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IS THERE A RELATIONSHIP BETWEEN ATTACHMENTS TO
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James Earl Lyons II

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**IS THERE A RELATIONSHIP BETWEEN ATTACHMENTS TO
PARENTS, AND MALE ANTISOCIAL BEHAVIOR?**

By

James Earl Lyons II

A THESIS

**Submitted to
Michigan State University
in partial fulfillment of the requirements
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ABSTRACT

IS THERE A RELATIONSHIP BETWEEN ATTACHMENTS TO PARENTS, AND MALE ANTISOCIAL BEHAVIOR?

By

James Earl Lyons II

The purpose of this study was to explore the connection between male attachments to parents, and male antisocial behavior. A sample of 918 males ages 12-18 years from the United States was used in the research. The study concluded that attachments to parents were significantly and negatively associated with antisocial behavior. Regression analysis revealed; however, that Parental Attachment only explained 0% to 1% of the variance in overall Antisocial Behavior. However, this study was a secondary analysis, and validity of variables is a major limitation with reference to secondary analysis. Therefore, additional research testing parental attachment and antisocial behavior employing a primary data collection procedure is recommended.

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**For Tyler and Kyndal: Enjoy the little things, for one day you may look back and discover they were the big things.
Love Uncle JJ**

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KEY TO SYMBOLS AND ABBREVIATIONS

AIQ	Aspects of Identity Questionnaire
ANOVA	Analysis of Variance
ANTISOC	Total Antisocial
ASSAULT	Assault on Authority Figures (parents and teachers)
ATTPAREN	Attachment to Parents
ROBBOOTH	Acts of Robbery
SACQ	Student Adaptation to College Questionnaire
SOLDSTO	Sold Illegal Drugs and Acts of Theft
VIOLENT	Violent Antisocial Acts
DV	Dependent Variable
IV	Independent Variable
SD	Standard Deviation
H ₀ :	Null Hypothesis
H	Hypothesis
X	Independent Variable
Y	Dependent Variable
R ₂ :	Explained Variation (Correlation Squared)
P	Attained Significance Level
α	Alpha Level
χ^2	Chi-Square
r	Correlation (Pearson)
n	Sample Size

t	T-Statistic
sig	Significance
β	Standardized Regression Coefficient

INTRODUCTION

The Problem

The inquiry of juvenile delinquency and the possible causes of this phenomenon in America have evolved greatly. From casual assumptions to well organized scientific studies, possible causes of delinquent behavior have been the interest of the neighborhood community as well as the scientific community.

This topic was chosen because antisocial behavior appears to be a developmental trait that begins early in life and often continues through adolescence, into adulthood (Patterson, DeBaryshe, & Ramsey, 1989; Loeber, 1982; Olweus, 1979). For many children, stable manifestations of antisocial behavior begin as early as the elementary school grades (Farrington, Ohlin, & Wilson, 1986). There is a history of empirical studies that have identified family variables as consistent indicators for early forms of antisocial behavior (LeBlanc, 1994; Patterson et al., 1989; Loeber, 1982; Loeber & Dishion, 1983; McCord, McCord, & Howard, 1963; Glueck & Glueck, 1962). Through studies, attachment or bonding to parents and parental variables are consistently found to be related to delinquency, yet, the importance of parenting skills tends to be ignored in most major theories of delinquency (Cernkovich & Giordano, 1987). This is best characterized by the belief that parent-child interaction variables are not nearly as important as peer interaction, school factors, and various structural factors such as intact families (i.e. parents not divorced) in understanding delinquent behavior patterns (Cernkovich & Giordano). Cernkovich and Giordano have asserted that family variables such as parenting have been ignored because of the “guidelines” established by scholars of the social sciences (1987: 296):

This has been attributed to a desire to avoid “psychologizing.” That is, while Criminologists include in their analyses such structural or social variables such as social class, blocked opportunities, and peer relations, such variables as personality characteristic and parent-child relationships are avoided because they are “too psychological.” This is yet another example of the misguided loyalty to artificial disciplinary boundaries which is far too characteristic of the social sciences.

This particular study is important because it will assess or determine the role attachment to parents’ plays with reference to antisocial and pro-social characteristics in male children. The potential significance of this study is to show whether or not attachments between parents and male children are major factors in predicting antisocial behavior. If parental attachment is found to be related to antisocial behavior; then, a more adequate knowledge of the possible causes of antisocial behavior would assist policy makers and programmers in designing more effective policies and programs regarding parent-child relations, and antisocial behavior.

Research Objectives

The research objectives of this study are:

1. To determine whether an association exists between parental attachment and male antisocial behavior.
2. To determine how much variance in antisocial behavior is attribute to parental attachment.

Overview

Criminologists are concerned about family variables relative to the development of early forms of antisocial behavior and later delinquency. This study of the American youth population examines male behaviors as well as parental factors. Self-reported delinquency and parent-child attachments were measured using the available variables in the National Youth Survey (Wave II). The dataset contained information on male and

females in the American population; however, only the male cases were used. A measure was made of the two variables self-reported delinquency and parent-child attachment.

This research is an important endeavor because follow up studies of antisocial males show that as adults they ultimately contribute disproportionately to the incidence of criminal activity, accidents, alcoholism, chronic unemployment, divorce, psychiatric illness, and the demand on welfare services.

The following section explains social control theory in detail as well as numerous studies that have utilized a social control approach. Also included in the literature review is a section that discusses the importance of attachment and how it relates to children becoming socially competent as young adults. The literature review also includes previous work concerning parent-child interactions as dynamics of the family structure and a section examining factors associated with being at risk for antisocial behavior.

CHAPTER TWO REVIEW OF RELATED LITERATURE

Theoretical Framework-Introduction to Theory

Throughout the span of sociological research, several theories have emerged regarding delinquency causation. In Robert Trojanowicz and Merry Morash's Juvenile Delinquency Concepts and Controls, the authors discussed several theories of delinquency causation. Travis Hirschi's social control theory (1969) was found to have the strongest empirical research (Junger & Marshall, 1997; Akers, 1994; Trojanowicz & Morash, 1992; Agnew, 1985, 1991; Gardner & Shoemaker, 1989; Wiatrowski, Griswold, & Roberts, 1981; Krohn & Massey, 1980; Johnson, 1979; Hepburn, 1977; Hindelang, 1973). Thus, it offers one of the most adequate explanations for delinquency causation.

This research project is centered on Travis Hirschi's control theory. Social control theory asks the question, "why do humans *refrain* from engaging in delinquent behavior?" Social control theory incorporates four main elements that Hirschi theorized to be the foundation of conventional behavior. Conventional behavior is conceptualized as behavior that is socially acceptable and of high moral standards. Those elements are attachment, commitment, involvement, and belief. Moreover, Hirschi theorized that these elements work independently to socialize individuals in order to mold the individuals obey the laws and norms of the society in which they live. This chapter is dedicated to providing the reader with a complete overview of Hirschi's social control theory. This chapter also provides the reader with numerous past studies that have tested the validity and efficacy of social control theory. Towards the end of this chapter is a section that examines the importance of early attachment to parents. This last section demonstrates the effect of the early bond in later years.

Social Control Theory

Travis Hirschi's social control theory, also known as bonding theory, stresses aspects of youths becoming bonded or socially integrated into the norms of society (Champion, 1992). Control theory assumes that people will commit crimes if it is left to their own will. The question that control theory asks then is, why do most people *not* commit crimes. Control theory seeks to answer that question by focusing on elements that Hirschi thought restrained individuals from committing crimes. These devices break down in certain conditions that result in crime and uncontrollable behavior. Thus, individuals, according to social control theory, commit crime because of the weakness of devices restraining them from doing so, not because of the strength of devices driving them to do so (Vold, Bernard, & Snipes, 1988).

Control theory classifies, describes, and proposes a process that orders and specifies the interrelationships among the elements of the bond (Akers, Krohn, Lon, Lanza-Kaduce, & Radosevich, 1979).

Elements of the Bond

The element attachment is defined as the effective bond that the youth forms with significant others. Social control theory proposes that if there is a lack of attachment to significant others, all characteristics that the deviant individual exhibits be attributed to the lack of attachment. Norms and moral restraints are defined and shared by members of society; therefore, an individual who violates a societal norm and suffers from a lack of a sufficient bond to society is insensitive to the opinion of others and is not bound by its norms (Hirschi, 1969). Thus, control theory suggests that attachment to any conventional person, group, or institution outside of one's self promotes moral behavior (Durkheim, 1961).

Commitment is defined as the individual's actual or anticipated investment in conventional activities. To the person committed to conventional lines of action, a risk that exceeds the value of what is to be stolen is not worth stealing. The concepts of commitment assumes that the organization of society is such that the interests of most persons would be endangered if they were to engage in criminal acts (Hirschi, 1969). Therefore, when an individual feels that his or her future status depends on present actions, the individual becomes committed to conventional lines of action and is therefore committed to conformity. Hirschi's social control theory assumes that when an individual is committed to conventional activities the individual chooses not to engage in delinquent activities.

The element of involvement stresses the notion that juveniles of any social or economic background can become susceptible to committing delinquent acts if leisure time outweighs conventional recreational involvement (Matza & Sykes, 1961). Involvement refers to involvement in conventional activities, which lead toward socially valued success and status objectives. The quality of a youth's participation in conventional activities and his or her relationship to future goals and objectives is important in preventing delinquency (Wiatrowski et al., 1981). Time spent on homework or other school related activities, for example, is viewed as future predictors to success in attaining educational goals which are prerequisites to high-status occupations. The assumption that is linked with the element of involvement is that a person may be too preoccupied engaging in conventional activities to find time to engage in deviant behavior (Hirschi, 1969). The element of belief is based on the assumption that all individuals are socialized (perhaps imperfectly). This particular element asks the question, "why do men violate the rules in which they believe?" Control theory

assumes that individuals do not develop systems of rationalization in order to justify commission of acts they want to commit. Instead, the beliefs allow an individual to commit deviant acts without motivation from a system of rationalization that explains and justifies the attachment of illegal means. Control theory also postulates that “there is variation in the extent to which people believe they should obey the rules of society” (Hirschi, 1969: 26). Therefore, the less a person believes he or she should obey the rules, then the more likely he or she will violate the rules.

Relations Among the Elements

According to Hirschi (1969), any individual who has bonded with conventional society through any one particular of the four aforementioned elements has probably bonded similarly with reference to the other three elements as well. Control theory assumes that an attachment to a conventional other and a commitment to achievement and prosperity are expected to relate in a positive manner (Hirschi, 1969).

Commitment and involvement’s relationship is important to understand because delinquent acts are events that take place at specific points in time. If an individual is involved in a conventional activity or committed to lines of conformity, it is less likely that he or she will engage in acts of delinquency. In other words, it is not definite that a conventionally attached individual will conform. It is only assumed that the individual is less likely to engage in delinquent behavior. Specification of some of the conditions necessary for delinquent behavior to occur often produces indeterminacy. Indeterminacy is specified as lacking the ability to be measured. It is not correct to imply that an individual will necessarily commit an act of deviance because of a lack of bonds to conventional society. Therefore, it is more appropriate to conclude that an individual weakly attached to conventional society is more likely to commit delinquent acts than

an individual with strong attachments to conventional society.

Attachment to Parents

Control theory assumes that crime is deterred greatly by the bond of affection for conventional others. The stronger the bond is between parents and children, the more the adolescent contemplates *not* committing the delinquent act. Parental ideals are passed to their children through the emotional bond (McKinley, 1964). “In control theory, then, attachment to parents becomes a central variable, and many of the variations in explanations of this relationship are the basis of control theory” (Hirschi, 1969: 86). The link between socialization and internalization of norms and attachment is difficult to determine; therefore, control theory assumes that the moral element is within the attachment itself. The element attachment is easily seen to vary with the same person over time. For example, if the attachment or bond between parent and child is weakened, the probability of delinquent behavior will increase. If the bond becomes stronger the probability for delinquency declines (Hirschi).

Attachment to conventional parents is assumed to work against the commission of delinquent acts through direct control and psychological presence. The child who spends a great deal of time in his or her parents’ presence is less likely to be faced with opportunities to commit delinquent acts for one obvious reason. The reason being that the child is constantly with or near the parent. However, the time it takes to commit a delinquent act is miniscule, and direct control, according to Hirschi holds little or no water in delinquency theory (Hirschi, 1969). Therefore, if a child is confronted with a delinquent opportunity and declines to commit the illegal act because of internal questions concerning parental approval or reactions, that parent is present psychologically. Psychological presence is based on how much time parents spend

with their children or the extent to which the child interacts with the parent on a personal level (Hirschi: 89-90):

The child is less likely to commit delinquent acts not because his parents actually restrict his activities, but because he shares his activities with them; not because his parents actually know where he is, but because he perceives them as aware of his location. Following this line of reasoning, we can say that the more the child is accustomed to sharing his mental life with his parent, the more he is accustomed to seeking or getting their opinion about his activities. We can also say that he is more likely to perceive them as part of his social and psychological field, and the less likely he would be to neglect their opinion when considering an act contrary to law-which is, after all, potential source of embarrassment and/or inconvenience to them.

Hirschi (1969) sampled 17,500 students entering 11 public junior and senior high schools of that area in the fall of 1964. The sample was drawn as part of the Richmond Youth Project. Hirschi hypothesized that the social control elements would correlate negatively to delinquency.

Hirschi conducted a study integrating the social control principles. Self-reported delinquency by the mother's virtual supervision indicated that among the children with low supervision, 55% reported committing two or more acts of delinquency, while 12% of children with high supervision reported committing two or more delinquent acts. The results for self-reported delinquency by intimacy of communication with the father indicated that of the children, who reported the least intimate communication with their father, 43% reported committing two or more delinquent acts. Five percent of the children who reported committing two or more delinquent acts reported more intimate communication with the father. Affectionate identification with the father as it relates to self-reported delinquency was measured by asking children the question, "Would you like to be the kind of person your father is?" Of those children who answered, "In every way," 16% admitted to committing two or more delinquent acts. Of those who answered "Not at all," 38% admitted to committing two or more acts of delinquency. Attachments

to peers were measured by asking the children, "Have any of your close friends ever been picked up by the police?" Of those who answered "No," 7% reported committing two or more delinquent acts. Of those who answered "Four or more," 45% reported committing two or more acts.

The section of Hirschi's study that tested the commitment to conventional actions indicated the following. When the question, "Do you smoke cigarettes?" was asked, among those who answered, "Yes, I began before 13," 48% reported committing at least two acts of delinquent behavior. Of those who answered "No," 12% admitted to committing two or more delinquent acts.

The section of the study based on involvement indicated that 34% of the of the children who reported spending one and a half hours or more devoted to homework reported committing one or more delinquent acts. Sixty-four percent who reported spending less than one half hour on homework reported committing one or more delinquent acts.

The belief element's results indicated that of those who answered, "Strongly agree" to the question "I have a lot of respect for the Richmond police," 12% reported committing two or more acts of delinquency. Of those who answered, "Strongly agree," 45% reported two or more acts of delinquency.

Delinquency and the Failure of Social Controls: An Overview

Delinquency results when there is a breakdown or absence of internalized norms and rules set by society. Reiss (1951) conducted a study in which he isolated a set of social controls he thought to be related to delinquent recidivism. Upon isolation of the social controls, Reiss sought to evaluate them as prognosticators of delinquent recidivism. The researcher chose from each juvenile's personal folder items that were

appropriate measures of social control in primary groups and social control by community and institutions.

Measures of social control from the primary group included economic status of the family and parental conflict. The economic status of the family as discussed by Reiss (1951) is the ability of the family to provide for the needs of the child. The researcher conceptualized that the economically dependent family has a lack of financial stability, which often leads to lack of respect for the supposed provider (usually the father). Dependent economic status usually results in diminished parental authority over family members. Loss of parental authority (especially among fathers) is greatest over the adolescents of the family.

For Reiss' study, parental conflict was hypothesized to have an effect on delinquency. Parental conflict, as measured in this study involved parents of juvenile delinquents who were together structurally but had conflicts within their structural unit. Absence of a formal break does not necessarily mean that the social-psychological unit of the family is intact.

The results indicated a statistically significant association between economic status of family and outcome on probation. There was a 27.5% failure rate for children with parents who earned over \$270 per month and a 53.8% failure rate for children whose parents were on public assistance. The parental conflict measure indicated that children who had parents that got along well had a 26.3% failure rate and those couples with gross incompatibility had children that indicated a 42% failure rate.

Social Control Theory: Gender Differences and Delinquency

This thesis deals with patterns concerning male antisocial behavior. Therefore it is appropriate to include studies pertaining to social control theory and gender. Jill

Rosenbaum (1987) conducted an empirical examination of social control theory as postulated by Hirschi (1969). The analyses focused on male and female delinquent behavior by social class and three types of delinquent behavior; drug offending, property offending and violent offenses, which served as the measures of delinquency. The independent measures that were used are attachment to parents, peers, and school; class, commitment to conventional activities, involvement in conventional activities, delinquent friends, dating, and belief in the law (Rosenbaum).

The data for Rosenbaum's study were derived from a self-reported questionnaire administered to a sample of male and female adolescents in Seattle between 1977 and 1979. A stepwise multiple regression analysis technique employed in the study.

The results for property offending indicated that the explained variance for females was 13% and 19% for the lower and upper classes respectively. For their male counterparts the explained variation for the lower and upper class was 7% and 8% respectively. The stepwise analysis for drug offending yielded stunning results for females, especially the upper class females. The explained variation for drug offending females was 47% for upper class females and 17% for lower class females. The explained variation was 12% and 15% for their lower and upper class male counterparts. The stepwise multiple regression table for violent behavior indicated slightly different results from property offending and drug offending. The results for the lower class males and females were slightly greater for the lower class males. The results were 6% and 5% for males and females respectively. For the upper class males and females the results were more consistent with the preceding results, indicating 5% and 7% of the variance for males and females (Rosenbaum, 1987).

The correlation for property offending and the independent measures indicated

negative associations between property offending and all of the independent measures with the exceptions of delinquent friends and dating. This held true for both social groups of males and the upper class females (attachment to peers did not enter the equation for upper class females). The same held true for lower class females with the exception of attachment to parent, which was found to correlate positively and highly with property offending (Rosenbaum, 1987).

The correlation for drug offending and the independent measures indicated negative associations between drug offending and all of the independent measures except delinquent friends and dating. This held true for both social groups of females and the upper class males (attachment to parents and peers did not enter the equation for upper class females). There was an exception, however regarding the lower class males. The same held true for the lower class males with the exception of dating, which was found to correlate negatively with the drug offending (Rosenbaum, 1987).

Finally, the correlation between violent behavior and the independent measures did not enter the equation. However, positive correlations were found between drug offending and number of delinquent friends for both social groups of males and the upper class females. The upper class females also indicated a positive correlation between violent behavior and dating (Rosenbaum, 1987).

Overall, this examination of social control theory's relationship with different types of delinquency indicates important differences. The most obvious result is that the theory accounts for more explained variation in female than male involvement for both drug and property offending, and a negligible amount of explanation of violent behavior for both sexes. This study gives an important look at gender differences and how social control theory explains those differences. However, several independent variables did

not enter the equation and the correlation between violent behavior and the independent measures were unclear.

Social Control Theory: A Rural and Urban Comparison

This section of the literature review entails how efficient social control theory predicts behavior in urban and rural locations. Gardner and Shoemaker (1989) conducted a study entertaining this type of comparison. The sample consisted of seven hundred thirty three 8th –12th grade students living in a predominantly rural and urban locale in Virginia. A cross-sectional multivariate analysis technique was employed. The operational measures consisted of a self-report survey (Gardner & Shoemaker). The researchers hypothesized that there would be a significant inverse relationship between components of the social bond and delinquency, with one exception, attachment to peers, which is expected to be positive. Gardner and Shoemaker also hypothesized that the associations between social bond factors and delinquency would be stronger in the rural locale instead of the urban locale. He combined explanatory power of the social bond components would be greater within the rural sample than the urban sample (Gardner & Shoemaker),

The measures of delinquency for Gardner and Shoemaker's study were property offenses, violent behavior, drug possession, and the less serious juvenile misbehaviors. The social bonding measures were involvement in school and community, attachments to peers, parents, teachers and church; commitment to church, school, parents, and peers; and beliefs (Gardner & Shoemaker, 1989).

The zero-order correlation for the total sample indicated negative correlations between the social bonding measures and the delinquency measures with the exception being, positive relationships between attachment to peers, drug possession, juvenile

misbehaviors, and total delinquency. The individual indexes indicated that for the total sample, the social bonding measures explained 41% of the variation in total delinquency. The index for the urban sample indicated that the independent measures explained 27 of the variance in total delinquency. The rural sample indicated that 47% of the explained variation was attributable to the social bonding measures. The results found in this study were concurrent with the hypotheses of the study (Gardner & Shoemaker, 1988).

Social Control Theory: Specifications, Replications, Suggestions, and Criticisms

A Longitudinal Study

Social control theory has become one of the most dominating theories of delinquency because the theory has received much empirical support. However, many researchers have contended that Hirschi's (1969) social control theory does not explain why the more serious acts of delinquency occur. According to Robert Agnew (1985) social control theory, as proposed by Hirschi, as only explained 1% to 2% of the variance in future delinquency when a longitudinal study was applied. This small variance is due to the assumption that the social control variables have a causal impact on delinquency, and the majority of the studies regarding social control theory have been cross-sectional studies. Robert Agnew stated that "since social control variables only explained 15 to 2% of the variance in delinquency, cross-sectional studies gave greatly exaggerated the importance of Hirschi's theory" (Agnew, 1985: 47).

Robert Agnew (1985) conducted a longitudinal study testing the predictive power of social control theory. Agnew wanted to test the hypotheses that control theory only predicts delinquent acts that are minor in nature, and those longitudinal results will indicate less variance between the social control variables and delinquency. The argument that Agnew was making was that longitudinal studies are more accurate

than cross-sectional studies when engaging in research concerning social control variables and the variables' effects on delinquency.

Agnew (1985) employed a panel design and collected the first set of data from 2,213 boys beginning the 10th grade and collected the second set of data from 1,886 of the members of the original sample, which accounted for 85% of the original sample. In order to test the previously stated hypotheses, Agnew (1985) used total delinquency and seriousness of delinquency as measures of delinquency. When the social control variables from the Time 1 section were regressed on total delinquency and seriousness of delinquency, the cross-sectional regression results indicated that the social control variables explained almost twice as much variance in total delinquency. The cross-sectional study also revealed that only four of the eight control variables used has a significant effect on seriousness of delinquency while six of the eight control variables had a significant effect on total delinquency. These results confirm that control theory is best able to explain minor delinquency.

The longitudinal regression results indicated that the longitudinal effects of the control variables are lesser than the cross-sectional effects. Only three of the eight control variables had a significant effect on Time 2 seriousness of delinquency, and likewise, three of the eight control variables had a significant effect on Time 2 total delinquency. The amount of variance explained by the control variables over and above Time 1 delinquency, indicated that the control variables accounted for 1.5% of the variance in Time 2 seriousness of delinquency and 1.8% of the variance in Time 2 total delinquency. The regression results suggested that the social control variables as a whole has a very small impact on Time 2 delinquency (Agnew, 1985).

Although the majority of the results supporting control theory's ability to explain

minor delinquency was obtained using cross-sectional techniques, Agnew (1985) explains that this is because “prior researchers have usually tested control theory with scales based toward minor offenses. For that reason, they have greatly exaggerated the importance of this theory” (Agnew, 1985: 53).

An Empirical Test of Hirschi’s Model

Thompson et al. (1984) empirically tested the validity of Hirschi’s control theory (1969). These researchers sought to test Hirschi’s approach through multiple regression analysis in the form of path diagrams. The diagrams were derived through a path analysis, which assumed that all variables included in the model were measured independently of each other. This type of analysis goes beyond indicating relationships between two pairs of variables (i. e. correlation procedures). The sample size was 724 juveniles with varied self-reported delinquency experiences. The juveniles were from a number of high schools and correctional institutions in a metropolitan area in the southwest. The study included males and females.

The findings of this study were derived from correlation matrices, and two-path analysis. The results of the correlation matrices indicated that for males, the associations between delinquent companions and delinquent acts was .71. The association between attachment and delinquent acts was -. 29. Conventional attitudes and delinquent acts indicated an association of -. 36. In addition, delinquent companions indicated a negative and moderate association with attachment and delinquent acts (-. 27 and -. 33 respectively). For females, the association between delinquent companions and delinquent acts was strong but not as pronounced as the association among males. For females, the correlation coefficient was .48. Among females, attachment and conventional attitudes related negatively and moderately to delinquent acts indicating

correlations of $-.26$ and $-.30$ respectively. There was a weak but negative association between delinquent companions and attachment ($-.13$), and delinquent companions and conventional attitudes indicated a correlation of $-.14$ (Thompson et al., 1984).

The path analysis of Hirschi's model indicated findings consistent with control theory; however, the path coefficients were significantly weaker than the original correlation. For males and females, the path coefficients between attachment and delinquent acts were $-.12$ and $-.13$ respectively. At the same time, a negative and low path coefficient was indicated between conventional attitudes and delinquent acts ($-.28$ and $-.23$). Furthermore, attachment and conventional behavior combined, explained only 13% of the variation in delinquent acts among males and 10% among females.

These findings are inconsistent with Hirschi's proposition of the bonding elements interrelating (Thompson et al., 1984). In addition, the explained variation, when delinquent companions are added to the path analysis, increases to 52% and 30% for males and females respectively. Hirschi's original model did not include delinquent companions. Hirschi suggested that any relationship between delinquent companions and delinquency was spurious and would disappear when controlling for other factors. These data do not support Hirschi's original model and the researchers suggest that Hirschi revise the theory to not only include conventional peers, but include delinquent peer association as well (Thompson et al.).

Direct Parental Controls and Delinquency

Wells and Rankin (1988) undertook a project that sought to examine direct parental controls. The researchers asserted that Hirschi's (1969) theory was not inclusive of all parental controls. In particular, Wells and Rankin suggested that Hirschi's (1969) model was not complete because of his lack of discussion about direct parental controls.

Direct controls are those dimensions such as parental regulation, parental monitoring, and punishment. Direct controls are concerned with the physical restriction and surveillance of behaviors. Indirect controls are dimensions such as attachment, involvement, belief, and commitment. These four components are conducive to Hirschi's model. The two elements that are most closely related to parental controls are attachment and involvement. These elements are said to be indirect controls because they are essentially concepts that do not involve one-on-one parent-child interactions. Indirect controls are based primarily on affectionate attachment to or identification with conventional persons (especially parents). Hirschi (: 88) argued that direct parent controls offer little effect in controlling delinquent behaviors beyond that already offered through attachments or indirect controls:

Since most delinquent acts require little time, and since most adolescents are frequently exposed to situations potentially definable as opportunities for delinquency, the amount of time spent with parents would probably be only a minor factor in delinquency prevention. So-called "direct control" is not, except as a limiting case, of much substantive or theoretical importance. The important consideration is whether the parent is psychologically present when temptation to commit a crime occurs.

The aim of Wells and Rankin's (1988) research project was to indicate conceptually what the relevant content of direct parental control variables might be and to examine empirically what relationships direct parental controls have with delinquency. The study analyzed the Youth in Transition Panel data. The data set included four waves of surveys administered to a nationwide sample of boys who were in the 10th grade in 1966. A total of 2,277 boys were selected into the sample list. Of the sample, 97% (2,213) of the boys agreed to participate in the initial survey. Eighty-five percent of the original sample was present in the second wave, and 73% of the original sample were included in the sample at the fourth wave. However, for the purpose of their study, Wells

and Rankin used only the first and second waves of the Youth in Transition Panel study. The researchers focused on the first and second waves because the respondents were sophomores and juniors at the time (15 to 17 years old). These ages correspond to the point in adolescence at which delinquent activities are most frequent and problematic (Wells and Rankin, 1988).

The multidimensional content of direct parental control was measured by four variables. Those four variables were chosen to correspond closely to the dimensions of direct control of children by parents who were described in the previous paragraph. Those dimensions were regulation, monitoring, and punishment. The four variables used were first, regulation/restriction (a summary index of five items indicating the degree to which parents decided their sons' friends and activities). Second was strictness, (an index of how strict respondents rated their parents to be). Third was punishment contingency (a measure of how frequently parents ignored rather than punished wrongdoing). The last variable was punitiveness (a summary index of items rating how vigorously and frequently parents punished their sons, ranging from yelling to hitting) (Wells and Rankin, 1988).

Six variables were used to measure involvement in juvenile delinquency. Those variables were total delinquency, theft/vandalism, assault/threat, and trouble with parents, school delinquency, and trouble with police.

All of the direct control measures were coded as three category variables. Mean levels of delinquency were compared across categories using analysis of variance (ANOVA) procedures. This type of statistical procedure provides both an estimate of the strength of association between parental control and delinquency variables as well as a test of the linearity of their correlation. Nonlinear associations were indicated to exist

between perceived strictness of parents and delinquent behaviors. The other three direct control measures indicated generally linear associations with delinquent behaviors. However, the differences for regulation/restriction were somewhat weak across all of the measures of delinquency. Contingency and punitiveness both show consistent associations with all forms of delinquent behavior (Wells and Rankin, 1988).

The correlation coefficients indicate that for three of the four direct control variables (strictness, punishment contingency, and punitiveness), the coefficients are moderate (mostly between .1 and .2) and statistically significant. Punitiveness was the strongest and most consistently related to delinquency with correlation ranging from .18 to .11. A multiple regression model combining all of the direct parental controls explained 22%, 16%, 19%, 21%, 23%, and 13% of the variance in total delinquency. The delinquency measures were theft/vandalism, assault/threat, trouble with parents, school delinquency, and troubles with police respectively (Wells and Rankin, 1988).

The results of Wells and Rankin's (1988) study indicated that measures of direct parental control relate in ways consistent to the occurrence of delinquent behavior. The researchers argued that direct controls are significantly related to various measures of delinquency and suggest that direct parental controls be researched further and should not be dismissed as empirically and theoretically irrelevant, as suggested by Hirschi (1969).

A Partial Replication and Extension

Michael Hindelang (1973) sought to examine the extent to which social control theory could be replicated. Hirschi (1969) focused primarily on urban males, so Hindelang focused primarily on rural males and females. Hindelang's major dependent variable was a recency index. A recency index is a simple sum across all acts. Hirschi also used a recency index, which was composed of several questions regarding

involvement in delinquent behaviors.

Hindelang (1973) used the same independent variables as Hirschi (1969). The independent variables were attachment to parents, attachment to school, attachment to peers, involvement in conventional activities, and belief. The dependent variables were delinquent involvement and the recency index.

Attachment to parents, as Hirschi (1969) conceptualized, was that when parental attachments are strong, parental values (presumed to be anti-criminal) are more readily accepted. The question that Hirschi asked was, "Would you like to be the person your father is?" In the recency index, Hirschi found that 64% of those who answered, "In every way" compared to 41% of those who answered "Not at all" scored low on the recency index. Hindelang's results for the rural males were 61% and 36%. The results for the rural females were weaker with a score of 65% and 48%, which was low on the recency index. Among the rural groups, attachment to parents was related to reported delinquent involvement, as Hirschi predicted (Hindelang, 1973).

Control theory postulates that weak attachments to school reduce the interest in school, which allows the child freedom to engage in delinquent behavior. For this aspect of the study the children were asked, "Do you care about what you teachers think of you?" Among the rural males who reported that they cared "A lot," 70% reported low delinquency involvement. The results were the same in 67% of the rural females studied. Of those rural children who reported "Not much," 35% and 42% were the males and females respectively reported low delinquency involvement. Hirschi's (1969) results indicated 66% and 36% respectively.

The variable attachment to peers was the first variable that was found by Hindelang (1973) to diverge from Hirschi's (1969) results. Hirschi hypothesized that the

greater the peer attachment (conventional peers), then the lower the reported delinquent involvement (Hirschi failed to include unconventional peers in his study). Hindelang found that among the rural children there was a generally positive relationship between the extent of identification with friends and the extent of reported delinquency. The compared results were as follows: Hirschi found that among the urban males, 64% who reported identifying most closely with friends reported low delinquency involvement while 47% who reported “Not at all” (close ties with friends) reported low delinquency involvement. Among the rural sample of males who reported to have close ties with their friends, 48% reported low delinquency, and 67% of those who identified the least with friends, reported low delinquency involvement.

The final two variables, involvement in conventional activities and belief, as studied by Hindelang (1973) were found to be similar to the results provided by Hirschi (1969). The overall correspondence between Hirschi’s results and Hindelang’s is substantial with the exception of peer attachments. Hindelang stated that “this may indicate that Hirschi’s control theory will have to be more specific about attachment to peers. The theory may need to be reconceptualized in terms of attachment to conventional and unconventional peers” (Hindelang: 487).

An Examination of the Elements of the Social Bond

Krohn and Massey (1980) examined the overall effects of the elements of Hirschi’s social control theory on four separate measures of deviance using data drawn from a sample of 3,065 adolescents. A self-report questionnaire was administered to male and female adolescents in six communities in three Midwest states. The researchers investigated the individual effectiveness of the elements, distinguished differences between minor and major delinquency, and whether social control theory is more effective

in explaining deviant behavior among females than it is for males.

The results addressing the individual effectiveness of the elements were produced by bivariate regression. The correlation matrix indicated moderate inverse association between 7 of the 10 bonding measures and the four measures of delinquency. The 10 bonding measures were maternal and paternal attachments, peer attachments, commitment, educational and career aspirations, grade point average, parents morals, moral duty to obey the law, and school learning helps find job. The three bonding measure that were not consistent with Hirschi's original theory were peer attachments, educational aspirations, and career aspirations. The second question, which pertains to seriousness of crime, is answered by multiple regression analyses. Alcohol and marijuana conceptualized soft drugs and hard drugs were defined as barbiturates, hallucinogens, amphetamines, and opiates. For alcohol and marijuana use and abuse, the theory accounted for 29% of the variance. Twenty-four percent of the variance with reference to status offenses and minor delinquent acts was attributed to the theory. The theory accounted for 16% of the variance in hard drug use and 18% of the variance in serious delinquent acts.

Multiple regression analyses were also conducted to establish how much the theory contributed to gender differences. The overall effect of the commitment items is greater for females than for males, with the opposite being true for the attachment items. The partial regression coefficient results indicated that 13% and 11% of the variance in alcohol and marijuana use was explained by attachment for males and females respectively; with 8% and 6% of hard drug usage attributed to attachments. For the commitment item 13% and 17% of the variance in alcohol and marijuana use was attributed to attachments; and for hard drug use, the numbers were 7% and 14% for males

and females respectively.

The theory continued to indicate its explanatory power with relation to females in the belief item. In the belief item for alcohol and marijuana usage, 19% of the variance was explained by belief with reference to males. It was indicated that 23% of the variance was explained by belief with reference to females. With reference to hard drug usage among males, 6% of the variance was attributed to belief. The respective percentage was 13% for females. For all variables representing the seriousness of delinquency scale, 24% of the variance was attributed to the bonding variables for males and 25% for females. For all variables representing the seriousness of delinquency scale, 18% of the variance was attributed to the bonding variables for males and 19% for females (Krohn & Massey, 1980).

In conclusion, the study of Hirschi's social control theory (1969) suggests that there is sufficient support for the theory's major hypotheses to continue the task of clarification and modification. Krohn and Massey stated "to the extent that this process continues, the theory will remain an important focus in criminological thinking" (Krohn & Massey, 1980: 42).

An Elaboration of Hirschi's Model

Cernkovich and Giordano (1987) conducted a study that built directly upon the work of Hirschi (1969). Their research project was an extension of Hirschi's model because of questions concerning the dimension (s) of attachment. According to Cernkovich and Giordano (1987) Hirschi was not specific with regard to what constitutes attachment. The researchers asserted that Hirschi was somewhat ambiguous when it comes to whether or not attachment is one dimensional or multidimensional in nature. For example, Hirschi gives the impression that the element attachment is a one

dimensional construct by asserting that attachment is one of four ways in which individuals are bound to the social order (i.e. attachment, involvement, commitment, and belief). However, at other times Hirschi concentrates on the communication origins of attachment or on the feelings of affection which characterize attachment. When this is the case, Hirschi is giving the impression that attachment is multidimensional in nature.

The purpose of Cernkovich and Giordano's (1987) research was to examine the several dimensions of family attachment and interaction, and the dimensions' impact on delinquency. In addition to this elaboration of Hirschi's (1969) model, the researchers are also interested in whether the specified variables are consistent across different types of family structure, or whether there are difference in interaction dynamics by family type (Cernkovich & Giordano). For example, if a child is attached to both parents, are his or her chances of being non-delinquent double those of a child attached to a single parent? Finally the research will examine whether or not there are race or sex differences in the influence of family interaction variables.

The data used for the study was based on a sample of adolescents living in private households in a North Central Standard Metropolitan Statistical Area. A cross-section of youth between the ages of 12 and 19 years was obtained through a multistage probability sample design. The number of successfully conducted interviews was 942. With reference to gender, 51% and 49% were adolescent females and males respectively. With reference to ethnicity, 45% were white and 50% were nonwhite.

The dependent variables used in the analysis were delinquency involvement, sex, race, and home status. Delinquency involvement was broken down into five degrees of frequency and seriousness that ranged from non-offender to high-frequency major offenders. Home status was broken down into three categories, which were, both parents,

mother only, and mother/stepfather. The independent variables were first, caring and trust (degree of intimacy with parents). The second variable was, control and supervision (extent of parental monitoring). Third, intimate communication (sharing of private thoughts with parents). Next, identify support (belief that parents accept character of child). Fourth, parental disapproval of peers (what do parents think of child' friends). Next, conflict (extent of parent-child arguments). Finally, instrumental communication (parent-child communication of important topics such as problems a school).

The results of a four-way (ANOVA) with age controlled as a covariant indicated that males, surprisingly, had a higher mean level of caring and intimacy than females. Also unexpected was the indication that females engaged in more arguments with their parents than males. However, females are subjected to greater control and supervision and are therefore more likely to engage in more conflicting conversations with their parents than males. Between sex and race for the control and supervision dimension, nonwhite females reported the greatest level of supervision and white males the least. With the exception of intimate communication, each of the family relationship dimensions is significantly related to delinquency involvement. What was assumed by the researchers to be the most important result was the indication that none of the seven family factors differed by home status. The authors contend that (1987: 299):

This clearly weakens the traditional argument that broken homes, female-headed households, or those with stepfathers are *necessarily* negative and/or disadvantageous socialization environments.

A correlation matrix of delinquency, age, and the seven family interaction factors indicate that all of the family dimensions are moderately associated with delinquency at the zero-order, and the dimensions are all related in the hypothesized directions. That is, delinquency is inversely associated with all of the family factors with the exception being

conflict and parental disapproval of peers.

A regression analysis by home status indicates that family variables explain only small amounts of the variance in delinquency. The results indicate that 15%, 17%, and 16% of the variance in delinquency is attributed to the seven factors as they fit, with reference to the total sample, both natural parents, mother only, and mother/stepfather respectively.

An unstandardized regression coefficient table explained by family factors and age revealed that the amount of variance in delinquency explained by the model ranges from a high 23% for white males and a low 8% for nonwhite males. The model also indicates that the family factors explain more variance in female delinquency than males. The explained variation is 14% and 12% for females respectively. When race is considered, the model explains more variation in delinquency for whites (18%) than for nonwhites (11%) (Cernkovich & Giordano, 1987).

In summation, the findings indicate that there are important sex and race differences in family interaction dynamics. However, there are no significant variation by family structure. Significant relationships between all but one of the family interaction dimensions and delinquency, along with the lack of any significant relationship between family structure and delinquency suggest that internal family dynamics affect delinquency more so than family structure. The researchers concluded that instead of thinking of attachment as a dichotomous conception (attached/unattached), it is more appropriate to think of attachment as more multidimensional in nature. In other words, a more detailed elaboration of the elements constituting attachment provides a more rigorous test of exactly how family processes affect delinquency (Cernkovich & Giordano, 1987).

Social Control Theory Revised

Travis Hirschi's social control theory (1969) assumes that criminality is the essential nature of humans. If this is believed to be true, then the element of conformity must be addressed in order to explain why some people choose not to engage in criminalistic activities. Conformity is achieved through socialization, which is the formation of a bond between society and an individual. According to the social control theory, socialization is the formation of the bond comprised of four major elements, which are attachment, involvement, commitment, and belief. Hirschi contends that the stronger each element, then the less likely the occurrence of delinquent behavior.

It has been implied by various researchers that Hirschi (1969), only concerned with the individual variance of each element of the theory, has failed to consider how the four elements might act simultaneously to affect the likelihood of delinquency behavior. Also, with respect to the relations of the elements of the bond, social control theory falls short of complete explanation because the association between the elements of the theory were only hypothesized by Hirschi and not empirically tested.

A study undertaken by Wiatrowski et al. (1981) sought to address the aforementioned concerns and develop an extension of social control theory. Because of the importance of this study in pointing out the shortcomings of Hirschi's control theory an extensive analysis of this study will be documented in this literature review.

The researchers addressed these shortcomings of control theory by raising three questions that Hirschi's theory presented. The three questions raised by Hirschi's (1969) theory were modified and tested by the present researchers to address the shortcomings charged. Construction and data analysis is as follows, along with the present researchers' method of testing these developments.

While analyzing Hirschi's (1969) theory, the researchers asked, "To what extent does any of Hirschi's four elements represent empirically distinct components of socialization?" (Wiatrowski et al., 1981: 526). The researchers of this study implied that Hirschi was contradictory in his discussion of each element's individual predictive power. If the association between the elements of the bond explain the most variance, then the elements independently would not constitute analytically distinct elements of the bond. The researchers sought to test these assumptions, so measures were created of the bonds to estimate how much each element contributes to the others to the explanation of delinquent behavior.

The second question raised by the researchers was with reference to the number of elements of the bond. The issue is since the predictive power of the bond is so modest, then additional elements of the bond should be considered. The researchers conducted a factor analysis of the bond's structure to discover and find new elements. The final question raised by the researchers discussed the constructs that Hirschi chose to include and those he chose to delete which were considered to be important. Research prior to Hirschi's theory construction has asserted that socioeconomic status, personal ability, and significant others play a major part in educational and occupational aspirations. Hirschi stresses the importance of educational and occupational aspirations but fails to incorporate these constructs into his theory. The researchers of this study conducted a pair of multivariate analyses incorporating educational and occupational aspirations along with the elements of attachment, involvement, commitment, and belief. The first analysis was intended to replicate Hirschi's findings. The second analysis was based on the factor analysis which used new and defined elements which lead to a revised model which the researchers contended was more complete than Hirschi's (Wiatrowski et al., 1981).

The study was longitudinal in nature and the reconstruction of the scales and indices demonstrated high alpha coefficients, which demonstrated their internal reliability.

The first analysis addressed the issue of the extent to which the elements make unique contributions to predicting delinquency and to what extent the variables simultaneously make on predicting delinquency. Hirschi's results (1969), which were intentionally replicated, indicated that all four of the elements of the bond with their respective measures explain 32% of the variance in delinquency. The individual elements of the bond; however, indicated that each individual element independent accounted for only minute variations in the dependent variable. The element attachment accounted for 7% of the change in predicting delinquency, commitment contributed 11% of the change, involvement accounted for 1% of change, and finally, belief accounted for 2% of the variance in predicting delinquency.

The researchers of this project conducted a second analysis using the elements of the bond that they deleted from the factor analysis. Only a few measures were selected and the results indicated a 17% variation collectively among the variables. The bond elements independently accounted for 3%, 0%, 1%, and 3% of the variance in predicting delinquency. The elements of the bond were attachment, commitment, involvement, and belief respectively. These results show that incrementally each element of the bond adds little explanation of delinquency in relation to the total amount of variance explained.

The second question involved the discussion of the structure of the bond with reference to the elements selected to represent the bond. A factor analysis done by the researchers included the original elements as selected by Hirschi (1969), and the elements were expected to appear as separate factors. However, the researchers found that belief did not appear a factor, and several of the original elements appeared to have

overlapped one another in the attempt to stand on its own as an adequate predictor of delinquency. These results suggest that a more complex interpretation of the social bond needs to be done. The researchers' summarized this phenomenon by stating "some of Hirschi's postulated dimensions emerge as distinct factors, but the general picture of the components of the bond is altered. What this suggests is that it may be more appropriate to reconceptualize the nature of the bond" (Wiatrowski et al., 1981: 532). Finally, the multivariate analyses conducting incorporated measures of socioeconomic status, ability, and grades along with the original elements developed by Hirschi (1969) and the elements defined by the factor and communality analysis are discussed briefly. The multivariate analyses' results were represented in the form of simple and complex models of the social bond. The first multivariate analysis included the incorporated measures of socioeconomic status, ability, and grades, which were controlled, as well as the original elements of the bond developed by Hirschi. A path analysis was used to examine the effects of the model on delinquency outcomes. The end result indicated a 19% proportion of the variance in delinquency.

The researchers contend that the R square (R^2) value of this model is low because the scales constructed to measure the predictive power of the variables were ravaged because they were based on Hirschi's (1969) theoretical statement. Finally, the complex model of social control theory constructed after factor analysis variables were added explained 33% of the variance in delinquency. In contrast to the first model, the revised model implies a moderate positive direct effect of ability and socioeconomic status. Grades make a moderate negative direct contribution to delinquency.

The next section of the literature review is dedicated to looking at a synthesized model of delinquency control.

Suggestion: A Synthesis of Social Control Theory and Social Learning Theory

The bulk of this literature review has concentrated on the shortcomings, replications, and uniqueness of Hirschi's (1969) social control theory. The final section of this literature review takes a look at how a synthesized view of delinquency theory can better predict delinquency behavior. This study's hypothesis was that a combination of the social bonding notion from control theory along with specific principles of social learning theory will lay a groundwork for a more comprehensive theory of delinquent behavior than either perspective alone. This study is included in this paper because it is the opinion of the writer that if a complete picture of social control theory is to be addressed, then the notion that the theory can be expanded to be more predictive of delinquency is important.

Whatever shortcomings may exist in the study of delinquency, a lack of theoretical perspective is not one of them. Through this literature review, social control theory has been collectively discussed in terms of its internal structure, its basic principles, its social-psychological nature, empirical consistency, and empirical inconsistencies. The conclusion of this discussion of social control theory will take a final route towards social control theory's aspects but also look at how the theory can be expanded to have more predictive power.

Social control theory has been extensively covered, so before the forthcoming study is discussed, a short discussion of social learning theory's basic components will be discussed. Social learning theory as defined by Bandura (1977) emphasizes the effect of a model's behavior on an individual who is capable of emitting imitative responses. Social learning theories are primarily psychological theories and are derived inductively. The differences among social control theory and social learning theory are

detailed in the following paragraph.

Social control theory (1969) asserts that human beings are prone to delinquency from the outset but are restrained from delinquency due to bonds they attain with conventional others and institutions. Control theory asks the question, “why do people refrain from committing delinquent acts?” It does not ask, “why do people engage in delinquent acts?” Social learning theory (1977) asserts that human beings’ behavior is acquired through direct conditioning and imitation of others’ behavior (Akers et al., 1979). The control theory perspective implies that attraction or attachment to deviant others is not a cause of delinquency. The social learning perspective asserts that attachments to deviant others increases the likelihood of delinquency if the rewards for engaging in delinquent acts outweigh the rewards for conforming to conventional behavior. This is commonly known as the “matching law.” A study conducted by Rand Conger (1976) examined the implications of both the control and the learning model in order to produce a more adequate predictor of delinquency.

The findings were broken down into two interpersonal categories: attachment to peers and attachment to parents. The first set of results, which tested the theories on attachment to peers indicated that attachment to peers (conventional), as control theory postulates, were not *always* inversely associated (Conger, 1976). The results indicated a random fluctuation in the relationship between attachment to peers and delinquent behavior, which is contradictory to control theory. The social learning position was supported which predicts either a negative relationship between delinquency and attachment to conventional peers or a positive relationship between delinquency and attachment to deviant peers.

The second set of findings which tested the theory’s predictive power on

attachments to parents indicated that actual parental behavior, not just the simple identification with parents, is the most important part of the bond between parents and child, which protects against delinquency involvement. The social control model predicts that communication between parent and child will decrease the likelihood of delinquent behavior. The social learning model predicts that communication between parent and child will be negatively associated with delinquency only if his or her parents reinforce initiations from the child.

This study argues that social control theory is more incomplete than incorrect. By combining the notion that individuals are bonded to others with certain principles from social learning theory, the groundwork for an expanded social control theory will be developed. Conger argues that (1976: 37):

The social learning model clarifies how attachments will influence deviant behavior by including to whom one is attached in the analysis. Social control is brought about through differential reinforcement and punishment in many subtle ways that are far from being completely understood.

Criticisms of Social Control Theory

Social control theory, like any other theory has weaknesses. Empirical research from testing the consistency of the theory have unearthed that social control theory, as Hirschi formulated does not predict major types of delinquency as well as it explains trivial types of delinquency. Agnew (1985) suggested that this phenomenon is from Hirschi's testing of control theory with scales biased toward less serious forms of delinquency. Social control theory has been credited with "being able to explain some of the differences between children and levels of delinquency, but failing to predict why certain adolescents exhibit particular patterns of delinquency" (Trojanowicz & Morash, 1992: 68). For example, why do some adolescents become habitual offenders, but others participate occasionally in minor delinquency?

Hirschi's social bonding theory (as labeled by Akers, 1973) has also been criticized for overestimating the significance of involvement in conventional activities and giving little credence to the role played by unconventional peer attachments. It has been suggested through empirical studies that peer attachments be divided into conventional and unconventional peer associations and examined independent of each other in relationship to delinquency (Thompson, Mitchell, & Dodder, 1984; Mastueda, 1982; Mastueda & Heimer, 1987; Patterson & Dishion, 1985; Mitchell & Dodder, 1980; Elliot & Ageton, 1980; Poole & Regoli, 1979; Linden, 1978; Conger, 1976; Silberman, 1976; Hindelang, 1973; Jensen, 1972). The theory also meets strong opposition from differential association theorists from the suggestion that parental attachment and peer attachments are positively correlated (Bandura, 1977; Sutherland & Cressey, 1974; Burgess & Akers, 1966; Cloward & Ohlin, 1960; Cohen, 1955). Differential association theorists suggest that delinquent behavior or conventional behavior depends on the proportion of the reinforcement offered by the peer or the parent. Whoever offers the most in the form of a reward gets the desired behavior. Differential association theorists argue that it is either the parent or the peer that gets the desired behavior from the child or friend, not the parent *and* the peer.

Social control theory, as it is proposed by Hirschi (1969) is also criticized for failing to incorporate direct parental controls (Wells & Rankin, 1988). Wells and Rankin argue that indirect parental controls (i.e., attachments) are no more important than direct parental controls (i.e., parental monitoring). Wells and Rankin insisted that Hirschi's dismissal of direct parental control was not based on an empirical demonstration of its unimportance, but rather in an ideological preference for other forms of social control (Wells and Rankin).

Hirschi is criticized for not being specific with regard to exactly what constitutes the dimension of attachment (Cernkovich & Giordano, 1987). At times, Hirschi speaks of attachment as a one-dimensional construct belonging to one of four elements of social control (attachment, involvement, commitment, and belief). At other times Hirschi concentrates on the communication origins of attachment, or on the feelings of affection which characterize attachment. In this instance, Hirschi is giving the impression that attachment is more multidimensional in nature. Cernkovich and Giordano suggest that Hirschi systematically identify the dimensions of attachment. Finally, criticisms of the theory come in the form of questions that were unanswered by Hirschi's research such as:

1. How do the bonds become weakened or broken?
2. How much do the bonds need to be weakened for delinquency to occur?
3. How does weakening of one bond affect others?

The Continuity of the Parent-Child Attachment

This section of the literature review addresses the attachment between parent and child during the adolescent's young adult years. The purpose of this section is to present literature that details the continuity of the attachment. Frequently asked questions concerning parent-child attachments are those such as, "Does the attached child continue to exhibit pro-social characteristics once he/she is independent of their parents, or how important is the attachment once the child has physically separated from the parent?" The first question is a valid question to ask because general belief is that departure requires a loosening of family ties. Furthermore, failure in loosening ties is expected to result in the difficulty in the development of intimate relationships outside the family (Haley, 1980; Freud, 1969; Blos, 1967).

The next few sections discuss how the early attachment develops in the youth.

Empirical evidence (Sullivan & Sullivan, 1980) has suggested that feelings of parental closeness actually increase following departure from the family. Sullivan and Sullivan found that adolescent males reported increased feeling of affection and communication towards parents after leaving home to attend a residential college.

The Continuity of Early Parent-Child Relationships Into the Young Adult's College Years

Kenny (1987) conducted a study that focused on the nature and function of parent-child adolescent attachment and separation during the leaving home process. The study attempted to explore the relationship between characteristics of the parental attachment in late adolescence and indices of social competence during the same period. Characteristics of secure attachment are expected to be associated with self-reports of social competence.

The subjects for this study were 173 first year residential college students at the University of Pennsylvania. The subjects were predominantly white (90% of the males and 81% of the females). The parental attachment measure consisted of a 70 item parental questionnaire designed to adapt Ainsworth, Blehar, Walters, & Wally's 1978 conceptualization of attachment for use with college students in a self-report format. Ainsworth et al's., conceptualization of attachment is that secure attachment fosters feelings of confidence in expressing one's needs and feelings with the expectation that one will influence and be accepted by others. Social competence was measured by assertion and dating competence, which were operationalized by the Dating and Assertion Self-report Questionnaire (Levenson & Gottman, 1978).

A factor analysis was executed and extracted separate factors for male and females. In the female category the factors were Quality of Relationship with Parent, Parental Role in Providing, Emotional Support of Parent, Parental Fostering, Autonomy,

and Adjustment to Separation. The factors extracted in the male category were General Attachment, which includes everything but Adjustment to Separation with reference to the female factors. The multiple regression analyses were completed separately for the male and female samples. The results indicated that for both men and the women, the Adjustment to Separation factor was significantly associated with self-ratings of assertion and dating competence. The results were .33 and .51 for prediction of assertion with reference to males and females respectively; and .33 and .25 for prediction of dating competence for males and females respectively. Among the females, the Quality of the Relationship with Parents accounted for 19% of the variance in the prediction of assertion variable, while Adjustment to Separation accounted for 26% of the variance in the prediction of assertion variable. In the male sample, 11% of the variance in prediction of assertion was attributed to Adjustment to Separation. With reference to the dating competence variables; 11% and 6% of the variance was attributed to Adjustment to Separation for males and females respectively.

These findings have suggested that parental attachment often continue through adolescence into young adulthood. These young adults appear to look for their parents or support while at the same time asserting their independence. Although correlation findings cannot be interpreted as causal understanding the relationship between parental attachment and assertion is reasonable. Since the majority of this sample came from affluent families, assertion amongst other behaviors was probably valued and expected. There has been little research conducted in this area. According to these findings, first-year college students often continue to view their parents as a secure base of support and caring (Kenny, 1987). Because the continuity of the parent-child attachment is so important in understanding the effects of the initial attachment, more studies concerning

this aspect of the attachment is much needed.

The Importance of Parental Attachments Among a College and Inpatient Sample

Pro-social behaviors can be defined as anything accepted and prescribed by a particular society. It is often hypothesized that parent-child positive attachments mold the child into an individual who exhibits characteristics of a socially acceptable individual. Throughout this literature review, it has shown that there are many different forms of antisocial behavior, or behavior not accepted as conventional or socially acceptable. This study conducted by Kenny and Hart (1992) looks at a different type of antisocial behavior. Kenny and Hart (1992) investigated the relationship of parental attachment to eating disorder symptoms among late adolescent and young adult women in inpatient treatment for eating disorders among a non-clinical sample of college women. These researchers hypothesized that characteristics of secure attachment, including positive affect, use of parents as a source of support, and view of parents facilitating autonomy would be inversely associated to eating disorder symptoms for the combined sample of eating disorder and college women.

The inpatient sample consisted of 68 females diagnosed as eating disordered. The non-clinical college sample consisted of 162 first-year college women enrolled at a private, urban, coeducational Jesuit university in the northeast. Parental attachment was broken down by factor analysis to include Affective Quality of Attachment, Parental Fostering of Autonomy, and Parental Role in Providing Emotional Support. Attachment was measured by a 55-item questionnaire. Five scales of the Eating Disorder Inventory (Garner, 1991) were used to assess eating disorder symptoms. The five scales were the drive for thinness, body dissatisfaction, bulimia, ineffectiveness, and the maturity fears scales.

Correlations indicated among the sample that the inpatient sample was less attached to their parents; and therefore were more susceptible to eating disorders. For the Bulimia and Ineffectiveness scale the inpatient sample indicated correlations of -.29 and -.29, both being significant at the .05 level. The college sample indicated correlations of .01 and -.20, with only the latter being statistically significant at the .05 level (correlated with Affective Quality of Attachment). Among women with eating disorders, affective closeness to parents and reaching out to available family support in conjunction with parental support for autonomy appear to be adaptive responses to difficulty. Eating disorder women described themselves as less securely attached to their parents when the college women. Hence the higher degree of eating disorders, as indicated previously. More specifically, the inpatient sample characterized their parents as less supportive of their independent strivings and described themselves as less likely to seek out and receive comfort from their parents in times of stress (-.15, -.06, -.11, -.23, and -.10 when parents fostering of autonomy was correlated with the eating disorders). The college sample, whose parents showed more interests in their independent strivings indicated correlations of -.02, -.06, -.03, -.28, and -.22; with the latter two correlations being significant at the .001 level ($p < .001$).

These results indicate that women who have never had an early attachment to their parents have grown up without an effective attachment. Therefore, they view their parents as interfering in their strives to become independent, and are likely to experience anxiety and this case obsessions with weight

Adolescent Attachments to Parents and Peers

Lapsley, Rice and Fitzgerald (1990) undertook a study to determine whether early bonding between parents and children remain important throughout the life span. Prior

research has indicated that positive attachments to parents convey a number of advantages for adolescents' social and personal development (Armsden & Greenberg, 1987; Greenberg, Siegel, & Leitch, 1983). The researchers hypothesized that early attachment to parents would account for a significant amount of variation in both personal and social identity. The study also hypothesized that early attachment to parents would account for personal and social identity in various college aspects (peers).

The participants totaled 130 males and females that were enrolled as psychology major freshmen at a small Catholic university. Also, 123 juniors and seniors who were enrolled in a child development course volunteered to participate. Attachment was assessed with the Inventory of Parent and Peer Attachment (Armsden & Greenberg). Factors extracted from attachment were Trust, Communication, and Alienation. Identity was used to assess personal and social identity. Identity was assessed by the Aspects of Identity Questionnaire (AIQ) developed by Cheek and Briggs (1982). College adjustment was assessed by the Student Adaptation to College Questionnaire (SACQ) developed by Baker and Siryk (1984). The SACQ is a 67-item self-report measure that assesses four features of college adjustment. Namely the adjustments were academic, social, personal-emotional, and goal commitment.

Regression analyses indicated that the block of the attachment variables (Trust, Communication, and Alienation) accounted for a significant amount of variation in the personal identity scores of both freshmen and upperclassmen (9% and 7% respectively). The addition of the peer attachment variables to the regression indicated an 11% change (positive) for freshmen, and a 10% change (positive) for the upperclassmen. Hence, the attachment variables appear to account for approximately 20% of the variance in the personal identity score of freshmen and about 17% of the variance in upperclassmen.

The block of parental attachment variables also accounted for significant proportions of the variance in social identity scores for both freshmen and upperclassmen (8% and 9% respectively). The addition of the peer variables did not improve the prediction of social identity for freshmen. However the peer variables did improve the prediction of social identity for upperclassmen (from 9% to 16%). The measures of parent and peer attachment were also entered as predictors of adjustment to college. In the freshman group the block of parent attachment variables accounted for a significant amount of variation only in academic adjustment scores (8%). The peer attachment variables did not improve the prediction. With reference to the personal-emotional adjustment and the goal commitment; the parental attachment variable accounted for 16% and 9% of the variance respectively. The addition of the peer attachment variable improved the prediction of personal-emotional adjustment by 5% and goal-commitment by 11%.

In conclusion, it was indicated by the data that freshmen did not differ significantly from upperclassmen in their felt attachment to parents or peers. The principle aim of this study was to chart the relationship between attachment and several indices of adolescent adaptation. Regarding the social identity variable, the findings suggest that adolescent attachments to parents and to a lesser extent peers significantly predicts social identity among the freshmen and upperclassmen.

Parental Management: A Summation of Previous Studies

The disruptions or omissions in the parents' application of parental monitoring and parental authoritarianism or effective discipline have consistently been found to correlated with preadolescents' antisocial behavior (Patterson & Stouthamer-Loeber, 1984). The emphasis upon monitoring and discipline rests upon the fact that when

counseling the parents of antisocial children, it becomes necessary to teach the majority of the parents to monitor their child and to discipline him or her, for antisocial behavior whenever antisocial behavior occurred (Patterson & Dishion, 1985). Patterson and Dishion conducted a study that tested the hypothesis that a parental failure to monitor their children effectively contributes directly and indirectly to delinquent activity. The model assumed that ineffective or a lack of parental monitoring contributed indirectly to delinquency by increasing the chance that the child will become involved with a deviant peer group which, in turn, contributes directly to delinquent activity. The direct assumption is that when there is a disruption in parental monitoring, the child will have more unsupervised “street time” which means more time to engage in antisocial or delinquent activity.

The results of the study proved the hypotheses of indirect and direct delinquency involvement. The results of the standardized structural coefficients and factor loadings for a revised two-stage model of delinquency indicated that social skills and parental monitoring are both found to be related to deviant peers. The results also indicated that 80% of the variance in delinquency in delinquency was explained by parental monitoring and social skills.

Family management variables have emerged as the result of years of clinical work with pre-adolescent, antisocial children. In the majority of these studies, the parent was the agent of change for altering the behavior of the problem child. Patterson and Stouthamer-Loeber (1984) developed specific family variables used in a study correlating family management practices for delinquency as a result of these studies. Patterson and Stouthamer-Loeber hypothesized that certain familial variables would be found to correlate significantly with criterion of delinquency. The familial variables were parental

monitoring, parental discipline, problem solving, and reinforcement. The criterion measures for delinquency were police contacts that were defined as boys who have had a police contact resulting in a juvenile court record and a self-reported delinquency measure of delinquent lifestyle. The grades of the boys who were studied, were inclusive of and between grades 7 and 10.

The correlation of the family management variables with measures of delinquency indicated a significant negative correlation of monitoring and discipline with both measures of delinquency, which gave strong support to the researchers' hypotheses. The correlation for the monitoring variable and the discipline variable accounted for two and a half as much variance as did any other measure of parental skill. When correlated with the delinquency measure, delinquent lifestyle, problem solving, and reinforcement indicated correlations of .04 and -.24 respectively. It was necessary to include the results of the familial variables problem solving and reinforcement to show that the family variables, parental monitoring; when disrupted, and parental discipline when inconsistently, severely, and nonchalantly applied account for more significant variations in delinquency than most other familial variables (Reiss, 1951).

The data results indicate that familial variables provide strong support for the hypothesis that disruptions in certain family management practices are associated with delinquent behavior for young adolescent boys. In this process, parental monitoring plays the central role. Lack of parental monitoring that increases with age insures the possibility of several unpunished trials of more or less delinquency (Patterson & Stouthamer-Loeber, 1984). This phenomenon may also be dichotomous in nature. In the beginning, it may determine which youths become engaged in delinquent activities, and consequently, it may determine which youths become recidivists.

Summary

This literature review was designed to inform the reader of the nature of parental attachments to children and how levels of attachments relate to delinquency. The review also serves to broaden the reader's knowledge of Hirschi's social control theory and to show through previous studies that the theory is effective in describing and predicting delinquency although internally the theory has some flaws and shortcomings.

Additionally, this literature review was designed to incorporate theory. Hence, an overview of the elements of the social bond and the relationship between these bonds and delinquency were reviewed. Studies examining the continuity of the bond were also included.

The continuity of the bond or attachment section of the literature review was included to briefly give the reader an idea of how important the early parent-child attachment is to the development of pro-social characteristics. Continuity studies have indicated that if early parental attachments are not established the child is more likely to have problems establishing social relationships, solving problems, and the inability to assimilate into conventional social settings.

CHAPTER THREE METHODS

The following section will outline the research strategy of the study in order to carry out the objectives stated in chapter one. Included in this section is the research design, the sample population, the data collection, and data analysis. A secondary analysis of the National Youth Survey (Wave II, see Appendix B) collected by Delbert Elliot for the Behavioral Institute in Boulder, Colorado will be carried out in order to achieve the objectives stated in the problem statement. Wave II was selected because the ages of the respondents ranged from 12 to 18 years. These ages correspond to the point in adolescence at which antisocial activities are most frequent and problematic (Wells & Rankin, 1988). The National Youth Survey is a longitudinal survey of delinquency and drug use. The first wave was conducted from January to March of 1977 and focused on delinquency during the 1976 calendar year. Subsequent analyses were conducted on an annual basis numbering seven waves to date.

Sample

The data will be used were acquired in a national survey of 1,725 youths in the United States. The ages of the youth ranged from 12 to 18 years. A total of 1,725 interviews were conducted from January to March of 1978 and focused o delinquency during the 1977 calendar year. In the second wave 53% (n=918) of the respondents were male and 47% (n=807) were female. Fifteen percent (n=252, n=257, n=258, n=253) of the respondents were ages 12, 13, 15, and 16 respectively. Sixteen percent (n=269) reported that they were 14 years old, which was the mode. Twelve and fourteen percent (n=197 and n=239) indicated that they were 18 and 17 years old. The majority of the

youths studied were White (79%). Fifteen percent (n=260) were Black, 4% (n=76) were Mexican-American, .5% (n=8) were American-Indian, 1% (n=17) were Asian-American, and .2% (n=3) made up the category “Other”.

Since this study targets male antisocial behavior, a sub-sample was chosen from the larger sample collected by Delbert Elliot. The sub-sample was chosen by deleting the female respondents from the original sample. The characteristics of the sub-sample are described in the beginning of Chapter Four.

Data Collection

The questionnaire used in this study and the data collected were obtained (in part) through the Inter-university Consortium for Political and Social Research (ICPSR) and the Behavioral Research Institute, with Delbert Elliot as the principal investigator. The primary data were obtained by area probability sampling of American youth. The questionnaire utilized had 24 sections. The first three sections of the questionnaire were devoted to obtaining demographic information and included a respondent receipt form (all interviewed youth received \$5). The fourth section assessed general activities that occurred the previous year (from Christmas 1976 to Christmas 1977). The fifth section of the questionnaire was devoted to assessing the importance of certain activities to the respondents and how well the respondents were at doing those activities. The sixth section was dedicated to obtaining information on the respondents’ feelings and beliefs about friends, teachers, and family. Sections seven and eight assessed how the respondent thought parents, friends, and teachers would describe him (respondent) and how the respondents think his parents and close friends would react if he or she engaged in certain behaviors. Section nine is devoted to assessing how parents and close friends would act if the respondents were to get in trouble at school, with the police, or in the

neighborhood. Section 10 assesses the respondents' perception of right and wrong and how it applies to other children in his age group. Sections 11 and 14 are devoted to assessing the behavior of the respondents' close friends (from Christmas 1976 to Christmas 1977). Sections 12 and 13 are devoted to assessing the respondents' views on the roles of men and women in American society and violence between people. Section 15 deals with assessing the extent that the respondents' parents engaged in drug use. Sections 16, 17, and 18 are devoted to the frequencies and rates the respondents' have participated in delinquent activities and drug consumption. Section 19 is used to determine the impact that the respondents' drug usage (if any) has affected their families. Sections 20 and 21 seek to determine how many times (if any) that the respondent has been the victim of a robbery. These two sections also assess how many times the respondent (if any) has attacked someone sexually, or how many times he has been attacked sexually by someone other than a parent, and the respondents' knowledge of handguns (how to use them, how to obtain them, ever used a handgun). Section 22 is devoted to those respondents who indicated that they had sexually assaulted someone. This section asks the respondents when the act took place, where, and the reaction of the victim. Section 23 is an informal section that gives the respondent a chance to add comments to any information that was given to the interviewer. The final section is the interviewer's observations before and during the interviews.

Data Analysis

The statistical techniques that will be utilized are the following:

1. Univariate Analysis

Frequency Distribution

Percentages

2. Factor Analysis
3. Reliability Analysis
4. Statistical Significance
5. Bivariate Analysis

Contingency Tables

Chi-Square

Pearson's Product-moment Correlation Coefficient

6. Multivariate Analysis

Partial Correlation-Analysis

Multiple Regression

Univariate Analysis

The types of Univariate analysis that will be utilized are frequency distributions and percentages. The frequency distribution is a type of statistical analysis that involves the measurements of each set of objects on a single variable.

Factor Analysis

The factor analysis is conducted during the very early stages of most statistical investigations. Factor analysis is a data reducing technique that removes the redundancy from a set of correlated variables and represents the variables with a smaller set of derived variables, or factors. In other words, the factor analysis procedure groups similar variables. The procedure can also be said to remove duplicated information among a set of variables. A quantity called an eigenvalue, which corresponds to the equivalent number of variables is used to extract variables. The eigenvalue's concept is to extract factors that account for the most variance in the data collection (Kachigan, 1991). The intricate formulas that factor analysis uses to perform these operations are beyond the

scope of this study, therefore only its importance and what it produces is discussed.

Reliability Analysis

Reliability analysis is a process in which several variables are measured for scale appropriateness. Reliability tests produce an alpha coefficient. If the coefficient is over .5, the scale is considered to be reliable. The reliability output gives an alpha coefficient (Cronbach's Alpha) of all of the combined items and then gives individual alphas, if the researcher chooses to delete certain items from the scale.

Statistical Significance

The statistical significance of a relationship that is observed in a set of sample of data is expressed in terms of probabilities. Statistical significance is the outcome of bivariate analysis and multivariate analysis. The particular probability that is used as the criterion for an unlikely outcome, supposing that the working hypothesis (H_0) is true, it is referred to as the significance level. The significance level is designated by the Greek letter alpha, α . Three common significance levels ($\alpha=.01$, $\alpha=.05$, and $\alpha=.10$) are used in hypothesis testing. The level of significance of this study is set at a .05 level ($\alpha=.05$). This means the probability of a relationship as strong as the observed one being attributable to sampling error alone is no more than 5 in 100. Simply, the probability of sampling error is discounted when the stated level of significance is less than five chances in one hundred.

Bivariate Analysis

Contingency Analysis

Contingency analysis will be used to conduct a certain type of bivariate analysis. A contingency analysis tests whether or not the effect of the column variable (IV) on the pattern of cell frequencies is independent (not contingent) or dependent (contingent)

upon the effect of the row variable (DV) upon the pattern of cell frequencies (Rosenberg, 1990). Contingency tables or crosstabs indicate in a broad way whether values on two dichotomous variables are contingent or dependent on one another. Contingency tables also show the joint frequency distribution of two independent variables. The relationship between the two variables will be presented in the form of percentage distributions.

Chi-Square

The chi-square (χ^2) test will be used to test for significance with reference to the contingency analysis. The calculated chi-square will be compared to the critical value set for the .05 level of significance coupled with the degrees of freedom of the table. If the critical value is higher than the chi-square value the hypothesis of independence is accepted. If the critical value is lower than the calculated chi-square value the hypothesis of independence is rejected, and it is assumed that there is a less than 5% chance of making a Type I error, which is incorrectly rejecting the null hypothesis. While univariate analysis and sub-group comparisons focus on describing the units of analysis under study, bivariate analysis focuses on the variables.

Pearson's Product Moment Correlation Coefficient (r)

Pearson's Product-moment Correlation Coefficient (r) is a measure of the degree of association between two variables (Graham, 1994). The correlation coefficient r can range in value from -1.00 to $+1.00$. A correlation coefficient of $r = -1.00$ signifies a perfect negative linear relationship. A correlation coefficient of $r = +1.00$ signifies a perfect positive linear relationship.

The Pearson's Product-moment Correlation Coefficient will be utilized to predict the values of the independent variable, parental attachment, in order to see how its increase or decrease in value affects the dependent variable, antisocial behavior. The

correlation coefficient assumes that the relationship between two variables is linear.

Multivariate Analysis

Partial Correlation Analysis

A partial correlation analysis is the process that examines the effect of the independent variable on the dependent variable when a third variable is held constant. If the partial relationship is essentially the same as the original relationship (corresponding zero-order) this outcome is called a replication. This means that the original relationship has been replicated within smaller sub-groups and that the control variable has no influence on the original relationship (Babbie, 1995).

Multiple Regression

Regression gives more information than the correlation analysis. It is necessary to analyze the notion that antisocial behavior is affected simultaneously by several elements of attachment. Multiple regression analysis provides a means to analyzing such situations (Maxfield & Babbie, 1995). Multiple regression uses several predictor variables to estimate values on a criterion variable (Kachigan, 1991). In using many predictor variables instead of just one, the aim is to reduce even further the errors of prediction; or equivalently, to account for more of the variance of the criterion variable.

A stepwise procedure will be used in the regression analysis. Stepwise procedures allow the selection of the one predictor variable that accounts for the most variance in the criterion variable, and then one at a time, add the variables which account for the most of the remaining or residual unexplained variance (Kachigan, 1991). The predictor variables are continuously introduced until the resulting increase in R^2 (explained variance) becomes insignificant. The R^2 value is the squared correlation produced by the Pearson test.

Conceptualization and Operationalization

The dependent variable in this study is antisocial behavior. The independent variable is parental attachment. The two variables are conceptualized and operationalized in this study as follows:

Antisocial Behavior in this study is defined by acts, the detection of which is thought to result in punishment of the person committing them, by agents of the larger society. Antisocial behavior is going against the conventional social order because of lack of concern for the moral ethic set forth by the conventional society (Hirschi, 1969). This variable will be measured using the responses of the questions in Appendix B.

Parental Attachment is the psychological bond that a child shares with his conventional parent/s. The bond represents the psychological presence of the parent and the presence of this bond depends very much on the extent to which the child interacts with the parent/s on a personal basis. It is thought that the stronger this bond, the more strongly the child is bound to his parents' expectations, and therefore the more strongly the child is bound to conformity with the legal norms of the larger system (Hirschi, 1969). This variable will be measured using the responses of the questions in Appendix B.

Data Transformations

This section describes the process that was undertaken to transform the primary data to measurable form for the purpose of this study.

The dependent variable for this study is antisocial behavior. Sixteen separate acts in the self-reported delinquency section were chosen to represent antisocial behavior. All of the antisocial offenses were combined into a single index that represents general or total participation in antisocial behaviors. Since individual antisocial items are rather diverse, an attempt was made to reduce them to smaller more manageable sets of indicators (sub-indexes). Four components emerged from a factor analysis indicating four dimensions of antisocial involvement. The specific acts that correlated the highest with each other were combined to form the specific antisocial indexes. The first specific antisocial index indicates acts of theft and illegal drug distribution (Table 1).

Table 1 Sold Illegal Drugs and Acts of Theft

n = 918	Mean	SD	Factor Loading
Sold Marijuana	1	.95	.674
Sold Hard Drugs	1	.41	.798
Stolen Motor Veh.	1	.31	.395
Stolen Items Worth > \$50	1	.41	.875
Stolen Items Worth < \$50	1	.85	.643
Stolen Items Worth (\$5-\$50)	1	.51	.836

Cronbach's Alpha = .75

The second antisocial index indicates participation in acts of robbery of fellow students and others (not including parents and teachers, Table 2).

Table 2 Robbery of Others

n = 918	Mean	SD	Factor Loading
Robbed Others (not students or teachers)	1	.34	.88
Robbed Students	1	.44	.88

Cronbach's Alpha = .70

The third antisocial index includes participation in other violent antisocial acts (Table 3).

Table 3 Violent Behaviors

n = 918	Mean	SD	Factor Loading
Attacked Someone	1	.40	.72
Hit Other Students	2	1	.70
Carried Hidden Weapon	1	1	.73
Been in Gang Fight	1	.66	.77

Cronbach's Alpha = .63

The fourth factor of antisocial behavior includes attacks on authority figures such as parents and teachers (Table 4).

Table 4 Assault on Authority Figures

n = 918	Mean	SD	Factor Loading
Hit Teacher	1	.48	.59
Hit Parent	1	.29	.78
Robbed Teacher	1	.13	.72

Cronbach's Alpha = .40

The factor loadings obtained from the varimax rotation for the individual items were all .46 or above. Refer to Appendix A for the specific items in each index. Demographic variables are also used in the study. The demographic variables are ethnicity, age, grade in school, and grade point average.

The independent variable is attachment to parents. After reviewing the codebook for the National Youth Survey (Wave II), six items were chosen to represent attachment to parents. Factor Analysis revealed loadings on one factor. The extracted factor was named attachment to parents. The combined items were used to form the Parental Attachment scale (Table 5).

Table 5 Parental Attachment

n = 918	Mean	SD	Factor Loading
Influence of Parents	4	.98	.62
Parents Believe You			
Do Things			
Well	4	.99	.61
Parent Comforting			
Important	2	.81	.71
Good Impression on			
Parents	4	.75	-.43
Get Along With			
Parents	4	1	.73
Importance of			
Honesty	5	.74	.57

Cronbach's Alpha = .52

The following Hypotheses are tested in this study:

- H₁: There is a negative association between the parental attachment variable and the combined antisocial behavior variable.
- H₂: There is a negative association between the parental attachment variable and various acts of illegal drug distribution and acts of theft.
- H₃: There is a negative association between the parental attachment variable and violent antisocial acts.
- H₄: There is a negative association between the parental attachment variable and acts of robbery of fellow students and others (not parents or teachers).
- H₅: There is a negative association between the parental attachment variable and assault on authority figures.
- H₆: There is a negative association between grade in school and all of the antisocial measures.
- H₇: There is a negative association between age and the all of the antisocial measures.
- H₈: There is a negative association between grade point average and all of the antisocial measures.
- H₉: There is no association between ethnicity and all of the antisocial measures.

CHAPTER FOUR RESULTS

General Description of the Sub-Sample

This chapter will present the findings of this study. Through the use of univariate analysis, summary statistics describe the sub-sample population. Clearly stated, the summary statistics are obtained through the usage of frequency distribution outputs. The sub-sample population consists of the entire male population available in the original study (n=918).

From the sub-sample population the ages of the males range from 12 to 18 years. The ages of the males in the sub-sample population are basically evenly distributed with each age group containing between 12% and 16% of the total sub-sample population. The median age of the males is 15 years. Eighty percent (n=101) of the 12 year olds in the sub-sample were White, 13% (n=16) were Black, 7% (n=9) were Mexican-American, and .8% (n=1) were Asian-American. Forty seven percent (n=60) of the 12 year olds were in middle school, 45% (n=57) were in high school, 3% (n=4) were first or second year college students, and 5% (n=6) were not in school. Among the 13 year olds, 77% (n=98) and 17% (n=22) were White and Black respectively. Six percent (n=7) and .8% (n=1) made up the Mexican-American and American-Indian population among 13 year olds. Thirty-four percent (n=44) and 60% (n=77) of the 13 year olds were in middle school and high school, while 2% (n=3) and 3% (n=4) were either first or second year college students or those not in school respectively.

With reference to the 14 year olds, 74% (n=100) were White, 20% (n=27) were Black, 4% (n=6) were Mexican-American, and .7% (n=1) were American-Indian and Asian-American collectively. Thirty six percent (n=48) and 53% (n=71) were in middle

and high school, while 4% (n=6) and 7% (n=10) were first or second year college students and those not in school respectively.

The 15 year olds numbered 74% (n=109) and 20% (n=29) which represented the White and Black populations respectively. The Mexican-American and Asian-American population made up 5% (n=7) and 2% (n=3) of the 15 year old sub-sample population respectively. Thirty-one percent (n=46) of the 15 year olds were in middle school while 59% (n=87) were in high school. The first and second year college students made up 3% (n=4) of the 15 year old population while 7% (n=11) were not in school.

The frequency outputs indicated that among the 16 year olds, 80% (n=110) were White males and 15% (n=21) were Black males. The Mexican-American population represented 4% of the 16 year olds, while both the American-Indian and Asian-American population numbered .7% (n=1) collectively. Among the 16 year olds, 41% (n=57) were in middle school and 45% (n=62) were in high school. In addition, 7% (n=9) and 7% (n=10) were first and second year college students and those not in school respectively.

Next, among the 17 year olds, 79% (n=104) and 15% (n=20) were White and Black respectively, while 3% (n=4) and 7% (n=9) were first and second year college students and those not in school respectively.

General Description of Antisocial Youth Behavior

This section will report the general descriptions of the youths' antisocial behavior. Frequencies were obtained for 16 antisocial behavior items. Those items are listed in Appendix A. Almost 7% of the sub-sample indicate participation in all 16 of the antisocial behaviors once or twice a year while 1% admit to participating in all 16 behaviors at least once a month. One and a half percent of the males indicate participating in all of the antisocial behaviors once every two to three months with the

exception of sold hard drugs. The closer the responses are to a higher frequency of participation, the smaller the percentages. However, the number of acts becomes more frequent. For example, only 5% of the sub-sample report engaging in antisocial acts once every 2-3 weeks. Those acts are (sold marijuana, carried hidden weapon, broken into building, stole items worth less than \$5, stole items worth between \$5-\$50, attacked someone, been in gang fights, hit teacher, and hit other students). The same percentage indicates those respondents who answered 2-3 times per week to participating in half of the total available behaviors (same as the previous category with the addition of sold hard drugs, stole items worth more than \$50, and used force on other students). An even smaller percentage (.4%) indicates those who answered once a week to being involved in eight select antisocial behaviors (sold marijuana, carried hidden weapon, broken into building, stolen items worth between \$5-\$50, attacked someone, and used force on students). The same percentage of .4% represents those youths who responded to participating in six of the 16 antisocial behaviors once a day (same as above category with the addition of been in gang fights, and hit other students).

Among the median age of 15, the most “popular” antisocial act is hit other students. The percentage is 41% (n=58), and the rate is once or twice a year, which is the second most “popular” act among the median age group. The most “popular” antisocial act among the high school and middle school youths is hit other students once or twice a year. The percentages are 37% (n=164) and 35% (n=118) respectively. Hit other students once or twice a year is also the act most participated in by the Black and White sub-sample population (32%, n=45; 38% (n=258) respectively. The next section of the results will discuss the descriptive characteristics that univariate analysis produced for attached youth.

General Description of Attached Youth

This section will reveal the general characteristics of the attached youth. With keeping in mind the univariate results of the antisocial youth, it is probable that the number of youths responding to the attachment items in a way leaning towards high parental attachment will be high. The frequency output indicates that almost 2% (n=17) of the sub-sample's parents influence them a little while an expected high percentage of 43% (n=390) indicates those respondents who felt their parents influenced them a great deal. The frequency statistics indicate that 69% (n=634) of the males think that it is very important that their parents think they do things exceptionally well while only 2% (n=16) of the sub-sample thinks that it is not important at all. The frequencies also indicate that well over half of the youths think it is very important that their parents comfort them when they are feeling depressed or stressed (61%, n=560). An exceptionally high 82% (n=750) of the youths indicate that it is very important to get along with their parents. The important to be honest with parents category is one of only two categories where the majority of the sub-sample did not answer to the extreme response with reference to high positive attachments. Importance of parental impression is the other category. Although 57% (n=521) answered agree to the honest with parents category, 26% (n=240) strongly agreed. The final category; with parents, good impression important even if it means being dishonest drew a percentage of 62% (n=567) to the disagree response while 18% (n=169) strongly disagreed. For the strongly agree response to the same question, .9% (n=8) of the sub-sample answered strongly disagreed.

The Computed Dependent Variable

A factor analysis was conducted on all of the diverse antisocial acts. Factor analysis revealed four components indicating four dimensions of antisocial behavior.

this allowed the researcher to compute the distinct components into four categories or factors (Tables 1-5). These categories are SOLDSTO, which measures participation in acts of theft and illegal drug distribution. The next category is ROBBOTH, which measures participation in acts of robbery of fellow students or other (not including parents and teachers). The VIOLENT category measures violent antisocial acts, and ASSAULT measures attacks on authority figures (parents and teachers). The ANTISOC measure represents all 16 antisocial items. The items were combined into a single index that represents general participation in antisocial activities. For the ANTISOC variable, the responses were recoded into low, medium, and high antisocial involvement. The four separate indices of antisocial behavior were recoded from having seven responses(Appendix B) to four responses. The responses were recoded to “almost never or seldom”, “once or twice a month”, “once or twice a week”, and “once or twice a day”. For the computed variable SOLDSTO, 95% (n=830) of the sub-sample fall into the almost never or seldom category while .9% (n=8) are included in the once or twice a day category. Percentages of 3% (n=30) and 1% (n=9) fell into the once or twice a month and once or twice a week categories respectively. The results of the frequency output for the ROBBOTH variable show that 97% (n=851) of the sub-sample are a part of the almost never or seldom category while on the extreme .7% (n=6) fall into the once or twice a day categories respectively. The variable VIOLENT includes 75% (n=603) of the sub-sample which falls into the once or twice a month category while 21% (n=169) and 5% (n=36) are a part of the once or twice a week and once a day categories respectively. Eighty-eight percent (n=765) of the sample population are a part of the almost never or seldom category while a percentage of .1% (n=1) is indicated for those who fall into the extreme category of once or twice a day. The remaining percentages of 11% (n=93) and

1% (n=11) are inclusive of the once or twice a month and once or twice a day categories respectively. Finally, the univariate statistics indicate that 94% (n=815) of the respondents indicate low antisocial involvement, 5% (n=42) indicate middle antisocial involvement, and 2% (n=14) indicate high rates of antisocial involvement.

The Computed Independent Variable

The independent variable parental attachment is represented by the single index ATTPAREN (Table 5). The six attachment indicators were combined to accomplish this. Factor analysis revealed no significant differences between the indicators of attachment of the subjects of this study. The attachment index was recoded into low, medium, and high parental attachment. The univariate analysis revealed that 57% (n=520) of the respondents have a high attachment, 37% (n=36) have a medium attachment, and 7% (n=61) indicate having a low attachment to their parents.

Contingency Analysis Results

This section will present the findings of the contingency analysis. The results of the contingency analysis indicate that total attachment and total antisocial behavior are related statistically and negatively in the population; however, the individual variables that make up the total antisocial variables are not statistically significant when crossed with total attachment. Therefore, it can be concluded that combined, the antisocial items are more readily related to total attachment than they would be individually. The results of the contingency analysis are below.

Total Attachment and Total Antisocial Behavior

The contingency analysis results indicate that the two variables are related. A chi-square of 11.53 and a critical value of 9.48 indicate that the two variables are statistically significant in the population. Since the probability is smaller than .05 ($p=.021$) the

hypothesis of independence between total attachment and total antisocial behavior is rejected and a statistically significant relationship is indicated. Therefore, the more that a child is attached to his parent, the less likely he will participate in antisocial acts. It can also be assumed that the higher the attachment the fewer the number of respondents in the antisocial categories as the categories go from low to high involvement. This is evident where 96% of the highly attached youths are in the low antisocial category, 3% are in the middle antisocial category, and 1% are in the high antisocial category.

Total Attachment and Acts of Illegal Drug Distribution and Acts of Theft

According to the contingency analysis output, the two variables are not statistically significant (chi-square = 3.86; critical value = 9.48). The probability is over the accepted value of .05 ($p = .145$) which also allows the null hypothesis of independence to be accepted.

Total Attachment and Violent Antisocial Acts

The probability is larger than .05 ($p = .114$). The hypothesis of independence between total attachment and violent antisocial acts is accepted. A chi-square of 4.346 and a critical value of 6 indicate that the variables are not statistically significant.

Total Attachment and Acts of Robbery of Students and Others (Not Parents and Teachers)

Again, the probability is larger than .05 ($p = .471$). The hypothesis of independence between total attachment and acts of robbery is accepted (chi-square = 1.505; critical value = 6).

Total Attachment and Assault Against Authority Figures (Parents and Teachers)

The two variables total attachment and assault against authority figures are also found to be independent in the population (chi-square = .674; critical value = 6). The probability value is again larger than .05 ($p = .714$).

Total Antisocial and the Various Demographic Variables

Contingency analyses were conducted with the antisocial measures and the various demographic variables. When ethnicity was crosstabulated with total antisocial behavior, a chi-square value of 38.27 and a critical value of 18.307 allow the hypothesis of independence to be rejected. The probability is small ($p = .000$) therefore there is a less than 5% chance of incorrectly rejecting the hypothesis of no difference. Another weak statistically significant relationship is indicated for the SOLDSTO variable and ethnicity. The hypothesis of independence is rejected (chi-square = 24.84; critical value = 11.07) and the chance of making a Type I error is less than 5% ($p = .000$). Ethnicity and acts of robbery are indicated as being dependent in the population (chi-square = 61.45; critical value 11.07). The probability of $p = .000$ allows the hypotheses of independence to be rejected. The final two measures of assault against authority figures and various acts are independent of ethnicity in the population (chi-square = 1.41, critical value = 11.07; chi-square = 5.6, critical value = 11.07 respectively). For the remainder of the demographic variables there are no relationships indicated by the contingency analysis with exception of total antisocial behavior and age. The hypothesis of independence is rejected in this case because the chi-square was indicated as 13.78 and the critical value is indicated as 12.59. There was a less than 5% chance of making a Type I error ($p = .032$).

Pearson's Product-moment Correlation and Partial Correlation Coefficient Analyses

The results indicate considerable support for the hypothesis of this study. The antisocial indices are inversely associated to parental attachment and are statistically significant in the population with the exception of assault on authority figures (ASSAULT), which is inversely associated to parental attachment, but not

statistically significant ($r = .022$, $p = .269$). The correlation matrix indicates that the strength of the associations are; however, weak (Table 6 Appendix C).

A partial correlation coefficient analysis was conducted in order to examine the effect of parental attachment on antisocial behavior with grade, ethnicity, grade point average, and age held constant in four separate instances. The goal was to test the independent effect of parental attachment. There were no significant differences from the partial relationships and the original relationship. A replication was achieved when grade, ethnicity, grade point average, and age were controlled (Table 7).

Table 7 Partial Correlations of Parental Attachment and Antisocial Behavior

Constant	Partial
Grade	-.092**
Ethnicity	-.093**
Grade Point Avg.	-.091**
Age	-.090**
Original Relationship = -.095**	

Concerning the demographic variable grade in school, a predicted inverse association is indicated for all of the antisocial measures with the exception of the robbery measure, which indicates a very weak positive association (Table 6; $r = .017$). Although the association is not statistically significant, the bivariate result, which are supported by the frequencies suggest that middle school students participate in antisocial behaviors more that high school students and more than 1st and 2nd year college students. The hypothesized inverse associations with reference to age and the antisocial measure indicate that there are more positive associations than negative association. This could be misleading when considering that middle school students participate in more antisocial activities; however, it must be remembered that almost 40% of the 18 year olds were in

middle school, 41% of the 17 and 16 year olds, and 31% of the 15 year olds were in middle school grades. Therefore, the ages of the middle school population should be taken into consideration. This is especially true when we look at the statistically significant associations between age and the SOLDSTO measure ($r = .072^*$).

The hypothesized inverse association between grade point average and antisocial behavior was indicated for acts of robbery and the violent acts measure (Table 6), but not significantly. There were no significant associations between ethnicity and antisocial behavior. The bivariate associations between the parental attachment variable and the measures of antisocial behavior serve as support, albeit weak, for the viability of the research hypotheses. The question remains; however, of the overall impact of the attachment variable on the explanation of the range of antisocial behaviors. To address this question, the results of the multiple regression will be discussed.

Regression Analysis Results

Stepwise regression analysis was conducted to determine which independent variables offered the best explanation of antisocial behavior. Based on the stepwise regression, when parental attachment and age were regressed on acts of theft and illegal drug distribution it was indicated that parental attachment and age explained only 1% of the variation in the theft and illegal drug distribution measures (Table 8). Although the explained variation is low, the slope of the regression line is statistically significant. The significant t level is .039. The standardized slope or the Beta weight for parental attachment is $-.071$ and for age the Beta weight is $.071$ which signifies very weak negative and positive relationships with acts of theft and illegal drug distribution. The next two regression analyses were enter method analyses, instead of stepwise because there is only one predictor variable, parental attachment.

Table 8 Stepwise Regression Analysis

	SOLDSTO		
	Standardized	t	sig.
Parental Attach.	-.071	-2.07*	.039
Age	.071	2.06*	.039
$R^2 = .01$			

*** $p \leq .05$**

When parental attachment was regressed on antisocial acts, the explained variation was less than 1% (Table 9). Less than 1% explained variation was also indicated when parental attachment was regressed on violent antisocial acts (Table 10). The slope for parental attachment and antisocial acts was found to be significant and the Beta weight was indicated as weak and negative ($t = .000$; $\beta = -.09$). The indicated slope of the regression for parental attachment and violent antisocial acts was found to be significant ($t = .000$) and the relationship indicated as a weak negative relationship ($\beta = -.09$).

Table 9 Regression Analysis

	ANTISOC		
	Standardized	t	sig.
Parental Attach.	-.09	-2.69*	.000
$R^2: .008$			

*** $p \leq .05$**

Table 10 Regression Analysis

	VIOLENT		
	Standardized	t	sig.
Parental Attach.	-.09	-2.65*	.000
$R^2: .008$			

*** $p \leq .05$**

CHAPTER FIVE CONCLUSIONS

Conclusions

To recap, this thesis sought to determine whether or not there was an association between parental attachment and male antisocial behavior. Travis Hirschi's social control theory was used as the theoretical framework for this project. Control theory's element of attachment was used to pursue the research objectives of this project. As hypothesized, a negative association was found to exist between parental and male antisocial behavior. Specifically, the antisocial behaviors that were found to be negatively associated with parental attachment were the violent acts and illegal drug and theft measures (see Table 6). Although these associations were consistent with the hypotheses of the study, the regression analysis revealed that the parental attachment variable accounted for only 0% to 1% of the variance in antisocial behavior. These findings are consistent with Agnew's 1985 study, which suggested that social control variables such as parental attachment have a very small impact on antisocial behavior. Although the regression analyses were damaging to the theory used in this study, the regressions do not prove that social control theory is unimportant in explaining future antisocial behavior. The antisocial acts used in this study were for the most part considered serious by the public at large. According to studies (see criticisms in Chapter 2) control theory is best able to explain antisocial acts that are minor in nature. Also, this study employed a cross-sectional approach and researchers have suggested that cross-sectional studies are less efficient in explaining antisocial behavior than longitudinal studies.

This study assessed whether or not there was an association between parental

attachment and antisocial behavior. It was thought that social control theory, as proposed by Hirschi would account for more of the variance in antisocial behavior that was indicated in this study. However, it must be noted that many of the variables had to be computed using available data, and in some instances, what was available was not thought to be perfect enough measures for the target variable. It is important to note that the original investigator's purpose in doing his survey was to collect information on specifics not conducive to this study's goals and objectives. This is why many of the variables under consideration for this study were not adequately measurable.

There is a great deal of information concerning antisocial behavior among male children; consequently, this is an open field for further research in the area.

Recommendations for further study in this area would be to undertake the problem using a primary data collection. Primary data collection's purpose would be to design an exact instrument for data collection that would consist of more accurate measures of the variables used in this study.

Limitations

The limitations of this study are associated with the use of secondary analyses and cross-sectional studies. First, the question of validity surfaces when conducting a secondary analysis. The secondary analysis is limited to using variables possibly operationalized differently than what the researcher is interested in. Thus, it is questionable whether secondary data provides valid measures of the variable of interest (Babbie, 1995). Another limitation of this study is with reference to the indices and scales used in the original study. If there were problems with the original scales and indices, the secondary analysts must deal with those problems accordingly (Davis, 1996).

The third limitation of this study is the usage of cross-sectional data. Although

the original data used in this study is a part of a longitudinal study only one wave will be used therefore making the analysis cross-sectional. Agnew (1991) has asserted that Hirschi's control theory (1969) must be studied under longitudinal conditions because longitudinal studies have found that several of Hirschi's social bond variables explain only 1% to 0% of the variance in delinquency. Several researchers have asserted that longitudinal studies have indicated that Hirschi's social control theory explains only trivial types of delinquency and not major types of delinquency (Agnew, 1985, 1991; Paternoster & Iovanni, 1986; Paternoster, 1988; Massey & Krohn, 1986; Elliot, Huizinga, & Ageton, 1985; Paternoster, Saltzman, & Waldo, 1983; Wells & Rankin, 1983). The longitudinal data in other words, suggest that cross-sectional studies have greatly exaggerated the importance of Hirschi's theory.

APPENDICES

**APPENDIX A
ITEMS USED IN THE STUDY**

APPENDIX A

<i>Items</i>	<i>Items as Worded</i>
ATTPAREN-attachment to parents	How much have your parents influenced what you've thought and done? How important is it for you to have parents who comfort you when you're unhappy about something? How important is it for you to have your parents think you do things well? How important is it for you to get along well with your parents? How much do you agree or disagree that it is important to be honest with your parents, even if they become upset or you get punished? How much do you agree or disagree that making a good impression is more important than telling the truth about parents?
SOLDSTO-selling illegal drugs and acts of theft	How many times in the last year have you sold marijuana or hashish ("pot", "grass", "hash")? How many times in the last year have you sold hard drugs such as heroin, cocaine, and LSD? How many times in the last year have you stolen (or tried to steal) a motor vehicle, such as a car or motorcycle? How many times in the last year have you stolen (or tried to steal) something worth more than \$50? How many times in the last year have you stolen (or tried to steal) something worth less than \$5? How many times in the last year have you stolen (or

VIOLENT-violent antisocial acts	tried to steal) things worth between \$5 and \$50?
ROBBERY-acts of robbery	How many times in the last year have you attacked someone? How many times in the last year have you hit (or threatened to hit) other students? How many times in the last year have you been involved in gang fights? How many times in the last year have you carried a hidden weapon other than a plain pocket knife?
ASSAULT-assault on authority figures	How many times in the last year have you used force (strong-arm methods) to get money or things from other people (not students or teachers)? How many times in the last year have you used force (strong-arm methods) to get money from other students?
ANTISOC-combined antisocial	How many times in the last year have you hit (or threatened to it) one of your parents? How many times in the last year have you hit (or threatened to hit) your teacher? How many times in the last year have you used force (strong-arm methods) to get money or things from a teacher or other adult at school?
	All items in VIOLENT, ROBBERY, ASSAULT, and SOLDSTO are combined together to form a single index.

APPENDIX B
NATIONAL YOUTH SURVEY WAVE II
(IN PART)

APPENDIX B

This section deals with your own behavior. I'd like to remind you that all your answers are confidential. I'll read a series of behaviors to you. Please give me your best estimate of the EXACT NUMBER of times you've engaged in each behavior during the last year. (FOR ANY BEHAVIOR THAT THE RESPONDENT HAS ENGAGED IN 10 OR MORE IN THE LAST YEAR, RECORD THE RESPONSES TO THE SECOND COLUMN SAYING "Please look at the responses on the orange card and select the one which best describes how often you are involved in this behavior.")

	Once A Month	Once Every 2-3 Weeks	Once A Week	2-3 times A Week	Once a Day	2-3 times A Day
How many times in the LAST YEAR have you:						
1. Stolen (or tried to steal) a motor vehicle, such as a car or motorcycle?	1	2	3	4	5	6
2. Stolen (or tried to steal) something worth more than \$50?	1	2	3	4	5	6
3. carried a hidden weapon other than a plain pocket knife?	1	2	3	4	5	6
4. Stolen (or tried steal) things worth \$5 or less?	1	2	3	4	5	6
5. Attacked someone?	1	2	3	4	5	6
6. Been involved in gang fights?	1	2	3	4	5	6
7. Sold marijuana or hashish?	1	2	3	4	5	6
8. Hit students?	1	2	3	4	5	6

9. Hit a parent?	1	2	3	4	5	6
10. Sold hard drugs such as heroin, cocaine, and LSD?	1	2	3	4	5	6
11. Used force (strong-arm) to get things from other students?	1	2	3	4	5	6
12. Used force to get things from a teacher or other adult?	1	2	3	4	5	6
13. Used force to get things from people (not students or teachers)?	1	2	3	4	5	6
14. Stolen (or tried to steal) things worth between \$5-\$50?	1	2	3	4	5	6
15. Broken into a building or vehicle (or tried) to steal something or just to look around?	1	2	3	4	5	6
16. Hit a teacher?	1	2	3	4	5	6

In this section, I would like to ask you some questions concerning how you feel about your parents. Please answer as accurately as possible. Thank you.

1. How much have your parents influenced what you've thought and done?

A Great Deal	Quite a Bit	Some	Not too Much	Very Little
5	4	3	2	1

2. Its important to be honest with your parents, even if they become upset or you get punished.

A Great Deal	Quite a Bit	Some	Not too Much	Very Little
5	4	3	2	1

3. Making a good impression is more important than telling parents the truth.

A Great Deal	Quite a Bit	Some	Not too Much	Very Little
5	4	3	2	1

How important is it to you...

4. to have parents who comfort you when you are unhappy about something?

Very Important

Somewhat Important

Not Important

5

3

1

5. to have your parents think you do things well?

Very Important

Somewhat Important

Not Important

5

3

1

6. to get along well with your parents?

Very Important

Somewhat Important

Not Important

5

3

1

APPENDIX C
ZERO-ORDER CORRELATION COEFFICIENT MATRIX
OF PARENTAL ATTACHMENTS AND
ANTISOCIAL BEHAVIOR

Table 6 Zero-Order Correlation Matrix of Parental Attachments and Antisocial Behavior

	X ₁	X ₂	X ₃	X ₄	X ₅	Y ₁	Y ₂	Y ₃	Y ₄	Y ₅
X ₁	—									
X ₂	-.035	—								
X ₃	.012	-.015	—							
X ₄	-.189**	.020	-.014	—						
X ₅	-.025	-.051	-.024	-.061*	—					
Y ₁	-.095**	-.010	.032	.033	.015	—				
Y ₂	-.022	-.028	-.052	-.014	.045	.564**	—			
Y ₃	-.100**	-.017	.050	.056	-.020	.702**	.400**	—		
Y ₄	.035	.017	.013	-.009	-.015	.506**	.319**	.375**	—	
Y ₅	-.088**	-.015	.009	.072*	.003	.677**	.235**	.328**	.297**	—

X₁ = Parental Attachment
X₂ = Grade In School
X₃ = Ethnicity
X₄ = Age
X₅ = Grade Point Average

Y₁ = Total Antisocial
Y₂ = Assault on Authority Figures
Y₃ = Violent Antisocial Acts
Y₄ = Acts of Robbery
Y₅ = Sold Illegal Drugs and Theft

**Correlation is significant at the .01 level

* Correlation is significant at the .05 level

Listwise N = 816

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