Coercion Theory, Self-Control, and Social Information Processing: Understanding Potential Mediators for How Parents Influence Deviant Behaviors

Jennifer M. Crosswhite a & Jennifer L. Kerpelman b

a Department of Family Studies and Interior Design, University of Nebraska at Kearney, Kearney, Nebraska, USA
b Department of Human Development and Family Studies, Auburn University, Auburn, Alabama, USA

Available online: 12 Aug 2009

To cite this article: Jennifer M. Crosswhite & Jennifer L. Kerpelman (2009): Coercion Theory, Self-Control, and Social Information Processing: Understanding Potential Mediators for How Parents Influence Deviant Behaviors, Deviant Behavior, 30:7, 611-646

To link to this article: http://dx.doi.org/10.1080/01639620802589806
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coercion theory, self-control, and social information processing: understanding potential mediators for how parents influence deviant behaviors

Jennifer M. Crosswhite  
Department of Family Studies and Interior Design, University of Nebraska at Kearney, Kearney, Nebraska, USA

Jennifer L. Kerpelman  
Department of Human Development and Family Studies, Auburn University, Auburn, Alabama, USA

Research has demonstrated that (in)effective parenting influences whether a child/adolescent engages in deviant behaviors; however, research is mixed regarding whether that influence is direct. After a review of theoretical and empirical evidence, parenting factors outlined by several theories appear important in explaining the association between parenting and deviance. More importantly, however, is that the parental influence may not be direct, but rather mediated through a child/adolescent’s level of self-control and social information processing skills. As such,
INTRODUCTION

Despite the encouraging trend that overall juvenile arrests have decreased between 1994 and 2004, adolescents are still engaging in criminal behaviors (Snyder 2006). For example, in 2004 2.2 million adolescent arrests occurred, as well as an increase in arrests for simple assault and disorderly conduct. Given how prevalent deviant behaviors still are among adolescents, understanding the etiology of deviance is crucial. As such, a number of factors have been examined, such as biological predisposition (e.g., neurological deficits; Moffitt 1997), contextual factors (e.g., low socioeconomic status; Sampson 2000), an association with deviant peers (e.g., Dishion and Skaggs 2000), and parenting (e.g., Capaldi and Patterson 1996). While there are many different factors that influence the development of adolescent deviance, evidence indicating a parental influence on adolescent deviance is quite robust and has been demonstrated for decades (see e.g., Loeber and Stouthamer-Loeber 1986). With such knowledge, understanding exactly how parents influence deviant behaviors, and specifically whether there are mechanisms that mediate this influence, would be an especially fruitful path to explore.

Three theories will be explored that offer explanations regarding how ineffective parenting is associated with child/adolescent deviance: coercion theory (Dishion and Patterson 1997; Patterson 1996, 1997; Patterson and Bank 1989; Patterson and Yoerger 1993; Snyder and Patterson 1987), Gottfredson and Hirschi’s (1990) A General Theory of Crime (i.e., self-control), and social information processing as detailed by Dodge et al. (1986), and more recently, Crick and Dodge (1994). Coercion theory provides an initial organizing framework as it offers the coercion process; a bidirectional coercion process between parent and child that impacts the child’s engagement of deviant behaviors. Coercion theory also provides a developmental perspective for understanding differences as to when children or adolescents begin to engage in deviant behaviors (i.e., early and
late onset trajectories). Further, the theory outlines five parenting practices theorized to protect against the coercion process and thus deviant behaviors. These practices are effective discipline, monitoring, problem solving practices, positive parenting, and positive reinforcement. The coercion theory, therefore, describes the direct association between parenting and child/adolescent deviance, but does not provide any "person" variables, or potential mediating mechanisms, that explain the association between ineffective parenting and deviance (Snyder et al. 2003). Snyder et al. offer self-regulation as a possible mediating mechanism, and also suggest that an individual’s cognitive system is important and may be related to self-regulation. Therefore, it is necessary to explore self-regulation and cognitive skills as potential mediating mechanisms that may help to explain the parenting–deviance association.

Two theories that provide such mediating mechanisms are the general theory of crime and social information processing. The general theory of crime (GTC) suggests self-control, defined as an individual difference characteristic, whereas social information processing (SIP) provides a series of cognitive skills, both of which may mediate the parenting–deviance link. Limited research has indicated that both self-control and SIP partially mediate the relation between ineffective parenting and adolescent deviance, and could potentially explain how ineffective parenting influences deviance (Hay 2001; Weiss et al. 1992). By examining both self-control and SIP, it may be possible to determine whether individual differences and cognitive skills are responsible for the link between parents and deviance, and whether self-control (i.e., self-regulation) and cognitive skills are indeed associated with one another. Furthermore, the GTC and SIP offer additional parenting practices not theorized by coercion theory (e.g., attachment, communication), but also appear to be influential in the parenting–deviance association. Taken together, the three theories provide a new integrative perspective on understanding exactly how parents may influence whether a child or adolescent engages in deviant behaviors, and should provide a more comprehensive understanding of the true etiology of adolescent deviance. The current conceptualization is intended solely as a theoretical contribution, and is designed to encourage future research in this area.
COERCION THEORY

According to coercion theory (Dishion and Patterson 1997; Patterson 1982, 1996, 1997; Patterson and Bank 1989; Patterson and Yoerger 1993; Snyder and Patterson 1987), whether an individual engages in deviant behaviors as a child or an adolescent depends on a bidirectional coercion process that occurs between the parent and child. Coercion is defined by an aversive event that leads to reinforcement of a negative behavior, and the coercion process is a series of feedback loops that escalates over time. For example, when a parent tries to discipline his or her child, the child responds in an aversive manner (e.g., whining, crying, throwing a temper tantrum). The parent returns with an escalated attempt at disciplining the child (e.g., scolding, threats). However, the child also returns in an escalated aversive manner. This process continues until the parent desists in trying to discipline the child. As time goes on, the parent terminates discipline attempts at the first sign of the child engaging in aversive behaviors. Eventually, the parent ignores aversive behaviors altogether, allowing the child to get away with both the initial inappropriate and the aversive behaviors. The coercive behaviors are further elicited, maintained, and exacerbated through positive and negative reinforcement each time this sequence of behaviors occurs. Positive reinforcement occurs as the parent provides a cue to which the child responds aversively. In this case, the parents’ attempt to discipline is the child’s cue to begin engaging in the aversive behaviors. Negative reinforcement occurs when the parents desist in the discipline attempt in the face of the child’s aversive response. In essence, because of ineffective parenting, a child learns that it is acceptable to engage in aversive behaviors to get what she or he wants.

Two points about the coercion process should be noted. First, some level of coercion occurs within every family; however, those children who engage in the coercion process at high rates are reinforced for aversive behaviors and typically engage in deviant behaviors within and outside of the family context (Kiesner et al. 2001). Second, when the child is young (i.e., under age 12), she or he engages in overt aversive behaviors such as whining, crying, and throwing temper tantrums. However, as the child becomes older (i.e., after...
age 12), the behaviors change from overt to covert behaviors that are considered more serious (e.g., theft, vandalism, drug and alcohol use; Patterson and Yoerger 1993, 2002; Snyder et al. 2003). Coercion within the family appears to influence all rather than specific types of deviant behaviors (Capaldi and Patterson 1996). Thus, for the current conceptualization such behaviors will be broadly referred to as deviant behaviors.

Depending on when the coercion process begins, the path to adolescent deviance can occur on two different trajectories—early and late onset. According to Patterson and colleagues (Dishion and Patterson 1997; Patterson and Yoerger 1997, 2002), early onset offenders begin to engage in deviant behaviors during early childhood (i.e., often identified as “problem children” at a young age), and continue to engage in chronic and serious forms of deviant/criminal behaviors throughout adulthood (Kiesner et al. 2001; Patterson 1996; Patterson and Yoerger 1993). Late onset offenders, however, do not start engaging in deviant behaviors until adolescence, and desist in deviant behaviors near the end of adolescence when prosocial behaviors are more reinforcing than deviant behaviors (Patterson and Yoerger 2002). Levels of disrupted parenting differ between parents of early versus late onset offenders. The parents of late onset offenders do not engage in disruptive parenting or the coercion process as severely as the parents of early onset offenders, and engage in some degree of effective parenting practices (Dishion and Patterson 1997; Patterson and Yoerger 1993, 2002). The problem for late onset offenders occurs during adolescence when a breakdown of effective parental management skills takes place (Kiesner et al. 2001). Parents of early onset offenders, however, are generally less competent parents and begin engaging in the coercion process while the child is very young. It should be noted however, that variability can occur within this phenomenon.

**Parental Influences**

At the core of the coercion theory is the coercion process, which demonstrates how parenting is influential in the development of deviant behaviors. Several investigators have suggested that effective family management is the key to eliminating, or protecting against, coercion within a family, and
thus substantially reducing deviant behaviors (Dishion and Patterson 1997; Patterson 1996; Patterson and Bank 1989; Patterson and Yoerger 1993; Snyder and Patterson 1987). For example, Patterson and colleagues suggest parents must use effective discipline, monitoring, and problem-solving practices in addition to positive parenting and reinforcement to protect against the development of deviant behaviors. First, effective discipline consists of recognizing inappropriate or deviant behaviors, consistently tracking behaviors across settings, and using consistent appropriate discipline when deviant behaviors are performed. Ineffective discipline techniques consist of lax, inconsistent, and harsh discipline (Snyder and Patterson 1987). Second, monitoring involves parental awareness of the child’s whereabouts, peer group affiliations, and free time activities (Patterson and Yoerger 1997; Snyder and Patterson 1987). Monitoring also involves communication regarding rules, regulations, and consequences. Third, teaching appropriate social problem-solving skills is necessary. Ineffective social problem-solving skills are observable during verbal and physical conflicts, such as a lack of communication, poor compromising strategies, rejection of responsibilities, poor problem solving, and increased anger, blaming, and defensiveness (Snyder and Patterson 1987). Fourth, positive parenting practices involve communication that is positive and indicates interest, caring, and support of the child, and an emotional attachment between parent and child, as well as allowing age-appropriate autonomy (Patterson 1996; Snyder and Patterson 1987). Fifth, it is important for parents to consistently acknowledge prosocial behaviors with positive reinforcement (Patterson 1996). Patterson and Yoerger (1993) suggest that families that do not reinforce positive behaviors, do not effectively punish deviant behaviors, and reinforce deviant behaviors are more likely to engage in coercion within the family.

**Empirical Research**

Overall, empirical research supports coercion theory in that (a) varying levels of coercion experienced within the family influence when an individual begins engaging in deviant behaviors, and for how long (i.e., early and late starters; Patterson et al. 1998), (b) the coercion process is bidirectional
and escalates over time (Patterson et al. 1990), and (c) the coercion process appears to be influential in the development of deviant behaviors (e.g., assault, aversive behaviors, robbery, rape, externalizing behaviors; Capaldi and Patterson 1996; Fagot and Leve 1998). Additional empirical research supports the relevance for most of these five parenting practices. In the only study to examine the relation among all five parenting practices and the development of deviant behaviors, Patterson et al. (1992) found that monitoring, discipline, positive reinforcement, and problem solving were negatively associated with deviant behaviors. Parental involvement (i.e., positive parenting), however, was not associated with deviant behaviors. Additionally, a number of empirical studies have found evidence linking ineffective monitoring and discipline with an increase in deviant behaviors (e.g., argues, lies, physical fighting, vandalism, substance abuse) and coercion within the family (Bank et al. 1993; Fletcher et al. 1995; Patterson et al. 1984). Unfortunately, the majority of empirical work has been conducted solely on the association between monitoring and discipline with deviant behaviors. Future work should continue to examine whether positive reinforcement and problem solving are associated with deviance, and elucidate whether positive parenting also is associated with deviance.

Finally, as Snyder et al. (2003) suggested, coercion theory research has focused only on the direct, observable influences ineffective parenting has on deviant behaviors. While these processes are paramount to the coercion theory, the authors suggested that the theory could be considered an “empty organism” or having a “black box”; that is, there appear to be no person variables (i.e., mediating mechanisms) that demonstrate the link between ineffective parenting and adolescent deviance. Snyder et al. further suggested that self-regulation could be a potential mediating link between ineffective parenting and deviance. Self-regulation includes executive attentional control (i.e., guides planful goal directed behavior), motivational inhibition (i.e., suppression of behaviors), and negative emotion reactivity (i.e., negative dysregulation); all of which involve the cognitive system. However, because self-regulation has only recently been introduced into coercion theory, no known empirical work has addressed whether self-regulation and cognitive
skills, within the context of coercion theory, account for the parenting–deviance association (see for exception Unnever et al. 2006). Therefore, future research should assess whether and how self-regulation and cognitive skills may mediate the parenting–deviance relation. In the following section, two potential mediators will be explored that could fill the “black box”; self-control and SIP. As will be demonstrated, the definition of self-control is similar to the definition Snyder et al. provides for self-regulation. There also appears to be a link between coercion theory and SIP. Thus, both self-control and SIP offer promising mediating mechanisms to fill the “black box.”

MEDIATING MECHANISMS

Self-Control as a Mediating Mechanism

Putting forward *A General Theory of Crime*, Gottfredson and Hirschi (1990) hypothesized that whether an individual engages in deviance can be explained by low levels of self-control. The authors contended that (a) an individual’s level of self-control influences the level of deviance in which she or he engages, (b) a lack of effective parenting influences whether an individual will engage in deviant behaviors due to low self-control, and (c) low self-control mediates the relation between parenting and deviance. The authors also suggested that these associations exist regardless of sex and cultural background. Furthermore, individuals with low self-control are likely to engage in a variety of deviant behaviors from crime-analogous behaviors (e.g., alcohol or drug use, smoking, aggression) to more serious forms of deviance (e.g., theft, property or violent offenses).

In describing self-control, Gottfredson and Hirschi (1990) suggested that self-control is an individual difference characteristic that ranges from low to high. Further, they argued that an individual with low self-control engages in behaviors that (a) provide immediate and simple ways to receive gratification, (b) are exciting, risky, or thrilling, (c) require little thought processing, (d) result in the victim(s) feeling pain or discomfort, and (e) lack long-term goals. Whereas Gottfredson and Hirschi discuss the concept of self-control, recall that coercion theory discusses the concept of
self-regulation (Snyder et al. 2003). These two concepts overlap considerably, particularly with executive attentional control and motivational inhibition in that individuals are able to control or suppress inappropriate responses and sustain behaviors as needed (Snyder et al. 2003). Self-regulation has been further defined as the ability to set and attain goals, plan actions, refrain from engaging in problematic behaviors, and focus on long-term goals (Brody et al. 2002; Brody and Ge 2001; Weinberger and Schwartz 1990). Similarly, someone who has self-control is able to problem solve, have a future orientation, have planful goal-directed behavior, restrain their behaviors, and delay responding for larger reinforcements (Moffitt 1997; Snyder et al. 2003; Vollmer et al. 1999; Wills et al. 2002). Finally, both self-regulation and self-control are thought to form at an early age. Thus, self-control appears synonymous with self-regulation. For consistency, the term self-control will be used throughout the remainder of this article.

Parental Influences

Gottfredson and Hirschi (1990) hypothesized that four parenting practices are influential in the development of self-control: (1) the attachment between parent and child, (2) parental supervision, (3) recognition of deviant behaviors, and (4) punishment of deviant acts. According to Gottfredson and Hirschi, if all four elements of effective parenting occur, an adequate level of self-control is likely to develop, resulting in a decreased probability of the child engaging in deviant behaviors. However, if one of the four elements is missing, the child is less likely to form an adequate level of self-control, and in turn, more likely to engage in deviant behaviors. Looking in depth at the four elements of effective parenting, attachment is viewed as a parental concern for the child’s well-being, the level of warmth parents feel toward their child, and time spent with their child (i.e., parental investment). Additionally, the higher the levels of communication and affectional identification between parent and child (i.e., love, respect), the stronger the parent–child attachment will be (Hirschi 1969). Second, parental supervision not only keeps a child from engaging in deviant behaviors, but also teaches the child how to avoid engaging in deviant behaviors when she or he is not under direct
supervision (Gottfredson and Hirschi 1990). Third, parents also must recognize deviant behaviors when they occur, and at all ages (e.g., talking back, yelling, pushing versus vandalism, theft). Fourth, effective punishment includes setting limits, having age-appropriate consequences, and enforcing the consequences when a rule is broken. In addition, the most effective form of punishment is disapproval by individuals close to the child (Hirschi 1969). Thus, when parents feel indifference or hostility toward the child, have lax, inadequate, or poor supervision skills, fail to recognize early forms of deviant behaviors, or are too lenient, inconsistent, or harsh with discipline, they are more likely to have children with low self-control, who in turn, engage in deviant behaviors.

**Empirical Research**

Empirical research guided by the GTC has found that low self-control is predictive of deviant behaviors in young children, adolescents, adults, and cross-nationally (Burton et al. 1999; Normandeau and Guay 1998; Vazsonyi and Crosswhite 2004; Vazsonyi et al. 2001). Low self-control also is predictive of a number of different types of deviant behaviors, such as vandalism, theft, alcohol/drug use, assault, school misconduct, and rape in adolescents, larceny, shoplifting, and gambling in college students and criminal behaviors in adults (Arneklev et al. 1993; Burton et al. 1999; LaGrange and Silverman 1999; Nagin and Paternoster 1993; Piquero and Tibbetts 1996; Vazsonyi and Crosswhite 2004; Vazsonyi et al. 2001). Thus, there appears to be robust empirical evidence suggesting that self-control is associated with whether an individual engages in deviant behaviors. However, much of the empirical work that has been conducted using the GTC has focused on the relation between low self-control and deviance. Limited empirical work has examined (a) whether the four hypothesized elements of effective parenting influence self-control or whether additional parenting practices not originally conceptualized also are influential and (b) the extent to which self-control mediates the parenting–deviance association.

Empirical examination of the parenting–self-control association suggests a number of hypothesized and non-hypothesized parenting practices influence the etiology of
self-control. For example, parental attachment, monitoring, supervision, recognition of deviant behaviors, discipline, consistency in punishment, poor parental efficacy (i.e., low attachment, as well as a lack of recognition and punishment of deviant behaviors), and parental management (i.e., monitoring, as well as a lack of recognition and punishment of deviant behaviors) have been found to be associated with the development of self-control (Cochran et al. 1998; Gibbs et al. 1998; Hay 2001; Hope and Chapple 2005; Latimore et al. 2006; Perrone et al. 2004; Pratt et al. 2004; Unnever et al. 2003). However, other evidence suggests that parental supervision and punishment are not associated with self-control (Cochran et al. 1998; Latimore et al. 2006), and parenting factors not originally conceptualized also have been found to be important in the development of self-control such as psychological autonomy, effective parenting (i.e., commitment, involvement, conventional qualities), parental support, parenting (i.e., consistency, child-centered), family functioning (i.e., effective problem solving, cohesion), and parenting (i.e., inductive reasoning, problem solving, positive reinforcement; Burt et al. 2006; Feldman and Weinberger 1994; Hay 2001; Jones et al. 2007; Polakowski 1994).

Additionally, when examining the mediation hypothesis, mixed results emerged regarding whether self-control partially or fully mediated the relation between parenting and deviance. For example, self-control fully mediated the associations between deviance and (a) parenting, (b) parental management, and (c) consistency in punishment (Feldman and Weinberger 1994; Gibbs et al. 1998; Unnever et al. 2003), whereas self-control only partially mediated the relations between deviance and (a) ineffective parenting, (b) parental support, (c) parental management, and (d) parental monitoring (Burt et al. 2006; Gibbs et al. 2003; Hay 2001; Jones et al. 2007; Perrone et al. 2004; Unnever et al. 2003). Finally, evidence suggests that associations among parenting, self-control, and deviance are more complex than originally conceptualized. For example, Hope and Chapple (2005) indicated that self-control partially mediated the association between attachment and risky sexual behaviors, but self-control did not mediate the relation between monitoring and risky sexual behaviors. Similarly, Chapple et al. (2005)
discovered that self-control fully mediated the relation between attachment and adolescent substance abuse, but only partially mediated the association between parental monitoring and adolescent substance abuse.

Thus, evidence is provided that all four elements of effective parenting (i.e., attachment, supervision, recognition of deviant behaviors, and punishment of deviant behaviors) appear to influence the development of self-control. However, additional parenting variables beyond what Gottfredson and Hirschi (1990) theorized also are responsible for the development of self-control (e.g., psychological autonomy, parental efficacy; Hay 2001; Perrone et al. 2004). Research also appears to suggest that self-control at least partially mediates the link between ineffective parenting and deviance. However, because so few studies have been conducted to examine the links among effective parenting, self-control, and deviance, conclusions regarding how parents influence the development of self-control, and the full extent to which self-control mediates the parenting–deviance association can only be speculative.

Research conducted by Brody and colleagues (Brody et al. 2002; Brody and Ge 2001; Brody et al. 1996; Brody et al. 1999; Wills et al. 2000) provides additional evidence that (in)effective parenting does influence the development of self-control, and that self-control fully mediates the link between (in)effective parenting and deviance. For example, parental involvement, support, monitoring, family cohesion, close family relationships, and appropriate discipline positively influence the development of self-control, whereas interparental conflict and harsh parent–child conflict negatively influence the development of self-control. Further, each of the constructs that Brody and colleagues have studied can be linked to Gottfredson and Hirschi’s (1990) theoretical ideas of how to teach self-control. First, involved-supportive parenting, family cohesion, and family support can be identified as parents who are involved, and therefore attached, to their child. Second, monitoring and supervision provide support for the second step in teaching self-control. Third, the discussion of appropriate discipline and harsh-conflicted parent–child relationships can provide empirical evidence for the final step in teaching self-control; punishment. Thus, the work of Brody and colleagues lends support
to Gottfredson and Hirschi’s theoretical conceptualizations that parents are influential in the development of self-control, and that self-control fully mediates relations. However, low self-control is not the only possible mediating mechanism for the link between ineffective parenting and deviance. Research has suggested that SIP deficits also mediate this link (Dodge et al. 1990; Dodge et al. 1995; Weiss et al. 1992).

**Social Information Processing as a Mediating Mechanism**

Information-processing theories provide information regarding how behaviors are transformed into memory, which in turn guide future processing and behaviors (Dodge 1993; Huesmann 1998). Huesmann (1998) suggests that information processing theories are a description of cognitive data structures that individuals utilize through a sequence of steps executed to generate cognitions regarding behaviors. However, with work conducted by Dodge and colleagues (Crick and Dodge 1994; Dodge et al. 1986), information-processing theories, such as SIP, are now used as a cognitive heuristic to help understand how and why individuals engage in deviant behaviors.

According to Dodge et al. (1986) and Crick and Dodge (1994), six steps are involved in SIP: encoding social cues, interpretation of social cues, clarification of goals, response access/generation, response evaluation, and behavioral enactment. In the first step, encoding social cues, an individual must scan and attend to environmental cues. However, because a large number of environmental cues are simultaneously being produced, an individual will selectively attend to, and focus on, a limited number of environmental cues. Next, the child must interpret the meaning behind the social cues. Meaning is assigned to social cues through inferences about the motives or intent of the behavior, and is related to the individual’s emotional needs, goals, and physiological arousal (e.g., angry, using drugs; Crick and Dodge 1994; Dodge 1993; Dodge and Schwartz 1997; Huesmann 1998). Third, the individual must select a goal or desired outcome for the current situation. Such goals are instrumental (e.g., solving a problem) or interpersonal (e.g., retaliation), external (e.g., obtaining an object), or internal (e.g., feeling happy), and can be influenced by the individual’s personality or emotional state (Dodge and Schwartz 1997). Fourth, an
individual must access all possible behavioral responses from his or her long-term memory. Some individuals access multiple responses, whereas for others the first response accessed is the behavior enacted. Fifth, the individual must evaluate each response to determine whether the accessed response will help reach a potential goal, and whether she or he can perform that behavior effectively (i.e., has self-efficacy). Further, if self-control functions are not properly in place, the individual is less likely to fully evaluate all behavioral responses and will engage in the first behavioral response accessed (Dodge 1993; Dodge and Schwartz 1997). Finally, behavioral responses are chosen based on the individual’s goals and self-efficacy regarding the behavior. In most cases, this is an automatic and ongoing process. If, however, the individual is involved in a new social situation, the process can be very rational and conscious.

Concurrent and longitudinal research suggests that children and adolescents who engage in deviant behaviors are more likely to have the following SIP deficits: encoding and interpreting social cues, response generation, aggressive conflict problem-solving skills, hostile attributions under ambiguous and accidental situations, hypervigilance to threatening cues, and hold more self-efficacy beliefs and positive evaluations toward aggression (Crick and Dodge 1994; Dodge et al. 2003; Dodge and Schwartz 1997; Fontaine et al. 2002; Slaby and Guerra 1988; Webster-Stratton and Lindsay 1999). Further, while research has predominantly explored the association between SIP deficits with aggression, some empirical research has suggested that SIP deficits are related to multiple types of deviant behaviors such as vandalism, theft, murder, rape, assault, dating violence, and using a weapon (Brendgen et al. 2002; Fontaine et al. 2002; Slaby and Guerra 1988). Although there appears to be robust evidence linking SIP deficits with deviant behaviors, little research has explained why some children, but not others, have SIP deficits. In order to understand how deficits are formed, early parental experiences must be examined.

Parental Influences

Although not part of the SIP heuristic, several researchers have suggested, theoretically, that ineffective parenting influences the development of SIP deficits. Reviews have
suggested that parenting practices, such as ineffective/harsh discipline, physical abuse, effective monitoring/supervision, emotional involvement/warmth (i.e., attachment), communication, and witnessing aggression may influence the development of SIP, and in turn, influence the development of deviant behaviors (Dodge 1993; Dodge and Pettit 2003; Dodge and Schwartz 1997; Pettit 1997). For example, physical abuse is associated with the development of hypervigilance toward hostile cues and hostile attribution biases, witnessing parental aggression is thought to teach children to evaluate positively the use of aggression, and attachment is thought to influence SIP through (in)secure attachments and (mal)adaptive schemas (Dodge et al. 1990; Huesmann 1998; Dodge and Schwartz 1997). SIP researchers have suggested that monitoring/supervision and communication also are important in the development of deviant behaviors. However, these constructs have not been tested in relation to SIP. Overall, ineffective/harsh discipline and physical abuse are the most extensively studied. Further, very little empirical work has been conducted to fully understand the origins of SIP (Dodge and Schwartz 1997), and whether the aforementioned hypothesized parenting practices do influence the development of SIP.

**Empirical Research**

In the limited empirical work that has been conducted, evidence suggests that physical abuse, punishment/discipline, parent-to-child aggression, and maternal support and control do influence the development of SIP deficits (e.g., encoding errors, accessing aggressive responses, increased hostile attribution bias, positive evaluations of aggression, positive attitudes toward violence, sensitivity toward hostile cues, aggressive response selection; Brendgen et al. 2002; Dodge et al. 1990; Dodge et al. 1995; Gomez and Gomez 2000; Gomez et al. 2001; Weiss et al. 1992). However, much more work is needed to fully examine the origins of SIP. Furthermore, evidence suggests that SIP deficits partially mediate the relation between ineffective parenting and deviant behaviors (e.g., aggression, externalizing behavior problems, physical violence [e.g., fighting, using a weapon], and dating violence). However, there are mixed results regarding which SIP steps mediate the ineffective parenting-aggression link.
For example, encoding errors and accessing aggressive responses mediated the relation between physical abuse and externalizing behavior problems, whereas hostile attributions and positive evaluations of aggression did not (Dodge et al. 1995). Therefore, future research needs to be conducted to examine the full extent to which SIP may mediate associations between parenting and deviance.

Finally, it is noteworthy that low self-control appears to be linked with SIP. For example, Dodge et al. (1997) found evidence suggesting that impulsivity (i.e., low self-control) was related to encoding errors (SIP step 1), and that encoding errors were associated with reactive aggression (i.e., when an individual responds angrily or defensively without thought when frustrated or provoked) rather than proactive aggression (i.e., when an individual deliberately behaves aggressively to achieve a goal). Therefore, SIP deficits may mediate the link between self-control and reactive aggression. Further, Dodge (1993) argued that individuals who engage in reactive aggression are less likely to fully evaluate all possible behavioral choices (step 5) and engage in the first response accessed. This sounds like a lack of self-control in that the individual fails to stop and think about other possible choices. Thus, it seems that self-control also would be related to step 5 (response evaluation) and, in turn, related to reactive aggression. Although only speculative, it appears that self-control can be linked to SIP through two SIP steps: step 1 (encoding social cues) and step 5 (response evaluation). However, no known empirical work has been conducted to examine whether self-control is linked with any of the SIP steps. Interestingly, Guerra (1993) suggested that self-control is related to problem-solving skills (i.e., SIP), and Gibbs et al. (1996) noted that low self-control may not lead to aggression or other deviant behaviors unless some form of cognitive deficit is present. Thus, it appears that self-control and SIP are linked, and future work should examine theorized associations between self-control and SIP, as well as how such associations influence the development of deviant behaviors.

DISCUSSION

Two possible mechanisms (i.e., self-control and SIP) have been presented that may mediate the link between ineffective
parenting (e.g., coercion theory) and deviant behaviors. At present, there appears to be some empirical evidence suggesting that self-control and SIP partially mediate the influence ineffective parenting has on deviant behaviors. In the section that follows, a proposed integrated model will be presented by beginning with a discussion of three areas in which coercion theory, GTC, and SIP converge, followed by a discussion of the research implications for the integrated model including research questions and data collection procedures. Finally, limitations and contributions the model provides to the field will be considered.

**Areas of Convergence**

**Parenting Practices**

There appear to be eight main parenting variables that should be assessed when examining how parents influence the development of self-control, SIP, or deviant behaviors: attachment, supervision/monitoring, discipline/punishment, communication, recognition of deviant behaviors, problem solving, positive parenting, and positive reinforcement. Coercion theory, GTC, and SIP scholars appear to agree that attachment, supervision/monitoring, discipline/punishment, and communication are important influences on self-control, SIP, and deviant behaviors. Recognition of deviant behaviors is found within two of the theories: coercion theory and GTC. Finally, coercion theory offers three additional parenting variables that GTC and SIP researchers do not consider: problem solving, positive parenting, and consistent positive reinforcement for socially appropriate and competent behaviors.

**Mediating Mechanisms**

The second area in which coercion theory, GTC, and SIP converge is in the area of mediating mechanisms. First, self-control appears to fill the “black box,” as discussed by Snyder et al. (2003), linking ineffective parenting with deviant behaviors. It seems likely that if a parent engages in ineffective parenting practices (e.g., coercive parenting), self-control would be underdeveloped resulting in an increased likelihood of engaging in deviant behaviors. In fact, Unnever et al. (2006) found that coercive parenting negatively
influenced self-control, and that self-control partially mediated coercive parenting and deviance. The authors suggested that when parents engage in a coercive style of parenting, parents are likely to be modeling low self-control in that the parents are punishing their children angrily and erratically, and potentially in an impulsive manner, in turn, suggesting that the parents themselves have low levels of self-control.

Second, SIP also may help to fill the “black box” (Snyder et al. 2003). For example, effective parenting, according to coercion theory, is responsible for teaching a child how to maintain positive social interactions with others, regulate emotions within social interactions, problem solve, and have internal or cognitive resources (Peterson and Leigh 1990; Snyder et al. 2003). SIP involves generating and evaluating possible ways to respond in social situations with the end result of maintaining positive social interactions with others. Throughout this process, the individual must “problem solve” to decide the most appropriate response. Further, it is implied that the individual regulates his or her emotions so as not to engage in socially unacceptable behaviors. Therefore, it is possible that effective parenting, as demonstrated by coercion theory, also may be influential in the development of socially relevant SIP skills. As a result, SIP would mediate the association between parenting and deviant behaviors. One such possible ineffective parenting strategy is that of coercive parenting. In fact, Unnever et al. (2006) found that coercive parenting was associated with the development of SIP deficits (i.e., holding aggressive attitudes), and that SIP deficits partially mediated the association between coercive parenting and deviant behaviors.

Third, research appears to suggest that low self-control is influential in the development of SIP deficits (i.e., encoding errors [step 1]; evaluating all possible behavioral choices [step 5]), and that SIP deficits partially mediate the link between low self-control and reactive aggression (Dodge 1993; Dodge et al. 1997). Individuals with low self-control seem to have deficits while encoding social cues and have an inability to fully evaluate all behavioral choices. Thus, such individuals are more likely to view social cues inappropriately and engage in deviant responses quickly. Additionally, Snyder et al. (2003) suggested that self-regulation
(i.e., self-control) processes were associated with cognitive skills. Having a cognitive deficit is likely to decrease an individual’s ability to plan behaviors or ability to suppress inappropriate behaviors. Moffitt (1993) further suggested when an individual has difficulties with self-control, she or he is likely to have deficits within the cognitive system (i.e., the “executive” functions). Therefore, it appears that self-control and cognitive skills (i.e., SIP) are associated in some manner, and are associated with an increase in deviant behaviors.

Types of Deviant Behaviors

The third and final area in which coercion theory, GTC, and SIP converge pertains to the types of deviant behaviors in which individuals engage. Although research conducted on coercion theory, self-control, and SIP has included different age participants, has used different methodologies, and the majority of SIP research has examined aggression only (see e.g., Capaldi and Patterson 1996; Dodge et al. 1990; Vazsonyi et al. 2001; Weiss et al. 1992), it appears, overall, that coercion theory, GTC, and SIP address many similar types of deviant behaviors. For example, all three theories are predictive of vandalism, physical aggression/assault, sexual assault (e.g., rape), and theft/stealing (Capaldi and Patterson 1996; Dishion 1990; Fontaine et al. 2002; LaGrange and Silverman 1999; Slaby and Guerra 1988; Vazsonyi et al. 2001). In addition, there are many similarities between at least two of the three theories. For example, both coercion theory and SIP address externalizing behaviors (Dodge et al. 1995; Fagot and Leve 1998), both coercion theory and GTC address verbal aggression and alcohol/drug use (Brody et al. 1996; Dishion 1990; Vazsonyi et al. 2001), and both GTC and SIP address whether an individual carries a weapon (Brendgen et al. 2002; Burton et al. 1999). Therefore, it appears that the same types of deviant behaviors are all associated with the coercion theory, GTC, and SIP.

Research Implications

From the research examined and discussed thus far, it is apparent there are many areas in which coercion theory, the GTC, and SIP overlap that offer avenues for potential integration and future research. It should be noted that
traditionally Patterson et al. (1992) have held the position that internal cognitive structures do not mediate the link between parenting and deviance, and Gottfredson and Hirschi (1990) have argued against theoretical integration and that self-control solely mediates the parenting–deviance link. However, empirical evidence suggests that both self-control and SIP mediate the association between ineffective parenting and deviance, and that coercive parenting is associated with both self-control and SIP. As such, possible theoretical integration should be explored.

Recently, Simons et al. (2007) supported the notion of studying factors that may mediate the association between parenting and deviance, and alluded to the idea of integrating theories. Specifically, the authors examined whether self-control (GTC), anger/frustration (strain theory), hostile view of relationships (SIP), and deviance acceptability and conventional goals (social learning and social control theories) mediated the parenting–deviance association. Results indicated that self-control and deviance acceptability mediated the association between monitoring/discipline and deviance, and self-control and anger/frustration mediated the association between harsh/rejecting parenting and deviance. Results also indicated that self-control and hostile views were correlated. The authors concluded that theories that have historically been thought of as competing may actually be complementary. Overall, the study points to the importance of examining various mediating mechanisms from multiple theories to understand the parenting–deviance association, and provides empirical evidence that multiple theories may work together in the explanation of deviance. Additionally, the study provides some correlational evidence that self-control and SIP are associated. However, the study is limited in that only a few parenting practices were examined; the very limitation that the authors argue with respect to past research. Secondly, the authors only examined hostile views of relationships, a SIP deficit in the interpretation of social cues (step 2). The proposed integration of coercion theory, GTC, and SIP will help to address many of the deficits in past theorizing about the etiology of deviance, offers a number of novel research questions that generally have been untested, and provide advancement in the theoretical understanding regarding the etiology of deviance.
Research Questions

Figure 1 offers a guide for testing six novel research questions. First, what specific parenting practices are influential in the development of self-control, SIP, and deviance? Are additional parenting practices involved in the etiology of self-control and SIP beyond the original conceptualizations? On the left side of Figure 1, an effective parenting construct is defined by eight parenting variables theorized across coercion theory, GTC, and SIP. The figure suggests that an overall effective parenting construct is associated with the development of self-control, SIP, and deviance. Originally,
Gottfredson and Hirschi (1990) suggested that all four of the hypothesized parenting practices must be present in order for an adequate level of self-control to be developed, and research has found that overall effective parenting constructs are influential in the etiology of self-control and deviance (e.g., Gibbs et al. 2003, 1998; Perrone et al. 2004). However, it is possible that the eight parenting constructs may each individually impact the etiology of self-control, SIP, and deviance, as past research also has demonstrated. The question then arises as to whether all parenting practices impact self-control, SIP, and deviance in the same manner, as theoretically implied, or do some parenting practices matter more than others for the development of self-control, SIP, or deviance. Therefore, future research should elucidate whether and how, uniquely or additively, these parenting variables influence self-control, SIP, and deviance. Furthermore, is possible that additional parenting variables not theorized may still be influential in the development of self-control, SIP, and deviance (e.g., psychological autonomy; Hay 2001). As such, future research also should examine non-theorized parenting variables to determine their association with self-control, SIP, and deviance.

Second, are self-control and SIP correlated? Does self-control impact how an individual encodes social cues (step 1) and evaluates responses (step 5)? Is self-control also associated with the remaining steps of SIP? Lines are indicated in Figure 1 from self-control to SIP suggesting that self-control impacts SIP. Thus far, it seems that self-control and SIP steps 1 and 5 are theoretically associated. Furthermore, empirical evidence has indicated that self-control was correlated with hostile views of relationships and holding aggressive attitudes (deficits in step 2: interpretation of social cues and step 5: response evaluation as the child positively evaluated aggressive responses; Simons et al. 2007; Unnever et al. 2006). Given that past research has suggested possible links between self-control and SIP, future research needs to fully examine the interrelationship between self-control and SIP.

Third, to what extent do both self-control and SIP mediate the association between parenting and deviance? As indicated in Figure 1, self-control and SIP both demonstrate an indirect link between parenting and deviance. As past research has demonstrated, self-control and SIP at least
partially mediate the parenting–deviance link. However, given the possibility that self-control and SIP are associated, would the inclusion of this association and, thus, both variables in a model help to explain more variance in the development of deviance? Future research should explore simultaneously how the inclusion of both self-control and SIP in the model explains the parenting–deviance association. Additionally, it is possible that self-control and SIP may mediate the association between specific types of parenting practices with specific types of deviant behaviors differently. For example, Hope and Chapple (2005) and Chapple et al. (2005) provide one illustration of the complexities regarding how parenting and deviance factors are associated. Recall in their analyses, self-control fully mediated the relation between maternal attachment and adolescents’ substance abuse, but only partially mediated the relation between attachment and adolescents’ risky sexual behaviors. Additionally, self-control partially mediated the relation between parental monitoring and substance abuse, but did not mediate the relation between monitoring and risky sexual behaviors. Thus, it is possible that self-control fully mediates the relation between some parenting–deviance relations, but only partially between other parenting–deviance relations, and this idea may be extrapolated to SIP. As such, future research should examine how self-control and SIP mediate the associations between various types of parenting and deviant behaviors.

Fourth, does the proposed model explain all types of deviance? An overall deviance construct is indicated in Figure 1 to suggest that the etiology of all types of deviant behaviors (i.e., crime analogous behaviors, aggression, criminal behaviors, etc.) would be explained. Thus far, empirical research conducted on coercion theory, GTC, and SIP all allude to similar types of deviant behaviors being explained. However, more research is needed to determine whether the proposed parenting variables and mediating mechanisms explain varied types of deviance in similar ways. As such, to fully test the theory, all types of deviant behaviors should be included in that conceptualization.

Fifth, how does the bidirectional coercion process between parent and child impact the development of self-control and SIP? Figure 1 demonstrates a bidirectional arrow
between effective parenting and deviance indicative of the bidirectional coercion process between parent and child. Given the theoretical and empirical support for the bidirectional coercion process, future research should examine whether this bidirectional process also helps to explain the development of self-control and SIP. It seems that the coercion process would negatively impact the development of self-control and increase the likelihood of SIP deficits resulting in deviant behaviors. That is, because of ineffective parenting, the child would develop lower levels of self-control and higher levels of SIP deficits. In fact, Unnever et al. (2006) empirically validated this assumption. Furthermore, because the coercion process is bidirectional, the child’s behaviors also would impact the specific parenting practices. Therefore, it seems that as the child engages in the deviant behaviors, the parents would change their parenting to more negative parenting practices. As a result, self-control and SIP would be further negatively impacted. This assumption seemingly falls in line with how the coercion process occurs; however, future research does need to explore whether and how self-control and SIP are associated with the bidirectional coercion process.

Sixth and finally, do levels of self-control and SIP deficits change in accordance with the early and late onset trajectories? Given that the developmental trajectories individuals follow are influenced by the coercion process and the coercion process has been empirically linked with self-control and SIP, it seems possible that levels of self-control and SIP deficits may change in accordance with the developmental trajectories. Although Gottfredson and Hirschi (1990) do not specify developmental trajectories, they have suggested that varying levels of deviance are a result of varying levels of self-control, which are initially formed by varying levels of ineffective parenting. Therefore, it seems that adolescents who have parents that are highly ineffective would engage in deviance for longer durations (i.e., early onset offending) and adolescents who have parents with moderate levels of effective parenting would engage in deviance for shorter durations (i.e., late onset offending). Furthermore, it seems that individuals who follow the early onset trajectory are individuals with the least amount of self-control and the highest levels of SIP deficits, and individuals who follow
the late onset trajectory are individuals with a moderate level of self-control and SIP deficits. As such, it seems important to ascertain whether various levels of self-control and SIP deficits exist between the early and late onset trajectories, and how various levels of ineffective parenting influence the development of self-control and SIP.

**Research Agenda**

Overall, a number of novel research questions emerge with the proposed integrated model. As such, it is important to consider methods for testing it. It seems that to best analyze this model, a multi-trait multi-method data collection procedure should be utilized to collect new cross-sectional and longitudinal data. By utilizing a multi-trait multi-method data collection procedure, common method variance, multicollinearity, and interrater biases can be reduced, and the reliability and validity of results should be increased. For both the cross-sectional and longitudinal studies, observational and self-report data should be collected from the children, as well as the parents, care-providers, and teachers. Observational data will be particularly important for children who are younger, and cannot complete a self-report questionnaire, as well as for parent–child interactions.

Initially, cross-sectional data could be collected from children of various ages to begin examining the correlational relations within the model until longitudinal data can be obtained. Simultaneously, a longitudinal data collection study could begin with the youngest of the cross-sectional participants with the intentions of following the participants through young adulthood. At a minimum level, data would need to be collected on the eight parenting variables described in the model, self-control, the first five steps of SIP, the coercion process, and several types of deviance. When collecting data, the conceptualization of each construct should be consistent with the definitions provided earlier. As such, it is possible that some constructs may need to be developed while other previously established measures may be adopted. For example, Grasmick et al.’s (1993) self-control measure assesses an individual’s self-control according to Gottfredson and Hirschi’s (1990) self-control description. Of course, all measures utilized must be age and informant appropriate.
A number of longitudinal datasets are available for empirically examining some of the aforementioned questions, such as the National Longitudinal Youth Survey and the NICHD Study of Early Child Care and Youth Development. However, the problem with conducting secondary data analysis is that the data generally do not capture all constructs that one would like to examine, and when a construct can be created, the construct generally does not measure the variables entirely consistent with theory. As such, carefully designed original data collection remains important to testing the proposed integrated model.

**Supporting the Proposed Model**

It is anticipated that support would be found for the proposed model. Specifically, it is expected that more variance in deviance would be explained compared to prior investigations, and fewer direct relations between parenting and deviance will result from self-control and SIP mediating the parenting–deviance association. Additional support for the model would include finding that (a) self-control does indeed impact the development of SIP, at least with regard to steps 1 and 5, (b) the coercion process is associated with self-control and with SIP, (c) the eight hypothesized parenting variables are uniquely or additively associated with self-control, SIP, and deviance, and (d) self-control and SIP deficits follow along early and late onset trajectories. One note of caution though with respect to mediation: if self-control and SIP do not together fully mediate the association between parenting and deviance in all instances, it does not mean a lack of support for the model. Rather it would suggest that additional mediating mechanisms may be important for the parenting–deviance association, or that mediation may depend on the specific parenting and deviance constructs measuring.

**CONCLUSION**

The proposed model has potential to make a number of contributions to the current field. First, eight main parenting variables (i.e., attachment/investment, supervision/monitoring, discipline/punishment, communication, recognition of deviant behaviors, problem solving, positive parenting, and positive reinforcement) appear to be influential in development
of self-control, SIP, and deviant behaviors. Second, low self-control appears to be influential in the development of SIP deficits. Third, it is possible that both self-control and SIP could fill the “black box” of coercion theory as discussed by Snyder et al. (2003). Fourth, it is apparent that coercion theory, self-control, and SIP are all predictive of similar types of deviance. Fifth, the coercion process may be influential in the etiology of self-control and SIP. Sixth and finally, self-control and SIP deficits may follow along the early and late onset trajectories of deviance.

LIMITATIONS AND POTENTIAL MODEL EXPANSIONS

While pushing the field forward in a number of ways, the current conceptualization is not without its limitations. First, the present conceptualization only explored the possibility of two mediating mechanisms. There is a possibility that additional mediating mechanisms exist. For example, according to Strain Theory, anger/frustration is thought to influence the engagement of deviance when parents produce strain by rejecting, neglecting or abusing the child, as well as utilizing strict, harsh, or inconsistent supervision/discipline (Agnew 2001). In fact, given that anger impacts the meaning individuals assign to social cues (step 2 of SIP), anger is not inconsistent with the proposed model. Additionally, Hirschi (1969) suggested that the social bond an individual feels with society is influential in the development of deviant behaviors. While the theory does not outright predict that an individual’s social bond would mediate the link between ineffective parenting and deviance, the possibility does exist as parents are responsible to a certain extent for the development of their child’s social bond with society. As such, the ideas of anger/frustration and having a social bond with society do imply that there may be other variables beyond self-control and SIP that mediate the link between ineffective parenting and deviance. As such, future research and theory expansion should continue to explore the possibility of additional mediating mechanisms.

Second, constructs typically associated with social learning theory have not been considered within the current conceptualization. As coercion theory has roots within social learning theory (Patterson 1982), it seems plausible to also
include constructs such as modeling and positive reinforce-
ment of deviant behaviors. In fact, Unnever et al. (2006)
found that parental reinforcement of aggression was directly
associated with delinquency, as well as indirectly via
self-control. Therefore, including social learning theory con-
structs within empirical examinations of the current model
would not be outside the realm of the current conceptualiza-
tion, and could be further explored.

Third, the current conceptualization only explores how
parenting influences the development of self-control, SIP,
and deviant behaviors. The current conceptualization
does not explore the extent to which peers are influential
in the development of deviance. However, as observed
within both the early and late onset trajectories, peers are
influential in child and adolescent deviance (Kiesner et al.
2001). Further, research has indicated that peers were asso-
ciated with SIP deficits and deviance (Dishion and Skaggs
2000; Dodge et al. 2003). Thus, it is necessary to examine
how peers and ineffective parenting uniquely and additively
influence the development of self-control, SIP, and deviant
behaviors.

Fourth and finally, the present conceptualization has not
explored the possibility that sex may influence how parent-
ing influences self-control, SIP, or deviance. Research has
suggested, in some cases, there does appear to be differences
between males and females in how the coercion process and
SIP influence deviance (Dishion and Skaggs 2000; Fontaine
et al. 2002); however, sex does not appear to moderate the
relation between self-control and deviance (see e.g., Burton
et al. 1999). Thus, it remains a possibility that the present
model may be moderated by sex warranting examination
in future research.

Despite these limitations, the current conceptualization
and integrated model does push theory and research forward
by demonstrating that coercion theory, GTC, and SIP can be
integrated to gain a better understanding of the etiology of
deviance. By conducting research according to the proposed
model, researchers should have a deeper, more enriching
developmental perspective as to how parenting influences
the etiology of deviance. With a more complete understand-
ing of how ineffective parenting influences deviance, inter-
vention and prevention efforts could be tailored to better
meet the needs of children, adolescents, and families and truly decrease child and adolescent deviance.

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JENNIFER M. CROSSWHITE, Ph.D., is Assistant Professor of Family Studies at the University of Nebraska at Kearney. Her current research interests include understanding the etiology of deviance. Specifically, examining how parents are influential in child and adolescent deviance, what processes may mediate the parenting-deviance association, and the theoretical advancement regarding these associations.

JENNIFER L. KERPelman, Ph.D., is a professor in the Department of Human Development and Family Studies at Auburn University. She conducts basic and applied research in the areas of adolescent identity development and adolescents’ relationships with parents, peers, and romantic partners. She also has created multiple resources designed to promote positive youth development, and is directing a 5-year, federally funded evaluation study of a youth-focused relationship education curriculum.