Evaluative behavioral judgments and instrumental antisocial behaviors in children and adolescents

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Received 1 May 2006; received in revised form 10 July 2006; accepted 13 July 2006

Abstract

There is a growing body of scientific research that has drawn a distinction between instrumental (or proactive) and reactive forms of aggressive behavior in children and adolescents. Whereas neurocognitive, psychophysiological, and other psychological factors have been shown to distinguish these aggressive subtypes, social cognitive research on alternative types of instrumental antisocial behavior (e.g., stealing, cheating, and illicit substance use) in youth is limited. Research on social information processing and aggression has shown that evaluative behavioral judgments may be of particular importance to understanding instrumental antisocial tendencies. Herein presented is a review of research on social cognition and discernible forms of instrumental antisocial behavior. It is demonstrated that, consistent with social cognitive research on proactive aggression, the relevance of a specific set of evaluative behavioral judgments appears to be common to alternative patterns of instrumental antisocial conduct. Conclusions may have particular importance for (a) research on the development of discernible instrumental antisocial trajectories, (b) clinical intervention, and (c) the formulation of a conceptual model of instrumental antisocial decision-making.

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Keywords: Instrumental antisocial behavior; Social cognition; Children; Adolescents; Decision making

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doi:10.1016/j.cpr.2006.07.003
1. Evaluative behavioral judgments and instrumental antisocial behaviors in children and adolescents

It has been well-demonstrated that conduct problem patterns in youth are associated with serious social, academic, psychological, and legal difficulties (e.g., crime) in later life. Research on the relation between social cognitive processing and conduct problem behaviors has led to important findings, including: (a) social cognitive processing develops early in life and plays an active role in the maturation of children’s social behavior, and (b) evaluative judgment and decision making styles that develop in childhood contribute to stable patterns of antisocial behavior, as well as antisocial subtypes, that extend through adolescence and adulthood (see Fontaine & Dodge, in press). These findings suggest that evaluative judgment processes in childhood are critical to understanding the development of goal-driven decision making, instrumental deviant behavior, and predatory criminal offending across the life course.

Research findings from multiple areas of scientific study, including brain and behavior sciences, psychophysiology, and social cognition, have drawn a distinction between instrumental and reactive subtypes of antisocial behavior. Whereas *instrumental* (also called proactive, offensive, or predatory) antisocial behavior is defined as premeditated, nonemotional, and goal-driven, *reactive* (also called hostile, defensive, or expressive) antisocial conduct has been characterized as emotional, highly aroused, and responsive to a perceived provocation or threat. The majority of this research has focused on aggressive behavior in youth (see Kempes, Matthys, de Vries, & van Engeland, 2005) or criminal behavior in adults (see Piquero & Tibbetts, 2002). Alternative antisocial behaviors in childhood and adolescence (e.g., stealing, cheating, and illicit substance use) have been neglected, despite their obvious relevance to the development of pervasive antisocial and criminal conduct problems. Before the evidence in support of these claims is presented, though, it is necessary to clarify some terminological and conceptual issues that have been confused in the literature. Furthermore, it should be understood at the outset that it is not the purpose of this paper to review all possible social cognitive operations that may be related to various forms of instrumental antisocial conduct. Rather, this paper focuses on evaluative behavioral judgments and introduces their common importance to multiple instrumental antisocial styles, including proactive aggression, stealing, cheating, and illicit substance use.

2. Terminological and conceptual issues

Some scholars (e.g., Bushman & Anderson, 2001; cf. Dodge, 1991; Fontaine, submitted for publication) have described subtypes of aggressive behavior as cold-blooded and premeditated (instrumental) versus hot-blooded and impulsive (reactive). Whereas these adjectives may well be applied to many instrumental and reactive aggressive behaviors, they are not essential components by which these styles of behavior need be discerned. For example, a person who steals from another may feel considerably anxious during the act and guilty following it. Similarly, a youth in a gang who is provoked in front of his fellow gang members may not feel particularly angry or emotional in response, but mindfully retaliates with aggression nonetheless because he recognizes that he will lose respect in his peer group if he does not. Though the first example is not one that suggests “cold” action, the latter does not describe a “hot” or impulsive behavior either, though these examples represent instrumental and reactive aggression, respectively. The reason for this lies in the difference in impetus for these acts. Instrumental acts are goal-driven and motivated by interests that are of an *intrapersonal* origin (motives and goals that are internally generated). In contrast, reactive behaviors require at least the perception of an *extrapersonal* stimulus (often one of an interpersonal or social nature), which serves to cue the response. That is, but for (at least the perception of) such a stimulus, the act would not be reactive.

Because different areas of research have approached the study of child and adolescent misconduct from varying perspectives, additional terminological and conceptual clarifications need be recognized. The term *instrumental* is here used to designate phenomena (e.g., cognitions and behaviors) that are of internal origin and serve to realize a specific goal. For example, violence that occurs as an intended component of a planned robbery is instrumental; violence that occurs in the course of angry retaliation to a provocation is not. The term instrumental is more specific than the term “goal-based,” the latter of which has been used to characterize certain processes associated with interpersonal decision
making (e.g., Slade, 1994). It is more accurate to describe instrumental cognitions and behaviors as “goal-driven.” It may often be the case that reactive, noninstrumental cognitive and behavioral processes are goal-based (though perhaps not goal-driven) indeed (see Crick & Dodge, 1994, for a discussion of goal clarification in the relation between social information processing and the enactment of interpersonal behaviors in response to social cues).

With these terminological and conceptual issues clarified, a review of evaluative behavioral judgments and instrumental antisocial behaviors in youth may be presented. Given the clear relevance of theory and research on social information processing and aggressive subtypes in children, a succinct review of such work is first provided. In particular, it is demonstrated that advanced evaluative decision processes that are outlined by Crick and Dodge (1994), Dodge and Schwartz (1997), and Fontaine and Dodge (in press) may play a particularly important role in not only proactive aggression but also other qualitatively distinct forms of instrumental antisocial conduct (stealing, cheating, and illicit substance use). The primary intention is to stimulate research on evaluative behavioral judgments and antisocial behavior that includes numerous alternative forms of instrumental delinquency in addition to aggressive conduct problems in children and adolescents.

3. Proactive and reactive subtypes of aggressive behavior

There is considerable literature that discusses the etiological, structural, functional, and phenomenological differences between subtypes of aggressive behavior. Instrumental (or proactive) aggression has been defined as aggressive behavior that is employed in order to achieve an identified goal (a means to an end), whereas reactive aggression is that which is enacted in response to social cues that are perceived as demands for such conduct, often because aggressive retaliation is believed to be justified and deserved. There have been a number of review articles that have comprehensively discussed instrumental and reactive styles of aggressive behavior (e.g., Dodge, 1991; Fontaine, submitted for publication; Kempes et al., 2005; Vitaro, Brendgen, & Barker, 2006; Vitiello and Stoff, 1997). Emotional, social, legal, individual, neurological, and topographical factors that have been theorized or empirically determined to discern instrumental and reactive aggressive styles have been addressed. Longstanding support for this dichotomy stems both from theory (Dodge, 1991; Lorenz, 1966; Reis, 1974; Scott, 1972) and empirical findings that are cognitively (Crick & Dodge, 1996; Dodge & Coie, 1987; Dodge, Lochman, Harnish, Bates, Pettit, 1997; Hartup, 1974; Schwartz et al., 1998; Smithmyer, Hubbard, & Simons, 1998), behaviorally (Dodge, 1991; Price & Dodge, 1989; Schwartz et al., 1998), socially (Dodge, 1991; Dodge & Coie, 1987; Dodge et al., 1997), and physiologically (Hubbard et al., 2002; Smithmyer, Hubbard, & Simons, 1998) based. In addition, developmental research has differentiated proactive and reactive aggressive individuals in terms of both latent mental structures (e.g., social attitudes toward aggressive peers; Dodge & Coie, 1987; Price & Dodge, 1989) and on-line processing (e.g., attributing hostility to ambiguous provocateurs; Dodge & Coie, 1987; Schwartz et al., 1998), suggesting that phenomenologically-distinct social cognitive mechanisms are of crucial importance to understanding the proactive/reactive dichotomy.

Whereas it is not uncommon for a percentage of aggressive individuals to engage in behaviors that would qualify them as both instrumental and reactive aggressors (e.g., see Dodge & Coie, 1987; cf. Little, Jones, Henrich, & Hawley, 2003), it remains equally clear and empirically demonstrated that certain social cognitive mechanisms are more predominant in one type of aggressive pattern as compared to the other. The main empirical findings have to do with differences in social information processing between proactive and reactive aggressive youths. Social-information processing theory (SIP; Crick & Dodge, 1994; Dodge, 1986; Dodge & Schwartz, 1997; Fontaine, 2006; Huesmann, 1988, 1998) has provided numerous contributions to current conceptualizations of instrumental decision making and social behavior. SIP theory posits that, when presented with a social stimulus, an individual potentially activates several mental processes that contribute to how he or she responds. That is, in response to a social cue, a person perceives and encodes the cues, makes attributions as to causality and intent, identifies his or her interest(s) in the situation, generates alternative responses and evaluates the alternative responses in order to select a response and behaviorally enact it.

Findings from SIP studies have added to the validation of the subtypes of instrumental versus reactive aggression that were originally observed in animals, and later in humans, and have long been discerned by psychobiologists (Lorenz, 1966; Reis, 1974; Scott, 1972) and clinical, developmental, and social psychologists (Buss, 1961; Dodge, 1991; Feshbach, 1964, Hartup, 1974). Early studies of social information processing and aggressive behavior were among the first to posit that social cognitive and evaluative decision-making mechanisms may be linked to subtypes of
aggression. Support has been demonstrated for the hypothesis that reactive aggressive children uniquely have significant problems in early stages of SIP processing such as encoding and organizing information and generating alternative ways to respond to challenging social cues (e.g., Dodge et al., 1997). For example, as compared with their nonreactive aggressive peers, reactive aggressive youths have been empirically demonstrated in multiple studies to be biased in their hostile attributions of ambiguously provocative social cues (e.g., Dodge & Coie, 1987). In addition, advanced social-information processing domains of response evaluation and decision have been linked to proactive aggression (e.g., Crick & Dodge, 1996; Schwartz et al., 1998; Smithmyer, Hubbard, & Simons, 2000). In comparison with nonproactive-aggressors, proactive aggressive children have been shown to evaluate aggression more positively, be more likely to expect aggressive behavior to lead to positive outcomes, and view aggression as an appropriate means by which to achieve instrumental goals (Crick & Dodge, 1996; Dodge et al., 1997; Hubbard, Dodge, Cillessen, Coie, & Schwartz, 2001; Schwartz et al., 1998).

The majority of SIP factors that have been uniquely linked to proactive aggression have been associated with what Crick and Dodge (1994) conceptualized as the response decision step. During this stage of processing, the responding individual assesses alternative response options across different evaluative domains, including response evaluation (the judgment of a response option’s content), outcome expectations (the anticipation of what will result from enacting a response), and self-efficacy evaluation (one’s expectation as to his or her ability to successfully carry out a considered behavior). Fontaine and Dodge (in press) elaborated upon this work by developing a model of response evaluation and decision (RED) and hypothesizing that additional evaluative judgment processes may be activated during the response decision step. In particular, they stressed the importance of distinguishing the processes of positive outcome expectancy and negative outcome expectancy, by which the responding individual considers possible favorable outcomes in light of possible negative consequences. In addition, Fontaine and Dodge hypothesized that, during the additional evaluative stage of response comparison, an individual weighs and compares his or her interests in alternative response options in order to select the one that has the highest overall value with respect to the social situation at hand.

There has been notable (though correlational) empirical support for the hypothesis that RED processes play a unique role in the employment of proactive aggressive acts. Evidence that advanced social-information processing factors, such as response evaluation, outcome expectancy, and response efficacy, provide utility in the prediction and explanation of proactive aggressive behavior has been found in multiple studies (Crick & Dodge, 1996; Dodge et al., 1997; Hubbard, Dodge, Cillessen, Coie, & Schwartz, 2001; Schwartz et al., 1998). In their critical 1997 multistudy investigation, Dodge et al. examined several hypotheses that uniquely related RED factors to proactive aggression. In Study 1, differences between proactive and reactive aggressive children who were followed from preschool through Grade 3 in a large community sample were investigated. Although several of the authors’ non-RED hypotheses about the unique characteristics of proactively aggressive children were not supported by the data, multiple hypotheses that RED factors are uniquely predictive of children’s proactive aggression were. Participants evaluated aggressive responses to social cues that were presented in a video vignette assessment and were also administered an instrument (adapted from Crick & Ladd, 1990) that was designed to measure response evaluation patterns in children. In addition, their reactive and proactive aggressive behaviors were reported by their teachers (using scales developed by Dodge & Coie, 1987). Proactive aggressive children were found to have greater self-efficacy (i.e., “it would not be difficult to act this way”) and expect more positive intrapersonal consequences (i.e., “it would feel good inside”) in their evaluations of aggressive behaviors. In contrast, significant differences between proactive aggressive children and other participant groups were not found with respect to overall endorsements (i.e., “this is a good way to act”) of aggressive responses shown in the video vignette assessment, suggesting that behavioral evaluation differences between proactive and reactive aggressive children are specifically associated with outcome- and ability-oriented processing.

In Study 2, Dodge et al. (1997) investigated links between SIP and aggressive subtypes in a sample of 50 chronically violent youths (mean age of 12.7 years) from a statewide treatment program in North Carolina. Participants were selected and classified as either proactively or reactively violent based on systematic reviews of their case records, and were administered multiple instruments that were designed to measure a broad range of social cognitive (e.g., perceived self-efficacy) and SIP factors, including multiple aspects of RED. Overall, the proactive violent group demonstrated poorer scores at later SIP stages—that is, RED domains that capture outcome-oriented processing. Proactively violent youths were not found to be significantly different in their physical and cognitive self-efficacy, but did report greater self-efficacy in social and general domains. In addition, it was found that proactively violent children are more likely than their nonproactively violent peers to evaluate aggressive behavior as a style of conduct that reduces aversive
behavior from others. These results were interpreted in light of social learning theory (e.g., Bandura, 1983) in that proactively violent youths may be enacting aggression because, in part, they have learned that violence leads to desired social outcomes. Note that this finding is consistent with the idea that instrumental antisocial behavior may be driven by social goals (e.g., peer acceptance or a reduction of aversive peer behavior), as opposed to nonsocial motivations (e.g., acquisition of material belongings). Further hypotheses related to RED processes and proactive aggressive behavior include possible associations between aggressive behavior and (a) internal congruence of aggression (i.e., the actor’s personal identification with an aggressive style of reactivity), (b) evaluation of aggression as a justifiable behavior, even when unprovoked or unwarranted, and (c) expectation that behaving aggressively will lead to feelings of pride, happiness, and satisfaction (Fontaine & Dodge, in press).

4. Evaluative behavioral judgments and other instrumental antisocial behaviors

4.1. Stealing

Research on stealing behaviors is severely neglected in child and developmental psychology. Stealing has generally been confined to social science fields other than psychology such as sociology, criminology, and criminal justice, and although considerable attention has been paid to stealing and theft in these disciplines, the majority of this work has been conducted with a focus on theft and criminality in adulthood. Most psychological research on stealing behaviors in youth has focused on correlates of academic achievement and social factors such as peer relations (e.g., Moncher & Miller, 1999). Empirical examination of social cognitive mechanisms of stealing in youth has been limited and has concentrated on societal judgments, attitudes toward theft and stealing, and reasons for stealing (Greening, 1997; Liau, Barriga, & Gibbs, 1998; Moncher & Miller, 1999). Some of these social cognitive factors relate directly to the RED model of response decision-making and aggression. For example, an endorsement of stealing as an acceptable behavior is similar to a positive response valuation of aggressive retaliation in a provocation situation. Likewise, generation of reasons for stealing is a fair parallel to processing expectations of behavioral outcomes when considering aggressive response options.

Psychological research on evaluative judgment and stealing in youth has also examined stealing in the context of the topography of overt versus covert antisocial behavior (as opposed to the instrumental/reactive dichotomy). One empirical study of antisocial behavior in adolescents sought to distinguish overt and confrontational antisocial acts (fighting) from those that are covert and nonconfrontational (stealing) based on self-serving, social beliefs and attitudes that are distorted or inaccurate (Liau et al., 1998). Guided by SIP theory, Liau et al. examined self-serving cognitive distortions as they relate to subtypes of externalizing conduct problems. 103 male adolescents, aged 14 to 18, with varying histories of aggressive and delinquent behavior were administered a questionnaire designed to assess cognitive distortion typologies that are uniquely related to overt versus covert antisocial behavior. In addition, participants self-reported their aggressive and delinquent behaviors, including deviant acts that were characterized as “predatory crimes against property” (e.g., burglary, auto theft, larceny, and stolen goods). The authors found that self-serving evaluative judgments (such as “People need to be roughed up once in a while.” and “If someone is careless enough to lose a wallet, they deserve to have it stolen.”) were not only linked to overall antisocial behavior but may be used to distinguish subtypes of antisocial conduct. In support of their hypotheses, favoring self-serving cognitive distortion items referring to overt behavior was found to be uniquely associated with overt externalizing patterns such as interpersonal aggression; conversely, agreement with cognitive distortion items referring to covert behavior was uniquely related to covert delinquency problems such as stealing.

Although the study of Liau et al. (1998) did not directly examine on-line RED processes with alternative forms of antisocial conduct, the overall conclusion that evaluative behavioral judgments may serve as markers of the instrumental antisocial behavior of stealing further suggests the utility of examining social cognitive mechanisms that may distinguish antisocial subtypes. Furthermore, the judgment biases that were linked to stealing may have important implications for the development of a model of instrumental antisocial decision-making in that such cognitive patterns and social attitudes may be guided by, as well as influence, real-time decision making that promotes self-serving behaviors and minimizes the needs and interests of others. In other words, this research suggests that, as is the case with youths who engage in other forms of instrumental antisocial behavior (e.g., proactive aggressive behavior), youths who steal tend to find this form of deviance less sociomorally inappropriate, as compared to their nonstealing peers, or may even judge it to be sociomorally justifiable or positive.
4.2. Cheating

Research on cheating behaviors in children has largely been the undertaking of educational psychologists. Scientific attention to academic cheating far outweighs that paid to other forms of cheating (e.g., in game playing) and has considered a multitude of intrapersonal (e.g., self-esteem; Lobel & Levanon, 1988), interpersonal (e.g., relationships with school officials; see Murdock, Hale, & Weber, 2001), and societal factors (e.g., educational system; Evans, Craig, & Mietzel, 1993). Regarding empirical studies that have examined intrapersonal factors, emphasis has been placed on two categories: (a) motivational factors such as goal identification and parental and school demands, and (b) evaluative judgment factors such as beliefs and attitudes about the acceptability of cheating and expectations of cheating outcomes (Anderman, Griesinger, & Westerfield, 1998; Enker, 1987; Evans et al., 1993; Lobel & Levanon, 1988; Murdock et al., 2001).

Although the majority of child cheating research has been narrowly tailored to academic cheating, and no studies have examined children’s evaluative behavioral judgments in the context of actual decision making about cheating, findings across studies suggest two themes that may inform the development of a model of instrumental antisocial decision-making. First, evaluating the degree to which the child desires a specific academic outcome must be accomplished. Children may develop this interest due to intrinsic reasons such as self-esteem and a sense of accomplishment or because of extrinsic reasons, such as familial, school, or societal demands. Of course, many children do not cheat in their pursuit of this interest once it has developed and been recognized. Second, identifying the various motivations that potentially underlie the consideration and enactment of cheating behaviors is essential.

Regarding children who do report cheating behaviors, it appears that youths typically cheat in school for one of two sets of reasons. First, some cheating children want to achieve a certain academic outcome without having to do the work that it would take to legitimately earn the grades or marks that are desired. In other words, laziness, or an interest in circumventing authority rule, combines with the child’s positive outcome expectancy of cheating to motivate the cheating behavior. Second, other children may believe that they need to cheat in order to meet perceived demands upon them, as they would otherwise be unable to do so regardless of the amount of effort exerted. This type of cheating youth is characterized by fear of failure and judgments of low behavioral efficacy with respect to working for and earning positive academic outcomes. Although judgments of behavioral efficacy (i.e., one’s assessment as to how capable he or she is, or would be, in carrying out a considered behavior) are similar to a type of outcome expectancy, they are distinguished from outcome expectancies in that they are really an expectation of behavior and not of the outcome to which the considered behavior may lead (Fontaine & Dodge, in press). Thus, this second type of cheating youth has both negative outcome expectancies (fear of failure) and negative behavioral expectancies (low self-efficacy) that are associated with legitimate means of academic achievement.

Multiple studies have examined the relation between perceived demands and cheating. Children who cheat tend to worry that they will not meet school demands (Anderman, Griesinger, & Westerfield, 1998), have a greater need for extrinsic approval (Lobel and Levanon, 1988), and desire to achieve academic goals without having to work for them (Murdock et al., 2001). Anderman et al. (1998) examined several indicators of cheating motivation in early adolescence. 285 students from Grades 6, 7, and 8 completed several measures of cheating motivation, strategy use, worry, and behavior. Multiple social cognitive and motivational predictors of beliefs in the acceptability of cheating as well as self-reported cheating behaviors were identified. Cheating children were more likely to worry about school, believe that their school stresses performance goals, and perceive that their classrooms stress extrinsic goals. In addition, with the exception of the belief that performance goals are emphasized by their school, these factors were positively related to children’s acceptance and endorsement of cheating behaviors.

Although not directly examined in the Anderman et al. (1998) study, the link between worrying about school and one’s endorsement and enactment of cheating behaviors may stem from children’s academic self-efficacy. That is, as discussed above, children who cheat may fear that they are unable to legitimately earn the marks and grades that are desired. The concept of behavioral efficacy (Bandura, 1986; Crick & Dodge, 1994) that is, one’s behavioral self-confidence, or estimation as to how successful he or she would be upon attempting to carry out an identified behavior—appears to be critical in the development of cheating behaviors in two main ways. First, the child who considers cheating may need to assess the degree to which he or she will be able to carry out the act of cheating. Second, this child may also need to judge his or her ability to carry out the legitimate means of earning the desired academic outcome; that is, the child may need to estimate the degree to which he or she can successfully study, learn the material, and perform
4.3. Illicit substance use

Only a limited amount of research has examined relations between additional forms of delinquency and evaluative behavioral judgments in children and adolescents—illicit substance use is no exception. One of the more inclusive investigations, conducted by Allen, Leadbeater, and Aber (1990), examined multiple relations among adolescents’ efficacy judgments, outcome expectations, social values, and various forms of social deviance, including delinquency, drug use, and high-risk sexual behavior. 100 participants (aged 15.5 to 18 years) were administered a structured interview in order to assess several social cognitive factors that were hypothesized to relate to various social and behavioral problems that are developmentally salient to adolescents. In addition, participants provided reports of their recent social and antisocial behaviors. Multiple types of expectancies and values were demonstrated to be related to all of the assessed problem behaviors. In addition, regression analysis provided evidence that, with respect to male participants, behavioral expectancies and values incremented the overall prediction of delinquency and drug use. The Allen et al. study points to the importance of considering multiple dimensions of behavioral and outcome expectancies and values. However, the simultaneous nature of this study leaves little room for inferences of causal relations. Whereas this area of research has made significant contributions toward the field’s understanding of social development, it has not explained how children make deliberate decisions in pursuit of their antisocial interests.
Perhaps one of the more important contributions of the Allen et al. (1990) study, though, was its inclusion of three main categories of social cognitive constructs that have been associated with substance abuse: behavioral efficacy judgments, outcome expectancies, and sociomoral valuations. Of the many social cognitive and social learning perspectives on substance use and dependence, these three classes of social cognitive operations represent those that have been attributed most emphasis. Deviancy models (e.g., Jessor & Jessor, 1977), for instance, posit that users reject society’s mainstream norms and values in favor of those that are more accepting, or even encouraging, of alcohol and drug use. Though it is unclear whether such deviant sociomoral judgments and beliefs lead to one’s initiation and maintenance of using drugs, serve as the postbehavioral excuse or justification of substance use, or both, there is a striking resemblance between this evaluative judgment pattern and that of proactive aggressors, stealers, and cheaters, all of whom tend to endorse the deviant acts that characterize their respective antisocial behavioral tendencies. Research perspectives that have focused on outcome-expectancy cognitions have also been widely applied in drug, alcohol, and tobacco research. Recently, Brandon, Herzog, Irvin, and Gwaltney (2004) proposed a model of tobacco dependence in adolescence that drew heavily from these models. Whereas expectancy models have primarily tended to focus on the attraction of expecting positive outcomes to result from substance use (e.g., feeling euphoric or enhanced performance), coping models have emphasized the user’s interest in avoiding or relieving negative outcomes (e.g., continued feelings of stress, sadness, anxiety, etc.). A study by Bailey and Hubbard (1990) examined a multitude of social factors, as well as decision making, in 11- and 15-year-olds with respect to marijuana initiation. These researchers were interested in the degree to which cost–benefit analysis may be used by adolescents in their consideration of using marijuana for the first time. Although evaluative decision making was not found to be significantly related to marijuana initiation in the younger cohort, it was predictive of this behavior among older adolescents. The researchers concluded that expected costs of using serves to discourage marijuana in this age group and that, as a sign of maturity, older adolescents may be better able to contemplate real-world consequences of using illicit drugs. This finding is consistent with research on the maturation of brain pathways and risk taking skills and behaviors in adolescence (Dahl & Spear, 2004).

Also of central importance to the Brandon et al. (2004) model is the evaluative judgment construct of self-efficacy that was introduced by Bandura (1977a,b, 1998) and has been incorporated in other social cognitive models of antisocial behavior (e.g., Crick & Dodge, 1994; Fontaine & Dodge, in press). As discussed above, self-efficacy judgments have more to do with anticipating behavioral enactments (i.e., how confident one feels carrying out the behavior in question) than they do behavioral outcomes. In this way, the Brandon et al. model recognizes the potential importance of both outcome and behavioral expectations with respect to the instrumental antisocial behavior of illicit substance use. Although this model provides a good first step toward understanding and developing preventions for adolescent tobacco use, research on evaluative judgment and decision making and substance use in youths remains relatively limited. This area of research is currently hindered, in part, by the lack of a comprehensive model of instrumental antisocial decision-making and deviant behavior in children and adolescents.

5. Conclusions and future directions

Although there exists considerable theoretical and empirical research on (a) responsive social-cognitive processing and aggressive subtypes in youth, and (b) decision making and instrumental criminal behavior in adulthood, this paper provides the first review of social cognitive processing and alternative forms of instrumental antisocial conduct in children and adolescents. The importance of this contribution lies in the overlapping relevance of evaluative behavioral judgments to discernible patterns of instrumental antisocial behavior, including proactive aggression, stealing, cheating, and illicit substance use. This work is intended not only as a review, but also as the first step toward developing a conceptual framework of instrumental decision making and antisocial behavior in children and adolescents.

This first step was accomplished by identifying six qualitatively distinct evaluative behavioral judgments that have been linked to multiple instrumental antisocial behaviors in youth. First, antisocial goal formation and identification is perhaps the least surprising of the group. By definition, an instrumental behavior of any sort is driven by some formed goal. Instrumental aggressors, stealers, cheaters, and substance users, as well as other instrumental antisocial actors, enact their respective antisocial behaviors in order to actualize the goals that motivate them to behave as they do. Second, instrumental actors with different antisocial goals typically report stronger beliefs of behavioral efficacy (regarding their respective antisocial behaviors), compared with their noninstrumental-antisocial peers. For example,
youths who steal from or proactively bully their peers report that these behaviors are easy to enact and that they have greater confidence that they can successfully carry out these behaviors. Third, various instrumental antisocial youths tend to endorse and favor their antisocial actions over socially appropriate alternatives—that is, in terms of behavioral comparison, instrumental antisocial actors tend to assign greater overall values to their respective instrumental antisocial behaviors. Substance-using and proactively aggressive adolescents, for instance, evaluate their antisocial styles of conduct more favorably across multiple levels than do youths who are not instrumentally antisocial. Fourth, youths who are characterized by instrumental antisocial patterns tend to expect positive outcomes from their antisocial actions. This tendency is common to all antisocial groups herein addressed. Substance users are more likely to expect drinking and drugging to lead to good feelings (e.g., euphoria) and/or improved performance; instrumental aggressors tend to expect that bullying will lead to positive outcomes of an instrumental (e.g., material belongings and/or money), intrapersonal (e.g., feeling good about oneself), and relational (e.g., power, dominance, and others’ fear) nature; lastly, stealers expect theft to lead to acquisition of wanted goods whereas cheaters expect that cheating on academic tests will lead to higher grades. Fifth, in addition to expecting increased likelihoods of positive outcomes, instrumental antisocial youths also tend to expect decreases in negative outcomes. For example, whereas cheaters tend to expect fewer negative responses from parents and school authorities (e.g., teachers) by cheating and improving their test scores and grades, substance users often use illicit substances in order to reduce negative outcomes such as continued—or even elevated—aversive feeling states (e.g., anxiety or sadness). In addition, proactive aggressive children expect that engaging in bullying behaviors will lead to less aversive treatment toward them by their peers. Finally, instrumental antisocial children and adolescents tend to assess their rule-violating behaviors as more sociomorally acceptable (and even appropriate and justifiable) than their peers. Just as stealing youths are more likely to believe that their victims deserve to have their belongings or money stolen from them; substance users have been shown to be more likely to evaluate the use of alcohol and drugs as socially and morally acceptable.

5.1. Implications for clinical intervention

The present review has clear implications for clinical intervention. Several recent reviews of research on aggressive subtypes have briefly offered suggestions for clinical treatments for instrumental aggressive youths (Dodge, 1991; Fontaine, submitted for publication; Kempes et al., 2005; Vitaro et al., 2006; Vitiello & Stoff, 1997). Dodge (1991) as well as Vitiello and Stoff (1997) have hypothesized that the prognosis is better for instrumental aggressive youths, relative to their reactive aggressive peers. This may be, at least in part, because purely proactive offenders tend to not have the problems with elevated physiological arousal and impulsivity that reactive aggressors typically do. Vitiello and Stoff (1997) hypothesized that instrumental aggressive children are more likely to respond to behavior therapy because they are more in control of their behavior and, because their aggressive actions are driven by reward goals and expectations of favorable outcomes, are more likely to respond to environmental contingencies that are intended to reduce antisocial behaviors and promote prosocial ones (also, see Kempes et al., 2005).

Dodge (1991) recommended that both behavioral and social cognitive interventions for the instrumental aggressive child may be helpful. In addition to consistent punishment of aggression and reinforcement of socially appropriate behaviors, cognitive-behavioral approaches that help the proactive aggressive child to learn problem-solving skills, better assess possible negative consequences for enacting aggressive behaviors, and consider ways that nonaggressive strategies may actually be more effective in terms of goal attainment may be used. Vitaro et al. (2006) further suggested that being exposed to nonaggressive peers may be helpful to proactive aggressive children, presumably to reduce the possible effect of a deviant peer contagion that can occur when antisocial children are removed from normative settings and placed together in clinical or juvenile detention facilities (see Dodge, Dishion, & Lansford, 2006).

The present paper has demonstrated commonalities among several different types of instrumental antisocial youths with respect to evaluative behavioral judgments. It seems reasonable, based on these similarities in social cognitive processing and behavioral decision making, to suggest that some of the same interventions that have been proposed for proactive aggressive children may be useful as interventions geared toward alternative instrumental types of delinquency. Behavioral approaches that utilize reinforcement contingencies may be applied to stealing, cheating, and substance using youths in ways that are very similar to treatments of child bullies and proactive aggressors. The coupling of consistent punishments of these antisocial behaviors and reinforcements of socially acceptable means of achieving their goals is the basis of an elementary behavioral strategy. However, the present review indicates that clinical interventions for instrumental delinquent youths must also focus on social cognitive mechanisms. First,
teaching instrumental antisocial children and adolescents skills by which they can effectively achieve their goals (as well as resolve their problems) in socially appropriate ways may be critical. In this way, these youths can develop and expand their behavioral repertoires, better understand how socially adjusted routes of action can lead to desired outcomes, and increase their behavioral efficacy judgments of nondelinquent, socially acceptable behavioral strategies. Second, all types of instrumental antisocial youths may benefit from cognitive behavioral interventions that are directed toward the facilitation of youths’ self-learning that (a) delinquent behavioral approaches can lead to meaningfully aversive negative consequences, and (b) nondelinquent strategies can produce outcomes that are, overall, favorable to outcomes produced by antisocial means.

Vitiello and Stoff (1997) also raised the issue that, as compared to their reactive aggressive peers, instrumental aggressive youths are less commonly referred for mental health treatment. This may be due to societal tendencies to view reactive aggression as more highly associated with psychological disturbance and psychiatric disorder, whereas instrumental aggression is attributed to nondisordered, purposeful wrongdoing. Whatever the reason, this point may have considerable relevance for interventions directed toward other types of instrumental antisocial offenders. Stealing, cheating, and illicit substance use, perhaps because of their similarly instrumental nature, may all be behaviors that are more likely to lead offending individuals to incarceration rather than mental health providers. If so, then the recommendations made in this section may also be useful to detention center and prison officials who are responsible for designing and implementing rehabilitation services for incarcerated juvenile offenders.

5.2. The need for a conceptual framework of instrumental antisocial decision-making

As demonstrated, with the possible exception of research on proactive aggressive behavior, research on evaluative social-cognitive processing and instrumental antisocial behaviors in children and adolescents is limited. However, this review suggests that the evaluative behavioral judgments that are common across different types of delinquent conduct should be incorporated into a conceptual framework of the development of social cognitive processing and instrumental antisocial behaviors in youths. A comprehensive model of goal-driven decision processes and antisocial behavior in children and adolescents is essential to understand life-course developmental tracks that lead to both persistent maladjustment and adult crime. This is of critical importance as a prevailing understanding among social scientists and criminologists is that much criminality is neither irrational nor purposeless. Rather, there is a developing movement among these scholars to view senseless crimes as more the exception than the rule and that the commission of crime is often not caused by psychopathology or evil but rather because evaluative decision processes lead to these outcomes as a direct result of individual differences in social cognitive processing (see Cornish & Clarke, 1986, for a discussion). In fact, Tsutomi (1991) has argued that the typical criminal is a normal person who is driven by motives that are common among humans. Both the degree to which and style by which humans act on these motives vary according to individual differences in decision making, among other domains of psychological functioning.

As a result, it is necessary to review and consider the research and knowledge in the social cognitive study of instrumental antisocial behaviors in youth and organize theoretical and empirical contributions into a conceptual framework. Until present, there has been no such review. Nor does there exist a theoretical model that accounts for the emergence and maintenance of evaluative judgment processes that are considered to underlie deliberate decisions to act upon antisocial desires and goals. This review outlines processes that are critical to the formulation of this much-needed developmental model and, as a result, sets the stage for the advancement of further theoretical and empirical research on instrumental antisocial behaviors in childhood and adolescence.

Acknowledgment

Support for this work was provided, in part, by grants MH56961 from the National Institute of Mental Health and HD30572 from the National Institute of Child Health and Human Development. I am grateful to Kenneth A. Dodge for his comments on an early draft of this paper.

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