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# Psychopathy in juvenile offenders Can temperament and attachment be considered as robust developmental precursors?

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## Abstract

Attempts to predict adult psychopathy generally focus on aggressive and antisocial behavior exhibited in childhood and adolescence. Yet, children with conduct problems constitute a heterogeneous group, and many of the unique interpersonal and affective features associated with the construct of psychopathy only apply to a small subset of children displaying antisocial behavior. The current review seeks to derive an understanding of the specific precursors of the apparently amoral, affectionless, and self-centered orientation that psychopathic youngsters display towards other people. The focus is on the notions of temperament and attachment in early childhood, and their links to the emergence of moral emotions later in life. Based on a developmental perspective, the data currently available are examined, highlighting the insights gained from this body of work and outlining the conceptual and methodological challenges that still need to be addressed. © 2002 Elsevier Science Inc. All rights reserved.

*Keywords:* Juvenile psychopathy; Temperament; Attachment

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## 1. Introduction

The concept of psychopathy has a long and prominent history in clinical psychology and criminology. Public imagination has always been fascinated by psychopathic individuals who are viewed as a breed apart from the class of “normal criminals,” in that they are peculiarly

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vicious and dangerous. Early accounts of this condition suggested that it represented a form of "moral insanity" (Blair, Jones, Clark, & Smith, 1995; Pritchard, 1835 as cited in Bemm, 1999). In fact, age-old popular images of madmen and violent maniacs emerged from these initial conceptualizations (see Adshad, 1999; Bemm, 1999; Gillett, 1999; Harold & Elliott, 1999; Slovenko, 1999). Decades of heated debates focused on the free will of these moral transgressors, and on whether they were capable of "understanding" the consequences of their acts (Pinel, 1801/1962; Selmer, 1841 as cited in Millon, Simonson, & Birket-Smith, 1998). Until the second part of the twentieth century, insight into the mind and behavior of psychopaths was mostly gained through clinical characterizations of these individuals (e.g., McCord & McCord, 1964). For example, in his highly influential book "The mask of insanity," Chekley (1941) offered a thorough description of the psychopath's primary traits: guilelessness, incapacity for object love, impulsivity, emotional shallowness, and superficial social charm. Attempts to study this condition from a research perspective have been more recent, and have until now mostly served to validate clinical accounts.

Based on both clinical and empirical work, current conceptualizations of psychopathy emphasize a personality disorder defined by a constellation of behavioral, interpersonal, and affective characteristics (Hare, 1993, 1998; Hart & Hare, 1997). Behaviorally, psychopathic individuals are risk-taking, sensation seekers who act impulsively and get involved in a variety of criminal activities. Interpersonally, they have been described as grandiose, egocentric, manipulative, arrogant, and cold-hearted. Affectively, they display shallow emotions and are unable to form strong emotional bonds with others. Among the trademarks of this condition, it has been suggested that psychopaths fail to experience or appreciate the emotional significance of events (Christianson et al., 1996; Hare, 1998). Clinicians and researchers generally emphasize a profound lack of remorse, guilt, and empathy, as well as a callous disregard for the feelings, rights, and welfare of others (Forth & Burke, 1998; Frick, 1998; Hare, 1991, 1993; Hart & Hare, 1997; Lynam, 1996).

It is a well-known finding that over the lifespan, psychopathy and other related disorders (e.g., oppositional defiant disorder, conduct disorder, antisocial personality disorder [APD]) are more prevalent in males than in females (Offord, Adler, & Boyle, 1986; Offord, Boyle, & Racine, 1991; Salekin, Rogers, & Dayli, 2001; Salekin, Rogers, & Sewell, 1997). In fact, results of several national surveys (e.g., Epidemiological Catchment Area study, National Comorbidity Survey) indicate that the disorder is five to seven times more common in men than in women (see Paris, 1998). Some authors (e.g., Hamilton, Rothbart, & Daves, 1986) contend that this gender difference can in part be explained by the fact that prevailing conceptualizations of psychopathy, which focus largely on antisocial acts and aggressive behavior, are less applicable to women. Because girls and women are typically not expected to engage in aggressive antisocial behavior and are actively discouraged from behaving against societal norms (Maccoby, 1986; Silverthorn & Frick, 1999), it has been suggested that personality components of the disorder (e.g., lack of empathy and remorse, superficiality) may be more predictive when studying female psychopathy. In essence, the argument is that differing symptom pictures exist for psychopathic males and females, and that women tend to be less aggressive than men. Although the hypothesis of two disparate gender-related psychopathy constructs is

consistent with several clinical accounts of the disorder (see Rutherford, Alterman, Cacciola, & Snider, 1995), further systematic inquiry is required to provide greater insight into the role of gender in the manifestation of psychopathy.

Because of its strong association with criminal conduct (see Blackburn, 1998), psychopathy is known to have devastating consequences for the individual as well as for society at large. Indeed, psychopaths are responsible for a disproportionate amount of crime in our society, and they are among the most violent and persistent of offenders (Forth & Burke, 1998; Hare, 1981; Hare, McPherson, & Forth, 1988; Newman, Schmitt, & Voss, 1997). Hare and McPherson (1984) reported that psychopathic offenders are charged with significantly more thefts, robberies, assaults, and possessions of a weapon per year out of prison, and more escape attempts while in prison, than are nonpsychopathic offenders. Not only are psychopathic offenders more prolific and violent, but they are also more likely than other offenders to recidivate when released from prison (Harris, Rice, & Cormier, 1991; Hart, Kropp, & Hare, 1988; Serin, Peters, & Barbaree, 1990).

Among individuals with psychopathic tendencies who are detained for the perpetration of severe crimes, the lifetime prevalence of mental problems such as major depression, bipolar disorder, and personality disorders is generally elevated compared to population norms (Andersen, Sestoft, Lillebaek, & Gabrielsen, 1996; Rasmussen, Storsaeter, & Levander, 1999). Such findings of high comorbidity in prison inmates raise difficult questions regarding causal links between mental disorders and psychopathy. Based on the data currently available, it is difficult to ascertain whether the mental disorders and high levels of subjective distress among inmates existed before detention or developed during the detention. Consequently, at present, no firm conclusion regarding the role of psychiatric disorders in the development of psychopathy can be established.

To systematically capture the dispositions and traits that distinguish psychopaths from others who routinely engage in criminal conduct, Hare, Hart, and Harpur (1991) and Harpur, Hare, and Haksian (1989) developed a two-factor model of psychopathy. Two partially independent dimensions of behavior emerged from their research, which together predict chronic and severe patterns of maladjustment (Christian, Frick, Hill, Tyler, & Frazer, 1997). One dimension includes the interpersonal and emotional traits that have been the hallmarks of the psychopathic personality. The second dimension includes the unstable (e.g., multiple marriages, poor employment history) and antisocial (e.g., multiple arrests, aggression) tendencies that have been defining features of APD (American Psychiatric Association [APA], 1994). Based on this model, Hare and colleagues designed the original and revised Psychopathy Checklist (PCL and PCL-R; Hare, 1980, 1991), which represent reliable and valid tools to assess psychopathy in adults (Hare et al., 1990). The authors of these instruments devoted considerable effort developing rating scales that could capture the key features of psychopathy, and help to differentiate this disorder from APD and other types of conduct problems. In the past, a focus on behavioral symptoms, to the exclusion of affective and interpersonal characteristics, had created confusion between the two categories of deviance, and had led to the overdiagnosis of psychopathy in criminal populations (Hart & Hare, 1997). In recent years, the use of the PCL and PCL-R has enabled researchers and clinicians to make great strides in the accurate diagnosis of psychopathy.

From a social policy perspective, however, it helps little to be able to identify psychopaths in adulthood, since they form a group known to be recalcitrant to efforts at rehabilitation (Lynam, 1996). In order to design and implement effective interventions that will significantly reduce the prevalence of this disorder, early identification of the chronic offender and insight into the precursors of the psychopathic condition appear essential.

## 2. Precursors of adult psychopathy

Most authors consider adult psychopathy to stem from conduct problems exhibited earlier in life, and consequently, they attempt to predict this condition from aggressive and antisocial behavior displayed in childhood and adolescence (Forth & Burke, 1998; Frick, 1998; Frick, O'Brien, Wootton, & McBurnett, 1994; Hinshaw, 1994; Huesmann, Eron, Loeber, 1984; Walder, 1982; Lynam, 1996, 1997). Yet, symptoms of conduct disorder and oppositional defiant disorder are common in childhood (APA, 1994), and delinquency in adolescence is almost normative (Moffitt, 1993; Moffitt, Silva, Lynam, & Henry, 1994). In the past, relying on acts with such high base rates for identification of the chronic psychopathic offender has yielded too many false-positives to allow predictive validity, and has contributed to a difficulty in differentiating between the concepts of psychopathy and conduct disorder among youngsters (e.g., White, Moffitt, Earls, Robins, & Silva, 1990). Children with conduct problems constitute a heterogeneous group, and many of the interpersonal and affective features associated with the construct of psychopathy may only apply to a rather small subset of children displaying antisocial behavior (Frick, 1998; Lynam, 1997).

Various classification systems have been presented to study antisocial youth. Although a detailed description is beyond the scope of the current paper, it should be noted that most approaches have not gained wide acceptance with respect to the prediction of psychopathy. These schemes have been based on the type (Frick et al., 1993; Loeber & Schmalzing, 1985; Quay, 1987), pattern (APA, 1980, 1987; Henm, Bardwell, & Jenkins, 1980; Quay, 1992), developmental sequence (Loeber, 1988), or timing of conduct problems displayed by youngsters (APA, 1994; Moffitt, 1993). Summarizing some concerns related to these classification systems, Moffitt (1993) suggested that they "may have failed to capture the imaginations of social scientists because they offered relatively little in the way of etiological or predictive validity" (p.674). Taking Moffitt's arguments a step further, it is reasonable to contend that many researchers have neglected the core affective and interpersonal features of psychopathic maladjustment. By focusing to a great extent on outward manifestations of this condition that can easily be operationalized, a number of research endeavors have failed to capture the true essence of psychopathic personality, which is so vividly described in clinical work. Some recent research has made attempts to reconcile clinical insights and empirical rigor to gain a valid conceptualization of the developmental precursors of this condition. This work has critical theoretical relevance not only for the ultimate understanding of etiology, but also for the practical implementation of differential treatment programs.

As such, the current review is aimed at examining, from a developmental perspective, the body of existing work focusing on the affective and interpersonal characteristics that distinguish youngsters with psychopathic tendencies from other antisocial youth. Specifically, the present paper seeks to derive an understanding of the precursors of the apparently amoral, affectionless, and self-centered orientation towards other people that these youngsters generally display (O'Kane, Fawcett, & Blackburn, 1996). Evidence validating the concept of psychopathy in childhood and adolescence will first be presented, emphasizing deficits in moral emotions such as empathy as core-defining aspects of the condition. Since the cognitive features of empathy have been most extensively researched, this body of work will subsequently be reviewed. It will be argued that in contrast to cognitive dimensions, affective processes linked to the development of moral emotions have been somewhat overlooked, and deserve greater attention.

In searching for precursors of the emotional detachment of psychopathic youngsters, the notions of temperament and attachment will both be examined. Children's temperamental style and the quality of their early relationships with their primary caregivers are known to exert powerful and long-lasting influences on the emergence of their social skills, behavioral competence, and emotional well-being. By shaping children's experiences during the first few months of life, these dimensions have the potential of setting the pathway towards long-term adjustment or dysfunction. The influence of other family and environmental circumstances taking place over the course of childhood and adolescence (e.g., abuse and/or neglect, chaotic family environment) cannot be discounted when studying the development of antisocial personality traits and engagement in criminal activities. Yet, insight from clinical accounts suggests that the emotional detachment displayed by psychopathic individuals is so fundamental and pervasive that it is likely to originate in the first few months of life, and that it is relatively independent of later inadequacies in the rearing environment. The deficits in moral emotions that are characteristic of psychopaths are generally thought to develop partly as a function of a unique temperamental style, low fearful inhibition, that makes a child difficult to socialize and resistant to emotional ties. As such, the study of temperament and early attachment style is likely to inform us on the unique motivational and affective style of psychopathic youth. The review will attempt to highlight the work that remains to be done in order to validate the usefulness of these two constructs, both for conceptualization and intervention purposes.

### **3. Conceptualizing juvenile psychopathy**

As previously mentioned, long-standing concerns have existed regarding the predictive validity of classification systems for antisocial youth. Recently, efforts have been made to elaborate a more precise conceptualization of juvenile psychopathy that focuses not only on phenotypic aspects of antisocial tendencies, but that also takes into consideration affective characteristics generally emphasized in clinical depictions of the psychopathic condition. Specifically, Christian et al. (1997), Frick (1998), and Frick et al. (1994) have made great strides in understanding the disorder by extending the two-factor model of adult psychopathy

to children exhibiting conduct problems. These authors demonstrated that two dimensions of behavior, similar to those found in studies of adults, could be identified in samples of youngsters with conduct problems. The Callous/Unemotional factor (CU) captures a dimension of behavior that is characterized by superficial charm as well as a lack of guilt and empathy, which are characteristics considered primary in clinical descriptions of psychopathy. The Impulsivity/Conduct Problems factor (ICP) captures a dimension of behavior that includes impulsivity, poor impulse control, and delinquent behaviors (see Frick et al., 1994). This scheme is helpful to differentiate between conduct disorders and psychopathy, and to determine which children with conduct problems show early precursors of psychopathy. Indeed, the presence of CU traits with significant conduct problems designates a unique subgroup of antisocial youngsters who show a severe pattern of antisocial behavior across many years (Lynam, 1997).

In a recent review of the literature on psychopathic children and adolescents, Forth and Burke (1998) presented evidence validating the concept of psychopathy in this population and confirming its long-term consequences. Specifically, youngsters with psychopathic traits have been found to differ from other antisocial youth in terms of the age of onset of their behavior problems, the number of violent acts committed, the seriousness of their offenses, as well as the likelihood of recidivism. Longitudinal studies indicate that it is the youngsters' affective–interpersonal traits (C/U factor) that foreshadow the greatest risk of long-term maladjustment (e.g. Hare, 1993). It thus appears that beyond severe antisocial behavior, deficits in critical moral emotions represent core features of the psychopathic condition, even at an early age (Smith, Gacomo, & Kaufman, 1997).

### 3.1. *The role of empathy*

Empathy is considered to represent one such fundamental moral emotion. It is generally described as the central disposition that leads individuals to understand and share in another's emotional state or context (Cohen & Strayer, 1996; Eisenberg & Miller, 1987; Eisenberg & Strayer, 1987). It is also thought to contribute to a sense of connectedness and responsibility towards others. Evolutionary and neuroscience perspectives emphasize the value for the individual and species of a capacity for empathy. Hoffman (1991) postulated that all children possess a biological preparedness towards empathy already present in infancy. Empirical research confirms the early origins of this capacity (Zahn-Waxler, Radke-Yarrow, Wagner, & Chapman, 1992). In fact, precursory signs of empathy have been identified in infants as young as 2 days of age (Damon, 1988). Infants have indeed been shown to often cry and emit other signs of distress at the sound of another infant's crying, possibly indicating a spontaneous tendency to identify with another's discomfort (see Beck, 1999). As they grow older, infants progressively display more genuine concern. In reaction to the distress of others, children who are 12 to 18 months old frequently react with agitation or sustained attention (Eisenberg & Mussen, 1989; Radke-Yarrow & Zahn-Waxler, 1984). By 18 months of age, children often attempt to comfort others who are suffering, and by age 24 months they frequently respond by bringing objects to the distressed person or verbally sympathizing (Eisenberg & Mussen, 1989).

Although empathy has its roots in early life, it is well recognized that individual differences exist in the strength of this moral emotion. In turn, the strong presence or absence of empathy appears to function, respectively, as a protective or risk factor for antisocial behavior patterns (Davis, 1994; Miller & Eisenberg, 1988; Zahn-Waxler, Cole, Welsh, & Fox, 1995). For the person able to empathize with the experience of others, observing victims of aggression (especially their distress cues) should elicit a sharing of their pain. It is also thought to lead the aggressor to experience the reactive emotional response of empathic concern. To avoid or escape this vicarious distress, the person should inhibit or stop the antisocial behavior. Individuals who do not possess strong empathic capacities are expected to be more self-centered, and to not be propelled to suppress their aggressive impulses.

A large body of research conducted with youngsters has provided evidence for the link between deficits in empathy and aggressive behavior (e.g., Burke, 1999; Hills & Pithers, 1999; Marshall & Maric, 1996; Matthys, Walterbos, & Engeland, 1995). Specifically, lower empathy has been associated with hostile attitudes and aggression in a variety of community and clinical samples (Cohen & Strayer, 1996; Damon, 1988; Davis, 1994; Miller & Eisenberg, 1988). In investigations of youth with psychopathic tendencies, deficits in empathy are also well documented, and appear intertwined with the callous attitude that underlies their violent tendencies (Widiger & Lynam, 1998).

### *3.2. The role of perspective-taking skills*

Of great interest are the main factors underlying this diminished sensitivity towards other human beings in youngsters vulnerable for psychopathy. One widespread view is that in order for individuals to show concern for others, they must possess the cognitive ability to discern another's inner psychological states. This skill is generally called perspective taking, and is considered to be a cornerstone of children's moral development. Theoretical and empirical work into cognitive perspective taking has been greatly influenced by the paradigmatic framework of Kohlberg (1976), who described a series of developmental levels in children's moral reasoning. In effect, he proposed a description of the increasingly sophisticated moral reasoning of children with age. Kohlberg viewed moral development as a process of increasing differentiation and integration of perspectives of self and other in resolving moral conflicts (Speicher, 1994). As children mature, they should become less egocentric and they should broaden their world view to incorporate the perspectives and experiences of others. His approach assumed that in order to display moral action, children must learn to identify a wide range of emotional states in others, and they must acquire the ability to anticipate what kinds of actions will improve or protect the emotional state of others. From this viewpoint, deficits in empathy and guilt, as well as antisocial behavior often observed in youngsters with psychopathic tendencies, are considered to reflect a fundamental immaturity in moral reasoning.

Based on Kohlberg's theory, research investigations have focused on the ability of antisocial youth to take the perspective of other human beings and make judgments that take into consideration their feelings and overall welfare. Some studies explored the

perspective-taking skills of psychopathic youth more specifically, testing whether they could recognize signs of distress in others such as sad and fearful facial expressions (Blair, 1995, 1997; Blair & Coles, 1999; Blair, Jones, Clark, & Smith, 1995, 1997). The extensive literature on the morality of antisocial youth has made it clear that the moral reasoning and perspective-taking abilities of delinquents are at a lower level than that of normal controls (Blair et al., 1995; Campagna & Harter, 1975; Jurkovic & Prentice, 1977; for reviews, see Blair, 1980; Jurkovic, 1980; Nelson, Smith, & Dodd, 1990; Smetana, 1990). From the evidence currently available, however, it is more debatable whether the moral reasoning of psychopathic youth is at a lower level than that of delinquent controls (Lee & Prentice, 1988; O'Kane et al., 1996; Trevathan & Walker, 1989). Consequently, cognitive perspective-taking skills cannot at this time be considered to represent a specific marker of psychopathy, or one that is useful to reliably predict this condition from a developmental perspective. Moreover, it is reasonable to contend that Kohlberg's perspective has led to a rather narrow focus on cognitive aspects of morality, and that it affords too much importance to the relationship between moral reasoning and behavior (see O'Kane et al., 1996). Blair (1980) and Locke (1983), reviewing the data linking moral cognition and behavior, suggested that the ability to take the perspective of others may not represent the most fundamental factor influencing moral behavior. Similarly, Kagan (1984) and a number of other scholars (see Damon, 1988) have argued that moral theories based on reasoning and deduction fail to understand that morality is directed more by affective processes than reasoning. They suggested that individuals generally decide right and wrong mainly through their feelings and their sense of connectedness towards others. They are also influenced by the distress they experience at the thought of witnessing someone's pain. This argument resonates well with the reports of psychopaths who have explained that they can cognitively understand that others experience pain, but do not feel moved by their distress. To illustrate this paradox, it has been said that psychopaths know the "words" of emotion, but not the "music" (Johns & Quay, 1962, cited in Patrick, 1994; Patrick, Cuthbert, & Lang, 1994).

The goal for researchers, then, is to come to an understanding of the underpinnings of these affective deficits that mute the sensitivity of children at risk for psychopathy and steel them against suffering. For years, clinicians and criminologists working with the population of psychopathic offenders have suspected that a unique temperamental style, combined with early aversive interpersonal experiences, may contribute to diminished feelings of connectedness towards others. Allowing clinical practice to inform research endeavors, the constructs of temperament and attachment have been applied to the study of psychopathic traits and behaviors. This body of work will now be reviewed, highlighting the insights it has provided as well as outlining the challenges ahead.

#### 4. Temperamental underpinnings of psychopathy: the fearlessness hypothesis

Based on early clinical accounts of psychopathy (Chekley, 1941), one key assumption of several theoretical models of this condition is that the affective deficits so frequently observed are related to a unique temperamental style (e.g., Frick, 1998). Temperament is generally



defined as constitutionally based individual differences in reactivity and self-regulation, with the term constitution referring to the person's relatively enduring biological makeup, influenced over time by heredity, maturation, and experience (Rothbart, 1989; Rothbart, Ahadi, & Hershey, 1994). Reactivity refers to arousability of affect, motor activity, and related responses. Self-regulation refers to processes such as attention, approach–withdrawal, behavioral inhibition, and self-soothing. Temperamental dispositions are often thought to underlie the development of a variety of personality traits, and to interact with experience to determine various social outcomes.

Beginning with the pioneering work of Thomas, Chess, and Birch (1968), many researchers have invested effort into predicting behavioral problems and psychosocial maladjustment from early temperamental dispositions (e.g., Rende, 1993; for reviews, see Bates, 1989; Bates, Bayles, Bennett, Ridge, & Brown, 1991; Garrison & Earls, 1987; Rutter, 1987). Antisocial behavior has often been regarded as a consequence of an extreme tendency to seek out stimulating experiences and an inability to delay gratification (Frick, 1998; Newman & Wallace, 1993; Rothbart, 1989). In samples of both antisocial adults and children, poor impulse control and boredom susceptibility have been hypothesized to explain the fact that these individuals are generally not very responsive to rewards and require extreme forms of reinforcement (Paris, 1998). Gray (1982, 1987) posited that these tendencies were all related to an overactivity of what he called the “behavioral activation system” (BAS), a neurological system thought to control appetitive drives and attention to cues of reward. While overactivation of the BAS is likely to explain the impulsive and antisocial dimension found in adults and the impulsive conduct problems factor found in children at risk for psychopathy, it does not appear to totally elucidate the C/U traits exhibited by psychopathic individuals.

Another temperamental dysfunction, specifically a lack of fearful inhibition, is regarded as contributing more heavily to the emotional detachment and lack of empathy displayed by these individuals (Frick, 1998). Fearful inhibition is viewed as critical in the development of the “affective discomfort components” of conscience and moral emotions in young children (i.e., empathy, guilt, remorse). Researchers often contend that dysfunctions in fearful inhibition underlie the emergence of the C/U traits that are characteristic of psychopaths (Cloninger, 1987; Frick, Lilienfeld, Ellis, Loney, & Silverthorn, 1999; Gray, 1982, 1987; Lykken, 1957; Newman & Wallace, 1993; Patrick, 1994).

Fearful  
inhibition

#### *4.1. The behavioral inhibition system (BIS) and psychopathy*

As part of his neuropsychological model of training, Gray (1982, 1987) posited the existence of a “BIS” which is sensitive to cues of punishment and nonreward. Specifically, this system is thought to produce anxiety and inhibit ongoing behavior in the presence of novel stimuli, innate fear stimuli, and signals of punishment. Although some controversy has always existed regarding the neurobiological substrates of the BIS (Newman & Wallace, 1993), it has represented a valuable heuristic to conceptualize the underpinnings of several clinical symptoms and disorders. With respect to psychopathy, a number of researchers have hypothesized the possible implication of BIS underactivity and consequent lack of fearful

inhibition (Frick, 1998; Kochanska, 1991, 1993, 1995). Indeed, distress cues such as sad facial expressions have been conceptualized as signals of punishment, and the lack of sensitivity to these expressions in individuals prone to psychopathy has been viewed as an important marker of BIS underactivity (see Blair, 1995).

Support for the link between the BIS and psychopathy has mostly been gathered through the use of psychophysiological and classical conditioning paradigms (for a review, see Hare, 1998). A study by Lykken (1957) served as the impetus for much of this research. Lykken demonstrated that psychopaths had difficulty in acquiring conditioned fear responses (as measured by anticipatory electrodermal activity and cardiac responses), and in avoiding punishment in a passive avoidance learning paradigm. These findings of diminished anxiety and behavior inhibition in response to potential punishment have since been replicated by different investigators using a variety of designs and increasingly sophisticated measurement tools (Newman, Patterson, Howland, & Nichols, 1990; Newman, Patterson, & Kossen, 1987; Newman et al., 1997; O'Brien & Frick, 1996; Ogloff & Wong, 1990; Patrick, 1994; Patrick, Bradley, & Lang, 1993; Patrick et al., 1994; Scerbo et al., 1990; Schachter & Latane, 1964). This body of work has been critical in validating the long-standing clinical impression that for psychopaths, the victim's pain does not act as a potential punishment that can inhibit their violent impulses.

Yet, most of this research has been conducted within prison populations, with inmates who are typically repeat offenders convicted of serious crimes. The long-standing nature of the social deviance manifested by these individuals cannot be refuted. This poses the challenge of determining whether their underlying insensitivity towards environmental contingencies has led psychopathic individuals to become detached and shallow members of society, or whether their difficult life experiences have contributed to a progressive sense of disconnectedness. Fundamental questions thus arise regarding the extent to which the temperamental disposition of fearlessness arises in early infancy, and whether it is causally related to psychopathic traits.

#### 4.2. *A developmental, longitudinal perspective on the fearlessness hypothesis*

Some recent research has begun to address these issues by adopting a developmental perspective. Although this work is promising, the data provided remain limited. Researchers have begun to demonstrate that the distinctive temperamental style of fearlessness can be measured early in life, and that it represents a risk factor for maladjustment across the childhood years and beyond. In studies of clinic-referred children receiving services for conduct disorders, Frick et al. (1999) as well as Walker et al. (1991) both found that a temperamental lack of fearful inhibition was related to overall maladjustment and to the presence of callous and unemotional traits. These investigations are valuable in that they clearly demonstrate that temperamental factors are involved in deficient moral emotions even before the establishment of prolonged antisocial behavior. However, the fact that the measures of temperament and moral emotions were collected at the same point in time leaves important questions of causality unanswered. A few studies have begun to address this limitation by exploring the roots of severe offending and maladjustment from a longitudinal perspective. In particular, reports from the

Dunedin (New Zealand) Multidisciplinary Health and Development Study have detailed the relations between early childhood temperament and behavior problems in late childhood and mid-adolescence (Caspi, Henri, McGee, Moffitt, & Silva, 1995; Henry, Caspi, Moffitt, & Silva, 1996; Henry, Moffitt, Robins, Earls, & Silva, 1993; White et al., 1990). On the basis of factor analyses of behavioral observations made when participants were 3 and 5 years old, a robust factor labeled “Lack of Control” was identified, characterized by elements such as emotional lability, restlessness, lack of emotional regulation, and negativism. This factor, which parallels descriptions of temperamental fearlessness, was associated with teacher and parent reports of externalizing behavior problems assessed between the ages of 9 and 15 (Caspi et al., 1995). As well, measures of early childhood temperament appeared to be specifically associated with having at least one violent conviction by the age of 18. Against a backdrop of family and socioeconomic risk factors, only the temperament variable discriminated between those participants who were convicted of a violent offense and those who had been convicted only for nonviolent offenses (Henry et al., 1996). Taken together, the studies from the Dunedin Project have helped to illustrate the powerful influence of temperament as a long-term risk factor for delinquency and serious offending, which are typical of psychopathic youth. Yet, the researchers mostly focused on the outward, behavioral manifestations of their participants’ maladjustment, and they did not attempt to assess psychopathy *per se*. As such, their work does not inform us on the distinctive features of psychopathy, and fails to contribute to a greater understanding of the involvement of temperament in the emergence of moral emotions such as empathy.

Although it also does not focus on psychopathy in juvenile offenders *per se*, the research of Kochanska (1991, 1993, 1994), Kochanska, Casey, and Fukumoto (1995), and Kochanska, Murray, Jacques, Koenig, and Vandegeest (1996) provides valuable insights into the mechanisms that may underlie the link between early temperamental dispositions and moral emotions such as empathy and guilt. During the past decade, these researchers have focused on the toddler period as the context for the normal early development of conscience and the emergence of moral emotions. This work is based on the conceptual model proposed by Kochanska (1993, 1994), which indicates that children’s fearfulness represents a contributor to the establishment of affective states such as shame, guilt, and empathy. According to Kochanska’s model, children more inclined towards fearfulness tend to feel salient remorse and upset after wrongdoing, are quite concerned about the potential consequences of their negative actions, and experience discomfort even while considering future wrongdoing. The main predictions stemming from this model have received empirical support as part of Kochanska’s ongoing longitudinal study of early conscience (Kochanska, 1991, 1995; Kochanska, DeVet, Goldman, Murray, & Putnam, 1994; Kochanska et al., 1996; Kochanska & Thompson, 1997). In recent years, this investigation has followed a group of approximately 100 mothers and their young children in toddlerhood and again at preschool age. It has been shown that toddlers who respond with distress and withdrawal in laboratory situations that present them with novel and mildly “risky” events and stimuli are more likely to subsequently inhibit prohibited behavior. They also appear to experience greater guilt and other negative affects after transgressions (Kochanska, 1995; Kochanska et al., 1994).

Independent support for the link between temperamental factors and children's acquisition of moral emotions has been gathered by Rothbart and Ahadi (1994) and Rothbart et al. (1994). These researchers demonstrated that 6- and 7-year-old children, who were described by their parents as high on moral emotions such as empathy and guilt, had been observed to be fearful during standardized assessments that took place in the laboratory when they were infants. Taken together, the evidence emerging from normative samples tends to confirm the role of temperamental dispositions manifested in early childhood as a contributor to moral emotions and prosocial behavior across many years.

A challenge for researchers working in this area is to demonstrate that the same mechanisms also operate in non-normative samples of children. Specifically, it is critical to provide prospective, longitudinal evidence that young children with low levels of fearfulness are indeed at risk to subsequently develop most of the unemotional traits that are characteristic of psychopathic individuals. Until such data are provided, the notion of temperamental insensitivity as a robust developmental precursor of psychopathy, as opposed to simply representing a correlate or an outcome of this condition, remains speculative.

## 5. Attachment underpinnings of psychopathy: the impact of disruptions in early bonding experiences

Parallel to the work exploring the implication of temperament in the emotional detachment of young psychopaths, relational factors have also been the focus of much debate and theorizing. In particular, attachment concepts have been applied to the study of the early relationships of individuals who subsequently develop psychopathic traits. According to Bowlby's (1982) attachment theory, the early relationship between children and their primary caregiver represents the first bonding experience for young children. Within this relationship, they are expected to acquire a trust in the availability and responsiveness of caregivers, as well as the ability to use the caregiver as a secure base from which to explore the environment (for a more complete description of attachment theory, see Richiers & Waters, 1991). From the very beginning, attachment theory was conceived to explain, among other things, the "affectionless" personality of juvenile thieves, for whom a lack of warm and continuous child care was thought to have created an absence of concern for others (Bowlby, 1944; Van Ijzendoorn & Zwart-Woudstra, 1995). According to Bowlby's early views, children who fail to bond or connect with their caregivers develop inner working models of others as unworthy of trust, empathy, and concern, which can lead the way to a broad range of callous traits characteristic of cold-hearted offenders.

Since Bowlby's initial formulation, several authors have posited a relation between early attachment relationships, moral emotions such as empathy, and severe antisocial behavior (Greenberg, Speltz, & DeKlyen, 1993; Spender & Scott, 1996; Van Ijzendoorn et al., 1997). For example, criminological theories have often considered that affective ties between children and caregivers are relevant to the development of antisocial behavior and crime. In his theory of justice, the philosopher Rawls (1971), as cited in Van Ijzendoorn, 1997, suggested that the absence of empathic feelings may indicate the lack of affective bonds with

parents or other caregivers. As well, a central component of Hirschi's (1969) criminal model (as cited in Agnew, 1993) is the contention that insecure attachments between children and parents lead to fragile bonds with teachers and other authority figures, and to a lack of identification with the social and moral order.

Empirical research testing these notions was long in coming, mostly due to the methodological constraints of measuring attachment in adult offenders. For years, research paradigms could only allow for the exploration of attachment styles exhibited in infancy, and these were studied under highly controlled laboratory conditions. Recent advances in the measurement of attachment beyond the childhood years have made it possible to move this theory back into the clinical domain, and into the study of APDs across the lifespan (Van Ijzendoorn et al., 1997). In particular, the development of the Adult Attachment Interview (AAI; George, Kaplan, & Main, 1985) has provided an impetus to return to Bowlby's (1944) early interest for attachment disorders in criminal offenders.

In a recent investigation conducted within two Dutch forensic psychiatric hospitals, Van Ijzendoorn et al. (1997) examined the relation between attachment representations and personality disorders in a sample of 40 young men held for the commission of serious crimes. Using the AAI and the Structured Interview for Disorders of Personality (Pfohl, 1989), these researchers demonstrated that secure attachment representations were virtually absent in the sample; separation from attachment figures in childhood was related to current insecure attachment as well as to personality disorders. In particular, insecure attachment was associated with disturbances such as narcissistic, sadistic, and APDs (Van Ijzendoorn et al., 1997).

Similarly, Fonagy et al. (1996) and Fonagy and Target (1995) compared the attachment representations of offenders who had committed crimes against property and those who had committed violent crimes, such as rapes and murders. The latter group reported more extremely disturbed attachment representations, often accompanied by a history of abuse. In parallel, they also failed to demonstrate the ability to reflect on and take into consideration the mental lives and emotions of others. Taken together, these investigations serve to highlight the advances made by researchers in empirically studying the attachment representations of violent criminal offenders who, beyond their severe antisocial behaviors, appear unaffected by the pain of others.

### *5.1. A developmental, longitudinal perspective on the attachment hypothesis*

Yet, the limitations of a retrospective approach to the study of attachment cannot be discounted. Beyond describing the attachment profiles of adult offenders with psychopathic tendencies, what is of great interest is to determine whether these profiles can be found in early childhood, and whether they can prospectively predict patterns of psychopathic deviancy appearing later in life. To this day, very little empirical work has been done to examine this specific issue. Only indirect evidence is available, and it comes from studies linking attachment style and antisocial tendencies manifested in childhood. Indeed, several studies document a relation between insecure or disorganized attachment patterns and childhood aggression or conduct disorders (Lyons-Ruth, 1996; Lyons-Ruth, Alpern, &

Repacholi, 1993; Lyons-Ruth, Zoll, Connell, & Grunebaum, 1989; Renken, Egeland, Marvinney, Mangelsdorf, & Sroufe, 1989; Shaw, Owens, Vondra, Kenan, & Winslow, 1997; Van Ijzendoorn, Schuengel, & Bakermans-Kranenburg, 1999). For instance, Greenberg, Speltz, Deklyen, and Endriga (1991), Speltz, Greenberg, and Deklyen (1990) as well as Shaw and Bell (1993) examined the attachment behaviors of clinic-referred children with early-onset conduct problems. Comparing these preschool children to matched comparisons, Speltz et al. (1990) demonstrated that about 20% of clinic children (compared with 72% in the contrast group) exhibited secure attachments to their parents at the time of diagnosis.

Despite this substantial body of evidence, an important question remains unanswered: Do relational factors captured by the attachment construct represent a general risk factor for antisocial behavior, or do they provide insight into the core affective deficits exhibited by only a small subset of disturbed children? As in the case of temperament, much work on attachment focuses on predicting the phenotypic manifestations of antisocial behavior and criminal offending, to the detriment of the emotions underlying the psychopathic condition. As a result, little is still known regarding the potential link between attachment and moral emotions (such as empathy) in disturbed youngsters. At the present time, insight into these processes is largely dependent on studies of the normal development of moral emotions.

Researchers interested in the early socialization of morality, such as Kochanska (1991), Kochanska and Aksan (1995), Kochanska, Aksan, and Koenig (1995), Kochanska and Thompson (1997), Maccoby (1983, 1984, 1992), and Maccoby and Martin (1983), have investigated the role of early positive relationships between children and their primary caregiver as a determinant of subsequent conscience or internalization. The core of their argument is that two partners involved in a mutually reciprocal relationship feel invested to and responsible for each other's welfare; they feel concern for and act responsively to the other's needs. At the same time, they come to expect the other to be responsive to their needs and concerned about their own welfare. As such, the early attachment relationship is conceptualized as the motivational basis of early moral internalization (Kochanska & Aksan, 1995; Kochanska, Aksan, et al., 1995; Kochanska, Tjebkes, & Forman, 1998; Maccoby, 1983, 1984; Richters & Waters, 1991; Speltz, Deklyen, & Greenberg, 1999; Waters, Kondo-Ikemura, Posada, & Richters, 1990).

As part of their ongoing longitudinal study of early conscience development, Kochanska (1997, 1998), Kochanska, Padavich, and Koenig (1996), Kochanska and Thompson (1997), and Kochanska et al. (1998) directly tested these notions by examining the relation between mutual reciprocity and toddlers' subsequent acquisition of moral emotions and rules of conduct. These researchers measured shared cooperation and positive affect through observations of mother–child interactions in routine, chore, discipline, and play contexts. Although still preliminary, the findings to date are in line with the researchers' predictions. They indicate that mutual responsiveness in early mother–child interactions predict children's commitment to and concern about behaving appropriately towards others. Such data can be interpreted as indicating that when children's early relationships are close and affectionate, they will subsequently be more likely to feel committed to the welfare of others (Kochanska, Aksan, et al., 1995; Kochanska et al., 1998).

From this line of research, it is possible to extrapolate that children who experience disruptions in their early bonding experiences will fail to exhibit moral and emotional commitment to others throughout childhood and into adulthood, potentially leading the way to the extreme detachment exhibited by psychopaths. This hypothesis, although it is intuitively appealing, needs to be put to the test of empirical validation before we can conceive of attachment disruptions as robust precursors of psychopathy. Using prospective, longitudinal designs, future studies should aim to gain a greater understanding of the broad range of parent and child factors that together mold the early attachment bond, and follow these complex attachment patterns over time.

## **6. Concluding comments**

Throughout its long history, the concept of psychopathy has fascinated professionals, researchers, and the general public alike. The severe offenses perpetrated by psychopathic individuals capture most imaginations, and are usually perceived as senseless acts of violence. Part of the attraction for these individuals seems to come from the fact that they lead their lives and criminal careers as if they were completely estranged from the society to which they belong. The interpersonal detachment they display throughout their lives, which for the most part appears irreversible, is greatly disturbing for many, perhaps, because it puts into question the foundations of human collectivity.

Most traditional accounts of psychopathy share the assumption that the marked impairments in affection and emotionality displayed by these chronic offenders originate in early childhood, and progressively become more entrenched over time. However, for decades, researchers appeared reluctant to apply a developmental perspective to the study of the core deficits of psychopathy. Recently, there has been a growing recognition of the need for a more thorough understanding of the early precursors of this condition (Lynam, 1996). Yet, this research endeavor has been plagued by a number of conceptual challenges (e.g., classification and definitional issues) and methodological difficulties (e.g., gaining access to this population). To this day, these factors have prevented researchers from arriving at a coherent and comprehensive account of the way in which this condition emerges and evolves across the lifespan.

Some interesting conceptual models have nevertheless been put forth that implicate temperament and attachment as early precursors of the hallmark emotional detachment and interpersonal insensitivity of psychopaths. These constructs are appealing to many applied scientists working in this area, since they allow the operationalization and systematic investigation of the features frequently reported in clinical depictions of the condition. The evidence reviewed in the current paper suggests that temperamental dispositions as well as the ability to form attachment bonds with early caregivers are involved in the manifestation of psychopathic traits. The most solid evidence for these associations comes from data gathered with adult psychopaths convicted of severe offenses. Studies on these individuals using both experimental and self-report designs point to an insensitivity to interpersonal issues that seems connected to diminished responding to social contingencies, and a lack of concern for the welfare of others.

However, current research is only beginning to address the explanatory power of temperament and attachment as early underpinnings of the core affective and interpersonal deficits manifested by youngsters at risk of psychopathy. Much work is still needed before we can derive firm conclusions regarding the value of these constructs from a developmental perspective. Specifically, research investigations need to study temperament and attachment style using prospective and longitudinal designs, and they need to tap into these factors from different levels of analysis (e.g., behavioral, psychophysiological, neurobiological, etc.).

As well, in order to increase the predictive power of the models they test, future research projects need to better reflect the complex nature of the psychopathic condition. This underscores the importance of addressing simultaneously the individual and combined effects of temperament and attachment on psychopathic traits, taking into consideration potential mediators. One interesting hypothesis that deserves further consideration is the possibility that temperamental fearlessness "sets the stage" for the emergence of psychopathy, with attachment serving as a mediator that can in some cases help to "reconnect" children born with a tendency towards interpersonal detachment (see Garbarino, 1999). Yet, it is likely that the same innate dispositions that forge the unique temperamental style of psychopaths also contribute to their inability to form bonds with others, discounting traditional accounts of temperament and attachment as completely distinct dimensions, with one primarily biological and the other mostly environmental. It is critical that researchers incorporate incoming evidence on the multiple underpinnings of temperament and attachment into their conceptual frameworks and research designs.

It is also necessary to consider notions of reciprocal relationships between children's early interactional style and their rearing environment. In antisocial youth who come to develop psychopathic tendencies, the aversive interpersonal tendencies they likely display early on in their life can be thought to contribute to negative interactions with family members and other individuals in their environment, which in turn continue to deepen the estrangement of psychopathic youth from their environment and larger community. Ultimately, the insights gained from addressing complex issues related to the origins of psychopathy should assist in designing intervention programs aimed at preventing and/or treating the psychopathic condition. Currently, rehabilitation efforts that intend to reduce recidivism rates among psychopathic offenders are mostly unsuccessful. Most programs involve attempts to enhance the perspective taking and social skills of these offenders (e.g., Pithers, 1999; Puttins, 1997), and as such, they invest most of their efforts in the cognitive deficits of psychopaths. The failure to devote sufficient attention to the emotional aspects of the condition may have contributed to the lack of success experienced by many professionals working in this area. It appears that efforts to counteract the devastating effects of the psychopathic condition could be well informed by considering the data emerging from studies that have adopted a developmental perspective. First and perhaps most importantly, recent advances in the reliable classification of psychopathic youth should prove to be beneficial in the early identification of children at risk for chronic offending and unemotional traits. Early



identification is essential, as it allows professionals to begin their prevention and intervention efforts before the establishment of severe and entrenched patterns of emotional insensitivity.

As well, a focus on developmental precursors of psychopathy should offer insights valuable for the design of treatment strategies emphasizing affective processes. Assuming that relational factors do mediate the link between early insensitivity to social contingencies and the extreme detachment that evolves over time in these individuals, it may be worthwhile to attempt to significantly improve the affective quality and mutual reciprocity between vulnerable children and their primary caregivers.

Although much time and resources are still needed to elucidate this enigmatic condition and improve our ability to prevent its devastating consequences, these efforts appear invaluable. Indeed, although psychopathic individuals do not manifest distress in a typical way and do not reach out for help, they still deserve that we recognize their distress and provide that help. Otherwise, they will forever remain “lost.”

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