



138
811
THS

12006
7836120

**LIBRARY
Michigan State
University**

This is to certify that the
thesis entitled

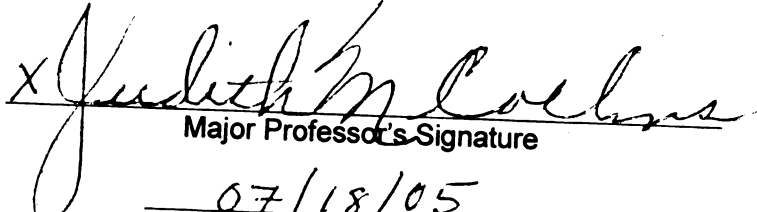
**A Meta-Analytic Review of Social Bonding Theory and
Juvenile Delinquency, with Moderated Meta-Analysis by
Gender**

presented by

Rebecca Michele Hayes

has been accepted towards fulfillment
of the requirements for the

M.S. degree in Criminal Justice


Major Professor's Signature

07/18/05
Date

PLACE IN RETURN BOX to remove this checkout from your record.
 TO AVOID FINES return on or before date due.
 MAY BE RECALLED with earlier due date if requested.

DATE DUE	DATE DUE	DATE DUE
DEC 13 2008		

**A META-ANALYTIC REVIEW OF SOCIAL BONDING THEORY AND JUVENILE
DELINQUENCY, WITH MODERATED META-ANALYSIS, BY GENDER**

By

Rebecca Michele Hayes

A THESIS

**Submitted to
Michigan State University
In partial fulfillment of the requirements
For the degree of**

MASTER OF SCIENCE

School of Criminal Justice

2005

ABSTRACT

A meta-analysis was conducted to examine the true score (population) correlation for Hirschi's social bonding theory and juvenile delinquency. Findings revealed considerable inconsistencies in indicators that measure the four social bonding variables—attachment, involvement, commitment and belief. The true score correlations for the overall model and also for the models using gender as a moderator ranged from $-.08$ (attachment analyzed for males only) to $-.33$ (belief). The explained variance in the distribution of correlations for the meta-analysis ranged from 2.41 (belief) to 26.26 (for the overall model for females only, which means there was considerable (as much as 97.59 per cent) unexplained variance, pointing to the likelihood of one or more moderators of the relationship between social bonding and juvenile delinquency.

Table of Contents

Introduction.....	1
Social Bonding Theory.....	2
Issues in Social Bonding Research.....	5
A Broad Review of Social Bonding Theory.....	7
Gender Differences and Social Bonding Theory.....	9
Thesis Hypotheses.....	11
Methods.....	13
Results.....	16
Discussion.....	18
Conclusion.....	22
Table.....	23
References.....	24

INTRODUCTION

This study presents a meta-analysis of the relationship between social bonding theory and juvenile delinquency. The goal of the study is to determine which of the four social bonding variables-- commitment, attachment, involvement, and belief-- best predict juvenile delinquency. In addition, the study evaluates the hypothesis that gender is a moderator of the relationship (correlation) between social bonding and juvenile delinquency. Thus, the study includes a moderated meta-analysis of gender and social bonding to see how much difference, if any, there is in the amount of explained variance for males versus females.

Hundreds of studies have been conducted on the relationship between social bonding theory and delinquency, but research findings are inconsistent. Few studies find the same or similar correlations. There are several possible reasons for these inconsistencies in the literature including the use of different sample sizes, which can contribute to sampling error (Hunter and Schmidt, 1990). In addition, the reliability of scales used to measure social bonding and delinquency differ across studies. The use of different measures contributes to measurement error (Hunter and Schmidt, 1990). However, meta-analysis can correct for these errors to reveal the “true score correlation,” which is the population correlation. Thus far, no such meta-analysis has been conducted on social bonding theory and delinquency. This study seeks to fill this gap in the scientific literature.

The meta-analysis in this study will clarify: (1) the magnitude of the true correlations (rhos) between each of the four social bonding variables and delinquency, and (2) the differences, if any, in the magnitude of these correlations for males versus

females. The meta-analysis method used will be that of Hunter and Schmidt (1990). In light of the extensive literature and studies available on social bonding theory, the possibility exists that a clearer picture of the relationship between social bonding and delinquency will emerge as a result of this meta-analysis.

SOCIAL BONDING THEORY

According to Hirschi (1969), the theory of social bonding, also called “social control,” asserts that delinquent acts occur when one's bond to society is either weak or broken. An individual's bond to society is achieved through the socialization process and the level of conformity to social norms (Wiatrowski, Griswold and Roberts, 1981). Different elements that contribute to this bond between individual and society are defined by four variables: attachment, commitment, involvement and belief (Hirschi, 1969; Wiatrowski, Griswold and Roberts, 1981; Agnew, 1985, 1991). Each of these variables will be discussed in greater detail. According to Hirschi's theory, these variables discussed further below, are related to each other and weaknesses in one or all of them lead a juvenile to commit delinquent behavior (Hirschi, 1969).

Social bonding theory presents a different explanation of criminal behavior than its predecessors that placed the causal importance on motivational processes (i.e. differential association, labeling, strain; Lasley, 1988). Instead of explaining the propensity to commit crimes like most theories, social bonding theory seeks to explain why individuals do not commit crimes (Hirschi, 1969). The theory offers an explanation based on an individual's bond to society. It assumes that all individuals would commit crime but that because of these “social bonds” individuals are disinclined from doing so (Hirschi, 1969). According to this theory, all individuals have unfulfilled needs and

desires. Because of low social control, people use unconventional means to attain their needs and desires (Agnew, 1993). In essence, social bonding theory is claiming to be a general theory that would include everyone and their propensities to attain needs and desires based on their personal level of social control.

Four elements purportedly contribute to an individual's bond to society. Weakness in one or more of these variables provides can lead to criminal behavior (Hirschi, 1969). The four elements are: attachment, commitment, involvement, and belief. Many of the studies find differences in the magnitudes of the correlations between delinquency and each of these four social bonding variables. The social bonding variables and their indicators are described by Hirschi (1969) and Agnew (1993) as follows:

- Attachment: the affection and respect that the adolescent holds toward significant others, such as parents, teachers and friends
 - Indicators include: opinions of affection they receive from parents, teachers and friends; expectations of and closeness of parents, teachers and friends; and amount of caring towards these people.

- Commitment: the adolescent's actual or anticipated investment in conventional activities.
 - Indicators include: Interest in school, sports or other extracurricular events; school

grades; college and career aspirations; life goals, etc.

- **Involvement:** the amount of time spent engaged in these conventional activities.
 - Indicators include time spent in school, sports, or other extracurricular events.
- **Belief:** the adolescent's commitment to the central value system of the society or social norms, which also can be gauged by their religious beliefs.
 - Indicators include: opinions of morality, honesty, and what is considered wrong by social standards.

According to Hirschi, the social bond elements are interconnected with each other and, if one aspect is weak, the others will be weakened as well (1969). For example if a child's attachment to his or her family is weak, commitment to school is also assumed to be weak.

There is much empirical support for social bonding theory. However, as previously stated, studies' findings conflict with one another (Agnew, 2003). There is also a debate as to whether commitment and involvement should be considered the same variable or if involvement is already tested within the other three variables of commitment, attachment, and belief (Gardner and Shoemaker, 1989; Junger-Tas, 1992;

Krohn, Lanza-Kaduce and Akers, 1984; Junger and Marshall, 1997; Agnew, 1991). It is hard to distinguish between commitment and involvement indicators when studies use them interchangeably, this meta-analysis will statistically untangle this issue. Furthermore, belief indicators are inconsistent among researchers with some using norm values and others using religious beliefs and not both (Rosenbaum, 1987; Huebner and Betts, 2002). For this thesis however, Hirschi's original propositions are adhered to as closely as possible, by making sure that the studies remain consistent with social bonding theory and its corresponding variables.

ISSUES IN SOCIAL BONDING RESEARCH

Hirschi's Social Bonding theory has been at the forefront of many analyses of crime, more specifically delinquency, since its introduction in 1969. In 1999, Ellis and Walsh deemed it the most endorsed theory in criminology. According to Junger and Marshall (1997), the theory has been tested, challenged, and revised numerous times since its publication in 1969 (p. 81). Despite all the literature available concerning this theory, the focus is directed almost entirely on delinquency; there are few studies on adult criminality based on social bonding (Kempf, 1993).

Agnew's (1991) study on the social bonding variables concluded that attachment, commitment and belief showed strong significance for the prediction of delinquent behavior. The fourth variable, involvement, was only weakly related to delinquency (Agnew, 1991). But ten years prior, Wiatrowski et al. (1981) conducted a study and found very different results. According to Wiatrowski's study, attachment was the strongest predictor of delinquency followed by involvement (Wiatrowski et al., 1981). The results of this study showed that the belief variable was not significant when the

other variables were present, and the commitment variable was a weak predictor of delinquency (Wiatrowski et al., 1981). In yet another study by Wiatrowski and Andersen (1987), contrary to his previous findings, belief was found as the second most significant variable preceded by attachment.

Greenberg (1999) conducted a reanalysis of Hirschi's 1969 study and found weaker support than Hirschi claimed to have found. The significance of this reanalysis to the social bonding literature was that it was one of the few studies that claimed to show minimal relationship between attachment and delinquency (Greenberg, 1999). However, this reanalysis did not examine all facets of attachment. The focus was on attachment with only the father (Greenberg, 1999).

Another issue with the variable attachment is that of peer attachment. Many studies shows a positive relationship with delinquency but, Hirschi's propositions deem it to be a negative relationship with delinquency (Agnew, 1985; Barton and Figueira-McDonough, 1985; Linden, 1978; Marcos, Bahr and Johnson, 1986; Agnew, 1991; Freidman and Rosenbaum, 1988).

In addition to the above, many studies do not always include all of the social bonding variables, yet they claim to support social bonding theory, (Bishop, 1982; Rankin and Kern, 1994; Huebner and Betts, 2002; Thompson, Mitchell and Dodder, 1984; Agnew, 1991; Marcos, Bahr and Johnson, 1986; Krohn and Massey, 1980; Linden, 1978; Hepburn, 1976). An example is the study by Rankin and Wells (1990) which examined only attachment and found it significant in explaining delinquency. However, Conger (1976) studied only attachment and found weak relationships between attachment and delinquency.

Further, Thaxton and Agnew (2004) recently studied only attachment, without the other social bonding variables. This study claimed to have found significant support for the theory of social bonding. However, these authors only found support for one component of the theory not the entire theory. All of the studies that were reviewed for this thesis included the variable 'attachment'. In the literature, attachment has been found to explain the most variance compared to the other three variables. However attachment is the only variable that is present in many studies, such as those in Hepburn (1976), Freidman and Rosenbaum (1988), Rankin and Kern(1994), Poole and Regoli (1979), Jensen and Browfield (1983) and Thaxton and Agnew (2004).

Another problem that plagues the literature on social bonding theory is that social bonding is a vague term. Many studies claim to be social bonding studies but they do not clearly contain social bonding variables (Heimer, 1997; Jensen and Eve, 1976; Patterson and Dishion, 1985). Other studies include social bonding variables but these studies integrate other theories so the results are unclear (Polakowski, 1994; Conger, 1976; Matsueda, 1982). According to Le Banc and Caplan (1993), until social bonding theory is properly formalized, inconsistencies will persist in social bonding studies. A formalized theory would have a clear, concise definition of terms and measurements associated with that theory. Furthermore, if social bonding is not properly formalized it can not accurately be integrated with other theories (Le Banc and Caplan, 1993).

A BROAD REVIEW OF SOCIAL BONDING THEORY

Kempf (1993) conducted a broad qualitative review of the many studies on social bonding. Kempf's review was conducted because of a lack of a systematic critique of social bonding theory. It examined research on social bonding theory from 1970 to 1991.

The study was comprised of seventy-one studies with the majority of those studies based on white adolescent males (Kempf, 1993). However, Kempf does not claim her evaluation is exhaustive due to the three criteria she applied in selecting the studies for the review.

Kempf's criteria were as follows: "first, there must be an acknowledged test of control theory; second, Hirschi (1969) must be cited; and third, the study must be published" (Kempf, 1993, p.148). Kempf's selection criteria imply that in order to validate the authenticity of a study of social bonding theory the study must mention Hirschi's original propositions. Published studies are presumed to be credible, probably due to the journal review process (Kempf, 1993).

According to Kempf (1993), the limitations of past studies were: a lack of variation in design elements; little attention to the construct validity of the four elements within the social bond; the use of only cross-sectional data and when longitudinal data were used they were analyzed as if cross-sectional. Furthermore, different and often contrary results were found between studies, and the studies failed to show causation in order to give the theory scientific merit (Kempf, 1993). The limitations do not invalidate the usefulness of social bonding theory but rather imply that in order to improve much work remains to be done (Kempf, 1993). Although Kempf recommended ways to address these problems, these same issues mentioned above persist today.

Kempf's study, however, was a narrative review and no comparative analyses were computed. Furthermore, differences in social bonding for male and female offenders were not explored (Rosenbaum, 1987; Krohn and Massey, 1980). Finally, Kempf's study concluded that more research is needed to further develop social bonding

theory (1993)

GENDER DIFFERENCES AND SOCIAL BONDING THEORY

Based on the increasing numbers of female offenders since the early 1980's, there is a growing interest in trying to explain female criminality (Daly and Chesney-Lind, 1988; Daly, 1989). Unfortunately, there is a shortage of criminological theories that address female criminality. According to Daly and Chesney-Lind (1988), this is a gap in the literature that needs to be filled. Most feminist theorists tend to ignore the mainstream theories of crime, because those theories were written by, for, and about men (Costello and Mederer, 2003).

Costello and Mederer (2003) suggest that such a disregard for current theories and how they pertain to females might be a mistake by the feminist theorists, who might consider current theories in order to expand or improve upon them. Therefore, gender differences will be examined in this thesis to determine if the social bonding variables have equivalent exploratory power with regard to both sexes and delinquency.

Gender differences manifest themselves according to the manner in which males and females are socialized into their respective gender roles. According to Costello and Mederer (2003), males and females have the same innate tendency to pursue self-interests, which suggests, something is causing the differences in the male and female crime rates. Therefore, it might be ascertained that the self-interest of females is carried out in different ways than that of males based on differences in socialization. So the question may be, if women do commit fewer crimes than men, what are the motivations for the ones who commit those crimes (Rumgay, 2004). Zeitz (1981) did a study on male and female white collar offenders. The major difference was women were sorry for their

actions substantially more often than their male counterparts. This again brings up the interesting question of whether or not women's and men's motivations are similar or very different (Costello and Mederer, 2003). In regard to social bonding and gender, Rosenbaum (1987) examined gender, social bonding, and delinquency and found better explanatory power for social bonding theory with females versus males. Specifically, attachment was the best predictor for both males and females but attachment showed greater predictive validity for the females (Rosenbaum, 1987).

According to Rosenbaum (1987), this finding is not surprising because females are required to conform to a greater extent than males so it would seem understandable that a theory that measures one's social bonds would be more explanatory for females than for males (Rosenbaum, 1987). For example, females in general seem to have a stronger attachment to their families and maintain this attachment longer than do males (Rosenbaum, 1987).

Another example of differences in gender socialization is that at a young age, what is socially acceptable for females is not socially acceptable for males and vice versa. For example, males are taught to not play with female toy but it is often acceptable for females to play with male toys. Also, as males get older they often attain more freedom than do females.

Costello and Mederer (2003) assessed gender differences in crime and delinquency by using control theory. Costello and Mederer (2003) believe that the focus of studies should be on the similarities between the types of crimes committed by females and males. These authors also believe that one of the reasons that females commit less crime is due to their socialization (Costello and Mederer, 2003). Yet, other scholars

believe that women who commit crimes are taking on male behaviors (Akers and Sellers, 2004). Some scholars claim that it is important to look at each individual as well as the group, in order to fully comprehend the motivations, beliefs, and propensities for offending (Daly and Chesney-Lind, 1988).

Costello and Mederer (2003) argue that, in order to lessen male crime the existing method of male socialization must change; however, they also claim that cannot be accomplished without an understanding of the reasons why women do and do not commit crimes. That is why it is important to look at the occurrences of female criminality and their propensity to commit these acts (Daly and Chesney-Lind, 1988). Although various theories have been proposed, there is as yet no dominant theory for gender and criminality.

Based on all of the above literature on gender and social bonding, it seems important to further examine the relationships between gender and delinquency. Therefore in this thesis, gender will be examined as a moderator of social bonding and delinquency.

THESIS HYPOTHESES

Based on the above literature review of social bonding theory, five hypotheses are proposed and will be tested meta-analytically. First, several studies indicate that attachment is the higher predictor of delinquency, relative to the other three social bonding variables (Costello and Vowell, 1999; Rankin and Kern, 1994; Rankin and Wells, 1990; Agnew, 1993; Kempf, 1993; Rosenbaum, 1987; Wiatrowski et al., 1981). Therefore,

Hypothesis 1: The magnitude of the true score (meta-analyzed) validity for

predicting juvenile delinquency from attachment will be larger than the predictive validity for the other three social bonding variables (commitment, involvement, and belief).

Second, many other studies show that commitment also strongly, but to a lesser extent than attachment, predicts juvenile delinquency (Agnew, 1993; Agnew, 1991; Kempf, 1993; Junger-Tas, 1992; Wiatrowski et al., 1981; Krohn and Massey, 1980), therefore,

Hypothesis 2: After attachment, the magnitude of the true score validity for the prediction of delinquency from commitment will be larger than the predictive validity for the involvement or belief variables.

Third and fourth, considerable research shows mixed results on the relative extent to which involvement and belief predict delinquency, and some studies find no significant effects at all. However, some studies indicate that the belief variable may be more strongly related to delinquency than does involvement (Costello and Vowell, 1999; Junger and Marshall, 1997; Wiatrowski et al., 1981; Kempf, 1993; Agnew, 1993; Kempf, 1993; Hirschi, 1969). Therefore,

Hypothesis 3: After attachment and commitment, the magnitude of the true score validity for belief and the prediction of delinquency will be greater than for involvement.

Hypothesis 4: The magnitude of the true score validity for involvement and the prediction of delinquency will be smaller than the other three social bonding variables

Last, based on the gender differences and social bonding theory studies by

Rosenbaum (1987) and Krohn and Massey, (1980),

Hypothesis 5: Attachment, commitment, belief and involvement
are stronger predictors of delinquency for females versus males.

METHOD

The Sample

The following procedures were used to select the appropriate studies for inclusion in this meta-analysis. First, a search of the literature was conducted to locate studies that report correlations between each of the four social bonding variables--attachment, commitment, belief and involvement--and juvenile delinquency, for both males and females. To locate these studies, a comprehensive search of the following computer databases was completed: The Criminal Justice Abstracts, ProQuest, First Search, JSTOR, Social Sciences Abstracts, Sociology Abstracts and the National Criminal Justice Research Service. The literature search was performed using the following keywords: attachment, commitment, belief, involvement, delinquency, gender, males, females, and social bonding.

Second, a search of the literature was also conducted of the following journals: *Criminology*, *Justice Quarterly*, *Journal of Research in Crime and Delinquency*, *Quantitative Criminology*, *American Sociological Review* and *Sociological Quarterly*.

Finally, the reference lists of all the retrieved studies and books concerned with social bonding theory were searched in an effort to find additional studies that may have not been in any of the above computer databases or journals. This "snowballing" method turned up additional studies including theses, dissertations and conference presentations.

The final search generated 74 studies for possible inclusion in the meta-analysis. However, three rules were established to identify data that were appropriate for this meta-analysis:

- (1) The study had to have delinquency or a type of delinquency as the dependent variable;
- (2) One or all the social bonding variables had to be present (attachment, commitment, involvement, belief) and;
- (3) The indicators for the independent variables must be consistent with Hirschi's original study and clear in which of the four variables they are attempting to measure.

In addition, exclusionary criteria included

- (1) studies that reported regression statistics with no other statistics available to calculate correlations, and
- (2) studies that did not have adequate data to compute the statistics needed for a meta-analysis.

As a result of these selection criteria, the original 74 studies were reduced to 26 studies. These 26 were further reduced due to the lack of adequate statistics from which to compute correlations.

In an effort to increase the number of studies in the analysis, several authors (Agnew, 1985, 1991 and 1993; Freidman and Rosenbaum 1988; Costello 1999 and Rankin and Wells 1990), were contacted and asked for the data necessary to compute correlations. Only Robert Agnew complied with the request. The final count was 20 studies that provided the necessary data for the meta-analysis. Most of the data came

from journals and two from dissertations. The articles ranged in date from 1976-2002.

Data Coding

The four independent variables (attachment, commitment, involvement and belief) were coded based on correlations available for each of them. Gender correlations were also reported when available. The reliability coefficients were also coded when they were reported from measures of delinquency, attachment, commitment, involvement and belief.

Three of the 20 articles misrepresented Hirschi's original variables. That is, in those studies the indicators were misaligned with the variables there were supposed to represent. For example, Gardner and Shoemaker (1989) examined three social bonding variables: belief, attachment, and commitment. These authors, however, measured commitment using indicators that, according to Hirschi's theory, intend to measure involvement. In this case (and in the other two), because this thesis is testing Hirschi's theory, the indicators were coded as measures of the variable Hirschi intended each to represent: in this example, involvement. The final database included a table of all correlations for each study and the variables; attachment, commitment, involvement, and belief.

Statistical Analysis

Using a database composed of the correlations from 20 studies, the Hunter and Schmidt (1987, 2004) meta-analysis program was used to correct those correlations for sampling error due to differences in the studies' sample sizes. The meta-analysis method

also corrects for measurement error due to differences in reliabilities of scales used in those studies to measure each of the four predictors, that is, the four social bonding variables(attachment, commitment, involvement, and belief) and juvenile delinquency.

When corrected for sampling and measurement errors, it is possible to estimate the "true score" validity--a predictor coefficient for which the statistical variance is free of sampling and measurement errors. In this way, even correlations reported in studies as non-significant may, in fact, be significant after all, to the extent the scales used in the study lack perfect reliability and the sample sizes are small.

The purpose of the moderator analysis is if the correlations in the meta-analysis explain a small amount of variance then it can be deduced that something moderates those relationships. A 80% credibility interval was used to observe where the true score correlation lay within that distribution (Hunter and Schmidt, 1990). If the credibility interval is large or includes zero, the correlations between social bonding and delinquency is being moderated by some other variable or variables (Hunter and Schmidt, 1990).

RESULTS

The results are reported in Table 1. The table includes first the overall social bonding model followed by a moderator analysis by gender. Second, the subset analysis shows the meta-analysis for the four variables separately (attachment, commitment, involvement and belief) and also by gender, for attachment and belief. Gender was not used as a moderator for commitment or involvement as there were inadequate statistics for these two variables.

The meta-analysis of the overall social bonding model was conducted using a sample size of 29,476. The true score correlation was $-.23$ and $SD = .17$. The 80% credibility interval is wide and is very close to zero ($-.46$ to $-.01$), which suggests the presence of moderators. Another indication of moderators was the negligible 4.79% variance explained. Since there is such a strong indication of moderators, gender was then tested to determine if the variance explained would be higher for either males or females.

The true score correlation for males was $-.15$ and for females $-.22$ indicating a stronger relationship between social bonding and delinquency for females versus males. The interesting part was that the explained variance for males was 20.74% and for females was 26.26% a substantial jump in magnitude from the 4.79% variance explained of the overall model. However, the explained variance by gender is still low so a subset analysis was conducted to explore the relationships between each of the social bonding variables and delinquency.

After correcting for sampling error and measurement errors, the true score correlations were; $-.24$ (attachment), $-.25$ (commitment), $-.20$ (involvement), and $-.33$ (belief). The strongest correlation was for belief and delinquency but the highest explained variance was for attachment. All the explained variance percentages, however, remain relatively low, as in the overall social bonding model.

The last two meta-analysis models were gender and attachment and gender and belief. For attachment, the correlation for females was $-.19$ and for males it was $-.08$. For belief the correlation for females was $-.22$ and for males it was $-.23$. The explained variance for the correlation between attachment and delinquency was slightly higher for

males (11.8%) than for females (7.4%) the differences are not large. After all the analyses were completed, considerable unexplained variance remained. The lack of explained variance means that some other factor or factors are involved in the prediction of juvenile delinquency from social bonding theory.

DISCUSSION

This discussion will follow the order of variables as listed in Table 1. First, however, I wish to address the issue of longitudinal versus cross-sectional research on social bonding theory and delinquency. The social bond literature is sparse when it comes to longitudinal studies: the review generated only three studies, two of those studies contained correlations and the third contained no statistics from which to compute correlations. It was, therefore, not possible to conduct a moderated meta-analysis to compare the two different types of studies (longitudinal versus cross-sectional), with only two correlations for the longitudinal studies.

Insofar as the overall social bonding model did not reveal strong correlations with delinquency. There was considerable unexplained variance for the correlation between social bonding and delinquency, which called for moderated meta-analysis to determine whether other (moderating) factors might explain some of that variance.

The relationship between gender and social bonding was the most supported hypothesis in this study, but there remained unanswered questions. Although the explained variance did increase when using gender as a moderator, the increase was modest and did not meet the 75% criterion that would lend support to the social bonding model.

The above findings for the model overall and with gender as a moderator

indicates the need for further research on social bonding. For example, gender would be a good topic to examine further with regard to the attachment variable. The correlation for attachment was stronger for females than for males, a finding that is consistent with the previous literature on social bonding theory and other studies of gender and delinquency (Rosenbaum, 1987).

That is, considerable literature on gender and delinquency focuses on socialization through parents, peers and teachers, which also are the indicators for attachment in social bonding theory. Attachment, therefore, might possibly be the best predictor for female delinquency and social bonding, aside from the other three social bonding variables (belief, commitment, and involvement).

Studies that would focus specifically on females and attachment are recommended because many problems exist with this current literature. For example, studies on females and social bonding almost always include males, and all four variables of social bonding--attachment, commitment, involvement and belief, but these studies are few. Also, the majority of the studies are male samples. Females need to be included as samples in more research on social bonding.

In the present thesis, only four studies were available that included correlations for both males and females. However, using four studies capitalizes on chance; that is, although the aggregated sample size is large the number of correlations in the meta-analysis is small. These results therefore must be considered speculative until further female-social bonding research is available.

For attachment, the true score correlation with social bonding was about the same as for the overall model, and the moderator subset analysis revealed more explained

variance than did the variance for other three variables (commitment, involvement and belief). However, the variance explained by attachment was only slightly larger in magnitude (relative to the overall model), and this value failed to meet the 75% criterion for ruling out moderators. Thus, gender was examined as a moderator.

As in the overall social bonding model, the explained variance increased when controlling for gender. There remained nonetheless a large amount of unexplained variance which maybe due to at least two factors: (1) other moderators, such as socio-economic status, ethnicity, urban/rural residence; would modify the size of the correlation and the amount of variance explained, and/or the variable called attachment lacks construct validity. Construct validity means that a variable measures all of the characteristics of a concept (e.g., attachment) and nothing else; for example, attachment would be construct valid if there were evidence to show that the items that measure attachment are all inclusive and exclude others that are unrelated to attachment.

The meta-analysis for commitment and involvement revealed results similar (in correlation magnitude) to the overall model and attachment. However, again, for both variables, the considerable unexplained variance in the distribution of correlations indicates a moderator effect operating. Unfortunately, the studies that included the commitment and involvement variables did not contain data for males and females. Thus, no gender moderator analysis could be conducted.

The highest true score correlation for social bonding and delinquency was between belief and juvenile delinquency, but not all of the indicators for belief were included in all of the studies. For example, some studies included religion as an indicator of belief and others included morals as an indicator, but not all studies included both

measures. If both measures, or indicators, are included in future research, the correlation between social bonding (as measured by belief) and delinquency may be larger in magnitude than in this study. The results showed the possibility of moderators, which were conducted, by gender.

Once again, the true score correlations for gender (and a moderator of belief) are similar in size as for the overall model, attachment, commitment, involvement, and belief—only the variance for the distribution of correlations is slightly larger in magnitude. What this means is that yet other factors are moderating the correlation; that is, if one knew of the other factors, other moderator analysis could be performed that would explain the large unexplained variance. As well, the issue of construct validity may be involved, and this will be addressed further below.

In general, the problems that plague the social bonding studies are in their lack of consistency: the studies claim to examine social bonding theory but the studies use different indicators for different social bonding variables. Until this thesis, the research has not addressed this issue of inconsistencies across studies.

Also, the validity of measures (indicators) used to measure the constructs—the four social bonding variables, is in question. There are no studies that test the construct validity using statistical procedures, such as structural equation modeling, that would reveal whether or not the variables represent what they purport to—attachment, commitment, involvement, or belief.

Another potential problem is the social bonding may include other variables that were not proposed in Hirschi's theory and that are therefore not explored in current research. So perhaps, the theory is subject to modification, should other criminal justice

theories point to such variables. In other words, although social bonding itself may be a well-grounded theory, this theory may be incomplete—which is why further research is needed.

Yet another possible explanation for the relatively small true score correlations and unexplained variance may be that other moderators are involved. For example, few studies on social bonding include measures of socioeconomic status, race, and region. Demographic variables could explain differences in how people bond and are therefore become subject to acts of delinquency. These and other variables could be examined further in primary (versus secondary meta-analysis) studies. First, however, the construct validity of the social bonding variables must be established because this is where the inconsistencies and conflicting findings of studies may reside.

CONCLUSION

The results of this meta-analysis showed that the correlations and explained variance between delinquency and social bonding theory is minimal. That is to say that the relationship between the two is weak, even when gender was used as a moderator. Corrections for sampling error and measurement error increased the size of the correlation for the overall model and also for the subset models, however, the correlations still were marginal. Evidence from these results indicates that the correlation between social bonding and delinquency is moderated by variables other than, but including, gender. Future research is needed to disambiguate the social bonding theory. A final recommendation is that all future studies would report descriptive statistics to provide data for meta-analyses that can reveal the true score correlation for social bonding and delinquency.

Table 1. Meta-Analysis of Correlations Between Social Bonding & Juvenile Delinquency

Model	<i>K</i>	<i>N</i>	<i>r</i>	<i>SD_r</i>	<i>ρ</i>	<i>SD_ρ</i>	80% Credibility Interval	% Var. Explained
Overall	20	29,476	-.17	.13	-.23	.18	-.46 to -.01	4.79
Males	4	2,059	-.11	.09	-.15	.11	-.29 to -.01	20.74
Females	4	1,675	-.17	.08	-.22	.11	-.36 to -.09	26.26
Subset Analysis								
Attachment	20	29,476	-.18	.13	-.24	.17	-.45 to -.028	4.87
Males	4	2,059	-.06	.12	-.08	.16	-.28 to .11	11.8
Females	4	1,675	-.15	.17	-.19	.22	-.48 to .09	7.44
Commitment	17	27,218	-.19	.18	-.25	.23	-.54 to .04	2.38
Involvement	11	16,405	-.14	.17	-.20	.24	-.51 to .11	2.72
Belief	17	26,957	-.25	.21	-.33	.27	-.68 to .02	2.41
Males	4	2,059	-.20	.18	-.23	.20	-.49 to .03	5.07
Females	4	1,675	-.20	.19	-.22	.21	-.49 to .04	6.04

Note: *K* = number of correlations; *N* = number of subjects; *r* = sample size weighted mean observed correlation; *SD_r* = sample size weighted observed standard deviation; *ρ* = true score correlation; *SD_ρ* = standard deviation of the true correlation; 80% Credibility Interval = $\rho = \pm 1.28 \cdot SD$; % Variance Explained = percent of variance in the observed correlations attributable to sampling error and measurement error.

References

- Agnew, R. (1993). Why Do They Do It? An Examination of the Intervening Mechanisms Between "Social Control" Variables and Delinquency. *Journal of Research in Crime and Delinquency*, 30(3), 245-266.
- *Agnew, R. (1991). The Longitudinal Test of Social Control Theory and Delinquency. *Journal of Research in Crime & Delinquency*, 28(2), 126-156.
- *Agnew, R. (1985). Social Control Theory & Delinquency: A Longitudinal Test. *Criminology*, 23(1), 47-61.
- Agnew, R. (2003). The Interactive Effects of Social Control Variables on Delinquency. In C. L. Britt, Gottfredson, M.R. (Ed.), *Control Theories of Crime and Delinquency* (Vol. 12, pp. 53-76). New Brunswick: Transaction Publishers.
- Akers, R. L. Sellers, C. (2004). *Criminological Theories Introduction, Evaluation, and Application* (Fourth ed.). Los Angeles: Roxbury Publishing Company.
- *Aultman, M.G. (1979) Delinquency Causation: A Typological Comparison of Path Models. *The Journal of Criminal Law & Criminology*, 70(2), 152-163.
- *Barton, W.H., Figueira-McDonough J. (1985). Attachments, Gender and Delinquency. *Deviant Behavior*, 6, 119-144.
- *Bernburg, J.G., Thorlindsson, T. (1999). Adolescent Violence, Social Control, and the Subculture of Delinquency Factors Related to Violent Behavior and NonViolent Delinquency. *Youth & Society*, 30(4), 445-460.
- *Bishop, D.M. (1982). *Deterrence and Social Control: A Longitudinal Study of the Effects of Sanctioning and Social Bonding on the Prevention of Delinquency*. Unpublished doctoral dissertation, University of New York, Albany.
- Chesney-Lind, M. (1997). *The Female Offender: Girls Women and Crime*. Thousand Oaks, CA: Sage Publications.
- Conger, R.D. (1976). Social Control and Social Learning Models of Delinquent Behavior; A Synthesis. *Criminology*, 14(1), 17-40.
- Costello, B. J., Mederer, H. J. (2003). A Control Theory of Gender Difference in Crime and Delinquency. In C. L. Britt, Gottfredson, M.R. (Ed.), *Control Theories of Crime and Delinquency* (Vol. 12, pp. 77-107). New Brunswick: Transaction Publisher.
- Costello, B.J., Vowell, P.R. (1999). Testing Control Theory and Differential Association:

- A Reanalysis of the Richmond Youth Project Data. *Criminology*, 37(4), 815-842.
- Daly, K. (1989). Gender and Varieties of White- Collar Crime. *Criminology*, 27(4), 769-794.
- Daly, K., Chesney-Lind, M. (1988). Feminism And Criminology. *Justice Quarterly*, 5(4), 497-538.
- Ellis, L. Walsh, A. (1999). Criminologists Opinions About Causes and Theories of Crime and Delinquency, *The Criminologist*, 24 (4).
- Freidman, J. Rosenbaum, D.P. (1988). Social Control Theory: The Salience of Components by Age, Gender, and Type of Crime. *Journal of Quantitative Criminology*, 4 (4), 363-381.
- *Gardner, R.L. (1984). *Social Bonding and Delinquency: A Multivariate Analysis*. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blackburg.
- Gardner, L., Shoemaker, D.J. (1989). Social Bonding and Delinquency: A Comparative Analysis. *The Sociological Quarterly*, 30(3), 481-500.
- Greenberg, D.F. (1999). The Weak Strength of Social Control Theory. *Crime & Delinquency*, 45(1), 66-81.
- Heimer, K. (1997). Socioeconomic Status, Subcultural Defintions and Violent Delinquency. *Social Forces*, 75, 799-833.
- *Hepburn, J.R. (1976). Testing Alternative Models of Delinquency Causation. *The Journal of Criminal Law & Criminology*, 67(4), 450-460.
- Hirschi, T. (1969). *Causes of Delinquency*. Berkeley: University of California Press.
- *Huebner, A.J., Betts, S.C. (2002). Exploring the Utility of Social Control Theory for Youth Development Issues of Attachment, Involvement, and Gender. *Youth & Society*, 34(2), 123-145.
- Hunter, J.E., Schmidt, F.L. (1990). *Methods of Meta-Analysis*. Newbury Park, CA: Sage Publications.
- Jensen, G.F. & Brownfield, D. (1983). Parents and Drugs. Specifying the Consequences of Attachment. *Criminology*, 21, 543-554.
- Jensen, G.F. & Eve, R. (1976). Sex Differences in Delinquency: An Examination of Popular Sociological Definitions. *Criminology*, 13, 427-448.

- *Junger, M., Marshall I.H. (1997). The Interethnic Generalizability of Social Control Theory: An Empirical Test. *Journal of Research in Crime and Delinquency*, 34(1), 79-112.
- Junger-Tas., J. (1992). An Empirical Test of Social Control Theory. *Journal of Quantitative Criminology*, 8(1), 9-28.
- Kempf, K. L., (1993). The Empirical Status of Hirschi's Control Theory. In Adler, Laufer (Ed.), *New Directions in Criminological Theory. Advances in Criminological Theory*(Vol. 4, pp.143-185). New Brunswick: Transactions Publisher.
- *Kempf-Leonard, K., Decker, S.H.(1994). The Theory of Social Control: Does it Apply to the Very Young? *Journal of Criminal Justice*, 22(2), 89-105.
- *Krohn, M.D., Lanza-Kaduce, L., Akers, R. L. (1984). Community Context and Theories of Deviant Behavior: An Examination of Social Learning and Social Bonding Theories. *The Sociological Quarterly*, 25, 353-371.
- *Krohn, M.D., Massey, J.L. (1980). Social Control and Delinquent Behavior: An Examination of the Elements of the Social Bond. *Sociological Quarterly*, 529-544.
- Lasley, J. R. (1988). Toward a Control Theory of White-Collar Offending. *Journal of Quantitative Criminology*, 4(4), 347-362.
- *Linden, R. (1978). Myths of Middle Class Delinquency: A Test of the Generalizability of Social Control Theory. *Youth & Society*, 9(4), 407-432.
- LeBanc, M. and Caplan, A. (1993). Theoretical Formalization, a Necessity: The Example of Social Bonding Theory. In Adler, Laufer (Ed.), *New Directions in Criminological Theory. Advances in Criminological Theory*(Vol. 4, pp. 237-336). New Brunswick: Transactions Publisher.
- *Marcos, A.C., Bahr, S.J., Johnson, R.E. (1986). Test of a Bonding/Association Theory of Adolescent Drug Use. *Social Forces*, 65(1), 135-161.
- Matsueda, R.L. (1982). Testing Control Theory and Differential Causation: A Causal Modeling Approach. *American Sociological Review*, 47, 489-504.
- Patterson, G.R. & Dishion, T.J. (1985). Contribution of Families and Peers to Delinquency. *Criminology*, 23, 63-80.
- Poole, E. D. & Regoli, R.M. (1979). Parental Support, Delinquent Friends and Delinquency: A Test of Interaction Effects. *Journal of Criminal Law and Criminology*, 70(2), 188-193.

- *Rankin, J.H., Kern, R. (1994). Parental Attachments and Delinquency. *Criminology*, 32, 495-515.
- Rankin, J.H., Wells, L.E. (1990). The Effect of Parental Attachments and Direct Controls on Delinquency. *Journal of Research in Crime and Delinquency*, 27, 140-165.
- *Rosenbaum, J.L., (1987) Social Control, Gender, and Delinquency: An Analysis of Drug, Property and Violent Offenders. *Justice Quarterly*, 4 (1), 117-132.
- Rumgay, J. (2004). Scripts for Safer Survival: Pathway Out of Female Crime. *The Howard Journal of Criminal Justice*, 43(4), 405-419.
- Thaxton, S., Agnew, R. (2004). The Nonlinear Effects of Parental and Teacher Attachment on Delinquency: Disentangling Strain from Social Control Explanations. *Justice Quarterly*, 21(4), 763-791.
- *Thompson, W.E., Mitchell, J., Dodder, R.A. (1984). An Empirical Test of Hirschi's Social Control Theory of Delinquency. *Deviant Behavior*, 5, 11-22.
- Tubre, T.C., Collins, J.M. (2000). Jackson and Schuler (1985) Revisited: A Meta-Analysis of the Relationships between Role Ambiguity, Role Conflict, and Job Performance. *Journal of Management*, 26(1), 155-169.
- Wiatrowski, M.D. , Anderson, K.L. (1987). The Dimensionality of the Social Bond. *Journal of Quantitative Criminology*, 3(1), 65-81.
- *Wiatrowski.,M.D., Griswold, D.B., & Roberts, M.K. (1981). Social Control Theory and Delinquency. *American Sociological Review* ,46, 525-541.
- Zietz, D. (1981). *Women Who Embezzle or Defraud: A Study of Convicted Felons*. New York: Praeger Publishers

MICHIGAN STATE UNIVERSITY LIBRARIES



3 1293 02736 2270