CHAPTER 2

MORAL COGNITION AND CHILDHOOD AGGRESSION

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Childhood aggression is of great interest because of the impact such behavior has on the welfare of others. Recent advances in understanding the development of children's aggressive behavior have emphasized the role of cognitive factors, since an individual's aggressive behavior is ultimately subject to cognitive control (Dodge, 1986; Huesmann, 1988). Paradoxically, the literature on cognition and aggression has not been informed by the literature on the development of children's moral reasoning. Instead, they have developed in two separate strands that minimally relate to one another. In large part, the lack of connection between these two literatures stems from a paradigmatic clash which has made the integration of research on cognitive correlates of childhood aggression and research on children's moral development problematic. Recent

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advances in theory and research in moral development, however, offer the possibility of a rapproachment between these two paradigms.

In this chapter, we will offer an integrated model for research on the relation between children's moral cognition and the development of habitual aggressive behavior. The term *moral cognition* is used to differentiate judgments about moral issues (e.g., issues of harm and fairness) from nonmoral issues (e.g., mathematics). This is distinct from the evaluative use of the word *moral* to confer approbrium. Our proposed model of moral cognition and aggression builds on recent elaborations of the moral development literature which offer new insights into the specific relation between moral cognition and behavior. Because these recent elaborations emphasize how an individual classifies and uses social information when considering complex issues with moral implications, they are also compatible with the social information processing/social cognitive models which have guided most contemporary studies of the cognitive bases of children's aggressive behavior. Our integrated approach affords a way to draw on what has been learned from these two existing strands of research.

First, we will review what has been learned from research on the role of cognition in the development and maintenance of children's aggressive behavior. Next, we will look at extant research on the relation between moral development and aggression, which has emphasized the correlation between moral stage and habitual aggressive behavior (e.g., delinquency). As we will see, the latter provides an inconsistent and conflictual picture of the relation between moral development and aggressive behavior (Blasi, 1980; Turiel & Smetana, 1984). We will then turn to the domain model of moral and social development which posits that situation-specific moral decision making is multifaceted and not simply determined by stage of moral development (Nucci & Nucci, 1982; Nucci, Guerra, & Lee, 1991; Turiel, Hildebrandt, & Wainryb, 1991). As recently pointed out by Saltzstein (1991), the domain model provides a connection between research on moral stage, moral information processing/decision making, and moral action. From this vantage point, we will present an integrated model and some preliminary data which point to a new direction in research on moral cognition and childhood aggression.

THE ROLE OF COGNITION IN CHILDREN'S AGGRESSIVE BEHAVIOR

Aggressive behavior is determined by a variety of factors, such as the biological (e.g., genetics, neuroanatomy, endocrinology); social influence variables (e.g., media violence); social context (e.g., peers, family, school); and environmental conditions (e.g., chronic environmental stress). There has been a plethora of research on each of these factors, although none of them in itself can explain much of the variance in aggressive behavior. Such behavior must somehow be learned (although not necessarily performed) and incorporated into the individual's response repertoire before it is elicited by some external situation or stimulation from within the individual (Eron, 1982). Aggression is both learned and regulated by means of the child's emerging cognitive system. From this perspective, children's cognitions play a central role in the development of aggressive behavior, and play a critical role in maintaining habitual aggressive behavior (Bandura, 1989a; Dodge & Crick, 1990; Eron, 1987; Huesmann, 1988; Huesmann, Guerra, Miller, & Zelli, 1992; Slaby & Guerra, 1988). While aggressive behavior is initially stimulated by a variety of factors, it becomes more stable and consistent over time as children's cognitions become more fully developed and more resistant to change (Eron, 1987; Huesmann et al., 1992).

Recent studies of the specific cognitive factors implicated in the development and maintenance of children's aggression have emerged from two related, but somewhat distinct, research traditions, social information processing theory and social learning/social cognitive theory. Studies which have emphasized social information processing correlates of aggression have focused on the cognitive *processes* children use to interpret and respond to social information in problematic situations. Most of the early work in the area of information processing and children's aggression was derived from an interpersonal, cognitive problem-solving model emphasizing the relation between aggressive behavior and deficits in information processing skills including means–ends thinking, generating solutions, and generating consequences (Shure & Spivack, 1976; Spivack & Shure, 1974).

Subsequent investigations have focused on a broader range of cognitive processes. For example, Dodge (1986) has formulated a five-step sequential model and has proposed that aggressive behavior may result from deficits in processing social information at any or all of the steps. The five sequential steps are: (1) encoding of social cues; (2) representation and interpretation of cues; (3) response search; (4) response decision; and (5) enactment. While a number of studies have suggested that aggressive children differ from nonaggressive children in the way in which they perform some of these cognitive processes (Dodge & Frame, 1992; Dodge, Price, Bachorowski, & Newman, 1990; Huesmann et al., 1992; Slaby & Guerra, 1988), the data do not provide strong support for a generalized *deficit* in information processing. Rather the data suggest

that some abnormal or biased styles of processing might contribute to aggressive behavior.

While these models (as applied to the study of children's aggression) have acknowledged the role of "theory-driven" cognitive processes, that is, prior concepts and beliefs which shape how data are viewed, they typically have not examined specific beliefs relevant to the learning of aggressive behavior. This is somewhat surprising in view of the central role that cognitive psychologists ascribe to organized prior knowledge, or schema, in guiding information processing (Shank & Abelson, 1977). Rather, studies of children's beliefs have emerged from the social-learning/social-cognitive tradition (Bandura, 1989a; Guerra & Slaby, 1990; Huesmann et al., 1992), being informed more recently by a growing literature on social schema and aggression (Huesmann, 1988; Mize & Ladd, 1988).

From this perspective, while aggressive behavior is learned through both enactive and observational learning, it is the child's cognitive representation of social interaction that ultimately determines behavior and development. In particular, social learning/social cognitive theory stresses the importance of self-regulatory beliefs in motivating and regulating aggressive behavior (Bandura, 1989b). Two important classes of self-regulatory beliefs are: (1) response–outcome expectancies, and (2) standards of conduct. It has been proposed that children who observe and experience more positive and fewer negative consequences for aggression learn a set of response–outcome expectancies which promote aggressive behavior. Furthermore, on the basis of these anticipated consequences, children also learn to discriminate between acceptable and nonacceptable standards of behavior and to regulate their actions accordingly (Bandura, 1989b; Huesmann, 1988; Perry, Perry, & Boldizar, 1990).

According to social-cognitive theory, cognitive representations of anticipated positive consequences for aggressive behavior serve as motivators of behavior. These positive consequences can include tangible rewards (e.g., desired objects), psychological benefits (e.g., control or dominance over others), self-evaluations (e.g., increased feelings of self-worth), and social reactions (e.g., status among peers). Studies of preadolescent children have shown that aggressive children are more likely than their less aggressive peers to predict that aggressive behavior will result in tangible rewards and termination of aversive behavior toward them by others (Perry, Perry, & Rasmussen, 1986), as well as psychological reinforcement based on control over peers (Boldizar, Perry, & Perry, 1989). Studies of aggressive and delinquent adolescents have shown that they are more likely to believe that aggression results in increased self-esteem and status among peers (Guerra & Slaby, 1990; Slaby & Guerra, 1988).

Similarly, cognitive representations of anticipated negative consequences for aggressive behavior can serve as inhibitors of behavior. These negative consequences may be anticipated for both self and others. Negative consequences for self can include expectations of physical punishment and social disapproval. Negative consequences for others can include harm, injury, and disruption of social relations. Habitual aggressive behavior during adolescence has been found to correlate with lowered expectations of negative consequences for both self (Guerra, 1989) and others (Slaby & Guerra, 1988). In addition to anticipating negative outcomes for aggression, it has also been proposed that aggressive behavior is further influenced by the degree of importance children attach to such outcomes. Several studies have found that aggressive children attach less importance to a range of negative sanctions for aggressive behavior (Guerra & Slaby, 1989; Boldizar et al., 1989).

External sanctions in the form of expected punishment are particularly salient in guiding the behavior of young children (Parke, 1974). While the threat of immediate punishment is quite effective in decreasing aggression, most individuals refrain from behaving aggressively even in the absence of external sanctions. Cognitive representations of expected sanctions provide a more stable and less situationally dependent source of behavior control (Bandura, 1989b). These negative self-generated reactions rely on comparing one's behavior with a set of self-regulatory standards or norms about the acceptability of aggressive behavior. As Perry et al. (1990) note:

> If children see that certain forms of aggression in certain situations and toward certain targets are inappropriate (e.g., physical aggression toward females, or aggression against someone whose frustrating behavior is not intentional), they may avoid acting aggressively under these circumstances for fear of self-censure. (p. 136)

While much has been published about the theoretical link between norms and aggressive behavior (e.g., Bandura, 1989a; Eron, Walder, & Lefkowitz, 1971; Huesmann, 1988), very few empirical studies have directly assessed the relation between normative beliefs about the acceptability of aggression and children's aggressive behavior. For example, Slaby & Guerra (1988) reported that aggressive and delinquent adolescents were more likely than their less aggressive high-school counterparts to endorse beliefs indicating that aggression is an acceptable response across a range of situations. Furthermore, in a subsequent intervention study (Guerra & Slaby, 1990), change in beliefs about the acceptability of aggression was the only cognitive factor directly related

to a reduction in posttreatment aggressive behavior. Similarly, Guerra & Nucci (Guerra & Nucci, 1992; Nucci, Guerra, & Lee, 1991) found that adolescents who engage in antisocial behavior (e.g., drug use and aggressive actions) were less likely to judge such behaviors as wrong.

Research with younger children generally has supported these findings, although some studies have reported relatively weak relations, particularly during the early elementary years. For example, in a study of inner-city children from grades 2, 3, and 4, Huesmann et al. (1992) found that approval of aggressive behavior correlated significantly with self-reported aggression of boys and girls but only weakly with peer-nominated aggression, and only for boys. However, in a subsequent study of 1975 elementary school children from grades 2, 3, and 5 from diverse ethnic and socioeconomic backgrounds, children who were rated as aggressive by peers and teachers were significantly more likely to hold beliefs that such aggressive behavior was acceptable (i.e., "OK" or "not wrong") across a range of situations (Huesmann & Guerra, 1993).

These studies suggest that with development, aggressive behavior is increasingly governed by normative standards of acceptable conduct. These standards serve as guides for information processing in different situations, and ultimately influence social behavior. Huesmann (1988) has proposed that this influence also becomes more automatic over time, as children form cognitive representations of sequences of events which occur in well-known situations. For children who view aggression as acceptable, these cognitive representations, or scripts, are more likely to include aggressive responses. While scripts may be used to guide behavior in a controlled manner, producing seemingly reflective behavior, after they are well learned they function in a more automatic fashion, producing seemingly impulsive behavior (Shiffrin & Schneider, 1977).

These well-articulated cognitive models inform us about the relation between cognition and the development of children's aggressive behavior. While beliefs such as response–outcome expectancies and standards of conduct can also be viewed as contributing to moral judgments and may be considered as integral to a comprehensive model of morality (e.g., Bandura, 1991), the focus of the previously discussed research has not been on the uniquely "moral" forms of cognition (Saltzstein, 1991). Furthermore, traditional information-processing/social learning approaches, with their emphasis on procedural knowledge and scripted behavior, cannot adequately account for developmental changes in generalized structures of moral reasoning, nor can they account for the ongoing construction of responses and procedures as a function of the contextual variation in actual life. In contrast, cognitive–developmental research on children's morality (e.g., Piaget 1932/1965; Kohlberg, 1969, 1976) has both differentiated moral from nonmoral forms of cognition, and has emphasized the role of general cognitive structures in generating judgments of right and wrong which guide or direct the construction of responses and procedures in context.

THE RELATION BETWEEN MORAL DEVELOPMENT AND CHILDREN'S AGGRESSIVE BEHAVIOR

Contemporary research on children's moral development has been dominated by cognitive–developmental theory (Piaget 1932/1965; Kohlberg, 1969, 1976). Rather than emphasizing norms, attitudes, or decision-making strategies, the cognitive–developmental approach defines moral cognition in terms of moral judgments or moral reasoning, characterized by justification of actions according to underlying conceptions of justice. The most important function of cognition is seen as the creation of moral meaning (Blasi, 1980). The construction of moral meaning is believed to be dependent on the child's progression through an invariant sequence of stages. Each stage is believed to represent a qualitative transformation in reasoning that reflects movement toward more mature reasoning based on universal moral principles.

Kohlberg (1969, 1976) proposed a six-state typology of moral reasoning. The first two stages represent preconventional thinking, with morality defined in terms of external consequences to self. The third and fourth stages represent conventional reasoning, with morality determined by consideration of the effect of one's actions on others, and by maintenance of the social order. The fifth and sixth stages represent postconventional thinking, where actions are evaluated in terms of moral principles of justice which have validity apart from the persons or society which hold them.

Kohlberg's theory of moral development also differs from social cognitive models in terms of how moral actions are defined. Social cognitive models typically define moral or immoral actions without reference to the actor's reasoning about such behavior. Thus, aggressive behavior is defined as behavior intended to harm another (Eron, 1987), without consideration of how the aggressor may justify such behavior. In contrast, according to cognitive–developmental moral theories, moral action cannot be understood independent of the actor's thoughts about that action—defining an action as moral or immoral requires a direct assessment of the actor's internal moral judgment (Kohlberg & Candee, 1984).

Because moral judgment competence has been viewed as necessary

(if not sufficient) for moral action, most of the work derived from cognitive–developmental theory has centered on the analysis of moral reasoning. Early formulations of stage theories offered only vague hypotheses about the relation between moral cognition and action. A particular problem in determining the nature of this relation has been the independence of stage of moral reasoning from the particular action chosen. For instance, in judging a hypothetical moral dilemma, two individuals could both advocate a harmful behavior such as stealing, but, depending on their reasoning, could be classified at two different moral stages. Just as the same behavior can be justified by different moral judgments, the same moral standards can also lead to different behavioral decisions.

More recently, a distinction has been made between "deontic" judgments of what is morally right and "aretaic" judgments of responsibility, which involve a commitment to act on one's deontic judgment. Kohlberg (1984) acknowledged that his stage model applied mostly to deontic judgments. In addition, the concept of substages has been introduced to account for discrepancies in judgment and action. Specifically, at each level, individuals have been found to reason at substage A or substage B. At substage A, people emphasize rules and authority in their decisions within the form of reasoning that is typical of their moral stage. At substage B, justice and welfare concerns are predominant. As Kohlberg and Candee (1984) point out, "Reasoning at the B substage of any structural moral stage approximates formal principles that are fully articulated only at Stage 5. For this reason, the behavior of subjects at Stages 3B and 4B often resembles the behavior of subjects at Stage 5" (p. 52).

Another problem in determining the relation between moral judgment and action centers on the methodology typically used. Empirical analyses of this relation generally involve assessing subjects' stage of moral reasoning by means of their reflective reasoning about a narrow sampling of relatively uncommon and complex moral dilemmas, and correlating their stage scores with their participation in a *different* action presumed to be moral (e.g., participating in demonstrations of free speech) or immoral (e.g., habitual criminal offenses). This methodology seems problematic for at least two reasons. First, level of moral judgment on these dilemmas is compared with a behavior unrelated to the dilemma themes, and which is categorized, a priori, as moral or immoral independent of the actor's reasoning about that particular action. The link to behavior is to assume that global stage score represents a general moral orientation which should be activated across a range of problematic social situations. Second, the level of information included in the

hypothetical dilemmas may vary significantly from what is actually available in real life situations. In fact, when information about the likely consequences of different courses of action is presented in hypothetical dilemmas, an increase in the severity of personal consequences corresponds to an increase in justifications based on self-interest (Sobesky, 1983).

Nevertheless, despite both conceptual and methodological problems, a number of empirical studies lend support to the existence of a relation between immature moral reasoning and children's antisocial aggressive behavior. Both Piaget and Kohlberg suggested that "difficult" or "antisocial" children might be delayed in their moral development. In fact, Kohlberg (1958) was one of the first researchers to study this relation. In his dissertation research, he compared a group of nondelinquent boys to a matched group of delinquents. He found that the nondelinquents displayed primarily conventional reasoning (stages 3 and 4), while the delinquents relied mainly on preconventional reasoning (stages 1 and 2). Thus, while nondelinquents tended to consider the effects of one's actions on others, delinquents' concerns centered on concrete and immediate self-interest.

Subsequent studies generally have provided support for the hypothesis that delinquents utilize lower stages of moral reasoning than their nondelinquent counterparts (for reviews see Blasi, 1980; Jurkovic, 1980). The findings are not unequivocal, however, and several limitations have been noted. For example, while delinquents as a group tend to display more preconventional reasoning than nondelinquents, some delinquents display higher stages of reasoning, suggesting that there are also significant differences in moral maturity within delinquent populations. Clearly, delinquent youth represent a heterogeneous group, and actual offenses vary considerably both within and across studies. While some prior studies have reported delayed moral development for subgroups of delinquents displaying deviant personality traits such as psychopathy (e.g., Fodor, 1973), the precise relation between antisocial aggressive behavior and stages of moral reasoning is still unclear.

THE DOMAIN MODEL OF THE DEVELOPMENT OF SOCIAL REASONING

As we have noted, the basis for linking Kohlberg's theory with the study of children's aggression is that the theory purports to offer an analysis of the reasoning process by which people generate decisions

pertaining to the right or wrong of actions affecting the welfare of others. According to Kohlberg's theory, the key element in such moral judgments is the structure of the person's justice reasoning (Kohlberg, 1984), that is, whether it is fair in a given situation to inflict harm on another person. Kohlberg recognized, however, that issues of morality (fairness) are rarely isolated in complex situations from other considerations, such as the prudence of a given action, the views of authorities, and prevailing social norms. While Kohlberg is credited with having been one of the first psychologists to have offered a conceptual analysis differentiating moral from nonmoral judgments about social situations (Saltzstein, 1991), his theory of moral development, in keeping with its Kantian and Piagetian roots, holds that morality as justice remains confounded with such considerations of prudence, authority, and convention until the latter stages of development. Only at the level of principled morality, according to Kohlberg (1969), are a person's judgments truly moral (i.e., based on justice principles). In Kohlberg's theory then, we are not provided with a disambiguated analysis of the person's reasoning about harm or fairness, except in very advanced adults. Thus, it is little wonder that stages of moral judgment as defined from this vantage point have provided inconsistent data with respect to children's aggressive and antisocial behavior.

Over the past 15 years an alternative to the Kohlberg paradigm has emerged which may offer a more fine-grained analysis of the multifaceted relationship between aggressive actions and sociomoral judgment. According to the domain theory of social development, concepts of morality (issues of fairness and human welfare), convention (consensually determined norms that maintain social structure), and personal issues (areas of perspective and privacy, actions that impinge primarily on the self) are structured within distinct conceptual and developmental frameworks (Nucci, 1981; Smetana, 1982; Turiel, 1983). More recently, Tisak and Turiel (1984) have identified an additional category, prudential, to describe concepts about those personal acts that are potentially harmful to the self. Each of these aspects of social understanding emerges from a distinctive facet of the individual's social interactions; each has an identifiable and distinct structure; and each follows its own developmental trajectory (see Helwig, Tisak, & Turiel, 1990; and Turiel, Killen, & Helwig, 1987 for comprehensive reviews). While reasoning within each social domain forms a differentiated structured whole, contextualized social judgments may invoke knowledge from more than one domain, resulting in judgments reflecting input and/or coordination across knowledge systems (Turiel, 1983; Turiel & Smetana, 1984). Interpretations of judgment-action relations that vary with context are unlikely, then, to be explained through a straightforward analysis of development in a single social reasoning dimension such as morality. Instead such analyses would require an investigation of the individual's decision making based on a reading of the social situation in moral and/or nonmoral terms, including the situational and intrapersonal sources of bias that would heighten or diminish the salience of the moral aspect of multifaceted social situations.

Our current understanding of the domain nature of social knowledge affords a reinterpretation of Kohlberg's stages of moral development as an approximation of the age-related changes in the development of cross-domain coordinations. For example, stage 4 (conventional) moral reasoning, as described in the Kohlberg system, reflects the emergence in middle to late adolescence of understandings in the *conventional* domain that social norms are constitutive of social systems. Although these age-typical integrations are captured by Kohlberg's stage descriptions, they do not represent the full range of sociomoral decision-making patterns that individuals present. For example, as we noted earlier, research conducted by the Kohlberg group itself (Kohlberg, 1984) shows that individuals at all points in development may respond to moral dilemmas from a perspective of either rules and authority (substage A), or justice and welfare (substage B). From the domain point of view, such within-stage variation can be accounted for only by recognizing that the tasks used by Kohlberg to assess moral development generate reasoning employing knowledge from more than one conceptual system.

The utility of applying domain theory to the study of complex issues involving potential harm to persons has been demonstrated through several recent studies. In one study, Smetana (1982) found that pregnant women's decisions regarding whether or not to engage in an abortion were largely determined by whether the action was viewed by the women as a moral issue entailing the taking of another human life, or as a matter of personal discretion with no interpersonal moral consequences. In her study, Smetana also obtained Kohlberg moral stage scores for subjects' judgments about abortion as well as their reasoning on standard Kohlberg dilemmas. What she found was that, for those women who viewed abortion as a moral issue, the stage scores they obtained on standard moral dilemmas were highly correlated with the stage scores they obtained regarding abortion. For women who viewed abortion as a personal issue, however, their stage scores on the standard moral dilemmas were uncorrelated with their stage scores on the abortion dilemma. Smetana interpreted these results as indicating that the moral stage

scores on abortion were valid only for those women who viewed abortion as a moral issue.

Another study, which investigated the relation between domain of social judgment and actions involving potential harm to persons, examined adolescents' reasoning about drug use (Nucci, Guerra, & Lee, 1991). In that study, 9th and 12th grade students were asked to rate the harmfulness and wrongness of various forms of substance use, and to indicate whether use of a given drug was an issue of interpersonal harm (morality), a matter of social convention, personal choice, or prudence. These subjects were also asked, through an anonymous questionnaire, to indicate their own degree of drug use.

Regardless of their own level of drug use, few subjects viewed drug use in moral terms (i.e., concern over potential harm to others). Rather, the overwhelming tendency was for subjects to view drug use as a matter of personal discretion or prudence. This tendency to view drug use as a personal issue was significantly more prevalent among high drug users. These high drug users also tended to view the behavior as less harmful and less wrong. In contrast, low drug users were most likely to view the behavior in terms of prudential concerns, although a small number of these low-use subjects considered the moral implications of this behavior. These findings suggest that individuals generally do not spontaneously consider the interpersonal consequences of the harm caused by drug use (Berkowitz, Guerra, & Nucci, 1991). They also suggest that the tendency to engage in drug use is a function of its placement in the personal domain.

Employing a similar methodology, Guerra and Nucci (1992) examined the relation between 9th and 12th grade student's self-reported delinquency and their judgments of the harmfulness and wrongness of prototypical moral (e.g., hitting and hurting another person), conventional (e.g., calling a teacher by her first name), personal (e.g., maintaining the privacy of one's diary), and prudential (e.g., riding a motorcycle without a helmet) issues. Subjects were also asked to indicate whether a given action was an issue of morality, social convention, personal choice, or prudence. Compared to nondelinquents, delinquent youth were significantly less likely to view moral issues as wrong and harmful, and were more likely to classify such issues as matters of personal choice. There were no significant differences in the ways in which delinquent and nondelinquent subjects treated nonmoral issues. These preliminary findings suggest that the tendency to engage in aggressive and delinquent behavior is also a function of its domain placement, and that more aggressive individuals can be characterized by an overextension of the personal domain.

AN INTEGRATIVE MODEL OF THE RELATION BETWEEN MORAL COGNITION AND AGGRESSION

These and other studies from the domain perspective indicate that understanding the relation between sociomoral judgments and aggression requires: (1) attention to how the person understands the nonmoral as well as moral aspects of situations, and (2) knowledge of individual and contextual factors which impact the reading of situations in moral or nonmoral terms. Various integrative models have been proposed for linking the development of moral reasoning with nonmoral components of judgment to address the issue of the relation between moral reasoning and behavior (Berkowitz, Guerra, & Nucci, 1991; Gerson & Damon, 1978; Rest, 1984; Turiel & Smetana, 1984). None of these, however, provides a framework for integrating information-processing/social learning research on the cognitive correlates of children's aggression with a domain analysis of the development of children's social and moral judgments. We will now turn to a preliminary model which integrates these two paradigms. First, let us specify four assumptions of this model.

Assumption 1: Knowledge is structured in discrete knowledge systems that correspond to fundamentally and qualitatively differing aspects of individual–environment interactions. As we have discussed previously, the conceptual and developmental systems that have been identified that pertain to aggression are the moral, conventional, and personal domains. This is distinct from the Kohlbergian differentiation hypothesis in which moral development entails the progressive differentiation of the moral from the nonmoral such that the nonmoral receives little attention. The Kohlbergian perspective provides no theoretical basis for examining interactions between moral and nonmoral knowledge systems in contextualized judgments.

Assumption 2: Understanding within each knowledge system or domain undergoes structural changes with age. We assume that there are also structural changes in how individuals organize knowledge and that these changes are not simply the result of an expanded knowledge base or an improvement in strategy use. Thus, this assumption differs from information-processing accounts (e.g., Darley & Schultz, 1990) of the relation between knowledge systems and moral judgment in that we also assume structural changes as a function of development within each knowledge system rather than an increased sophistication of accessing information.

Assumption 3: Decisions in context are a function of the coordination of contextually generated information across domains. This coordination is a func-

tion of the levels of development within accessed domains. As Turiel & Smetana (1984) have noted, these coordinations can vary in complexity as a function of the degree to which knowledge systems are emphasized or deemphasized in context. They can also vary in relation to individual differences in the weight attached to the many decisional components of complex situations. Furthermore, in familiar day-to-day situations, coordination of contextually generated information should proceed with relative automaticity.

Assumption 4: Actions in context may solely entail the automatic implementation of procedural knowledge (scripts) or may involve reflective engagement of structural knowledge. These aspects of knowledge are reciprocally implicated and cogenerative. That is, development within a given domain is generated out of reflections on the outcomes of behaviors and the procedures that led to them. Transformations in social knowledge structure enable the generation of more sophisticated procedures which, in turn, through reflection, enable the construction of more developed structures. Actions in context do not necessarily, however, engage the reflective process, particularly under conditions of heightened affective arousal. Indeed it has been proposed that affect functions to reduce an individual's cognitive workload by "selecting" procedures in most situations (e.g., Brown, 1987). Thus, while the procedures in use imply a particular minimum level of developmental sophistication, they may not necessarily reflect the person's highest level of sophistication and may not necessarily generate developmental change. Moral judgment, as opposed to procedurally driven behavior, requires the engagement of reflection.

CONTEXTUALIZED JUDGMENTS AND AGGRESSIVE BEHAVIOR

Drawing on these assumptions, we propose that aggressive actions are directed by judgments which may draw primarily from the moral knowledge system or may entail reasoning from the personal or conventional domains, although preliminary studies suggest that aggressive behavior may be characterized by an overextension of the personal domain. The resulting judgments will be a function of the degree to which various knowledge systems are invoked *and* the level of development within those systems. We also propose that these judgments should become highly routine in nature, to the point where behavior appears relatively automatic and insensitive to the unique features of each situation. Factors that determine which knowledge systems are utilized in

decision making stem from many sources, including: (1) the person's self-guiding beliefs; (2) the person's interpretative biases; and (3) the salience of situational cues.

We use the term *self-guiding beliefs* to refer to those beliefs which provide guides for behavior based on justifications for specific actions. From a social–cognitive perspective, these beliefs include both evaluative (i.e., right or wrong) and informational (i.e., potential consequences) concepts. For example, if parents strongly believe it is inappropriate to spank a child under any circumstances (evaluative) because spanking is harmful (informational), their decisions should reflect these moral concerns. In contrast, believing that violence is acceptable (evaluative) because victims don't really suffer (informational) would reduce the likelihood that moral considerations would be engaged when harming another. Similarly, if a teenage boy believes that it is okay to hit other boys because everyone in his social group does it and approves of it, his decisions related to hitting other boys should primarily invoke social conventional reasoning.

Within the moral developmental literature, recent investigations have also highlighted the importance of a person's "informational assumptions," or understanding of the relevant facts (whether they are correct or not) regarding a given phenomenon which bear on their interpretation of the *impact* of given actions (Wainryb, 1991). These assumptions may reflect characteristic beliefs (e.g., stereotypes) or situation-specific interpretation of cues. While informational assumptions do not determine moral judgments, evidence suggests that they affect the meaning given to an act and thereby affect the understanding of moral issues. For example, in Wainryb's (1991) investigation of adult's beliefs about corporal punishment, she found that procorporal punishment parents held the view that this behavior was all right because it was a highly effective, educative act rather than one of unprovoked harm. When such parents were presented with information that spanking is no more effective than other methods of disciplining children, significant numbers of these parents shifted in their view of corporal punishment and maintained that it was not all right for parents to engage in the behavior. Conversely, when parents who maintained that it was wrong to engage in corporal punishment were presented with information that experts had found spanking to be the most efficient method to teach young children, there was a tendency for such parents to shift toward a view that corporal punishment would be all right.

The term *interpretive biases* refers to an individual's tendency to place multidimensional issues into particular judgment categories. From an information-processing perspective, these biases should produce selec-

tive attention to certain cues as well as potential distortions of these cues. For example, a traditional conservative male might read all situations of gender bias in terms of social convention rather than as involving moral issues of equity and fairness. There are two important sources of these biases: (1) intrapersonal factors such as mood states, personality, needs, self-definition, and attributional style, and (2) sociocultural influences.

Stable intrapersonal factors such as personality and self-definition can affect the relative salience of different judgment categories. For instance, less empathic individuals would be less likely to interpret complex situations as a matter of others' welfare. In contrast, individuals who consider "being a moral person" to be part of their essential self should be particularly aware of the moral issues imbedded in interpersonal situations (Blasi, 1984). Factors such as mood states may be relatively stable and represent physiological predispositions or relatively transient. Stable mood states should promote relatively enduring interpretative biases while transient mood states may temporarily alter the salience of judgment categories.

Sociocultural influence refers not only to the larger cultural framework but also to specific sources of bias stemming from salient reference groups (e.g., family, peers, school, religion). Social contexts vary markedly in the degree to which they emphasize personal gains, conventional standards, or moral concerns. Just as religious training fosters a bias toward interpreting events in moral terms, juvenile gangs turn morality upside down by reframing it as a matter of social convention defined by gang standards.

The impact of social context on interpretative bias was demonstrated in a recent study by Nucci and Weber (1991). In this study, they divided students into three discussion groups which met once a week for 4 weeks. During these groups, students discussed issues that were primarily moral, conventional, or both moral and conventional. Throughout the course of these weekly discussions, one group was directed to treat all issues in terms of moral concerns of fairness and human welfare; a second group was directed to treat all issues as matters of social convention and social order, and the third group was directed to treat moral issues from a moral perspective, conventional issues from a conventional perspective, and to coordinate moral and conventional perspectives of multifaceted issues. Following this intervention, students were asked to write their views about the values issues contained in an incident which had both moral and conventional features. Findings were that subjects who had been in the moral only group subordinated complex issues to moral concerns, and subjects in the convention

only group subordinated complex issues to matters of norms and social organization. Only the third group spontaneously looked at both features of issues and attempted to coordinate them. As this relatively benign and short-term treatment illustrates, social groups can be influential in framing the meaning individuals will give to social situations.

Situational cues further direct which domain system will be involved in a decision to engage in aggressive actions. For instance, cues that focus attention on perceived dissimilarities between an aggressor and his or her victim will reduce the likelihood of moral engagement (Bandura, 1989a). Similarly, portraying victims as inferior through verbal derogation or outgroup affiliation minimizes the activation of a moral orientation, a technique which is used by both juvenile gangs and countries at war. Conversely, situational cues depicting a victim's suffering should activate moral concerns. Turiel's (1983) analysis of the Milgram studies provides a good example of how specific conditions can shift people from a conventional to moral orientation, and how this orientation is correlated with individual's willingness to engage in harm.

SUMMARY

We propose that the generation of moral behavior involves a multicomponent decision-making process. One step consists of coordinating intrapersonal factors and situational cues vis-à-vis the reading of a given situation in nonmoral or moral terms. This step is similar to the social information processing components of encoding and interpreting cues, although we assume that in familiar day-to-day situations this process becomes routine, so that domain placement is accomplished with little thought, although novel circumstances may engage the reflective process. We are not, however, suggesting that behavior is merely an artifact of domain placement. In fact, two individuals might both evaluate a situation in terms of morality, yet respond very differently.

As we have discussed, understanding within each domain also undergoes developmental changes, and individuals should display differences in their level of reasoning within each domain as well as differences in their corresponding normative understanding of appropriate behavior. Individuals search for and decide on a response based, in part, on their judgments regarding the appropriateness of that response. In familiar situations, individuals develop a repertoire of likely response procedures or scripts which are both consistent with their cognitive interpretation of similar types of situations, and subject to modification in accordance with their level of structural understanding. Furthermore,

an individual's level of reasoning within a domain may also increase the salience of that domain. For instance, a person who thinks it is very wrong to hit others because all people deserve respect might display a heightened sensitivity to the moral characteristics of any situation involving potential harm to others and might develop a repertoire of highly prosocial scripts.

Because this chapter has focused primarily on cognition, we have not discussed the role of response skills in aggressive behavior. It is clear that a child may read a situation in terms of morality and decide on a corresponding course of action, yet lack the response skills to perform an appropriate behavior. For instance, a child who is used to behaving aggressively may be sensitized, through intervention, to the moral implications of a conflict resolution situation, decide to compromise with his or her peer, yet lack the specific social skills to engage in a social interaction sequence involving compromise and reciprocal exchange. Thus, moral behavior also requires certain performance competencies.

Our model has several implications for prevention and intervention to reduce childhood aggression. We suggest that the relation between moral cognition and aggression is complex, and that intervention efforts should focus on at least three components of this relation. First, interventions should increase the salience of the morality dimensions of social interactions. Second, interventions should promote the development of more sophisticated moral reasoning structures which focus on internal sanctions for causing harm to others. Finally, children should be encouraged to develop and practice behavioral repertoires which include prosocial responses and which can be engaged automatically in real-life social interactions.

REFERENCES

Bandura, A. (1989). Self-regulation of motivation and action through internal standards and goal systems. In L. A. Pervin (Ed.), *Goal concepts in personality and social psychology* (pp. 19–85). Hillsdale, NJ: Lawrence Erlbaum.

Bandura, A. (1991). Social cognitive theory of moral thought and action. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Moral behavior and development: Advances in theory, research, and applications* (Vol. 1, pp. 45–103). Hillsdale, NJ: Lawrence Erlbaum.

Berkowitz, M. W., Guerra, N. G., & Nucci, L. (1991). Sociomoral development and drug and alcohol abuse. In W. M. Kurtines & J. L. Gewirtz (Eds.). *Handbook of moral behavior and development* (Vol. 3, pp. 35–54). Hillsdale, NJ: Lawrence Erlbaum.

Blasi, A. (1980). Bridging moral cognition and moral action: A critical review of the literature. *Psychological Bulletin, 88*, 1–45.

Blasi, A. (1984). Moral identity: Its role in moral functioning. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Morality, moral behavior, and moral development* (pp. 128–139). New York: Wiley Interscience.

Boldizar, J. P., Perry, D. G., & Perry, L. (1989). Outcome values and aggression. *Child Development, 60*, 571–579.

Brown, T. (1987). Values and affectivity. *The Genetic Epistemologist, 15*, 29–32.

Darley, J. M., & Shultz, T. R. (1990). Moral rules: Their content and acquisition. *Annual Review of Psychology, 41*, 525–556.

Dodge, K. A. (1986). A social information processing model of social competence in children. In M. Perlmutter (Ed.), *Minnesota Symposia on Child Psychology* (Vol. 18, pp. 77–125). Hillsdale, NJ: Lawrence Erlbaum.

Dodge, K. A., & Crick, N. R. (1990). Social information-processing bases of aggressive behavior in children. *Personality & Social Psychology Bulletin, 16*, 8–22.

Dodge, K. A., & Frame, C. L. (1982). Social cognitive biases and deficits in aggressive boys. *Child Development, 53*, 620–635.

Dodge, K. A., Price, J. M., Bachorowski, J., & Newman, J. P. (1990). Hostile attributional biases in severely aggressive adolescents. *Journal of Abnormal Psychology, 99*, 385–392.

Eron, L. D. (1982). Parent-child interaction, television violence, and aggression of children. *American Psychologist, 37*, 197–211.

Eron, L. D. (1987). The development of aggressive behavior from the perspective of a developing behaviorism. *American Psychologist, 42*, 435–442.

Eron, L. D., Walder, L. O., & Lefkowitz, M. M. (1971). *The learning of aggression in children*. Boston: Little, Brown.

Fodor, E. M. (1973). Moral development and parent behavior antecedents in adolescent psychopaths. *Journal of Genetic Psychology, 122*, 37–43.

Gerson, R., & Damon, W. (1978). Moral understanding and children's conduct. In W. Damon (Ed.), *New directions for child development* (Vol. 1, pp. 41–60). San Francisco: Jossey-Bass.

Guerra, N. G., & Slaby, R. G. (1989). Evaluative factors in social problem solving by aggressive boys. *Journal of Abnormal Child Psychology, 17*, 277–289.

Guerra, N. G., & Slaby, R. G. (1990). Cognitive mediators of aggression in adolescent offenders: II. Intervention. *Developmental Psychology, 26*, 269–277.

Guerra, N. G., & Nucci, L. (1992). *Delinquent behavior as an overextension of the personal domain*. Manuscript submitted for publication.

Helwig, C., Tisak, M., & Turiel, E. (1990). Children's social reasoning in context. *Child Development, 61*, 2068–2078.

Huesmann, L. R. (1988). An information-processing model for the development of aggression. *Aggressive Behavior, 14*, 13–24.

Huesmann, L. R., Guerra, N. G., Miller, L. S., & Zelli, A. (1992). The role of social norms in the development of aggressive behavior. In A. Fraczek & H. Zumkley (Eds.), *Socialization and aggression* (pp. 139–152). New York/Heidelberg: Springer-Verlag.

Jurkovic, G. J. (1980). The juvenile delinquent as a moral philosopher: A structural-developmental perspective. *Psychological Bulletin, 88*, 709–727.

Kohlberg, L. (1958). *The development of modes of moral thinking and choice in the years ten to sixteen*. Unpublished doctoral dissertation, University of Chicago.

Kohlberg, L. (1969). Stage and sequence: The cognitive–developmental approach to socialization. In D. A. Goslin (Ed.), *Handbook of socialization theory and research* (pp. 347–480). Chicago: Rand McNally.

Kohlberg, L. (1976). Moral stages and moralization. In T. Lickona (Ed.), *Moral development and behavior* (pp. 31–53). New York: Holt, Rinehart, & Winston.

Kohlberg, L. (1984). *Essays on moral development:* Vol. 2. *The psychology of moral development*. San Francisco: Harper & Row.

Kohlberg, L., & Candee, D. (1984). The relation of moral judgment to moral action. In

W. M. Kurtines & J. L. Gewirtz (Eds.), *Morality, moral behavior, and moral development* (pp. 52–73). New York: Wiley Interscience.

Mize, J., & Ladd, G. (1988). Predicting preschoolers' peer behavior and status from their interpersonal strategies: A comparison of verbal and enactive responses to hypothetical social dilemmas. *Developmental Psychology, 24,* 782–788.

Nucci, L. (1981). Conceptions of personal issues: A domain distinct from moral or societal concepts. *Child Development, 52,* 114–121.

Nucci, L., & Nucci, M. S. (1982). Children's responses to moral and social-conventional transgressions in free-play settings. *Child Development, 53,* 1337–1342.

Nucci, L., Guerra, N., & Lee, J. (1991). Adolescent judgments of the personal, prudential, and normative aspects of drug usage. *Developmental Psychology, 27,* 841–848.

Nucci, L., & Weber, E. (1991). The domain approach to values education: From theory to practice. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Handbook of moral behavior and development* (Vol. 3, pp. 252–266). Hillsdale, NJ: Lawrence Erlbaum.

Parke, R. (1974). Rules, roles, and resistance to deviation: Recent advances in punishment, discipline, and self-control. In A. D. Pick (Ed.), *Minnesota symposia on child psychology* (Vol. 8, pp. 11–143). Minneapolis: University of Minnesota Press.

Perry, D. G., Perry, L. C., & Boldizar, J. P. (1990). Learning of aggression. In M. Lewis & S. Miller (Eds.), *Handbook of developmental psychopathology* (pp. 135–146). New York: Plenum.

Perry, D. G., Perry, L. D., & Rasmussen, P. (1986). Cognitive social learning mediators of aggression. *Child Development, 57,* 700–711.

Piaget, J. (1965). *The moral judgment of the child.* London: Routledge & Kegan Paul. (Original work published 1932).

Rest, J. R. (1984). The major components of morality. In W. M. Kurtines & J. L. Gewirtz (Eds.). *Morality, moral behavior, and moral development* (pp. 24–38). New York: Wiley Interscience.

Saltzstein, H. (1991). Why are nonprototypical events so difficult, and what are the implications for social-developmental psychology? In E. Turiel, C. Hildebrant, & C. Wainryb (Eds.), Judging social issues. *Monographs for the Society for Research in Child Development* (Vol. 56, pp. 104–117).

Shank, R. C., & Abelson, R. (1977). *Scripts, plans, goals and understanding.* Hillsdale, NJ: Lawrence Erlbaum.

Shiffrin, R. M., & Schneider, W. (1977). Controlled and automatic human information processing: II. Perceptual learning, automatic attending, and general theory. *Psychological Review, 84,* 127–190.

Shure, M. B., & Spivack, G. (1976). *Problem-solving techniques in childrearing.* San Francisco: Jossey-Bass.

Slaby, R. G., & Guerra, N. G. (1988). Cognitive mediators of aggression in adolescent offenders: I. Assessment. *Developmental Psychology, 24,* 580–588.

Smetana, J. (1982). *Concepts of self and morality: Women's reasoning about abortion.* New York: Praeger.

Sobesky, W. E. (1983). The effects of situational factors on moral judgments. *Child Development, 54,* 575–584.

Spivack, G., & Shure, M. B. (1974). *Social adjustment of young children.* San Francisco: Jossey-Bass.

Tisak, M., & Turiel, E. (1984). Children's conceptions of moral and prudential rules. *Child Development, 55,* 1030–1039.

Turiel, E. (1983). *The development of social knowledge: Morality and convention.* Cambridge: Cambridge University Press.

Turiel, E., Hildebrant, C., & Wainryb, C. (1991). Judging social issues. *Monographs for the Society for Research in Child Development* (Vol. 56, pp. 1–103).

Turiel, E., Killen, M., & Helwig, C. (1987). Morality: Its structure, functions, and vagaries. In J. Kagan & S. Lamb (Eds.), *The emergence of moral concepts in young children* (pp. 155–244). Chicago: University of Chicago Press.

Turiel, E., & Smetana, J. G. (1984). Social knowledge and action: The coordination of domains. In W. M. Kurtines & J. L. Gewirtz (Eds.), *Morality, moral behavior, and moral development* (pp. 261–282). New York: Wiley Interscience.

Wainryb, C. (1991). Understanding differences in moral judgments: The role of informational assumptions. *Child Development, 62,* 840–851.