhibit low levels of depression and anger. Their abuse of drugs and alcohol is frequent, and they are more violent outside the home than other groups. They also represent approximately 25% of batterers (Holtzworth-Munroe & Stuart, 1994). They have moderate marital satisfaction, but fail to achieve any sense of relationship reciprocity or whole-object relatedness to their partner (in analytic terms, she remains a selfobject or part-object). Most interestingly, their violence is predatory (instrumental): planned, purposeful, and emotionless. Their attachment pathology, however, appears to be preoccupied, but not fearful. Although at first blush, this appears contradictory, and one would expect a dismissive attachment style, Tweed and Dutton (1998) note that such an attachment pattern would not motivate a high investment in a troubled relationship nor an ongoing effort to use violence to control a partner. What appears to be present is, instead, a preoccupation with attaining a relationship in which the psychopathic batterer dominates and controls his partner. Measurement of psychopathy in a future study of batterers will clarify this issue. The severe psychopath—individuals that score ≥ 30 on the Psychopathy Checklist—Revised (PCL-R; Hare, 1991)—may be relatively infrequent among spousal batterers because all of his relationships are generally fleeting. Without any capacity to attach or bond, he moves on to another sexual object, engaging in a pattern of search polygyny (Meloy, 1992, 2000b) that precludes any sustained effort to control a noncompliant mate. The batterers in Dutton's instrumental group are likely to be significantly more psychopathic than his impulsive group, but may not be severe psychopaths.

Gottman and Jacobson (Gottman et al., 1995) have directed their research efforts toward understanding and treating marital violence for a number of years, and have likewise

made enormous contributions. Most recently, they have validated the three types of batterers, which they call generally violent, pathological, and family only (Waltz et al., 2000), the typology originally proposed by Holtzworth-Munroe and Stuart (1994). Although the first two groups did not differ on personality disorder—both elevated on the borderline and antisocial scales of the MCMI-II—the types differed as predicted on the frequency of their emotionally abusive behavior, their history of witnessing parental violence, attachment pathologies, jealousy, and presence of chemical abuse. (The authors also noted the high overlap between these scales on the MCMI-II and their correlation of 0.64. The MCMI-III, however, shares only 18% of items between these two scales, suggesting further research may benefit by using the latter measure.) The generally violent men were dismissing and avoidant, whereas the pathological men were preoccupied and ambivalent. The “family-only” batterers showed a “compulsive care-seeking” attachment style.

Their most compelling work, moreover, has been in the area of physiology, emotional regulation, and marital violence. In an earlier study which received considerable attention, Gottman et al. (1995) recruited a sample of couples with maritally violent histories and measured their physiology in the laboratory while the pair engaged in conversations about highly conflicted issues in their relationship. They identified two groups: Type I batterers (<20% of their sample) demonstrated heart rate decreases during intimate conflict; Type II batterers demonstrated heart rate increases. They referred to the former as “vagal reactors,” in reference to the vagus nerve, which, when activated, reduces autonomic arousal. This group was also more likely to be generally violent and antisocial, and had scale elevations on the MCMI-II for Antisocial and Aggressive-Sadistic behavior. Although they did not measure psychopathy, nor discuss it in this study, their findings were highly consistent with the autonomic hyporeactivity that has been documented in psychopaths for decades, particularly in aversive circumstances (Meloy, 1988). Low resting heart rate is also one of the most replicated physiological findings among adolescent delinquents, and is a measurable aspect of the chronic cortical underarousal seen in habitual criminals (Raine, 1993). Most interestingly, during long-term follow-up, none of the women married to these men had left them.

Babcock et al. (2000) further advanced their work in a study that integrated attachment pathology as an “index of emotional regulation” (p. 392) and the function of violence in marital relationships. They viewed insecure attachment along a dimension of deactivation (dismissing) versus hyperactivation (preoccupied) attentional systems that serve to regulate affect during stress. They showed, first of all, that violence was most likely to occur in an insecure attachment

according to the Adult Attachment Interview (AAI; Main & Goldwyn, 1984).

The AAI is a semistructured interview about childhood attachment experiences that has been refined and expanded over the past 15 years (Main & Goldwyn, 1994) but has yet to be published. Extensive training is required to use the instrument. The narrative of the interview is transcribed and scored according to three criteria: (a) the coder's assessment of the subject's childhood experiences; (b) the language used by the subject during the interview; and (c) the individual's ability to give an integrated and credible account of his or her experiences as a child. Two sets of scales, Parental Behavior and State of Mind, result in the assignment of the subject to one of three major classifications: secure, dismissing, or preoccupied. Individuals may also be classified as "unresolved" (what I have termed "disorganized" in this chapter) and "cannot classify." The AAI is the gold standard for assessment of attachment (Crowell et al., 1999).

Babcock et al. (2000) further demonstrated two functional patterns of intimate partner violence that were tied to both attachment pathology in the male and triggering behavior in the female. The dismissing batterers were most likely to use violence instrumentally (a predatory mode) to control the behavior of their spouse. This subgroup also had the most extensive antisocial traits and were likely the most psychopathic of their types; although, once again, psychopathy was not directly measured. They were also most likely to be violent when the spouse became defensive during an argument. The preoccupied batterers were most likely to use violence expressively (an affective mode) to regulate affect in their interaction with their spouse. They were most likely to be violent when she attempted to withdraw during an argument. Both attachment pathologies tended to be more domineering than the secure husbands. The researchers hypothesized that the dismissing batterers used a controlling and distancing style of interaction to get what they wanted, whereas the preoccupied batterers were remarkable for their inability to use distancing and disengage from conflict: When their spouse withdrew, they perceived imminent abandonment, and their anger escalated into dysregulated fury and violence.

Holtzworth-Munroe and her colleagues (Holtzworth-Munroe & Stuart, 1994) have been the undisputed leaders in the formulation of a reliable and valid overall batterer typology. Their theory is an intrapersonal one, focusing on the predisposing and precipitating factors *within the batterer* that contribute to his violence.

Following a review of the existing research, Holtzworth-Munroe and Stuart (1994) theorized that batterers could be categorized along three descriptive dimensions: (a) the severity and frequency of marital violence, (b) the generality of

violence, and (c) the batterer's psychopathology or personality disorder. This dimensional approach yielded three types previously mentioned: the family-only batterers, the dysphoric-borderline batterers, and the generally violent-antisocial batterers. They further proposed a developmental course for the three types, which included both historical (e.g., genetic and prenatal factors, violence in the family of origin) and proximal correlates (e.g., attachment style, dependency, hostility toward women, social skills). They built predictions for their model based on their proposed types and risk factors.

One hundred and two men were recruited from the community to test their model (Holtzworth-Munroe, Meehan, Herron, Rehman, & Stuart, in press), selected on the basis of a wide range of violence toward their spouse. Two nonviolent comparison samples were also recruited (distressed and not distressed). When they completed their analyses of both their dependent and independent variables, their three predicted subgroups emerged, along with a fourth group. The subgroups generally differed along their three descriptive dimensions and their proposed developmental risk factors. One independent research group has also found three subgroups that closely fit the Holtzworth-Munroe and Stuart typology (Hamberger, Lohr, Bonge, & Tolin, 1996).

The fourth unpredicted cluster was labeled the "low-level antisocial" group. These men appear to fall within an intermediate range on a number of variables between the family-only and the generally violent-antisocial groups. Holtzworth-Munroe (2000) argued that the family-only group in their community sample probably represents the young, newlywed couples where low levels of aggression are almost normative (O'Leary et al., 1989). These men, however, did not differ on measures of attachment or psychopathology from the nonviolent but distressed comparison group. It may be that their violence is socioculturally based, rather than rooted in any psychological abnormalities.

Holtzworth-Munroe (2000) also proposed a condensing of her three descriptive dimensions into two: an antisocial continuum (measurement of psychopathy would work best here) and a borderline continuum (perhaps a measure of borderline personality organization) to account for the severity of violence and the degree of attachment pathology, respectively. She also emphasized the dynamic, rather than static, nature of spousal violence, and endorsed, at least in theory, the application of predatory versus affective modes of violence in demarcating the behavior of the generally violent-antisocial from the borderline-dysphoric batterer.

Fonagy (1999c) and his colleagues have charted exciting new territory in our understanding of violent attachments and the psychology of the self. Approaching attachment theory from the perspective of psychoanalysis, their theoretical and

empirical work has focused on the “mentalizing” function and the reflective self, the capacity of an individual to recognize subjective states and the subjectivity, or inner states, of others. This is the experience of oneself and others as having wishes, feelings, thoughts, desires, beliefs, and expectations—in short, an “intentionality” that is motivated by an internal psychology. Fonagy’s work is a deepening and broadening of Bowlby’s (1961) early theory on internal working models that, in essence, posits that the absence of a theory of mind (a theory of self) is a fundamental cause of insecurity of attachment and, in certain cases, intimate violence. As Fonagy (1999a) wrote:

The child finds himself in the caregiver’s mind as an intentional being motivated by mental states, beliefs, and desires. This representation is internalized as the core of the psychological self. Thus, the realization of subjectivity might be more accurately stated: “My caregiver thinks of me as thinking, therefore I exist as a thinker.” (pp. 12–13)

Fonagy has empirically tested his theory in a number of ways. Fonagy, Steele, Moran, Steele, and Higgitt (1991) found that the capacity for caregivers to reflect on mental states in themselves and others when describing their own childhood predicted their children’s security of attachment. Reflective self ratings were reliable ($r > .80$) and provided a good prenatal prediction of their child’s behavior in the Strange Situation experiment. Highly reflective parents were three or four times more likely to have secure children than low-reflective parents. In another study, Fonagy, Steele, Steele, Higgitt, and Target (1994) factored in social deprivation of the mother (single parent, living in overcrowded conditions, unemployed father, low income, etc.) to see if it would affect the impact of the reflective self on secure attachment. It did not. The deprived mothers with a capacity to fully represent and reflect on themselves and others all had securely attached infants, and virtually all of the deprived mothers who could not reflect had insecure infants. In a third study, children securely attached in infancy were more likely to cognitively understand the affective states in others at 5 years of age when compared to insecurely attached children (Fonagy, Redfern, & Charman, 1997).

The psychoanalytic basis of Fonagy’s work is that children find themselves in the mind of their caretaker, and the psychobiological vehicle for this discovery is a loving and secure attachment. When this is not available, when, for instance, the parent is constantly angry at or even hates the children, the children’s contemplation of the parent’s feelings toward them is intolerable. Therefore, they do not think of themselves; rather, they internalize the hateful, perhaps

persecutory mental representations of the parent. These hateful introjects then become a source of emotional volatility and turmoil in subsequent attachments throughout their life, as they continuously project them onto their intimates as a means of evacuating and controlling them. These individuals are clinically observed as impulsive, emotionally unstable, and prone to violence toward self and others; the diagnosis is often borderline personality disorder. Fonagy (1999a) has emphasized the importance of trauma and disorganized attachment in the genesis of such a personality disorder.

Although Fonagy’s (1999b) theory of male violence toward female intimates has yet to be empirically tested, it is an elegant conceptual extension of his other work. The frequent childhood abuse and shaming of the male (Dutton, 1998) when he is little is managed by refusing to acknowledge his caretaker’s thoughts about him and his wish to harm him. The lack of safety with his caretaker continuously triggers his attachment behavioral system, which is responded to with neglect or abuse. The nascent mentalizing stance in the child is disavowed, and under the combined pressure of needing comfort and escaping abuse from the same person, he disrupts his capacity to represent the mental states of himself and others. People become objects or bodies, rather than whole, real, and meaningful individuals. A failure of mentalizing also causes a moral disengagement for four reasons: (a) Individuals without a well-established sense of themselves have no sense of personal agency; (b) they cannot anticipate the psychological consequences of their actions on others; (c) others are treated as objects; and (d) rationalization and minimization (plausible but false fluidities of thinking) are more prominent (Fonagy, 1999a). Violence toward the intimate results from a maladaptive escalation of anger to keep the partner from neglecting or abandoning, as well as an overwhelming need to control the other so that intolerable self states can be projected (or projectively identified) into her. One 26-year-old male who killed his estranged wife told me, “I didn’t know what to feel. I was in a rage and also numb. I needed to shoot the pain . . . I killed the woman I loved.” A 38-year-old male who sexually assaulted and killed a 12-year-old girl told me that his father would always say to him, “The best part of you got spilled on your mother’s bed-sheets.” These devaluing and hateful self and other representations constantly oscillate between two insecurely attached partners who attempt to manage, often unsuccessfully, a volatile interpersonal space.

Violence and Criminality

The research on attachment and other forms of criminal violence is much more limited than the intimate partner

research. Antisocial personality disorder (*DSM-IV*), or conduct disorder in adolescence, appears to be associated with dismissing or disorganized attachment pathology. Allen, Hauser, and Borman-Spurrell (1996) found that both pathologies predicted criminality in a sample of adolescents 10 years after their attachment was measured. This prospective study compared adolescents who were psychiatric inpatients with a group of high school students. Derogation of attachment (dismissing) and lack of resolution of trauma (disorganized) were the best predictors, and did so when psychiatric hospitalization was controlled as a confounding variable. Likewise, Rosenstein and Horowitz (1996) found in a small sample of conduct disordered adolescents ($N = 7$) that most were classified as dismissing and none were classified as unresolved (disorganized). Fonagy et al. (1996) found that most paranoid and antisocial personality disordered adults in a nonrandom sample were classified as disorganized, with clearly unresolved trauma, when a four-category system of attachment classification was used.

The most compelling theory and supportive empirical findings concerning pathological attachment as a risk factor for violence and criminality have been advanced by Fonagy (1999a; Fonagy et al., 1997). In a small study comparing prison inmates, psychiatric patients, and controls (Levinson & Fonagy, cited in Fonagy, 1999a) using the AAI, the vast majority of the prisoners were classified as either dismissing (36%) or preoccupied (45%). Although 82% of psychiatric patients were disorganized, only a minority of prisoners were disorganized (36%). However, most of the prisoners had been physically or sexually abused, and neglect was also prevalent. Anger was highest among the prisoners, and their reflective function was lowest among the three groups. Reflective function among the violent prisoners, as measured by index offense, was significantly lower than among the non-violent prisoners.

Fonagy (1999a) argued that these findings, although only a pilot study, support the theory that weak bonding and the dismissal of objects is a risk factor for violent criminality, a relatively consistent finding over the past 50 years (Bowlby, 1958; Meloy, 1992); more important, "criminal behavior may be seen as a socially maladaptive form of resolving trauma and abuse. Violent acts are committed in place of experienced anger concerning neglect, rejection, and maltreatment. Committing antisocial acts is facilitated by a nonreflective stance toward the victim" (Fonagy, 1999a, p. 64).

This thinking is in accord with other work concerning disorganized, traumagenic attachment in infants and the emergence of coercive and aggressive behavior in later childhood (Lyons-Ruth, 1996). It usefully extends it into the object representations of the violent criminal. But it does not account-

for the prominence of dismissing attachment pathology among criminals, likely related to the construct of psychopathy, that may instead have its roots in a temperament-environmental misfit that leads to avoidant strategies by both mother and child (Shaw & Bell, 1993). It also does not leave room for the possibility that a constitutional defect in the capacity to bond may exist in the child, and despite heroic efforts by the securely attached parents to stimulate a bond, nothing works.

In the domain of attachment and violent criminality we are left with intriguing theory, very little research, and some tentative findings: (a) Insecure attachment is a risk factor for violent criminality; (b) secure attachment may be a protective factor against violent criminality, particularly when the child is raised in a deprived economic or social environment (Klevens & Roca, 1999; Marcus & Gray, 1998); (c) the reflective function may be an important mediating variable for understanding affective violence in particular; and (d) dismissing and disorganized pathologies of attachment may correlate with constitutional and traumagenic pathways to violent criminality, respectively.

NEW AVENUES OF FORENSIC RESEARCH AND APPLICATION

If we conceptualize attachment pathologies as lying on a continuum between hyperarousal (the preoccupied type) and hypoarousal (the dismissive type), and see this autonomic activation or deactivation (whether acquired or inherited) as being related to both attention and emotion (Babcock et al., 2000), two intriguing new areas of forensic research and application become apparent: understanding the nature and dynamics of stalking and psychopathy.

Stalking: The Preoccupied Crime

Stalking is an old behavior but a new crime (Meloy, 1999). First codified in California in 1990, stalking laws now exist throughout the United States, Canada, Great Britain, Australia, and New Zealand. Typically defined as "the willful, malicious, and repeated following and harassing of another that threatens his or her safety" (Meloy & Gothard, 1995, p. 259), stalking victimization affects a large proportion of both the adult and adolescent populations.

Stalking laws typically have three elements: a pattern of unwanted pursuit, a credible threat, and the induction of reasonable fear in the victim. In California, the current stalking law reads as follows (Penal Code Section 646.9):

Any person who willfully, maliciously, and repeatedly follows or harasses another person and who makes a credible threat with the

...tent to place that person in reasonable fear for his or her safety, or the safety of his or her immediate family, is guilty of the crime of stalking.

Although the law is new, Mullen, Pathé, and Purcell (2000) note that the first attempt to prosecute stalking behavior was brought before the English court in *Dennis v. Lane* in 1704. Dr. Lane, a physician, engaged in an unwanted pursuit of Miss Dennis. During the course of his stalking, he assaulted two parties, a man accompanying Miss Dennis on a trip and a barrister who had escorted her to London. He was eventually ordered to pay 400 pounds as security to ensure the peace. The eventual outcome of the case is unknown.

At the end of the twentieth century in the United States, it appears that 8% of adult women and 2% of adult men will be stalked some time in their life (Tjaden & Thoennes, 1997); approximately 25% of college-age students will be victimized by stalking behaviors, although most incidents do not arise to the level of criminal activity (McCann, 2001).

Stalking and violence are closely allied. Rates of violence are disturbingly high, usually directed toward the target of the stalking. They range from 25% to 40%, but they typically exceed 50% when there has been a prior sexual intimacy between the stalker and his or her victim (Meloy, in press). The nature of the stalking violence is also being studied. In most cases of "private" stalking in which there has been a previous known relationship, the violence is affective: Victims are pushed, shoved, grabbed, choked, slapped, punched, fondled, or their hair is pulled. There is typically no weapon used. In cases of "public" stalking, in which the target is a public figure such as a celebrity or politician, the violence is predatory: Victims are attacked with a weapon, usually a firearm, after a lengthy period of obsessive thought, dysphoric rumination, planning, and approach (Fein & Vossekuil, 1999; Meloy, 1999; 2001). Mark David Chapman, the assassin of John Lennon, traveled from Hawaii, where he was living, to New York City and back, only to return again in December 1980 to carry out his killing. He made himself known to the doormen at the Dakota Building as a fan of Lennon over the course of a number of days and actually got Lennon's autograph on a compact disk before he murdered him later that evening by shooting him in the back using a .38 caliber revolver (Jones, 1992).

Meloy (1989, 1992) first proposed that stalking may be a pathology of attachment in relation to unrequited love and the wish to kill. His clinical and theoretical assertion was largely based on the obsessive nature of the cognitions and the labile, and intensity of the affect apparent in the rejected (either in fantasy or reality) individual. Kienlen, Birmingham, Solberg, O'Regan, and Meloy (1997) were the first to

observe and document two empirical findings that strongly suggested attachment pathology in stalking cases. In a small sample of incarcerated stalkers in a Missouri prison, the majority had lost a primary caretaker in childhood and had had a major loss, usually a personal relationship, in the six months preceding the onset of stalking. The researchers proposed that these two findings respectively predisposed and precipitated the criminal behavior. Although Meloy (1996, 1999) focused on a preoccupied attachment style among stalkers in subsequent writings, Kienlen (1998) reported case examples and theory consistent with a variety of attachment pathologies among stalkers.

The preoccupied, hyperaroused nature of stalkers has been supported by several negative findings. Most individuals who stalk are not antisocial personality disordered (Meloy et al., 2000), and the psychopathic stalker is a rare event (Meloy, 1999). These empirical findings are consistent with the hypothesis that chronically emotionally detached individuals who evidence a "dismissing" attachment would not waste their time stalking someone; they do not form an enduring, meaningful emotional bond with another. Instead, they manipulate, exploit, and then dispose of their objects. It is also consistent with findings I described concerning the surprisingly preoccupied attachment pathology among some antisocial batterers (Tweed & Dutton, 1998); they are probably not psychopaths.

More recent studies continue to verify the hyperaroused, preoccupied pathology of individuals who stalk prior sexual intimates. Mechanic, Weaver, and Resick (2000) found in a large sample of battered women that emotional and psychological abuse in the relationship were strong predictors of postrelationship stalking, even when the effects of physical violence were controlled. They wrote, "It appears that one function of pursuit-oriented behaviors, of which stalking is a particularly virulent form, is to regulate attachment and proximity seeking via coercive control strategies" (p. 70). Others have found that attachment disturbances (preoccupied and fearful) are related to jealousy, following, surveillance, and separation behaviors (Dutton, Saunders, Starzomski, & Bartholomew, 1994; Guerrero, 1998; Holtsworth-Munroe et al., 1997). Research among college students is promising. Langhinrichsen-Rohling, Palarea, Cohen, and Rohling (2000) found in a large sample of undergraduates that unwanted pursuit behaviors were significantly predicted by an ex-partner who was anxiously and insecurely attached and evidenced higher levels of "possessive" and "dependent" love. These latter terms concerning "love styles" have recently played a role in the research of Cupach and Spitzberg (1998), who have made important contributions to our understanding of "obsessive relational intrusion," a typically

nonviolent and less severe form of stalking, among college students.

Love styles were first proposed by Lee (1976) and measured by Hendrick and Hendrick (1986). A secondary style, called "mania," blends *eros* (passion and romance) and *ludus* (game playing and exploitation); it is possessive, dependent, and addictive. In a large study of undergraduates, Spitzberg (2001) found that both a preoccupied attachment pattern and manic love had small but significant associations with some of the obsessively intrusive tactics of relational pursuit, specifically, physical threats and hyperintimacy (unwanted messages, intruding on interactions with others, monitoring, exaggerated affection).

This new area of forensic research—stalking as a preoccupied crime—is important because of the high rates of violence associated with it, its prevalence in society, its relationship to domestic violence, and accumulating evidence that it is a chronic behavior for which a hyperaroused, preoccupied attachment pathology may be central. Empirical studies, however, that directly measure the attachment pathologies of samples of convicted stalkers, both men and women, have yet to be done.

Psychopathy: The Dismissive Criminal

At the other end of a hypothetical attachment continuum is the underaroused, affectively avoidant, chronically emotionally detached individual. This dismissing attachment pathology, in its most extreme and virulent form, is likely found in the psychopath. A plethora of research during the past 20 years has shown the construct of psychopathy—a constellation of behaviors and traits (Hare, 1991)—to be both reliable and valid, particularly as a predictor of violent criminality (Millon, 1998). Psychopaths, when compared to other nonpsychopathic criminals, are more frequently and severely violent, are more likely to target strangers, engage in both affective and predatory violence, perpetuate violent criminal acts for a longer period of time across their life span, and are often found among the most feared and unpredictable offenders: those who commit sexually sadistic acts and serial sexual homicides (Meloy, 2000a, 2000b).

Curiously, there are no published studies that have directly measured psychopathy (Hare, 1991) and attachment (using the AAI or other direct self-report measures) in samples of male inmates, despite the work cited earlier concerning the externalizing, disruptive, and controlling behavior found in children and adolescents with various attachment pathologies, and the chronic cortical underarousal found in habitual criminals (Raine, 1993). There has, however, been work in two related areas. Gacono and Meloy (1994) found in a

number of antisocial samples—including children, adolescents, and adults—that a Rorschach measure of attachment, the texture response, was significantly less frequent than in normal samples. As degree of psychopathy increased across these subjects, the frequency of the texture response decreased. Meloy (1988) described this measure, which involves the perception of a tactile quality to the inkblot, as a somatosensory analog for early skin contact with the mother, the primary vehicle of affectional relatedness for the infant and perhaps the corporal genesis of secure attachment.

Attachment and psychopathy have been measured among female inmates. Both Strachan (1993) and Taylor (1997) found that a dismissive attachment pathology, inferred by the voluntary relinquishment of their children, significantly correlated with psychopathy in samples of incarcerated women, even when other confounding variables, such as drug abuse and prostitution, were controlled. On the other side of this coin is the finding by Raine, Brennan, and Mednick (1997) that birth complications and maternal abandonment during the first year of life were significant predictors of early-onset violent criminality in their adult male offspring.

This new area of forensic research, the psychopath as a dismissive criminal, is important because of his high rates of violence and the chronic, nonviolent destruction he causes through dominance, manipulation, and exploitation of others—despite his apparent conscious disavowal of any need for affectional relatedness, a striking paradox. Attachment theory also can bring to the psychopathy research an empirically based, psychobiologically informed construct that may help complete the unfinished patchwork quilt that best describes the current findings within the neurobiology of the psychopath (Millon, 1998). For example, I would hypothesize that a dismissing attachment pathology may be inherited in some cases, rather than acquired through parental abuse, neglect, or an unreflective parent, a possibility heretofore unacknowledged among attachment researchers. Testing of this hypothesis may contribute to our fuller understanding of the exact nature of heritability of psychopathy. Another intriguing area of investigation is the role that deficiencies in vasopressin and oxytocin, two hormones apparently related to attachment (Fisher, 1998), may play in the biology of psychopathy, two biochemicals unexplored by psychopathy researchers. This might help us understand the psychopath's lack of empathy and enormous capacity for cruel aggression.

CONCLUSION

It may become an empirically grounded truism, years from now, that attachment pathology is a centrally necessary, but

alone insufficient, component to explain violence: whether it is the hyperaroused, preoccupied attachment pathology of stalking behavior that often results in affective violence, or the hypoaroused, dismissive attachment pathology of the psychopath that often results in predatory violence. In a more applied context, violent attachments and their measurement through the use of reliable, valid, and normed forensic instruments, none of which currently exist, may become *de rigueur*, a standard of practice requirement, for the forensic psychologist of the future. Current research is certainly lighting the way.

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