

WHY IS “BAD” PARENTING CRIMINOGENIC?

Implications From Rival Theories

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This article tests two rival theories: low self-control and differential association and social learning and their competing accounts of why bad parenting matters. The analysis revealed that several dimensions of parenting (including monitoring and caring and parental reinforcement of aggression) affected both low self-control and aggressive attitudes. Both low self-control and aggressive attitudes predicted delinquent involvement and were found to partially mediate the effect of parenting measures on delinquency. The influence of self-control on delinquent involvement was found to vary across levels of aggressive attitudes—adolescents who had aggressive attitudes and little self-control were especially likely to engage in criminal behavior. The results indicate that ineffective parenting is likely to produce low self-control and aggressive attitudes through not only direct control (e.g., monitoring and punishment) but also through modeling. Thus, the findings question the claim by Gottfredson and Hirschi and Akers that they have set forth truly general theories of crime.

Keywords: *parenting; crime; aggression; low self-control; delinquency*

Although dissenting views can be found (Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000; Harris, 1995), social scientists, including criminologists, believe that “bad” parenting is a cause of youthful misconduct.¹ In the criminological literature, “bad” parenting is typically called *ineffective*, *inept*, or *dysfunctional* parenting, and it is regularly portrayed as a risk factor for unhealthy social development and, in turn, for antisocial behavior (e.g., Loeber & Farrington, 2000; Loeber & Stouthamer-Loeber, 1986). However, if criminologists are agreed that families are incubators of criminality (Farrington, Barnes, & Lambert, 1996), they are not nearly as certain as to why ineffective or “bad” parenting is re-

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lated to juvenile delinquency. The purpose of this article is to further elucidate the intervening processes that occur between “bad” parenting and delinquent acts.

In this regard, the research on “bad” parenting as a cause of crime is experiencing a subtle yet salient shift in its empirical emphasis. Initially, research focused on simply showing that ineffective parenting and crime were interrelated. Now, however, the focus has shifted to defining more precisely what constitutes “bad” parenting and explicating the negative social and psychological consequences engendered by ineffective parenting and how they may be related to criminal behavior (Patterson, 1998). In fact, Agnew (1993) argues that the major delinquency theories are more clearly distinguished by the intervening processes they propose than by their independent variables. Agnew goes on to contend that focusing on these intervening processes is often the only way to assess empirically the relative merits of competing theories. This is certainly the case when examining parenting variables because the major theories often identify as criminogenic many of the same aspects of inept parenting but differ from one another in terms of why such parenting fosters illegal conduct.

In this context, the current study examines two major intervening factors described in the theoretical literature—low self-control and aggressive attitudes. These factors are core theoretical variables in two perspectives long considered—by their authors and by fellow criminologists—to be rival, if not incompatible, theories: general or low self-control theory and social learning theory (see, e.g., Akers, 1998; Costello, 1997; Kornhauser, 1978; Matsueda, 1988, 1997; Sampson, 1999). We test propositions central to these theories that address why “bad” parenting is a potential cause of crime. More specifically, we assess three issues: (a) Gottfredson and Hirschi’s (1990) key proposition that “bad” parenting affects delinquency through its impact on low self control, (b) the differential association and social learning proposition that “bad” parenting affects delinquency through its impact on aggressive attitudes, and (c) whether low self-control and aggressive attitudes each uniquely predict delinquency.

A collateral benefit of this analysis is that we provide a partial test of two rival theories as they apply to the social domain of the family. Hirschi (1969, 1989) has long argued against attempts at theoretical integration, preferring instead for theories to remain independent and oppositional. In his view, oppositional theories foster the “tendency to internal consistency and conceptual clarity” (1989, p. 38). The resistance to integrated theory also allows for critical empirical tests that either strengthen or falsify theories, thus providing a basis for theoretical advancement, rejection, or reconceptualization. As we will report, the current project’s results suggest that these two rival perspectives are neither general in their explanatory power nor, it appears, fully independent of one another. This latter, somewhat surprising finding creates an interesting explanatory challenge to scholars in the control theory and social learning theory camps.

Parenting and the General Theory of Crime

The central assumption of Gottfredson and Hirschi’s general theory is that a stable propensity to engage in crime—criminality or low self-control—is the prime cause of involvement in crime and in deviant or analogous behaviors. Gottfredson and Hirschi (1990) argue further that ineffective parenting is the reason why youngsters fail to develop self-control. Gottfredson and Hirschi are clear in their definition as to what constitutes ineffective parenting. Ineffective parenting includes three components: (a) the failure to monitor or track the child’s behavior, (b) the failure to recognize deviant behavior when it occurs, and

(c) the erratic and excessive punishment of deviant behavior. Inept parenting thus occurs when adults do not monitor, recognize, or sanction misconduct.

This view of parenting represents a major departure from Hirschi's (1969) theory in *Causes of Delinquency*. In his early social bond theory, parenting variables, particularly parental attachment, were said to have a direct effect on delinquency. In the general theory, Gottfredson and Hirschi (1990) argue that a strong attachment between parent and child is a prerequisite for effective parenting. This attachment is what provides adults with the motivation to discipline and punish their children appropriately (Gottfredson & Hirschi, 1990; Hirschi & Gottfredson, 2001). Parental attachment, however, is not seen as having a direct effect on low self-control or delinquency. And parental supervision and discipline only affect delinquency through their effect on self-control.

Gottfredson and Hirschi (1990) take pains to show what constitutes low self-control. Adolescents, who behave impulsively, enjoy taking risks, prefer physical activities to mental exertion, are self-centered and short-tempered, and choose simple tasks over complex ones are said to have low self-control. They argue that low self-control is an individual propensity that persists across the life span, thus predisposing individuals with low self-control to a lifetime of engaging in criminal or analogous behaviors. Importantly, the general theory of crime boldly argues that the influence of ineffective parenting on criminal behavior should be entirely mediated by the effect of low self-control.

In short, Gottfredson and Hirschi (1990) contend that children raised in unstructured environments fail to develop the ability to control their behavior and therefore are prone to engage in risky behaviors that give them either a short-term reward or relief from momentary irritations (i.e., criminal behavior). They reject the argument that parent-child interactions model or teach children attitudes and actions that predispose them to engage in either aggressive or criminal acts. As Gottfredson and Hirschi (1990) state,

One thing is, however, clear: low self-control is not produced by training, tutelage, or socialization. As a matter of fact, all of the characteristics associated with low self-control tend to show themselves in the absence of nurturance, discipline, or training. (p. 95)

That is, it is the failure of parents to make the effort to instill internal control, not their positively encouraging the embrace of antisocial beliefs that leads youngsters into misconduct.

This dismissal of the need for positive learning for crime—that is, of definitions favorable to crime—represents a purposeful rejection of the Sutherland tradition and of social learning theory (Sutherland & Cressey, 1970). As they state, “Most crimes require no special learning or knowledge” (Hirschi & Gottfredson, 2001, p. 88). Furthermore, crime requires no special motivation. This contention is rooted in the notion that the motivation for crime and analogous acts is inherent in human nature and therefore shared by all. Humans seek the easy and immediate gratification of their needs and desires and are therefore attracted to crime. What differentiates delinquents from nondelinquents is not their motivation for crime but rather their ability to restrain themselves from acting on this motivation. Self-control, in particular, refers to the capacity to exercise self-restraint when tempted or provoked to engage in crime (Gottfredson & Hirschi, 1990; Hirschi & Gottfredson, 2001). By contrast, social learning theory explicitly states that the motivation for crime varies across individuals. A major source of such variation is said to be the fact that some individuals are taught definitions or attitudes favorable to crime. These definitions are not held to invariably require lawlessness—as control theory critics claim—but rather make such acts more permissible (Akers, 1998). As Akers (2001) explains, “These definitions . . . provide a

mind-set that makes one more willing to commit the act when the opportunity occurs” (p. 195). Despite its centrality to the general theory, relatively few studies have examined Gottfredson and Hirschi’s thesis on ineffective parenting, low self-control, and crime (for exceptions, see Gibbs, Giever, & Martin, 1998; Gibbs, Giever, & Higgins, 2003; Hay, 2001; Perrone, Sullivan, Pratt, & Margaryan, 2004; Pratt, Turner, & Piquero, 2004; Unnever, Cullen, & Pratt, 2003). In part, this neglect is because of researchers using older samples (i.e., late teens or adults; Pratt et al., 2004) and samples that do not contain measures of ineffective parenting and self-control.

In any event, the results from these studies partially support the general theory of crime. They show that ineffective parenting is related to low self-control (Pratt et al., 2004), which in turn is related to criminal behavior. However, Gibbs et al. (2003), Hay (2001), Perrone et al. (2004), and Unnever et al. (2003) also found that ineffective parenting directly influenced criminal behavior after controlling for the influence of low self-control. These studies suggest that although Gottfredson and Hirschi (1990) are correct that ineffective parenting is related to low self-control, “bad” parenting must also generate other negative social and psychological consequences than just low self-control that may mediate its effects on delinquent involvement. Accordingly, they suggest that further research is needed that examines what other possible negative social and psychological consequences are related to ineffective parenting and how they may be related to criminal behavior.

Parenting and the Differential Association and Social Learning Perspective

The differential association and social learning perspective focuses on many of the same dimensions of “bad” parenting as the general theory of crime, including the failure to monitor the child’s behavior and to recognize and consistently sanction deviance. Social learning theory, however, argues that crime not only results from the absence of effective parenting; parents may also teach their children to engage in crime by modeling and reinforcing deviant behavior. Most notably, parents model aggressive behavior when they punish their children in a coercive manner.² And parents reinforce aggressive behavior when they give the child what he or she wants because the child antagonistically demands it (Patterson, Reid, & Dishion, 1992; Snyder & Stoolmiller, 2002). Furthermore, differential association and social learning theory argue that these parenting variables increase crime by teaching the child that crime is an appropriate or desirable form of behavior in certain circumstances (Akers, 1985, 1998, 1999).

The extant research indicates that one of the underlying processes that may intervene between “bad” parenting and delinquent behavior is when children learn a set of definitions favorable to the use of aggressive behavior (Eron, 1987; Slaby & Guerra, 1988). The research by Eron (1987) has established a link between “bad” parenting and cognitively developing a set of attitudes, standards, and norms for behavior that are favorable to the use of aggressive behavior. Maxwell and Maxwell (2003) further show that child-directed and child-witnessed aggression predicted self-reported aggressive behavior. Additionally, Slaby and Guerra (1988) have found a connection between attitudes favorable to the use of aggressive behavior and criminal behavior. They discovered that adolescents who were incarcerated for violent crimes and high school students who were rated high in aggression by their teachers were more likely to hold a set of beliefs supporting the use of aggression (Slaby & Guerra, 1988). Researchers have also demonstrated that aggressive attitudes predict a range of behaviors, including aggression, dating violence, bullying, school discipline

referrals, detention, and suspensions (Foo & Margolin, 1995; Huesmann & Guerra, 1997; McConville & Cornell, 2003).

In this article, we test whether adolescents are more likely to learn a set of definitions that support the use of aggressive behavior if they have been punished in a coercive manner and if their parents have differentially reinforced their aggressive behavior (Colvin, 2000). We also test whether adolescents who hold a set of definitions that support the use of aggression are more likely to engage in criminal behavior. In short, we test whether aggressive attitudes mediate the relationship between “bad” parenting and criminal behavior. We recognize that social learning theory is complex and that a comprehensive investigation would have to assess its diverse components (see, e.g., Akers, Krohn, Lanza-Kaduce, & Radosevich, 1979). Even so, our analysis focuses on attitudes or definitions, a factor both central to the Sutherland tradition of social learning theory and that rival control theories have long argued is causally unimportant.

Research Strategy

The current article attempts to contribute to the debate about ineffective parenting and delinquency in three ways. First, we look at two key intervening variables largely neglected by the prior research on parenting and crime, low self-control, and aggressive attitudes (e.g., Brezina, 1998; Scaramella, Conger, Spoth, & Simons, 2002; Simons, Johnson, & Conger, 1994; Simons, Wu, Conger, & Lorenz, 1994). Again, this allows us to furnish an empirical test of the rival self-control and differential association and social learning perspectives. In so doing, we are able to see whether the causal variables identified by these theories mediate the effects of “bad” parenting and whether the relationship to delinquency of self-control and attitudes is unique, spurious, and/or interactive.

The current study was designed to assess the relative empirical status of two longstanding theoretical competitors. However, the results of the data analysis presented ahead question the usefulness of seeing social learning and control theories as rivals. As we will see, the findings accord both theories a measure of support and, somewhat noteworthy, suggest that there is an interaction effect between low self-control and aggressive values. These results indicate the need to conceptualize parenting as affecting crime through diverse pathways and the need to consider points of convergence between control and social learning theories.

Second, we examine a broader range of parenting variables than previous scholars who have investigated the intervening processes between parenting and crime (e.g., Brezina, 1998). As part of this effort, we include a potentially significant parenting variable, the parental reinforcement of aggressive behavior, which has been largely ignored by criminologists (Brezina, 1998; Simons, Johnson, et al., 1994; Simons, Wu, et al., 1994; Stewart, Simons, Conger, & Scaramella, 2002).

Third, prior studies have been limited in sample size, household diversity (e.g., only intact households; Simons, Johnson, et al., 1994; Simons, Wu, et al., 1994), and social diversity (e.g., limited to boys—Brezina, 1998; Simons, Johnson, et al., 1994; Simons, Wu, et al., 1994). We extend the prior research by analyzing a relatively large data set that includes a socially and economically diverse population of more than 2,400 middle school boys and girls representing six schools. Notably, the use of a diverse sample presents the opportunity to weigh a core contention of the self-control and learning perspectives—that the effects of central theoretical variables are general across social groups.

In summary, the causal relationships that we examine are theoretically derived and consistent with prior tests of the general theory's ineffective parenting thesis and with the social learning perspective (Eron, 1987; Hay, 2001; Slaby & Guerra, 1988; Unnever et al., 2003). We recognize, however, that alternative causal relationships could be hypothesized.

First, there are likely other possible paths between "bad" parenting and delinquency that might be explored. For example, a social learning theorist might argue that poor parenting not only directly fosters definitions favorable to delinquency but also increases the likelihood of association with delinquent peers, which in turn leads to delinquency. A social control theorist (Hirschi, 1969) might argue that poor parenting reduces parental attachment, thereby freeing the child to engage in delinquency. In particular, children who are weakly attached to their parents have less to lose through delinquency and so are more likely to respond to temptations and provocations with delinquent acts. And a strain theorist (Agnew, 1993) might argue that poor parenting is a type of strain that increases negative emotions such as anger. These emotions create pressure to engage in corrective action, with delinquency being one possible response. Unfortunately, the data set we employ does not allow us to examine these alternative paths. Nonetheless, as noted, we do examine what are perhaps the two dominant explanations for the effect of poor parenting on delinquency—that such parenting reduces self-control and fosters definitions favorable to crime. As Agnew (1993) points out, researchers seldom examine the intervening mechanisms between their independent variables and delinquency. This study provides a fuller examination of the intervening mechanisms associated with poor parenting than the prior research, but future research should certainly expand on our analysis by considering additional mechanisms.

Second, it is possible that parents may initiate or escalate their use of ineffective parenting techniques if previous attempts to effectively raise their children do not result in improved behavior (Stewart et al., 2002). It is also possible that parents may withdraw from their parenting responsibilities (e.g., monitoring their children) as delinquent behavior escalates (Laird, Pettit, Bates, & Dodge, 2003). These child effects, interactional, or reciprocal relationships are well documented in the literature (Laird et al., 2003; Stewart et al., 2002; Thornberry, Lizotte, Krohn, Farnworth, & Jang, 1991; Vuchinich, Bank, & Patterson, 1992; Wright & Cullen, 2001). Given that our survey is cross-sectional, we cannot test nor control for possible reciprocal relationships between "bad" parenting, low self-control, aggressive attitudes, and delinquency. However, it is noteworthy that researchers have shown that parental practices are related to juvenile delinquency even after taking into consideration the consequences of possible child effects (Stewart et al., 2002; Vuchinich et al., 1992; Wright & Cullen, 2001). Stewart et al. (2002) and others (Scaramella et al., 2002; Wright & Cullen, 2001) have concluded that ineffective parenting is a major explanation for problem behaviors, even after the influence of earlier misbehavior is taken into account.

Although the data set does not allow us to control for possible child effects, we do control for a characteristic of children that may be related to them being less responsive to initial attempts to effectively parent. We control for whether the child had been prescribed medication for attention-deficit hyperactivity disorder (ADHD). Controlling for whether the child has ADHD also allowed us to control for one possible genetic and biological correlate of aggressive and criminal behavior (Moffitt, 1993; Rowe, 2002; Unnever & Cornell, 2003; Unnever et al., 2003).

Third, our data set also does not include measures of deviant peer group affiliation. A longitudinal data set with measures of peer group affiliation would allow us to assess whether ineffective parenting causes children to develop aggressive attitudes or low self-

control, which results in them affiliating with deviant peers and developing school-related problems, which in turn contributes to their greater involvement in delinquency (Dishion, Patterson, Stoolmiller, & Skinner, 1991; Patterson et al., 1992; Scaramella et al., 2002; Simons, Wu, et al., 1994). However, the general theory of crime argues and the prior research shows that both parenting and the development of individual characteristics such as low self-control and aggressive attitudes are relatively stable over time and that children with these characteristics affiliate with children similar to themselves (Eron, 1987; Olweus, 1979; Patterson, 1998; Scaramella et al., 2002; Vuchinich et al., 1992). The prior research also shows that ineffective parenting can affect the development of aggressive behaviors and attitudes even after controlling for deviant peer group affiliation (Simons, Wu, et al., 1994). These findings suggest that including a measure of deviant peer affiliation may partially mediate the relationship between having aggressive attitudes and low self-control and delinquency; however, it should not substantially alter the relationship between parenting and these possible intervening mechanisms.

Method

Sample

The data we employ in this study were collected for a project designed to gather baseline data on school bullying and school violence. The sample was drawn from the six public middle schools that serve a metropolitan area with a diverse population of nearly 100,000 inhabitants in Virginia. The six middle schools served a total enrollment of 3,038 students in Grades 6, 7, and 8. Approximately, 46.5% of the middle schools' student population was non-White, 52% received a free or reduced cost breakfast or lunch at school, and 50% were male. The percentage of students receiving some services in special education based on an individualized education plan (IEP) was 19.6%, and the dropout rate for the middle schools in 1999 to 2000 was 1.9%. The mean age of the sample was 12.4.³

All middle school students in attendance on the day of the survey were eligible for the study.⁴ In all, 2,472 students completed the survey (a response rate of 81%). School administrators sent an opt-out letter to all the parents and guardians of the students before the administration of the survey. The parents of 42 students declined to allow their children to participate in the survey. Teachers administered an anonymous survey in classrooms during the fall of 2000.

The respondents who completed the survey closely matched the total population of students. The percentage of students who reported they were non-White was 40% in comparison to the student population of 46.5%; the percentage of male study participants was 48.9% in comparison to the student population of 50%; and the percentage of students who reported that they received a free or reduced cost breakfast or lunch was 49.8% in comparison to the student population, for Grades 7 to 12, of 52%.

Surveys were carefully screened for complete and accurate information (patterned responses). Thirty one surveys were deleted in which the students gave the same response to every question on one or more pages (excluding the pages focused on bullying and having been bullied). Also, four surveys were dropped in which the student reported an unlikely height (taller than six foot five inches) or weight (more than 300 pounds). School principals confirmed that no students in the school were this large.

We used LISREL 8.50 for Windows and the EM (expectation maximization) algorithm to impute values for the missing cases. We employed this procedure to reduce any bias that could have been introduced into our analysis if we had deleted missing cases using the listwise deletion procedure.⁵ This is a commonly used procedure for imputing missing values, and our results are substantively similar if missing values are excluded (e.g., Unnever et al., 2003). The EM algorithm generated values based on a data set that included the variables used in the present analysis. After imputing values for the missing cases, the sample included 2,437 middle school students. We used ordinary least squares as the estimation procedure. We did not detect any excessive collinearity. None of the correlations exceeded .75, and no VIF (variance inflation factor) value exceeded 2.5 (Fisher & Mason, 1981).

Measures

Table 1 shows the coding of the variables included in this analysis. Variable names are in the first column, the coding categories are in the second, and descriptive statistics are in the last columns. We also created a correlation matrix of our independent and dependent variables, which is presented in Appendix A. It is instructive that with one exception, which we discuss below, the correlations among our independent variables are .45 or lower. Appendix B presents the items used to construct the scales included in the analyses.

Dependent variables. A self-report instrument adapted from the National Youth Survey was used to create three scales to measure delinquent involvement (Elliott, Huizinga, & Ageton, 1985; Elliott, Huizinga, & Menard, 1989). To ensure a clear reference period for offending, students were asked to indicate how often since school started in August that they had engaged in nine relatively serious delinquent acts. The survey was administered in the last week in October 2000. To respond to the self-report items, the youths used a scale ranging from 0 (*never*) to 4 (*four or more times*).

We constructed three scales: a General Delinquency scale, a Violent Crime scale (carry a hidden weapon, attack someone, gang fights, hit or threaten to hit a teacher or your parents, and use force or threaten to use force to get money), and a Nonviolent Crime scale (use of alcohol and illegal drugs, purposely damage or destroy school property, sell illegal drugs, and set fire to personal property). The students' scores were summed across each of the items composing the scales and were standardized. The items for these three scales are included in Appendix B. The alpha coefficient for the General Delinquency scale was .87, the alpha coefficient for the Violent Crimes scale was .82, and the alpha coefficient for the Nonviolent Crimes scale was .78. The log transformations of the scales scores were used in the analysis given that they were positively skewed.

Ineffective parenting. The data set provided an opportunity to assess propositions central to the debate about the relationship between "bad" parenting and delinquency. As discussed in more detail below, the data set included four measures of ineffective parenting: two scales—a single-item measure derived from the work of Simons, Wu, et al. (1994) and a single-item measure of the parental reinforcement of aggression, a variable largely ignored by criminologists (Larzelere & Patterson, 1990).

A 5-item self-report scale was used to form an indicator of coercive parenting. These five items are listed in Appendix B. Our scale is the same scale used by Simons, Wu, et al. (1994). The scale is a reliable indicator of coercive parenting because it measures the degree

TABLE 1
Coding of Variables

<i>Variable Names</i>	<i>Coding and Range</i>	<i>Mean</i>	<i>Standard Deviation</i>
Age	In years	12.386	1.029
Free lunch	0 = no free meal 1 = free meal	0.500	0.500
Male	0 = female 1 = male	0.488	0.499
Black	0 = other 1 = African American	0.400	0.490
Attention-deficit hyperactivity disorder	0 = no 1 = yes	0.147	0.354
Intact family	0 = no 1 = yes	0.410	0.492
Family conflict	-1.09 to 4.25 (Higher standardized scores indicating more family conflict)	0.008	0.900
Parental monitoring and involvement	-1.01 to 4.35 (Higher standardized scores indicating less parental monitoring or involvement)	0.009	0.972
Inconsistent punishment	1 to 4 (Higher scores indicating greater inconsistency in parental punishment)	1.453	1.254
Parental reinforcement of aggression	1 to 4 (Reverse coded; higher scores indicating more parental reinforcement of aggression)	3.328	0.800
Coercive parenting	-1.47 to 3.75 (Higher standardized scores indicating more coercive parenting)	0.004	0.970
Low self-control	-2.92 to 3.18 (Higher standardized scores indicating less self-control)	0.071	0.893
Aggressive attitudes	-1.53 to 2.71 (Higher standardized scores indicating more aggressive attitudes)	0.028	0.937
General delinquent involvement	-.23 to 3.53 (Higher logged scores indicating more delinquent involvement)	0.380	0.703
Violent delinquent involvement	-.19 to 3.04 (Higher logged scores indicating more violent delinquent involvement)	0.263	0.562
Nonviolent delinquent involvement	-.24 to 3.04 (Higher logged scores indicating more nonviolent delinquent involvement)	0.326	0.629

to which the respondent's parents or guardians used authoritarian parenting techniques such as yelling and hitting. The responses to each item ranged from 0 (*never*) to 4 (*always*). The scores were summed across the five items and standardized with higher scores indicating more coercive parenting. The standardized alpha for coercive parenting was .72.

The Parental Monitoring and Involvement scale assessed how closely parents or guardians monitored the behavior of their children (Simons, Wu, et al., 1994). The scale was composed of 5 items, which are listed in Appendix B, including “How often do/does your parent or parents/guardians know who you are with when you are away from home?” and “In the course of a day, how often do/does your parent or parents/guardians know where you are?” The scores were reverse coded, summed across these items, and standardized with higher scores indicating less monitoring. The standardized alpha coefficient for the Parent Monitoring and Involvement scale was .74.

Inconsistent punishment was measured using a single-item developed by Simons, Wu, et al. (1994): “How often do/does your parent or parents/guardians punish you for something at one time and then at other times not punish you for the same thing?” The responses ranged from 0 (*never*) to 4 (*always*) with higher scores indicating greater inconsistency in punishment.⁶

The parental reinforcement of aggression was measured using a single-item: “When I get angry or yell at my guardians/parents, they give me what I want.” The responses ranged from 0 (*strongly agree*) to 4 (*strongly disagree*). Nearly half of the students, 49%, reported that they strongly disagreed, 39.5% disagreed, 6.6% agreed, and 4.8% strongly agreed that when they got angry or yelled at their parents, they got what they wanted. The responses were reverse coded with higher scores indicating more parental reinforcement of aggressive behavior.⁷

Intervening social and psychological measures. Given the richness of the data set, we were able to include two social and psychological variables that should intervene between ineffective parenting and juvenile delinquency: low self-control and aggressive attitudes.

Consistent with much previous research (Pratt & Cullen, 2000; Vazsonyi & Crosswhite, 2004), Grasmick, Tittle, Bursik, & Arneklev’s (1993) scale was used to measure the respondent’s level of low self-control. Responses were summed across the items and the scores were standardized. The items included in the scale are listed in Appendix B. The standardized alpha coefficient for low self-control was .87. This reliability is consistent with previous research (Arneklev, Grasmick, Tittle, & Bursik, 1993; Baron, 2003; Gibbs & Giever, 1995; Gibbs et al., 1998; Hay, 2001; Longshore, 1998; Longshore & Turner, 1998; Piquero & Tibbetts, 1996; Tittle, Ward, & Grasmick, 2003). Note that we have coded this measure so that a high score means the respondent has less self-control.

Aggressive attitudes, the extent to which students endorsed attitudes supportive of aggressive behavior, was measured using five items derived from previous studies of aggressive adolescents (McConville & Cornell, 2003; Slaby & Guerra, 1988). These items have been found to be predictive of peer aggression and disciplinary infractions at school (McConville & Cornell, 2003). The items used to construct the Aggressive Attitude scale included “If a kid threatens you, it is OK to hit them,” “It feels good when I hit someone,” and “If you fight a lot, everyone will look up to you.” The remaining items are listed in Appendix B. The responses to these items ranged from *strongly agree* to *strongly disagree*. The scores were reverse coded, summed, and standardized. Higher scores indicated students with more aggressive attitudes. The standardized alpha coefficient for the Aggressive Attitude scale was .79.

Control variables. We control for a number of factors that may be related to ineffective parenting, low self-control, aggressive attitudes, or juvenile delinquency including whether the child had been prescribed medication for ADHD. Our measure of ADHD was

an item (where 1 = yes and 0 = no) that asked, “Have you ever taken medication for being hyperactive (attention-deficit hyperactivity disorder)?”⁸

We additionally controlled for intact families (1 = intact and 0 = other). The effects of family structure on delinquency are subject to substantial debate (Gelles, 1989; Juby & Farrington, 2001; Wells & Rankin, 1991). However, it is possible that intact families may be able to more effectively parent their children (e.g., by sharing the responsibilities of monitoring their children’s behavior). Thus, we included a single dichotomous measure for whether the child lived in an intact household.

It has also been argued that families living in poverty encounter greater environmental stressors undermining their effectiveness as parents and thereby increasing the misbehavior of their children (Amato & Booth, 1997; Belsky, 1980; Gelles, 1992). Therefore, we controlled for the family’s socioeconomic status. Our measure of the family’s socioeconomic status, free lunch (1 = yes and 0 = no), was based on the student’s response to the question “Do you get a free or reduced cost breakfast or lunch at school?”

Furthermore, we have controlled for family conflict. Research suggests that family conflict is indirectly related to children’s maladjustment because it alters parenting practices and the quality of parent-child relations (Buehler & Gerard, 2002; Foo & Margolin, 1995). We include in the analysis a 5-item self-report scale similar to the one created by Simons, Wu, et al. (1994). Appendix B includes the 5 items used to construct the scale. The responses for each item ranged from 0 (*never*) to 4 (*always*). The scores were summed across the 5 items and standardized with higher scores indicating greater family conflict. The standardized alpha for family conflict was .77.

Finally, we included dichotomous measures for gender (Male, male = 1), and race (Black, 1 = African American and 0 = other), and we controlled for the respondent’s age, in years.

Results

The Impact of Parenting on Self-Control and Aggressive Attitudes

The general theory of crime and differential association and social learning theories predict that ineffective parenting should be related to low self-control and aggressive attitudes, respectively. Table 2 presents the results of regressing low self-control and aggressive attitudes on our four measures of ineffective parenting while holding constant the effects of the control variables. Model 1 of Table 2 shows the results for low self-control and Model 2 presents the results for aggressive attitudes.

The results from Model 1 of Table 2 indicate that low self-control was related to ineffective parenting. Model 1 of Table 2 indicates that adolescents with low self-control were more likely to have parents who reinforced their aggression by giving into them when they were angry and have parents who did not closely monitor their behavior. The beta weights also indicate that adolescents with low self-control were equally likely to have parents who either inconsistently or coercively punished them. Low self-control was also related to five of the control variables. Adolescents with low self-control were more likely to have received a federally funded lunch, be male, have ADHD, and have been exposed to family conflict. Model 1 additionally indicates that adolescents with low self-control were less likely to be living in an intact household.

TABLE 2
The Impact of Ineffective Parenting on Low Self-Control and Aggressive Attitudes

<i>Independent Variables</i>	<i>Model 1 (Low Self-Control)</i>		<i>Model 2 (Aggressive Attitudes)</i>	
	<i>Beta</i>	<i>B</i>	<i>Beta</i>	<i>B</i>
Age	.018	.015	.071***	.065
Free lunch	.117***	.210	.109***	.204
Male	.178***	.318	.207***	.388
Black	.031	.057	.102***	.195
Attention-deficit hyperactivity disorder	.100***	.254	.025	.068
Intact family	-.078***	-.142	-.044**	-.085
Family conflict	.076***	.075	.037*	.039
Monitoring and involvement	.208***	.191	.186***	.179
Inconsistent punishment	.124***	.088	.045**	.033
Parental reinforcement of aggression	.229***	.256	.279***	.327
Coercive parenting	.124***	.115	.093***	.089

R^2 = Model 1, .370***; Model 2, .340***.

$N = 2,437$.

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

The results from Model 2 of Table 2 indicate that the Aggressive Attitude scale was also influenced by the ineffective parenting measures. The results show that adolescents with aggressive attitudes were more likely to have parents who reinforced their aggression by giving into them when they were angry and to have parents who did not closely monitor their behavior. Adolescents with aggressive attitudes were also more likely to be either inconsistently or coercively punished. The Aggressive Attitude scale was related to six of the control variables. Adolescents with aggressive attitudes were more likely to be older, male, to have received a federally funded lunch, and to have been exposed to family conflict. Model 2 further indicates that adolescents with aggressive attitudes were less likely to be living in an intact household.

Parenting, Theoretical Variables, and Delinquency

Table 3 presents the results from regressing delinquency on the ineffective parenting and control variables while including or not including low self-control in the equations. The results from Table 3 assessed three key propositions of Gottfredson and Hirschi's (1990) general theory of crime: (a) low self-control should directly influence delinquent behavior, (b) low self-control should entirely mediate the effects of the ineffective parenting and control measures, and (c) low self-control should similarly affect the delinquency measures (e.g., violent vs. property crimes). The results supported the first of Gottfredson and Hirschi's key propositions; adolescents with low self-control were significantly more likely to commit delinquent acts.

However, the results from Table 3 do not support Gottfredson and Hirschi's (1990) second proposition; low self-control did not entirely mediate the effects of the ineffective parenting and control measures. Models 2, 4, and 6 of Table 3 show that even after taking into consideration the effect of low self-control, adolescents were more likely to commit crimes if they were poorly monitored, had their aggressive behavior reinforced, and were coercively parented. Indeed, the factor that most influenced an adolescent's likelihood of

TABLE 3
Ineffective Parenting, Low Self-Control, and Delinquency

Independent Variables	Estimates					
	General		Violent		Nonviolent	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age	.070*** (.048)	.066*** (.045)	.035* (.019)	.031 (.017)	.153*** (.094)	.150*** (.092)
Free lunch	.043* (.060)	.019 (.027)	.057** (.064)	.037 (.042)	.008 (.010)	-.010 (-.013)
Male	.102*** (.144)	.067*** (.094)	.083*** (.093)	.053** (.059)	.013 (.017)	-.015 (-.018)
Black	.064*** (.093)	.058*** (.084)	.052** (.060)	.047** (.054)	.021 (.028)	.016 (.021)
ADHD	.048** (.096)	.028 (.056)	.042* (.067)	.025 (.040)	.036* (.065)	.020 (.036)
Intact family	.003 (.005)	.019 (.027)	.001 (.001)	.014 (.016)	-.018 (-.024)	-.006 (-.007)
Family conflict	.071*** (.056)	.056** (.044)	.072*** (.045)	.059** (.037)	.081*** (.056)	.068*** (.048)
Monitoring/involvement	.264*** (.191)	.222*** (.160)	.242*** (.139)	.206*** (.119)	.225*** (.145)	.191*** (.123)
Inconsistent punishment	.008 (.005)	-.015 (-.008)	-.010 (-.004)	-.031 (-.014)	.016 (.008)	-.003 (-.001)
Parental reinforcement of aggression	.138*** (.121)	.091*** (.080)	.154*** (.108)	.115*** (.080)	.104*** (.081)	.067*** (.052)
Coercive parenting	.132*** (.095)	.107*** (.077)	.144*** (.083)	.123*** (.071)	.126*** (.082)	.106*** (.069)
Low self-control		.200*** (.157)		.169*** (.106)		.162*** (.114)

NOTE: Odds ratios with standardized regression coefficients are in parentheses. ADHD = attention-deficit hyperactivity disorder.

R² = Model 1, .241; Model 2, .266; Model 3, .220; Model 4, .238; Model 5, .200; Model 6, .217.

N = 2,437.

*p < .05. **p < .01. ***p < .001.

committing delinquent acts was not, as Gottfredson and Hirschi predicted, low self-control but rather whether parents effectively monitored their adolescent's behavior. It is also notable, that depending on the type of crimes analyzed, age, gender, race, and family conflict also directly affected delinquency. The results from Table 3 supported Gottfredson and Hirschi's (1990) third proposition; low self-control similarly influenced each of the three measures of delinquency.

Table 4 presents the results from regressing delinquency on the ineffective parenting and control variables while including or not including having an aggressive attitude in the equations. These results address key propositions raised by differential association and social learning theorists. Based on these theories, we expected that each measure of delinquency should be influenced by aggressive attitudes with perhaps the strongest relationship being between aggressive attitudes and violent crimes. We did not expect that aggressive attitudes should entirely mediate the influence of ineffective parenting on crime. Aggressive attitudes should be just one of many possible components of the underlying processes that

TABLE 4
Ineffective Parenting, Aggressive Attitudes, and Delinquency

<i>Independent Variables</i>	<i>Estimates</i>					
	<i>General</i>		<i>Violent</i>		<i>Nonviolent</i>	
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>
Age	.070*** (.048)	.054** (.037)	.035* (.019)	.021 (.011)	.153*** (.094)	.143*** (.087)
Free lunch	.043* (.060)	.019 (.027)	.057** (.064)	.036 (.041)	.008 (.010)	-.006 (-.008)
Male	.102*** (.144)	.058*** (.082)	.083*** (.093)	.044** (.050)	.013 (.017)	-.014 (-.018)
Black	.064*** (.093)	.042** (.061)	.052** (.060)	.033 (.038)	.021 (.028)	.007 (.010)
ADHD	.048** (.096)	.043** (.085)	.042* (.067)	.037* (.060)	.036* (.065)	.033 (.059)
Intact family	.003 (.005)	.013 (.018)	.001 (.001)	.009 (.011)	-.018 (-.024)	-.012 (-.016)
Family conflict	.071*** (.056)	.063** (.049)	.072*** (.045)	.065*** (.040)	.081*** (.056)	.075*** (.053)
Monitoring/involvement	.264*** (.191)	.224*** (.162)	.242*** (.139)	.206*** (.119)	.225*** (.145)	.199*** (.129)
Inconsistent punishment	.008 (.005)	-.010 (-.000)	-.010 (-.004)	-.019 (-.008)	.016 (.008)	.010 (.005)
Parental reinforcement of aggression	.138*** (.121)	.078*** (.068)	.154*** (.108)	.101*** (.071)	.104*** (.081)	.066*** (.051)
Coercive parenting	.132*** (.095)	.112*** (.081)	.144*** (.083)	.126*** (.073)	.126*** (.082)	.113*** (.073)
Aggressive attitudes		.214*** (.160)		.188*** (.111)		.137*** (.092)

NOTE: Odds ratios with standardized regression coefficients are in parentheses. ADHD = attention-deficit hyperactivity disorder.

R² = Model 1, .241; Model 2, .271; Model 3, .220; Model 4, .243; Model 5, .200; Model 6, .213.

N = 2,437.

p* < .05. *p* < .01. ****p* < .001.

are operative in each individual's learning history and in the immediate situation in which an opportunity for a crime occurs (Akers, 1999).

The results presented in Table 4 supported the differential association and social learning theories' prediction that aggressive attitudes should significantly predict juvenile delinquency. The Aggressive Attitude scale was significantly related to each of the delinquency measures even after holding constant the effects of the ineffective parenting and control measures. The results also show that the Aggressive Attitude scale predicted violent crimes better than it predicted property crimes, although the difference in the beta coefficients was only .05.

As expected, the Aggressive Attitude scale did not entirely mediate the effects of the ineffective parenting measures. Parental monitoring and involvement, parental reinforcement of aggression, and coercive parenting directly affected the delinquency measures even after controlling for the effect of the Aggressive Attitude scale. Notably, the Aggressive Attitude scale did mediate, on average, more than a third of the effect of the parental reinforce-

TABLE 5
Ineffective Parenting, Low Self-Control, Aggressive Attitudes, and Delinquency

Independent Variables	Estimates					
	General		Violent		Nonviolent	
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Age	.070*** (.048)	.057*** (.039)	.035* (.019)	.023 (.012)	.153*** (.094)	.146*** (.089)
Free lunch	.043* (.060)	.013 (.019)	.057** (.064)	.032 (.036)	.008 (.010)	-.013 (-.016)
Male	.102*** (.144)	.052** (.073)	.083*** (.093)	.039* (.044)	.013 (.017)	-.021 (-.027)
Black	.064*** (.093)	.045** (.065)	.052** (.060)	.035 (.041)	.021 (.028)	.011 (.014)
ADHD	.048** (.096)	.033 (.067)	.042* (.067)	.030 (.048)	.036* (.065)	.022 (.040)
Intact family	.003 (.005)	.019 (.027)	.001 (.001)	.014 (.016)	-.018 (-.024)	-.006 (-.008)
Family conflict	.071*** (.056)	.057** (.045)	.072*** (.045)	.060** (.037)	.081*** (.056)	.069*** (.048)
Monitoring/involvement	.264*** (.191)	.213*** (.154)	.242*** (.139)	.198*** (.114)	.225*** (.145)	.187*** (.121)
Inconsistent punishment	.008 (.005)	-.006 (-.011)	-.010 (-.004)	-.027 (-.012)	.016 (.008)	-.001 (-.000)
Parental reinforcement of aggression	.138*** (.121)	.070*** (.062)	.154*** (.108)	.095*** (.067)	.104*** (.081)	.057** (.045)
Coercive parenting	.132*** (.095)	.104*** (.075)	.144*** (.083)	.120*** (.070)	.126*** (.082)	.105*** (.068)
Low self-control		.109*** (.085)		.085*** (.053)		.121*** (.085)
Aggressive attitudes		.151*** (.113)		.138*** (.083)		.067** (.045)

NOTE: Odds ratios with standardized regression coefficients are in parentheses. ADHD = attention-deficit hyperactivity disorder.

R² = Model 1, .241; Model 2, .276; Model 3, .220; Model 4, .246; Model 5, .200; Model 6, .219.

N = 2,437.

*p < .05. **p < .01. ***p < .001.

ment of aggression on the delinquency measures. Similar, to low self-control, aggressive attitudes was, in general, the second best predictor of delinquency. The Monitoring and Involvement scale was the variable most related to delinquency.

Table 5 presents the results from regressing delinquency on the ineffective parenting and control variables while including or not including low self-control and the aggressive attitude scales in the equations. The results presented in Table 5 assessed whether low self-control and aggressive attitudes uniquely predicted delinquency and whether these two constructs mediated the effects of the ineffective parenting measures. Incremental F tests indicated that including the low self-control and the aggressive attitude scales in the equations significantly increased the explained variances.

The results from Table 5 indicate that adolescents were more likely to commit delinquent acts if they had either low self-control or if they held a set of attitudes that supported

the use of aggressive behavior. Notably, the Aggressive Attitude scale was more strongly related to general delinquency and violent crimes than was the low self-control scale. However, low self-control was a better predictor of property crimes than was aggressive attitudes.⁹

It is noteworthy that the low self-control and aggressive attitude scales did not entirely mediate the effects of ineffective parenting on delinquency. Even after controlling for the effects of low self-control and aggressive attitudes, adolescents were more likely to commit delinquent acts if they were ineffectively monitored, coercively parented, and if their aggressive behaviors were reinforced. In addition, age, gender, race, and family conflict directly influenced one or more of the delinquency measures with family conflict having the most consistent effect.¹⁰

The Generality of Effects

Our data set allows for an assessment of another key proposition of the general theory of crime and social learning theory: that the effects of self-control and attitudes (or definitions) are general—that is, not specific to any social group (Akers, 1998; Gottfredson & Hirschi, 1990). Using LISREL 8.5 and the main effect equation presented in Table 5, we tested Model 1 to see if it was invariant across gender. The differences in the chi-squares showed that the only set of measures that had at least two of its parameters significantly vary across gender were the error variances for the three endogenous variables. These results indicate that the model significantly explained more variance in female low self-control, aggressive attitudes, and delinquency than they did for males. However, the regression weights were invariant across gender. We also examined whether Model 1 was invariant across race. The results replicated the gender analyses. The model significantly explained more variance in non-Black low self-control, aggressive attitudes, and delinquency; however, the regression weights were invariant across race. Thus, these results support a key proposition of the general theory of crime and social learning theory; the impact of “bad” parenting on low self-control and aggressive attitudes and the influence of “bad” parenting, low self-control, and aggressive attitudes on crime do not vary across gender or race.

The Interrelationship Between Low Self-Control and Aggressive Attitudes

Research reports that programs designed to lessen the saliency of aggressive attitudes also reduce impulsivity (Guerra & Slaby, 1990; Henry et al., 2000). This suggests that aggressive attitudes and low self-control may be correlated. Our data indicate that the correlation between aggressive attitudes and low self-control is .71. Notably, although the data show that adolescents who have low self-control are more likely to hold aggressive attitudes, our results also indicate that low self-control and aggressive attitudes each uniquely predict delinquency. That is, our findings indicate that although these constructs are correlated, the variance they do not share uniquely increases a child’s likelihood of committing delinquent acts.¹¹

It is also possible that adolescents who held aggressive attitudes and had little self-control were the ones most likely to be delinquent. We tested this possibility by including an interaction term (aggressive attitudes \times low self-control) in the main effect regression equation presented in Table 5, Model 2 and found that it was statistically significant ($p = .000$).¹² Of the adolescents who were in the top 10% of the scores on the low self-control and aggressive attitude scales, 53% committed at least one delinquent act in comparison to less than

2% of those who were in the lower 10% of the scores on the low self-control and aggressive attitude scales. The standardized estimate for the Aggressive Attitudes \times Low Self-Control interaction term is .06 and the unstandardized estimate is .04, indicating a positive interaction between these variables. That is, low self-control has a larger positive effect on delinquency as aggressive attitudes increase (and vice versa).

These results indicate that adolescents who had the least amount of self-control and who strongly identified with aggressive attitudes were the ones most likely to engage in delinquency. In fact, the data indicated that the probability of committing at least one delinquent act for adolescents who strongly identified with aggressive attitudes and had little self-control was 26.5 times the probability of adolescents who did not hold a set of attitudes that supported aggressive behavior and did not have problems controlling their behavior.

It may be that children who strongly support the use of aggression and who have little self-control have an underlying psychological disorder such as an antisocial disorder or an oppositional defiant disorder and are, therefore, the ones most likely to commit crime (Farrington, 1989; Loeber & Stouthamer-Loeber, 1998; Reid, Patterson, & Snyder, 2002; Simons, Chao, & Conger, 2001). However, our results also show that adolescents who hold attitudes that support the use of aggression or who have low self-control are, uniquely, likely to commit crime. In short, we found that each of these constructs, low self-control and aggressive attitudes, should be independently considered as criminogenic; however, it is the combination of the two that is the most problematic.

Discussion

Control theory and differential association and social learning theory have shaped, if not dominated, microlevel sociological thinking about crime for the past three decades (Agnew, 2001; Lilly, Cullen, & Ball, 2002). Since Hirschi's (1969) initial statement of control theory, these two paradigms have been juxtaposed as rival—indeed, as mutually exclusive—explanations of crime and delinquency (see, e.g., Akers, 1998; Costello, 1997; Kornhauser, 1978; Matsueda, 1988, 1997; Sampson, 1999). The current study has attempted to contribute to this ongoing debate by empirically assessing the answer each of these perspectives gives to the question: How does “bad” parenting lead to delinquent conduct? In so doing, we have endeavored to disentangle which theory—if not both—is right or wrong. Three conclusions appear warranted.

First, any perspective's claim to being a general theory lies in its ability to render spurious the causal variables specified by its theoretical rivals. In the current study, both self-control and social learning theory failed in this regard. More fortunate for these theories, we did find that each perspective's causal variable was significantly related to the delinquency scales. These results are consistent with previous studies that have included measures of both self-control and differential association and social learning (Baron, 2003; Pratt & Cullen, 2000; Tittle et al. 2004; Winfree & Bernat, 1998). They are also in line with studies of offender recidivism that show that both antisocial values and temperament and antisocial personality (or low self-control) are two of the strongest predictors of reoffending (Andrews & Bonta, 2003). Accordingly, a more complete understanding of delinquency will require addressing the role of both low self-control and antisocial or aggressive attitudes in misconduct.

Notably, self-control and aggressive attitudes were each significantly related to both violent and nonviolent delinquency. This finding is consistent with previous research show-

ing that the predictors of violence are similar to the predictors of other forms of offending (e.g., Costello & Dunaway, 2003; Elliott, et al., 1985; Henry, Caspi, Moffitt, & Silva, 1996; Johnson, 1979). The finding also lends added support to the conclusion that self-control and social learning variables have general effects.

Second, our measures of ineffective parenting influenced both the respondents' level of internal control and the degree to which they had an aggressive attitude. Not surprisingly, the absence of effective monitoring contributes to low self-control and aggressive attitudes. But we also found that those parenting practices that receive special emphasis in social learning theory—coercive punishment and the parental reinforcement of aggression—affect self-control as well as aggressive attitudes. This suggests that low self-control does not simply result from the failure of parents to instill high self-control. Parents may also teach their children to be low in self-control. They may do this by modeling low self-control, such as when they punish their children in a coercive, angry manner or, more generally, when they act in an erratic or impulsive manner in the course of their daily lives.

In this regard, the parenting variables in this study affect delinquency through both low self-control and aggressive attitudes. On average, low self-control and aggressive attitudes mediated 30% of the effect of the ineffective parenting measures (monitoring involvement, parental reinforcement of aggression, and coercive parenting). Parental reinforcement of aggression was the one measure of ineffective parenting that had the greatest indirect effect through low self-control and aggressive attitudes; nearly 50% of its effect was mediated.

We should note, however, that ineffective parenting continued to have direct effects above and beyond its indirect effects through low self-control and aggressive attitudes. These findings suggest that a range of intervening criminogenic factors might be implicated in the link between parenting and delinquency. Therefore, in addition to aggressive attitudes, social learning theory might point to the causal significance of how parents model or otherwise teach beliefs encouraging of or conducive to crime (e.g., neutralizations; Akers, 1998) or how children inadvertently acquire deficits in information processing resulting in developing a hostile attributional bias (Dodge, 1986; Dodge, Bates, & Pettit, 1990; Dodge, Bates, Pettit, & Valente, 1995). Alternative theories might also identify candidates for intervening processes. For example, general strain theory might envision how “bad” parenting creates trait and state anger (Agnew, 1993), whereas routine activity theory might be relevant to the extent that ineffective parenting permits adolescents access to opportunities to offend (LaGrange & Silverman, 1999). If these alternative pathways from parenting to delinquency do in fact exist, then they would call into question the claim by both Gottfredson and Hirschi (1990) and Akers (1998) that they have set forth truly general theories of crime. The possibility of alternative pathways is further evidenced by the variance left unexplained although our models are relatively fully specified.

Third, and perhaps the most ironic finding—ironic, that is, given the long competition between control and learning theories—is that it appears that “bad” parenting produces in many individuals both low self-control and aggressive attitudes. The analyses revealed that adolescents who have little self-control and who strongly identify with aggressive attitudes are especially at-risk for offending behavior. In this regard, Andrews and Bonta (2003) suggest that those with low self-control may forego even easy criminal opportunities if they fail “to assess the situation as one in which that behavior would be appropriate” (p. 162). One factor affecting such an assessment is “the attitudes, values, beliefs, and rationalizations held by the person with regard to antisocial behavior” (p. 162)—that is, antisocial values may help to channel those with low self-control into a criminal, as opposed to some other

analogous behavioral direction. It is also possible that low self-control and aggressive attitudes are part of an integrated antisocial propensity (Farrington, 1989; Loeber & Stouthamer-Loeber, 1998; Reid et al., 2002; Simons et al., 2001). At the least, however, it appears that ineffective parenting is likely to produce multiple criminogenic risk factors in youngsters that include deficits in control and in prosocial attitudes.

Taken together, these findings suggest that empirical reality is inconsistent with the idea that internal controls and aggressive attitudes are competitive, rather than complementary, criminogenic risk factors. It is likely that any resistance to this conclusion would be rooted in a continuing belief that control theory and social learning theory are inherently rival perspectives. This view is itself largely based on Hirschi's (1969) original critique of "cultural deviance" or social learning theory (see also, Kornhauser, 1978)—that positive learning to commit crime is unnecessary because the motivation to deviance is inherent in humans' preference for immediate gratification.

The control-theory position, however, is limited in two ways. First, it ignores much of modern psychology's findings on social learning and, more specifically, the substantial body of evidence linking social learning to crime (Akers, 1998; Akers & Jensen, 2003; Akers & Sellers, 2004; Andrews & Bonta, 2003; Cullen, Wright, Gendreau, & Andrews, 2003). Second, control theory's assumption about human nature is just that—an assumption. This view of human nature as prone to seek immediate gratification seems to be consistent with what research shows about the nature of much crime (e.g., versatile, little planning, immediate and short-lived gratification; Gottfredson & Hirschi, 1990). Still, the challenge for control theorists is to confront the empirical reality of consistent support for social learning constructs not only in this study but in the criminological literature generally (see, e.g., Pratt & Cullen 2000; Pratt, Sellers, Cullen, Winfree, & Madensen, 2005).

As the preeminent control theorists, Gottfredson and Hirschi (1990) not surprisingly remain resistant to any theoretical integration, trying to avoid any concession to differential association and social learning theory. In their writings, they seem to scrupulously avoid using the term *learning*, instead linking the acquisition of self-control to effective socialization and its weakness to "ineffective child rearing" (pp. 96-97). These terms appear, however, to be euphemisms for the concept of *learning*, and every once in a while, the term *learn* slips into their text (Hirschi & Gottfredson, 2001). It is not clear that Gottfredson and Hirschi can sustain the position that self-control is not a learned trait or propensity. And if this is the case, it is equally unclear why children would not simultaneously learn, or not learn, not only self-control but also a range of crime-related attitudes.

It is noteworthy that social learning theorists—especially Akers (1998)—are more likely to entertain the possibility of incorporating self-control into their theoretical paradigm, arguing that internal controls are a learned response during socialization (see also Andrews & Bonta, 2003). Akers contends that in the socialization process, individuals learn to control their behavior through a continuing process of sanctioning and modeling. Akers and other social learning theorists, however, tend to conceptualize self-control less as an overarching personality trait or criminal propensity and more as part of a set of cognitive skills by which people regulate their behavior (Bandura, 1986). At this point, the nature of self-control might remain a theoretical dispute to be resolved.

For parenting researchers, the challenge is to explore in more detail how parenting behavior is involved in the creation of low self-control and of aggressive (and other antisocial) attitudes. In particular, the absence of good parenting often means the presence of "bad" parenting. Parents who fail to care about, monitor, recognize wayward behavior, and discipline their children might also be prone to act toward their children impulsively, erratically,

coercively, and with anger. They may not only fail to instill self-control but also might, through their behavior, positively model or teach low self-control. They also might foster aggressive attitudes either through their own behavior or by neglecting to do anything about the aggressive acts of their children. This scenario is speculative (see, however, Colvin, 2000), but it may illuminate how parenting effects on self-control and aggressive attitudes are substantially intertwined.

Finally, the interrelationship between “bad” parenting, low self-control, and aggressive attitudes leads to two observations about the policy implications that flow from our study. First, building more effective parenting is likely to be a profitable source of intervention because it potentially affects several salient risk factors (see, e.g., Alexander, Pugh, & Parsons, 1998; Farrington, 1994; Henggeler, 1997; Henggeler, Mihalic, Rone, Thomas, & Timmons-Mitchell, 1998). Second, it also appears that low self-control and aggressive attitudes are important predictors of criminal involvement and thus that these factors should be targeted for change when family, school-based, or other interventions are undertaken (see also, Andrews & Bonta, 2003).

APPENDIX A
Correlation Matrix of Independent and Dependent Variables

	Age	Lunch	Male	Black	ADHD	Intact Family	Family Conflict	Monitor	Punish	Reinforce Aggression	Coercive Parents	Low Self-Control	Aggressive Attitudes	Crime	Violent Crime	Nonviolent Crime
Age	—															
Free lunch	.04*	—														
Male	.04*	.01	—													
Black	.32*	.32*	-.01	—												
ADHD	.04*	.07*	.17*	-.07*	—											
Intact family	-.09*	-.34*	.03	-.24*	-.10*	—										
Family conflict	.06*	.12*	-.12*	.05*	.00	-.14*	—									
Parent monitoring	-.23*	-.13*	-.14*	-.08*	-.05*	.14*	-.22*	—								
Inconsistent punish	.02	.12*	.00	.07*	.08*	-.11*	.26*	-.04	—							
Reinforce aggression	-.07*	-.10*	-.04*	-.12*	-.08*	.09*	-.13*	.32*	-.12*	—						
Coercive parents	.10*	.10*	-.03	.09*	.09*	-.16*	.46*	-.26*	.32*	-.11*	—					
Low self-control	.13*	.25*	.22*	.15*	.20*	-.22*	.25*	-.40*	.25*	-.37*	.31*	—				
Aggressive attitudes	.17*	.24*	.24*	.21*	.11*	-.18*	.17*	-.38*	.15*	-.40*	.24*	.72*	—			
General crime	.17*	.14*	.15*	.13*	.10*	-.11*	.21*	-.40*	.11*	-.27*	.27*	.41*	.41*	—		
Violent crime	.13*	.15*	.12*	.12*	.10*	-.11*	.21*	-.38*	.10*	-.28*	.27*	.37*	.38*	.93*	—	
Nonviolent crime	.24*	.10*	.05*	.08*	.08*	-.12*	.22*	-.35*	.11*	-.22*	.26*	.33*	.31*	.78*	.66*	—

NOTE: ADHD = attention-deficit hyperactivity disorder.

* $p < .05$.

APPENDIX B

Scale Items

<i>Scale</i>	<i>Items</i>
General delinquency	<p>Since school started in August, did you ever . . .</p> <p>Purposely damage or destroy property belonging to a school?</p> <p>Purposely set fire to a building, a car, or other property or try to do so?</p> <p>Carry a hidden weapon other than a plain pocket knife?</p> <p>Attack someone with the idea of seriously hurting or killing him or her?</p> <p>Get involved in gang fights?</p> <p>Sell illegal drugs? (Marijuana, LSD, Crack, Ecstasy, etc.)</p> <p>Hit or threaten to hit a teacher or other adult at school?</p> <p>Hit or threaten to hit one of your parents?</p> <p>Use force or threaten to use force to get money or things from other people?</p> <p>Use alcoholic beverages, beer, wine, hard liquor?</p> <p>Use illegal drugs? (Marijuana, LSD, Crack, Ecstasy, etc.)</p>
Coercive parenting	<p>How often have your parents/guardians disagreed with you?</p> <p>When you have had disagreements, how often have your parents/guardians discussed them calmly with you?</p> <p>How often have your parents/guardians argued heatedly or shouted at you?</p> <p>How often have your parents/guardians ended up threatening you?</p> <p>How often have the arguments between you and your parents/guardians ended up being physical (e.g., hitting shaking, shoving, etc.)?</p>
Parental monitoring	<p>How often does your parent/guardian know who you are with when you are away from home?</p> <p>In the course of a day, how often do/does your parent or parents/guardians know where you are?</p> <p>My parents/guardians care how late I stay out?</p> <p>My parents/guardians care how I do in school?</p> <p>My parents/guardians help me with my homework?</p>
Low self-control	<p>I often act on the spur of the moment without stopping to think.</p> <p>I don't devote much thought and effort to preparing or the future.</p> <p>I often do whatever brings me pleasure here and now, even at the cost of some distant goal.</p> <p>I am more concerned with what happens to me in the short run than in the long run.</p> <p>I frequently try to avoid projects that I know will be difficult.</p> <p>When things get complicated, I tend to quit or withdraw.</p> <p>The things in life that are easiest to do bring me the most pleasure.</p> <p>I dislike really hard tasks that stretch my abilities to the limit.</p> <p>I like to test myself every now and then by doing something a little risky.</p> <p>Sometimes, I will take a risk just for the fun of it.</p> <p>I sometimes find it exciting to do things for which I might get in trouble.</p> <p>Excitement and adventure are more important to me than security.</p> <p>If I had a choice, I would almost always rather do something physical than something mental.</p> <p>I almost always feel better when I am on the move than when I am sifting and thinking.</p> <p>I like to get out and do things more than I like to read or contemplate ideas.</p>

(continued)

APPENDIX B (continued)

<i>Scale</i>	<i>Items</i>
	<p>I seem to have more energy and a greater need for activity than most other people my age.</p> <p>I try to look out for myself first, even if it means making things difficult for other people.</p> <p>I'm not very sympathetic to other people when they are having problems.</p> <p>If things I do upset people, it's their problem, not mine.</p> <p>I will try to get the things I want, even when I know it's causing problems for other people.</p> <p>I lose my temper pretty easily.</p> <p>Often, when I'm angry at people, I feel more like hurting them than talking to them about why I am angry.</p> <p>When I'm really angry, other people better stay away from me.</p> <p>When I have a serious disagreement with someone, it's usually hard for me to talk calmly about it without getting upset.</p>
Aggressive attitudes	<p>If a kid threatens you, it is OK to hit them.</p> <p>It feels good when I hit someone.</p> <p>If you fight a lot, everyone will look up to you.</p> <p>Sometimes you have only two choices: get punched or punch the other kid first.</p> <p>If you are afraid to fight, you will not have any friends.</p>
Family conflict	<p>How often have your parents or guardians disagreed with one another?</p> <p>When they have had disagreements, how often have they discussed them calmly?</p> <p>How often have your parents/guardians argued heatedly or shouted at each other?</p> <p>How often have your parents/guardians ended up threatening each other?</p> <p>How often have your parents/guardians ended up being physical (e.g., hitting, shaking, shoving, etc.)?</p>

NOTES

1. Similar to Feld's (1999) use of the phrase "bad kids" in his analysis of policies affecting the processing of youths in the juvenile justice system, we use the term "*bad*" parenting as a parsimonious, if not poignant, way to convey the thrust of our project. Of course, we set this term off in quotation marks to indicate our realization that this it is a linguistic device, not a scientific concept.

2. It is also possible that a very small minority of parents intentionally teach their children the definitions, rationalizations, attitudes, and techniques that may predispose them to engage in crime. This possibility could explain the strong and consistent relationship between parents, particularly fathers, with a criminal background and their children's criminal behavior (Farrington, 1989; Thornberry, Freeman-Gallant, Lizotte, Krohn, & Smith, 2003).

3. The age of the current sample is younger than the samples used in the vast majority of tests of Gottfredson and Hirschi's (1990) theory, including those that focus on the impact of parental management on self-control (Gibbs et al., 1998; Hay, 2001). It should be noted, however, that Gottfredson and Hirschi argue that self-control is largely established by the end of childhood, which they pinpoint at about age 8. Arguably, then, an ideal test of the general theory would employ data drawn from grade school children. Still, the advantage of our sample—again, especially as compared to most extant studies—is the relatively short time span between age 8 and the age of our respondents (mean age of

just 12.4). During this time, it seems reasonable to assume that the respondents' self-control and parenting behavior would remain relatively constant. The finding from the current study (reported below) that parenting affects self-control in predicted directions lends credence to this proposition.

4. An alternative school with 50 seventh and eighth graders was excluded from participation in the survey by the school administration.

5. The EM algorithm generates values based on the variance-covariance structure of the full set of variables included in the analysis. Because the data are cross-sectional, missing values could not be generated via within-subjects estimation procedures because repeated measures over time would be necessary to do so. Thus, as opposed to an alternative method such as mean replacement, the variance estimates produced through imputation methods are not biased downward, which would otherwise increase the probability of obtaining statistically significant results (Nuamah, 1992). Note, that the percentage of missing cases on a single measure averaged less than 3.5%; however, the percentage of missing cases increased on the scales because we summed across numerous single-item measures.

6. Ideally, to operationalize Gottfredson and Hirschi's (1990) concept of ineffective parenting, it would be necessary to have measures that indicate the timing of when the parents administered punishments. Gottfredson and Hirschi argue that ineffective parents do not punish the child immediately after they become aware of the deviant behavior. This measurement difficulty could be overcome with observational data. However, to date, the extant research has used survey data, which has not included questions concerning the timing of the punishment (Hay, 2001; Gibbs et al., 1998; Perrone et al., 2004; Unnever et al., 2003). The present research also uses survey data, which do not contain information regarding the timing of the punishment. Hay (2001) contends that omitting this dimension of parental management may be acceptable because "research has consistently identified monitoring and discipline as the key aspects of effective parenting" (p. 715).

7. It must be emphasized that differential association and social learning theories and the general theory of crime both contend that ineffective parenting should affect their corresponding intervening variables—that is, attitudes that support the use of aggression and low self-control, respectively. For example, Gottfredson and Hirschi (1990) might be correct that low self-control is strengthened when parents give into their children because they are threatening them. However, it is also possible that, as differential association and social learning theorists would contend, attitudes that support the use of aggression are reinforced when parents give into their children because they are threatening them. If these theories are both correct, we should find that our measures of ineffective parenting should affect low self-control and attitudes that support the use of aggression.

8. Research shows that ADHD is a risk factor in a range of problem behaviors, including delinquency (Pratt et al., 2002), and that it has genetic and biological origins (Sprich, Biederman, Crawford, Mundy, & Faraone, 2000; Thapar, Harrington, Ross, & McGuffin, 2000; Weiss, Hechtman, & Weiss, 1999). Given the availability of a measure of ADHD in our study, we chose to include it as an alternative measure of individual differences. Specifically, we used a question in the survey instrument that asked students "Have you ever taken medication for being hyperactive (attention-deficit hyperactivity disorder)?" Notably, epidemiological researchers have used questions about ADHD medication status to measure its prevalence (Rowland et al., 2002).

We believe that our measure is a reasonable proxy for ADHD for the following three reasons (Unnever et al., 2003). First, to receive a prescription for ADHD medication, students must be referred to a physician and found to have symptoms consistent with ADHD. Second, the ADHD prevalence rates using the medication status measure are consistent with the extant research. In the current study, 14% of the 2,437 students ($n = 359$) reported having ever taken medication for ADHD. This percentage is similar to the rate of ADHD found in low-income community samples in which the Diagnostic and Statistical Manual impairment criteria are used to establish prevalence rates (Brown et al., 2001;

Pineda et al., 1999). Third, the results we present on the relationships of the medication status measure of ADHD to self-control and to delinquency are in the predicted direction.

However, Gottfredson and Hirschi (1990) might claim that ADHD overlaps with low self-control and that taking medication is a behavioral indicator of low self-control. To ensure that the effects of low self-control were not artificially deflated, we reran the analysis presented in Table 5 without the ADHD measure in the analysis. The results for self-control remain constant.

9. One possible interpretation of Gottfredson and Hirschi's (1990) theory is that parenting should not be analyzed by its components but as an overall construct. In this regard, we created a general "bad" parenting scale and reanalyzed the reported models in Tables 3 and 4. In this assessment, the results remained stable. First, parenting continued to have effects on delinquency through low self-control and aggressive attitudes. Second, the "bad" parenting scale, low self-control, and aggressive attitudes continued to directly affect delinquency.

10. We also assessed whether the models presented in Table 5 would generalize to an analogous behavior, school bullying. The scores on school bullying ranged from 0 (*I have not bullied another student at school*) to 4 (*several times a week*). The results presented in Table 5 for the effects of "bad" parenting, low self-control, and aggressive attitudes on the three measures of delinquency were reproduced in our analysis of the bullying data. These findings suggest that the general theory of crime and social learning theory are equally applicable to understanding criminal and analogous behaviors.

11. We conducted a factor analysis of the items included in our aggressive attitude and self-control scales. The results showed that our measures of having an aggressive attitude loaded on a separate factor than the indicators of self-control. These findings suggest that aggressive attitudes and self-control are separate and unique theoretical constructs. However, future research may want to theoretically investigate and empirically explore the strong association between low self-control and aggressive attitudes. It is possible that aggressive attitudes are another component of low self-control or low self-control and aggressive attitudes are both components of a yet broader theoretical construct.

12. Results from these analyses can be obtained by contacting the first author.

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