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# Empathy and Emotional Responsiveness in Delinquent and Non-delinquent Adolescents

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## Abstract

*Two groups of male adolescents, incarcerated young offenders (N = 64, mean age = 16.3 years) and a comparison group of community youth (N = 60; mean age = 16.6 years), were administered the Empathy Continuum (measuring cognitive-affective responses to persons in emotionally evocative videotaped vignettes) and questionnaire measures of empathy, emotional responsiveness, guilt, shame, and anti-social attitudes and behaviors. Although both groups endorsed general statements of empathy, young offenders responded with empathy less often to particular persons in particular situations, and reasoned regarding their empathic responses in more self-referencing ways. They also described their emotional responses to stimulus persons as less intense. In addition to the expected group differences, responsive empathy was a stronger predictor of delinquency than self-reported antisocial behavior, and correctly classified 69 percent of young offenders and comparison youths. Although guilt was consistently related to lower self-reported antisocial attitudes and behaviors, guilt (and shame) only weakly differentiated the two groups, limiting the usefulness of the TOSCA-A as a predictor of delinquency.*

*Keywords:* empathy; emotions; delinquency; adolescents

## Introduction

Both emotional and cognitive factors are thought to be involved in aggressive and antisocial behavior. For example, in research based on the social information processing model proposed by Dodge (1980, 1986) and others (see Coie & Dodge, 1998, for a review), aggressive children have been found to ignore relevant social cues while selectively attending to aggressive ones, and to interpret ambiguous social cues as hostile or humiliating. They have been found to react to social cues (including emotional distress in others) with anger rather than empathy or guilt. They generate fewer response alternatives (such as empathic comforting and guilt-related reparative responses), are impulsive (i.e., to fail to consider all alternatives before selecting one) and have difficulty inhibiting aggressive responses. Moreover, they believe that aggressive responses (rather than empathic or perspective-taking responses) are effective

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solutions to social problems, and that aggression is a normal social response with largely positive outcomes. Similar information processing models have been proposed for competent, prosocial behavior in non-aggressive children (Bretherington, 1995; Roberts, 1983; Roberts & Strayer, 1987, 2003). These models have emphasized the role of emotionally laden memories and the 'social emotions' of empathy, guilt and shame in selecting and evaluating social cues, in constructing a set of possible responses, then selecting and implementing one of these alternatives.

Although antisocial youth are a heterogeneous group, there are good reasons to believe that many such youth are characterized by low levels of empathy, guilt and shame. In particular, the family environments of early-starting antisocial youth are often characterized by harsh, inconsistent parenting (e.g., Patterson, 1982, 1995; Patterson, DeBaryshe, & Ramsey, 1989) and abuse (Luntz & Widom, 1994), empathy-poor environments in which children are inadvertently trained to make angry, coercive responses rather than empathic, prosocial ones. In contrast to this emotionally angry, coercive group, Frick et al. (2003) have identified a second type of early-starting antisocial child, one with callous, unemotional traits. These children are characterized by an 'absence of guilt, constricted display of emotion, failure to show empathy, [and] use of others for one's own gain' (p. 247). Perhaps, overlapping both these groups is the link found in low-income families between early insecure attachments and low levels of empathy and heightened aggressiveness in preschool and middle childhood (Sroufe, Egeland, & Carlson, 1999).

Lower capacity for empathy and guilt affect children in two ways—(1) by making possible interpretations (e.g., hostile attributions and beliefs regarding the efficacy and rightness of aggression) and emotions (such as anger), which make aggression more likely, and (2) by interfering with the establishment of positive social bonds with non-aggressive peers. Early-starting antisocial children are typically rejected by their peers, forcing them to associate with other deviant children. Such relationships, usually abrasive and unsatisfying, are associated with more frequent and more diverse antisocial behavior (Dishion, Andrews, & Crosby, 1995; Thornberry, Krohn, Lizotte, & Chard-Wierschem, 1993). Such unempathic relationships with deviant peers are thought to play an important role in late-starting antisocial behavior as well; and it is notable that when adolescents desist from antisocial and criminal behavior, they usually drop out of the gangs and deviant groups to which they had belonged (Robins, 1966; Thornberry et al., 1993). Positive social bonds appear to play a role in this change because desistance is associated with job stability and supportive marital relationships in early adulthood. Both have been shown to be adversely affected by ill-temper and low self-control (Caspi & Elder, 1988), and it is plausible to suppose that empathy and perspective-taking, as well as a willingness to accept responsibility for one's actions (guilt), are important in the successful resolution of conflict and the maintenance of positive social relationships, whether in marriage or on the job (Gottman, Katz, & Hooven, 1997).

Although these converging lines of evidence and reasoning indicate an important role for the social emotions in aggressive and antisocial behavior, for incarcerated youth, the empirical evidence for empathy is inconsistent (Jolliffe & Farrington, 2004), whereas the evidence for guilt and shame is sparse. In Jolliffe and Farrington's meta-analysis, questionnaire measures of empathy showed large and important differences among themselves, with the strongest differences between incarcerated and control youth shown by a psychometrically suspect instrument with little face validity (the Hogan empathy scale), whereas psychometrically sounder, face-valid instruments

(such as the IRI empathic concern scale; Davis, 1983) showed small effects, which sometimes favored incarcerated youth. Thus, self-report data have failed to establish the existence of important and expected deficits in empathy in young delinquents.

Multi-method, multi-source evaluations of empathy are clearly called for. Where they have been used, clear links have been found between empathy and prosocial behavior (Roberts & Strayer, 1996, 2003), between (low) empathy and observed physical aggression and anger (Strayer & Roberts, 2004a) and between low empathy and diagnosed conduct disorder (CD) (Cohen & Strayer, 1996). In the study reported here, we employed the measures used in these studies—a laboratory-interview measure of empathy (the Empathy Continuum (EC); Strayer, 1993) and traditional self-report measures (Bryant, 1982; Davis, 1983)—to examine differences in empathy between an incarcerated group of male adolescents and a community sample matched for age.

The EC (Strayer, 1993) is a laboratory measure in which individuals are shown emotionally evocative videotaped story episodes ('vignettes') and then interviewed regarding their responses, both emotional and cognitive (cf. Strayer, 1987). Differences in the EC can arise for cognitive reasons (differences in how the causes of one's own emotions are understood) or for emotional ones (emotions are evoked more frequently or more intensely). Because emotion-related processes are thought to differ for socially maladjusted youth (Chalmers & Townsend, 1990; Dodge et al., 2003; Dodge & Frame, 1982), we expect group differences in both areas. Young offenders should reason regarding their emotional responses in simpler, more self-referenced ways, as reflected in their EC cognitive level (Table 1, below; Cohen & Strayer, 1996; Strayer, 1993). In addition, they should be empathic less often, given their likely developmental histories and because deficiencies in empathy are likely to contribute to moral disinhibition and delinquency (Eisenberg & Miller, 1987; Hare, 1978; Hoffman, 1987).

### *The Recognition and Expression of Emotions*

Biases and error in the interpretation of social cues, prominent in the social information processing model described above, include the recognition and interpretation of emotions, both one's own emotions and those attributed to others. In general, accurate emotion recognition is thought to be necessary for appropriate emotional development, social competence and the successful resolution of conflict (Denham, 1998; Parke, Cassidy, Burks, Carson, & Boyum, 1992; Saarni, 1999). Thus, in comparison to an incarcerated group, a community group should be better able to process social information involving others' emotions—and this should be apparent in their responses during the EC interview.

Group differences on the EC should be accompanied by differences in the intensity of emotions ascribed to oneself while watching the EC stimulus vignettes. Using the emotion report questionnaire (ERQ; Toi & Batson, 1982), we expect less empathic young offenders to report not only less intense feelings of sympathy and compassion than community youth, but also less intense negative emotions—the feelings that trigger empathy in response to present scenes portraying primarily others' negative (dysphoric) emotions.

### *Other Social Emotions: Guilt and Shame*

*Guilt.* Guilt is thought to temper antisocial and promote prosocial behaviors in non-aggressive children and adolescents. In addition, antisocial youth often place

**Table 1. Empathy Continuum Scoring System (Strayer, 1993)**

Cognitive Level	Score	Affect Match	Description
<i>I: No empathy</i>			
	0	0	No emotion reported for character
	1	1	Character's emotion identified, but no or no concordant emotion for self
<i>II: No attribution or irrelevant reasons are provided (I just didn't like it)</i>			
	2	1	Similar emotion in self and character
	3	2	Same emotion, different intensity
	4	3	Same emotion, same intensity
<i>III: Attribution based on story events (I felt angry because the ending could go either way)</i>			
	5	1	Similar emotion in self and character
	6	2	Same emotion, different intensity
	7	3	Same emotion, same intensity
<i>IV: Attribution refers to a specific character's situation (I felt happy because the son was having a good laugh with his father)</i>			
	8	1	Similar emotion in self and character
	9	2	Same emotion, different intensity
	10	3	Same emotion, same intensity
<i>V: Attribution indicates transposition of self into situation or association with one's own experiences (I felt angry when his mother was yelling at him because I've been treated like that too)</i>			
	11	1	Similar emotion in self and character
	12	2	Same emotion, different intensity
	13	3	Same emotion, same intensity
<i>VI: Attribution indicates responsiveness to a character's internal state (I was sad because she felt so put down)</i>			
	14	1	Similar emotion in self and character
	15	2	Same emotion, different intensity
	16	3	Same emotion, same intensity
<i>VII: Attribution indicates semantically explicit role taking (I'd be sad, too, in his place with nowhere to go)</i>			
	17	1	Similar emotion in self and character
	18	2	Same emotion, different intensity
	19	3	Same emotion, same intensity

responsibility for their violent behavior on their victims, rather than themselves, a stance inconsistent with the self responsibility associated with feelings of guilt. For both reasons, we expect scores on a self-report measure of guilt, the TOSCA-Adolescent Version (Tangney, 1992), to be lower for the delinquent than for the comparison group. To our knowledge, ours is the first study to use the TOSCA-A with incarcerated adolescents.

We think it is plausible that adaptive guilt may form a natural bridge to other-oriented empathic concern (Eisenberg, 2000; Hoffman, 1982; Tangney, 1991, 1995; Zahn-Waxler & Robinson, 1995). Findings across age groups support the relationship

of guilt-proneness to empathic disposition, the endorsement of interpersonal empathy, constructive anger management strategies and benevolent interpersonal perceptions (Tangney, 1991, 1994, 1995; Tangney, Wagner, Fletcher, & Gramzow, 1992; Tangney, Wagner, Hill-Barlow, Marschall, & Gramzow, 1996). Therefore, we expect scores on guilt to relate positively to empathy (both responsive and dispositional) across groups and negatively to antisocial attitudes and behavior on the Jesness Inventory.

*Shame.* We expect scores on the TOSCA-A to be higher for young offenders than for the comparison group for several reasons. Shame, which Tangney (1993) construes as maladaptive, has a self-focus, in contrast to the constructive, other-person focus of guilt. Secondly, reactive antisocial youth respond to provocation (which includes shaming) with anger and aggression. It is plausible to suggest that shaming (criticism, humiliation) may occur frequently in coercive families, and may play a part in children's adopting family norms of blaming and attacking others, just as milder shaming in normal, prosocial families may lead those children to self-adjust to (prosocial) family norms. Thus, aggression is consistent with high levels of experienced shame, some of which is inevitably internalized by children.

Previous research using the TOSCA-A suggests that shame-proneness relates negatively to selected measures of empathy and positively to maladaptive responses such as anger and direct, indirect and displaced aggression (Tangney, 1991; Tangney, et al., 1992, 1996). Across groups, therefore, we expect shame to correlate negatively with empathy and positively with measures of antisocial and aggressive behavior on the Jesness Inventory.

To summarize, we are concerned with theoretically pertinent psychological variables related to delinquency in a sample of young, incarcerated, male offenders who concurrently reported high levels of antisocial and aggressive attitudes and behaviors. The present study focuses on males adolescents because they constitute the large majority of youth in detention (Canadian Centre for Justice Statistics, 2002). The young offender group is expected to perform more poorly than the comparison group on responsive empathy as well as on related measures such as emotion recognition, emotional responsiveness, perspective taking and guilt. In contrast, they are expected to obtain higher scores on the self-focused emotion of shame than the comparison group. Present measures should provide clues regarding cognitive and affective differences in empathy that are relevant for understanding particular deficits in empathic responsiveness.

## **Method**

### *Sample and Procedures*

*Young Offender Sample (N = 64).* These youth (70 percent White; 9 percent Asian descent; 8 percent First Nations; 13 percent 'other') were incarcerated for juvenile offences at the Burnaby Youth Secure Custody Centre in Burnaby, British Columbia, Canada, at the time the study was conducted. Permission for access was obtained from the assistant deputy minister, Corrections Branch, BC Ministry of Attorney General.

The average age of those who volunteered was 16.3 years, range 14 to 18. They were in custody for a variety of offences: 30 percent for non-violent offences (e.g., breach of probation, vandalism, theft), 19 percent for violent offences (e.g., assault and, for one-third of violent offenders, murder), and 51 percent for a combination of

non-violent and violent offences. Nearly all (92 percent) were repeat offenders (two or more convictions). Information on violent/non-violent status was missing for one youth.

Consistent with the defining antisocial and aggressive features of CD—features that get individuals in trouble with law and society—81 percent of these young offenders had such a diagnosis, given by an assessing psychologist or psychiatrist. Of these 52 individuals, 17 also had a concurrent diagnosis of attention deficit hyperactivity disorder or substance use, and another 13 had an unspecified second disorder. No one in the offender group had a primary diagnosis of depression, mental retardation, substance use or personality disorder. Diagnostic information was missing for nine individuals (14 percent of young offender group).

*Comparison Sample (N = 60).* The comparison group (66 percent White; 21 percent Asian descent; 12 percent ‘other’) consisted of male volunteers from high schools in two metropolitan school districts, and reflected the ethnic composition of their communities (Statistics Canada, 2001a). The youths and their parents received letters describing the nature of the research project and both gave written consent to participate. Of the 65 who initially volunteered, three withdrew after partially completing the questionnaires.

Because family income was not assessed, these neighborhoods were selected because they were near the provincial median (Statistics Canada, 2001b), as were the home communities of young offenders. Youths’ average age was 16.6 years, range 15 to 19. Fourteen percent reported previous contact with the juvenile justice system, 11 percent for non-violent offences, 3 percent for violent offences or a combination of violent and non-violent offences. These two former violent offenders were excluded from all analyses, leaving a final N of 60.

### *Procedures*

The participants in the young offender group completed individually administered questionnaires and the EC interview in one session lasting 2 to 2.5 hours, with a break midway for refreshments. The custody center permitted a selection of choices from vending machines at this time to compensate for participation in the study.

The participants in the comparison group completed their questionnaires at school in one of their usual 50-minute classes. The first author was available to give directions and answer questions. Subsequently, the participants were scheduled for one hour individual appointments in one of the school offices for the EC interview. Following this interview, participants were given a \$5 gift certificate to a popular fast food outlet and their names were placed in a lottery with a \$150 cash prize. The lottery served as an incentive for participants to appear for their scheduled appointments.

### *Measures*

Empathy was assessed by two methods: self-report (two questionnaires reflecting empathy as a personality disposition) and a laboratory procedure with a semi-structured interview (the EC). In contrast, other constructs (emotional responsiveness, antisocial attitudes, guilt) were assessed by self-report only. Measures were administered in the order in which they are described below.<sup>1</sup>

*Jesness Inventory.* This questionnaire (Jesness, 1969) consists of 155 true–false items assessing antisocial attitudes and aggressive behaviors. The three scales proposed by Jesness were of particular interest: manifest aggression, social maladjustment and alienation. Because these scales are large, share individual items and are multi-factoral (as indicated by principal components analyses done on the items comprising each scale), the items from each of the first principal components were used as the basis for a simple one-factor scale with items unique to that scale. The original 31-item manifest aggression scale yielded a final scale, which we called aggression and anger, with nine items (e.g., ‘I get into a lot of fights’; ‘I get angry very quickly’), Cronbach  $\alpha = .82$ . The original 65-item social maladjustment scale yielded a final scale, which we called antiauthority, with nine items, reflecting negative attitudes to the legal system (e.g., ‘police usually treat you dirty’; ‘most people in authority are bossy and overbearing’), Cronbach  $\alpha = .82$ . The original 26-item alienation scale yielded a final scale, which we called distrustful, with eight items (e.g., ‘a person is better off if he doesn’t trust people’; ‘you can hardly ever believe what parents tell you’), Cronbach  $\alpha = .72$ . The items were scored 1 (= true) or 0 (= false) and averaged so that scale scores = the proportion of items endorsed ‘true’.

*The Interpersonal Reactivity Index.* The 28 items comprising the interpersonal reactivity index (Davis, 1983) measure affective and cognitive dispositions central to empathy. The items were rated on 5-point scales (1 = not at all like me; 5 = very much like me) and averaged to derive scale scores. The empathic concern scale (seven items,  $\alpha = .80$ ) measures the tendency to experience feelings of warmth, compassion and concern for other people, for example, ‘I am often very touched by the things I see happen’. The perspective taking scale (seven items,  $\alpha = .74$ ) measures the ability to adopt the perspective of other people in everyday life situations, for example, ‘Sometimes I find it difficult to see things from the other person’s point of view’. We confirmed that items for each scale formed only one factor (first principal component) with eigenvalue  $> 1$ , so that scales had a simple interpretation. The remaining two scales, personal distress and fantasy/imaginal involvement, were of less direct theoretical interest, and because they did not relate with other measures, they will not be further discussed.

*The Bryant Empathy Index (BEI).* We used a nine-point scale (1 = absolutely not like me; 9 = very much like me) for this 22-item questionnaire, as Bryant did for her seventh-grade group (Bryant, 1982). Because these 22 items fell on several factors, we used items from the first principal component as the basis for a simple, one-dimensional scale. This eight-item scale, empathy, Cronbach  $\alpha = .84$ , contained such items as ‘I get upset when I see a boy being hurt’ and ‘some songs make me so sad I feel like crying’. The items were averaged to derive a scale score.

*The Empathy Continuum.* In contrast to the self-report measures just described, the EC (Strayer, 1993) is a laboratory procedure in which participants are interviewed regarding their affective and cognitive reactions to videotaped stimulus materials presenting persons in a number of brief, moderately emotionally evocative interactions. This measure has been validated with children and youths using a variety of stimulus vignettes and predictively related measures and outcomes (Chisholm & Strayer, 1995; Poole, 1992; Roberts & Strayer, 1996, 2003; Strayer, 1993; Strayer & Chang, 1997; Strayer & Roberts, 1997, 2004a, 2004b; Strayer & Schroeder, 1989.)

Two of the stimulus vignettes in the present study were used by Cohen and Strayer (1996). Five vignettes were added by the first author, following the principle that vignettes should be appropriate for the age and subculture of the sample and should be emotionally evocative. For example, because they were studying conduct-disordered youth, Cohen and Strayer pretested and added new stimulus vignettes, in addition to retaining previously used vignettes (Strayer, 1989, 1993). The vignettes used in the present study, chosen from existing films or TV programs, followed the same principles and included vignettes similar to those used by Cohen and Strayer (1996). They differed in that all main protagonists were male, and they targeted themes that were thought to be appropriate to older adolescents. They are described in Table 2 in their order of presentation, along with the emotions most frequently identified for the characters by two pilot samples, one of non-delinquent adolescents ( $N = 29$ ) and another of adult health professionals ( $N = 18$ ). Pilot feedback was helpful in selecting vignettes that would engage those in the young offender and community groups, and ensured that the stimuli displayed a range of emotions. Viewing time for the videotaped vignettes was approximately 30 minutes, with the structured interviews after each vignette totaling another 30 to 45 minutes.

During these structured interviews, respondents were asked to identify (1) the stimulus person's emotion and its intensity; (2) any emotion they themselves experienced and its intensity; and (3) the reason for their emotion, if they reported one. The scoring system, which indicates the joint operation of affect and cognition, is summarized in Table 1. Two coders independently scored 32 randomly selected cases (25 percent of the sample), stratified by group. They achieved 82 percent agreement,  $\kappa = .78$ .

*The Emotional Response Questionnaire.* After viewing each EC vignette, the participants used the emotional response questionnaire (ERQ; Toi & Batson, 1982) to rate (from 1 = not at all to 7 = extremely) the intensity of the sympathetic ('sympathy, moved, compassion') and negative emotions ('alarmed, grieved, upset, distressed, troubled, disturbed') that they had just experienced. These two clusters of emotions were called empathy and personal distress by Toi and Batson (1982), although empirical findings (reviewed below) suggest that these labels may be inappropriate.

We aggregated ERQ responses using factor scores from two principal components analyses, one for each cluster of emotions. For the 7 (vignettes)  $\times$  3 (sympathetic emotions) = 21 positive ratings, there were six factors with eigenvalues greater than one. The first principal component was by far the largest, accounting for 37 percent of the variance in the original scores, with the next five factors accounting for an additional 31 percent. The 7 (vignettes)  $\times$  6 (negative emotions) = 42 negative ratings fell on nine factors. Again, the first principal component was the largest, accounting for 34 percent of the variance in the original scores, with the next eight factors accounting for an additional 33 percent.<sup>2</sup> In both cases, the factor loadings for the first principal component were positive for all ratings (for sympathetic emotion ratings, mean = .60, range = .44 to .72; for negative emotion ratings, mean = .58, range = .37 to .72),<sup>3</sup> so that high factor scores, derived only from the first principal components, equal greater reported emotional intensity across all vignettes.

Because empathy and personal distress are negatively related (Eisenberg & Fabes, 1998), we thought the names 'empathy' and 'personal distress' inappropriate for these two factors, as they were strongly positively correlated both in our sample (see below) and in Toi and Batson's (1982, p. 287) sample ( $r(81) = .63, p < .001$ ). Therefore, we

**Table 2. Vignette Synopses and Emotion Matches***Vignette 1: Going away*

Description: A young man is riding his motorcycle to meet his father at a park. They sit together and the son announces that he wants to go to Australia and wants his father to go with him. They have an animated discussion about the implications of such a trip.

Emotion: Happy (Son), surprised/worried (Father).

*Vignette 2: Car ride*

Description: A young man drives a hot, red convertible to a beach area where he runs into his younger female cousin who is with two of her giggling girlfriends. She reminds him that he promised her a ride in his car, but he is uncomfortable being seen with the young girls so, initially, he refuses. He eventually gives in and takes the girls for a ride in his convertible.

Emotion: Embarrassed, angry (Boy), sad, then happy (Girl).

*Vignette 3: Teacher and student*

Description: A young male, substitute teacher, who is disabled and uses a wheelchair, is shown trying to teach a lesson to a class of teenagers. He gives a disrespectful girl a detention. During the detention, she is very uncomfortable and behaves in a verbally aggressive manner. When he confronts her about whether her behavior is due to his disability, she flips over her desk and leaves the room.

Emotion: Angry (Girl), sad (Teacher).

*Vignette 4: Runaway*

Description: A boy introduces himself to a female pedestrian on a dark street. He appears stranded. She invites him home and feeds him. When she telephones child protection services, she discovers that he is a runaway. The boy bolts from her apartment.

Emotion: Afraid (Boy), sad (Woman).

*Vignette 5: Fishing trip*

Description: The same father and son as in vignette # 1 are out in a boat on a pristine lake, fishing. The father is treating the outing seriously and the son is looking bored until he catches a fish. The father tries to instruct the son on how to bring the fish in and there is a heated exchange until the son loses the fish. After an awkward silence, they both start laughing about what happened.

Emotion: Happy (both Father and Son).

*Vignette 6: Uncle*

Description: A young man is visiting his sister's home. She arrives home from work with her little son and her brother starts to play with his nephew. She grows impatient with this and criticizes her brother for his immature behavior. He, in turn, argues with her about her stressful life and being left alone as a single parent by the boy's father.

Emotion: Angry (Sister), sad (Brother).

*Vignette 7: Driving*

Description: The same young man in vignette 6 is shown driving around talking into a cassette tape recorder about missed opportunities in his life and lamenting a recent break up with his girlfriend.

Emotion: Sad.

*Notes:* All vignettes were obtained from the National Film Board of Canada (Retrieved from <http://www.nfb.ca/>). Emotion based on pilot work. See text for details.

considered these factors to reflect general emotional intensity, either positive valence ('sympathetic') or negative.

*The Test of Self-Conscious Affect—Adolescent Version.* The TOSCA-A (Tangney, 1992) presents 15 hypothetical, age-appropriate situations, each with a range of responses that adolescents rate from 1 (= not at all likely that they themselves would react in this way) to 5 (= very likely that they would react in this way). The present study focuses on the two main scales in this measure: shame (nine items;  $\alpha = .80$ ) and guilt (12 items;  $\alpha = .86$ ). Because the original scales were multi-factorial in our sample, the items were eliminated until a simple factor structure was obtained for each scale.

## Results

### *Group Differences on Background Variables*

The category of 'young offender' denotes not only a legal status, but also a cluster of developmental and contextual variables, some of which are thought to contribute to deficits in empathy and appropriate emotional and social responsiveness. Thus, as we will shortly detail, the young offenders and comparison adolescents understandably showed strong differences in academic success, family circumstances and history of abuse. In addition to these expected differences, marginal group differences emerged for ethnicity. These differences, presented below, nevertheless did not affect the major findings of the present study with regard to empathy.

*Age.* As intended, the age difference between groups was small. The young offenders were, on average, less than a third of a year younger than adolescents in the comparison group. Consistent with this, age was a non-significant predictor of group membership, accounting for only 2.5 percent of the variance. In addition, age had only small relations with the central measures in our study (see Table 3). It will not be discussed further.

*Ethnicity.* There were marginal differences in ethnic composition across groups,  $\chi^2(4, N = 124) = 8.89, p < .07$ , Cramer's  $V = .27$ . In particular, First Nations' adolescents were over-represented in the young offenders group (8 percent vs. none in the comparison group; adjusted standardized deviate = 2.25,  $p < .05$ ). This over-representation of First Nations' youth in our sample is consistent with their over-representation in the youth justice system: 26 percent of incarcerated youth in British Columbia are First Nations' youth (Canadian Centre for Justice Statistics, 2002).

Because there were so few First Nations' adolescents in our sample (only 5 of 64 young offenders), any distorting effect they contributed would be eliminated by the trimmed and non-parametric tests of robustness that we used for all comparisons of group means (offenders vs. comparison). These results were consistent with our main analyses and will not be reported below.

*Grade Retention and Special Placement.* Although close in age, young offenders were nearly two years behind the comparison group in their academic careers. Most of the comparison group (97 percent) were in Grades 11 or 12, whereas 92 percent of young offenders were in grades 8, 9 and 10,  $\chi^2(4, N = 120) = 93.93, p < .0001$ , Cramer's

**Table 3. Age, Reading Level, and Grade: Correlations with Central Measures**

Variable	Age	Reading Level	Grade
<i>Group membership</i> <sup>a</sup> <i>Strayer (1993)</i>	-.16	-.67***	-.76***
EC maximum	.15	.26**	.30***
EC times empathic	.10	.34***	.38***
<i>Davis (1983)</i>			
IRI empathic concern	.19*	.21*	.14
IRI perspective taking	.23*	.19*	.29**
<i>Bryant (1982)</i>			
Bryant empathy	.07	.03	.02
<i>Jesness (1969)</i>			
Aggression and anger	-.15	-.28**	-.24**
Antiauthority	-.15	-.26**	-.26**
Distrustful	-.29**	-.23*	-.20*
<i>ERQ emotion factors</i>			
Sympathetic	.07	.21*	.15
Negative	-.01	.13	.09
<i>Tangney (1992)</i>			
Shame <sup>b</sup>	-.14	-.06	.03
Guilt <sup>b</sup>	.26**	.17	.16

Notes: Ns varied from 117 to 124.

For age, the binomial probability of observing four or more significant tests ( $\alpha = .05$ ) in a set of 13 is less than .05.

<sup>a</sup> 0 = community youth; 1 = young offenders.

<sup>b</sup> Following Tangney, guilt scores were partialled from shame, and shame from guilt.

\*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ ; all tests are two-tailed.

$V = .88$ . Overall, 67 percent of young offenders were older than expected for their grade-level, in contrast to 8 percent of comparison youth,  $\chi^2(1, N = 120) = 43.56$ ,  $p < .0001$ , Cramer's  $V = .60$ , indicating that most comparison youth had progressed through school normally, whereas two-thirds of young offenders had been retained in grade at some point in their academic career. These findings are not surprising, given the truancy and family instability that characterize young offenders.

Consistent with indications of grade retention, the majority of young offenders (57 percent) received learning assistance support. In contrast, only 20 percent of comparison youth did so,  $\chi^2(1, N = 109) = 16.02$ ,  $p < .001$ , Cramer's  $V = .38$ .

Grade was significantly correlated with 6 of 12 central measures in our study (see Table 3). However, only one comparison remained significant when group membership was partialled (grade and IRI perspective taking,  $r(113) = .19$ ,  $p < .05$ ), no more than one would expect by chance. Binomial tests retained the omnibus null hypothesis that all partialled correlations with grade were zero,  $p > .45$ .

Differences in grade level were consistent with differences in teacher-reported reading levels, which averaged 11.1 for the comparison group and 9.3 for young offenders,  $t(117) = 9.86$ ,  $p < .0001$ ,  $r_{pb}^2 = .45$ . When we considered grade level and reading jointly, we found that most adolescents in both groups were reading at or above

**Table 4. Means (SD), and Effect Sizes for Group Differences**

Measure	Young Offenders (N = 64)	Comparison (N = 60)	$\eta^2$
<i>Strayer (1993)</i>			
EC maximum	12.1 (3.4)	14.0 (2.9)	.08**
EC times empathic	3.7 (1.6)	5.1 (1.6)	.16***
<i>Davis (1983)</i>			
IRI empathic concern	3.3 (.8)	3.4 (.8)	.00 <sup>a</sup>
IRI perspective taking	2.9 (.8)	3.2 (.7)	.00 <sup>b</sup>
<i>Bryant (1982)</i>			
Bryant empathy	5.3 (1.7)	5.3 (1.7)	.00
<i>Toi and Batson (1982)</i>			
ERQ sympathetic	-.21 (.99)	.22 (.94)	.05*
ERQ negative	-.15 (1.05)	.14 (.94)	.02
<i>Tangney (1992)</i>			
Guilt	3.4 (.8)	3.6 (.6)	.02
Shame	2.2 (.7)	2.4 (.7)	.03
<i>Jesness (1969)</i>			
Aggression and anger	.49 (.31)	.31 (.25)	.09***
Antiauthority	.57 (.28)	.36 (.31)	.11***
Distrustful	.36 (.26)	.26 (.26)	.04*

Notes: Standard deviations in parentheses. Significance levels for  $\eta^2$  (effect size for group differences) derived from multivariate ANCOVA; see text.

<sup>a</sup> Reading level covaried,  $F(1, 116) = 4.53, p < .05, \eta^2 = .04$ .

<sup>b</sup> Grade covaried,  $F(1, 117) = 4.15, p < .05, \eta^2 = .03$ .

EC, Empathy Continuum; IRI, interpersonal reactivity index; ERQ, emotion report questionnaire.

\*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

their own grade level (88 percent of young offenders and 78 percent of comparison youth;  $\chi^2(1, N = 119) = 2.04, p > .15$ , Cramer's  $V = .13$ ). Across both groups, grade and reading level were strongly correlated,  $r(117) = .82, p < .0001$ .

Like grade, reading level was frequently correlated with our outcome measures (see Table 3). However, although statistically significant, most of these relations were small ( $< .30$ ), and none remained significant ( $\alpha = .05$ ) when group membership was partialled. Nevertheless, given their strong associations with group membership, we tested reading level and grade as possible covariates in all of our analyses of group differences and used them on the two occasions when they were significant (see notes to Table 4).

We were unable to obtain IQ estimates, but no youth in either sample were reported to have general deficits rather than behavioral/attentional problems.

*Family Circumstances.* Paralleling their difficulties in school, young offenders reported more difficult family circumstances. Fewer of them reported living in two-parent homes (11 percent vs. 69 percent of comparison youth) and over a third (39 percent) were in foster care (vs. no comparison youth),  $\chi^2(3, N = 115) = 51.01$ ,

$p < .0001$ , Cramer's  $V = .67$ . Although more young offenders than comparison youth reported living in single-parent homes (43 vs. 29 percent), this difference was not statistically significant, adjusted standardized deviate =  $-1.57$ ,  $p < .06$ , one-tailed.

*Abuse.* Most young offenders (84 percent) reported some form of abuse in their upbringing. Physical abuse was reported by 30 percent; another 37 percent reported multiple types of abuse. In contrast, few comparison youth (5 percent) reported abuse of any sort,  $\chi^2(4, N = 101) = 67.93$ ,  $p < .0001$ , Cramer's  $V = .82$ . In contrast to the differences in age, ethnicity, grade and reading level just noted, these strong differences in family background and abuse are likely to contribute to group differences in empathy.

#### *How Often Were Adolescents Empathic?*

Abuse has been linked to markedly unempathic reactions in young children (e.g., Main & George, 1985; Sroufe, 1983). In addition, cultural norms endorse emotional control for male adolescents, and there are consistent reports from other samples that male adolescents report fewer emotional responses and lower levels of empathy (Broidy, Cauffman, Espelage, Mazerolle, & Piquero, 2003; Eisenberg & Lennon, 1983; Roberts & Strayer, 1996; Strayer & Roberts, 1997). Thus, before turning to the central issue of group differences in empathy, it is useful to consider how often the adolescents in this study were empathic in response to our stimulus materials—which, for obvious ethical reasons, were of limited emotional intensity.

We examined this issue by seeing how often our video stimulus materials evoked EC scores greater than one (see Table 1). As expected, we found marked individual variability, with some participants making an empathic response to all vignettes (13 percent of the sample) and a very few (2 percent) responding to none, with systematic differences across groups and some differences across vignettes. Overall response rates were satisfactory: half of these adolescents made empathic responses to at least five of seven vignettes, and two-thirds responded to four or more.

#### *Were Young Offenders Less Often Empathic than Comparison Youth?*

As expected, yes. On average, young offenders responded empathically to 3.7 of 7 EC vignettes, in contrast to 5.1 of 7 for comparison adolescents,  $F(1, 122) = 22.92$ ,  $p < .0001$ ,  $\eta^2 = .16$ , with empathy coded as zero (= absent, EC scores  $\leq 1$ ) or one (= present, EC scores  $\geq 2$ ) and summed across vignettes.<sup>4</sup> This pattern was essentially unchanged when we contrasted violent offenders only against our comparison group (new offender mean = 3.6,  $F(1, 103) = 18.60$ ,  $p < .0001$ ,  $\eta^2 = .15$ ). However, violent offenders were over-represented among the least empathic offenders. Only 5 percent of non-violent offenders responded empathically to two or fewer vignettes, whereas 27 percent of violent offenders did so, an odds ratio of 6.75,  $\chi^2(1, N = 63) = 3.93$ ,  $p < .05$ , Cramer's  $V = .25$ .

We were able to replicate this finding in a reanalysis of data from Cohen and Strayer (1996). In this independent sample, we found that the young conduct-disordered group responded empathically to 3.7 vignettes out of seven, whereas the comparison group responded empathically to 5.4 vignettes out of seven. The difference was highly significant,  $t(58) = 4.81$ ,  $p < .001$ ,  $r_{pb}^2 = .29$ .

In a discriminant analysis, responsiveness on the EC (number of vignettes with scores  $\geq 2$ ) correctly classified 69 percent of young offenders and 70 percent of comparison youth, for an overall success rate of 69 percent.

*Were Young Offenders Less Intensely Empathic than Comparison Adolescents?*

*Empathy Continuum.* We examined this issue by comparing maximum EC scores across groups. Given the number of non-empathic responses just noted and the consequent bimodal nature of many individual profiles (several vignettes with scores of one with the remainder receiving scores of eight or better), it would be inappropriate to generate a summary score by averaging across vignettes.

As expected, young offenders were less intensely empathic than comparison adolescents. As shown in Table 4, mean maximum scores were 12.1 and 14.0, respectively,  $F(1, 122) = 11.24, p < .005, \eta^2 = .08$ .<sup>5,6</sup> This pattern was essentially unchanged when we contrasted violent offenders only against our comparison group (new offender mean = 12.0,  $F(1, 103) = 9.81, p < .005, \eta^2 = .09$ ).

The maximum scores in our sample indicated that young offenders, on average, responded cognitively in terms of their own experiences (Level V, Table 1), whereas comparison adolescents, on average, responded with cognitive attributions regarding the characters' internal state (Level VI). More precisely, 58 percent of young offenders in the current sample scored at or below Level V, whereas 70 percent of comparison adolescents scored at or above Level VI. Thus young offenders not only responded empathically less often than comparison adolescents, they responded in less cognitively differentiated ways.

We were able to replicate this finding, also. In a reanalysis of independent data from Cohen and Strayer (1996), we found that mean maximum EC scores were 13.0 and 14.9 for their conduct-disordered and comparison groups, respectively, a statistically significant difference,  $t(58) = 2.22, p < .05, r_{pb}^2 = .08$ . Like the pattern in our sample, 43 percent of conduct-disordered youth scored at or below Level V, in contrast to 78 percent of comparison adolescents at or above Level VI.

*Self-reported Empathy.* A MANOVA examining group differences in empathy was conducted using questionnaire measures of empathy and perspective taking. Group differences for self-reported empathy (shown in Table 4) were not significant, even before reading was covaried from IRI empathic concern. This pattern was unchanged even when we contrasted violent offenders only against our comparison group (new offender means were 3.1 for the IRI and 5.2 for the Bryant,  $F_s(1, 99) = .01$  and  $.00$ , respectively, both  $p_s > .90, \eta^2_s = .00$ ).

The small effect sizes in Table 4 are quite similar to those reported by Jolliffe and Farrington (2004) in their meta-analysis. Thus young offenders were as willing as comparison youth to endorse general statements regarding empathy, even though EC results suggest that when faced with a life-like portrayal of particular persons in particular situations, they were less empathic than comparison youth.

Within the incarcerated group, violent offenders described themselves as less empathic than did non-violent offenders, but only on the IRI. Means were 3.2 and 3.6, respectively, multivariate  $F(2, 60) = 3.51, p < .05$ , univariate  $F(1, 61) = 4.34, p < .05, \eta^2 = .07$ . There were no violent/non-violent offender differences on the Bryant empathy scale,  $F(1, 61) = .02, p > .85, \eta^2 = .00$ .

Consistent with the cognitive difference in responsive empathy noted above (offenders were less likely to empathize for other-person-centered reasons), young offenders reported lower levels of perspective taking than comparison youth on the IRI, univariate  $F(1, 122) = 6.45, p < .05, \eta^2 = .05$ . The size of the effect is consistent with the meta-analysis of Jolliffe and Farrington (2004). However, when grade was covaried, this relation became non-significant,  $F(1, 117) = .02, p > .80, \eta^2 = .00$ .

#### *Were Young Offenders Less Able than Comparison Youth to Identify Others' Emotions?*

Group differences in emotion identification were not significant in this study. Across the 15 character-emotions in Table 2, young offenders averaged 7.3 matches with target emotions, comparison youth, 7.2 matches,  $t(122) = .51, p > .60, r_{pb}^2 = .00$ , indicating that the two groups were essentially equivalent in this respect.<sup>7</sup>

Overall, offender and comparison youth did not differ in the emotions that they attributed to the 15 vignette characters. Only two of 15  $\chi^2$  analyses were statistically significant, just slightly more than one would expect by chance, and binomial tests retained the omnibus null hypothesis that all tests were non-significant,  $p > .15$ . In general, group membership accounted for less than 2 percent of the variance in types of emotions attributed to vignette characters (median Cramer's  $V = .13$ ). Thus group differences in empathy could not be attributed to differences in how vignettes were construed.

#### *Did Young Offenders Describe Their Emotional Responses as Less Intense?*

To answer this question, we examined aggregated (factor) scores on the ERQ for both sympathetic and negative emotions reported during the EC procedure. Young offenders, consistent with their lower scores on the EC, reported significantly less-intense feelings of compassion or sympathy for vignette characters than did comparison youth, univariate  $F(1, 120) = 6.09, p < .02, \eta^2 = .05$ ; multivariate  $F(2, 119) = 3.07, p = .05$  (see Table 4). They also reported less intense negative emotions, but this difference was small and non-significant,  $F(1, 120) = 2.67, p > .10, \eta^2 = .02$ .

These small differences in reported emotional intensity may be mediated by empathy. As shown in Table 5, reported intensity was positively correlated with frequency and intensity of empathic responsiveness on the EC, as expected; but in a multiple regression analysis, emotional intensity was not related to juvenile status independently of empathic responsiveness on the EC (for sympathetic and negative emotions, non-significant partialled  $r$ s were  $-.08$  and  $-.03$ , respectively). Thus our findings are consistent with a model in which greater emotional intensity contributes to greater empathy (e.g., Roberts & Strayer, 1996), which in turn influences juvenile status.

#### *Does Empathy Predict Delinquency Independently of Self-reported Aggression and Antisocial Behavior?*

As expected, young offenders described themselves as more angry, aggressive, and antisocial than did their community peers, multivariate  $F(3, 120) = 5.74, p < .005$ . As shown in Table 4, these differences, although statistically significant, were only

Table 5. Correlations for Measures of Emotion and Antisocial Behavior

	1	2	3	4	5	6	7	8	9	10	11
<i>Strayer (1993)</i>											
(1) EC maximum score	1.00	—	—	—	—	—	—	—	—	—	—
(2) EC times empathic	.60****	1.00	—	—	—	—	—	—	—	—	—
<i>Toi and Batson (1982)</i>											
(3) ERQ sympathetic	.35***	.40**	1.00	—	—	—	—	—	—	—	—
(4) ERQ negative	.22**	.30****	.75****	1.00	—	—	—	—	—	—	—
<i>Davis (1983)</i>											
(5) IRI empathic concern	.29****	.36****	.40****	.35****	1.00	—	—	—	—	—	—
(6) IRI perspective taking	.25****	.24****	.26****	.21**	.48****	1.00	—	—	—	—	—
<i>Bryant (1982)</i>											
(7) Empathy	.18*	.24****	.42****	.42****	.63****	.37****	1.00	—	—	—	—
<i>Jevness (1969)</i>											
(8) Aggression and anger	-.14	-.16*	-.20**	-.18*	-.38****	-.25****	-.28***	1.00	—	—	—
(9) Antiauthority	-.23***	-.25****	-.18**	-.13	-.41****	-.32****	-.32****	.66****	1.00	—	—
(10) Distrustful	-.20**	-.21**	-.18**	-.09	-.32****	-.28****	-.22**	.48****	.47****	1.00	—
<i>Tangney (1992)</i>											
(11) Shame	-.02	-.00	.12	.24***	-.13	.00	.13	.16*	.03	.36****	1.00
(12) Guilt	.18*	.20*	.18*	.14	.64****	.45****	.54****	-.50****	-.49****	-.44****	.31****

Notes: Ns vary from 120 to 124. Tests are two-tailed. The correlation for guilt and shame is their simple (unpartialled) correlation; for all other variables, guilt is partialled from shame, and shame is partialled from guilt.

EC, Empathy Continuum; ERQ, emotion report questionnaire; IRI, interpersonal reactivity index.

\*  $p < .10$ ; \*\*  $p < .05$ ; \*\*\*  $p < .01$ ; \*\*\*\*  $p < .001$ .

**Table 6. Group Membership Predicted by Empathy and Self-reported Antisocial Behavior**

Predictor	<i>r</i>	$\beta$	<i>sr</i> <sup>2</sup>
EC times empathic	-.38**	-.36	.13**
Aggression and anger	.30**	.25	.06*

Note: Multiple  $R^2 = .22$ ,  $F(2, 121) = 16.87$ ,  $p < .0001$ . Tests are two-tailed.

$N = 124$ .

Group membership: 1 = young offenders; 0 = comparison youth.

*r* = simple (raw) correlation.

$\beta$  = standardized regression coefficient.

*sr*<sup>2</sup> = the squared semi-partial correlation; the variance accounted for independently of all other predictors.

\*  $p < .01$ ; \*\*  $p < .001$ .

moderate in size, reflecting a relatively high level of self-reported antisocial behavior in the community group.

A regression analysis was used to assess the relative importance of empathy and these antisocial variables. As shown in Table 6, responsiveness on the EC (empathy present/absent) was an important predictor of group membership independently of self-reported anger and aggression. In a discriminant analysis, these two variables correctly classified 73 percent of both groups.

#### *Do Shame and Guilt Predict Delinquency and Self-reported Antisocial Behavior and Attitudes?*

Contrary to expectation, scores on the TOSCA were only marginally significant predictors of delinquency, multivariate  $F(2, 119) = 2.39$ ,  $p < .10$ . As shown in Table 4, group differences, although in expected directions, were small. Moreover, the potentiating effects reported by Tangney in other samples were absent in a multiple regression analysis predicting group membership. Shame and guilt jointly predicted less than 4 percent of the variance in group membership,  $F(2, 119) = 2.39$ ,  $p < .10$ .

In contrast to these marginal differences, higher levels of guilt were consistently associated across groups with lower levels of self-reported antisocial behaviors and attitudes (Table 5), consistent with the socially responsible nature of guilt.

## **Discussion**

Although there are strong theoretical reasons for expecting deficits in empathy in incarcerated youth (Batson, Fultz, & Schoenrade, 1987; Broidy et al., 2003; Coie & Dodge, 1998; Feshbach, 1979; Feshbach & Feshbach, 1982; Frick et al., 2003; Gibbs, 1987; Hoffman, 1982), empirical studies have reported mixed results. In their meta-analysis of self-report measures of empathy, Jolliffe and Farrington (2004) found that differences were small, although present even when adolescents' social class and IQ

were controlled. Our findings, based on a multi-method assessment, help extend these conclusions. In particular, our laboratory-interview assessment of responsive empathy indicated that even when differences on self-report measures are small, meaningful differences in responsive empathy can still exist, differences that are significant theoretically in their specificity and in their implications for remediation.

We found that incarcerated young offenders, in comparison to community youth, described themselves as less emotionally responsive to evocative videotaped story episodes, responded empathically less often to the persons portrayed in them and reasoned regarding their empathic reactions in more self-referencing ways. Responsive empathy correctly classified two-thirds of the sample and was a stronger predictor of offender/non-offender status than was self-reported aggressive behavior and antisocial attitudes. Moreover, these findings for responsive empathy appear to be robust. A reanalysis of data from a younger group of non-incarcerated, conduct-disordered adolescents (Cohen & Strayer, 1996) revealed very similar patterns. Empathy is thus highlighted as a defining deficit, above aggression and antisociality, differentiating young offenders from their non-incarcerated peers. Remedial targeting of empathy in response to real persons and situations (as depicted in present stimulus vignettes, for example) may therefore be helpful in programs designed to treat aggression and antisocial attitudes in youth.

The small effect sizes shown by our self-report measures of empathy and role taking are consistent with those reported in Jolliffe and Farrington's (2004) meta-analysis. This suggests that our two groups are comparable to those in other studies. The contrast between the ability of our laboratory procedure (the EC) and our self-report measures to identify incarcerated youth underlines Jolliffe and Farrington's conclusion that self-report measures of empathy are problematic. Given their concern that measurement issues are salient in this area, our alternative measurement approaches may provide a useful addition to further investigations in this area. Our results suggest that self-report measures may seriously underestimate differences in empathy between incarcerated and community youth.

Although we did not assess social class directly, we did assess some of the family variables (abusive parenting, parental divorce and foster care) that mediate its effects on delinquency (Coie & Dodge, 1998). It is noteworthy that these factors impact emotional and socio-moral development, affecting children's abilities to form positive social bonds as well as increasing their antisocial behavior. For example, as we noted earlier, abuse has been linked to hostile, unempathic reactions in young children (Main & George, 1985), as have insecure attachments, themselves the product of unresponsive, unempathic parenting (Sroufe, 1983). Friendships between deviant peers are also noted for their abrasiveness (Dishion et al., 1995). Thus, deficiencies in empathy and social skills are both consequences and causes of problematic relationships and antisocial behavior.

It was not possible in our study to separate the effects of parental abuse from incarceration, as abuse was reported by almost all the incarcerated sample and almost none of the community sample. Such high rates of abuse are consistent with the research literature (e.g., Farrington, 1995). In order to isolate the effects of abuse, it is advisable in future research to focus selectively on abuse as a criterion for inclusion, so that abused samples in the community can be compared with incarcerated abused samples in their processing of social cues and empathic responses to others. Although biases in arrest and adjudication exist, it is plausible to suggest that abused children who avoid antisocial pathways to incarceration may somehow have emerged from their

family experiences with a greater ability to respond empathically and positively to others. Such relatively able abused children would be expected to fare better in school, given the importance of social relationships for early school adjustment (Ladd, Buhs, & Troop, 2002).

Poor academic performance is an early risk factor for antisocial behavior, and the lag of two years in grade level between our community and our incarcerated groups likely reflects the cumulative effects of low initial levels of school preparedness, family disruption, poor parental monitoring and support, and poor attendance (Bimler & Kirkland, 2001). Although research has established the importance of the latter factors, longitudinal data are needed to assess the role played by empathic relationships in early school success and the avoidance of antisocial pathways.

Although the present sample of young offenders lagged behind the comparison group in grade level and reading ability, these differences did not appear to have an important impact on our results. The reading level of all participants was well above that needed for our self-report measures (grade 6), and our laboratory measure, the EC, required no reading at all. Moreover, grade level and reading ability were significant covariates no more often than one would expect by chance, and as covariates, they affected the outcome of only one analysis, the small group difference on self-reported perspective taking. Taken together, this pattern is inconsistent with the suggestion that reading ability and grade were more important than group membership as a source of group differences.

#### *Self-reported Antisocial Attitudes and Behaviors*

Consistent with their legally adjudicated status, young offenders described themselves as more aggressive and angry on our revised Jesness scales than did community youth, as well as more antiauthority and distrustful. A similar pattern of self-attributions has been noted for a younger sample of non-incarcerated, conduct-disordered youth (Cohen & Strayer, 1996). Although cross sectional, the similarity of findings of these two studies is consistent with a suggested continuum from unremediated CD to criminality (Loeber et al., 1993).

Considered together, our findings indicate the importance of the continued study of empathy in relation to antisocial, not only prosocial, contexts and persons. Because 81 percent of our sample were diagnosed with CD, our findings add to data suggesting a predictive link between deficiencies in empathy and problems related to anger and aggression in youth (Cohen & Strayer, 1996; Coie & Dodge, 1998; Miller & Eisenberg, 1988; Strayer & Roberts, 2004a, b). Other findings (e.g., Patterson, 1982) suggest this link is embedded in a developmental context of coercive family and peer relations, which also influence the antiauthoritarian attitudes and distrustfulness of others reported by present youth.

#### *Emotional Responsiveness*

Emotional responsiveness on the ERQ related positively to empathy across measures and methods, supporting theory that empathy entails emotional responsiveness (Feshbach, 1975; Hoffman, 1983; Snow, 2000; Strayer, 1993). However, our findings are inconsistent with Toi and Batson's (1982) interpretation of this measure. They proposed that the two components of the ERQ operate differentially according to an egocentric (upset, grieved) vs. allocentric (other-person concerned) model. We found

that both sets of ERQ responses related positively, not only to empathy, but also to guilt and shame (differentiated on the TOSCA as other-person vs. self-concerned). This set of findings suggests a shared, rather than a differential, emotionality component for the ERQ that needs to be considered in future research.

Although we found, as expected, that young offenders reported significantly less intense sympathetic emotional responses than did comparison youth, and marginally less intense negative emotional responses, both effect sizes were small. These results are consistent with the idea that aggressive children, growing up first in families and then in peer groups in which emotions other than anger are seldom acknowledged in positive, empathic ways, may be less willing (and able) to acknowledge such feelings. Their limited attributions or interpretations would then have consequences for their evaluations and choices in social contexts.

### *Guilt and Shame*

Group differences in shame and guilt were small and only marginally significant. This contrasts with findings of lower levels of guilt in CD youth. For example, Cimbora and McIntosh (2003) reported differences in guilt that accounted for 27 percent of the variance across three groups (childhood-onset CD, adolescent-onset CD, and comparison youth). Our failure to replicate this finding no doubt rests, at least in part, on our use of the TOSCA-Adolescent Version, whereas Cimbora & McIntosh developed a measure of guilt specifically for a conduct-disordered sample. It may be that their measure is more appropriate in this clinical context than the more widely used TOSCA-A.

Despite their positive intercorrelation, shame and guilt had distinct and expected patterns of correlations with other variables. Shame was unrelated to either responsive or dispositional empathy, a pattern consistent with the differentiation of shame along an axis self concern. Supporting Tangney's (2001) views, shame was related to self-reported distrustful attitudes towards others (as assessed by our revised Jesness scale), and so belongs to a set of factors associated with lower empathy. In contrast to shame, guilt had consistent positive correlations with measures of empathy and perspective taking and consistent negative correlations with antisocial attitudes and behavior.

Although our cross-method correlations were modest, our findings are consistent with theories linking empathy (both responsive and dispositional measures) and constructive concepts of guilt (Hoffman, 1983; Kochanska, DeVet, & Goldman, 1994; Krevans & Gibbs, 1996; Zahn-Waxler & Robinson, 1995). They also add to limited data showing relatively low self-reported guilt for adolescents with antisocial attitudes and behavior (Cimbora & McIntosh, 2003; Tangney et al., 1992).

Correlations of other measures with guilt and shame need to be interpreted cautiously. The relatively strong relations within our questionnaire measures (empathy, perspective taking, guilt, aggressive behavior and antisocial attitudes) and their weaker relations across methods (with our laboratory-interview measure of responsive empathy and legally-determined juvenile status) suggest that shared method and source variance may play an important role in some of the correlations presented in Table 5. This conclusion is characteristic of multi-method studies, and raises questions regarding relations between self-reported guilt and self-reported antisocial behaviors in studies that have confined themselves to single-method assessments of these constructs.

### Concluding Comments

We examined young offenders vs. community youth and found important differences, as well as similarities, in critical affective and cognitive processes related to empathic and emotional responses to others viewed in emotional contexts. We also found expected relations across all adolescents between self-reported guilt and antisocial attitudes and behaviors. Although antisocial behaviors predicted juvenile status, guilt did not, suggesting that care is needed in how this construct is measured and findings interpreted.

Patterns of findings for responsive empathy in our adolescent sample compared with younger, conduct-disordered adolescents (Cohen & Strayer, 1996) underscore the need to develop programs to assist children and youth in empathy and emotional-social development. Longitudinal investigations of these variables in the context of family and peer socialization (reviewed in Coie & Dodge, 1998) suggest that such interventions should occur early, if children are to escape the consequences of growing up in empathy-poor families and neighborhoods. We need to be especially concerned that incarcerated youth, found to differ in empathy from comparison youth, do not proceed to one such socially opprobrious consequence: the development of antisocial personality disorder and psychopathy—a path explicitly linked by the American Psychiatric Association (2000) to deficient empathy.

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## Acknowledgments

We would like to express our gratitude to the participants, who made this project possible; to Doug Cohen, who very generously made his original dataset available for our reanalyses; and to Joan Foster, whose very helpful practical advice in the early stages of this project was invaluable.

## Notes

1. Because order of presentation was fixed, not randomized, it is possible that fatigue or carry-over effects had some impact on our findings.

2. Toi and Batson (1982) reported a simpler factor structure for the ERQ, but their subjects rated only one story.
3. Only one factor loading was less than .44.
4. Reading level and grade were omitted from this analysis, as neither were significant covariates (both  $F_s < 1$ ).
5. Reading level and grade were omitted from this analysis also, as neither were significant covariates (both  $F_s < 1$ ).
6. As expected, violent offenders were less intensely empathic than non-violent offenders, but the difference was small and non-significant. Mean maximum scores on the EC were 12.0 and 12.3, respectively,  $F(1, 61) = .10, p > .75, \eta^2 = .002$ .
7. Although one criterion for the EC vignettes was clarity of emotional expression, the youth freely reported emotional reactions in their interviews (rather than selecting responses from a standard set of emotion labels) and often were not queried further in order to maintain their co-operation. This procedural decision likely contributed to the moderate correspondence between emotions identified by the study groups and the pretest groups.