

SOCIAL BONDING AND DELINQUENCY: A MULTIVARIATE ANALYSIS

by

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TABLE OF CONTENTS

	Page
ACKNOWLEDGEMENTS	ii
LIST OF TABLES	vii
Chapter	
I. INTRODUCTION TO THE PROBLEM	1
II. SOCIAL BONDING: THEORY AND RESEARCH	11
Hirschi's Social Bonding Theory	11
Relationships Among The Components	14
Empirical Assessments Of The Social Bond	17
Hirschi's Assessment Of The Bond	17
Attachment	18
Commitment	26
Involvement	28
Belief	29
Subsequent Assessments	32
Additional Evidence	45
Attachment	45
Commitment	51
Belief	54
Involvement	56

Exogenous Influences	59
Differential Effects Of Residence	59
Differential Effects Of Sex	62
III. AN EMPIRICALLY BASED BONDING MODEL	66
Relations Among Elements Of The Social Bond	66
The Influence Of Sex	69
Rural-Urban Residence And Delinquency	70
The Case Of Involvement	71
Notes On The Use Of Measures Of Self-Reported	
Delinquency	72
Verification Of The Model	74
IV. SAMPLE AND MEASUREMENT	77
Pretest	77
The Sample	78
Measurement	79
Indicators Of The Bond	80
Additional Indicators	85
Indicators Of Delinquency	87
Response Categories And Scoring Technique	90
Scale Construction	91
V. FINDINGS	94
Relationships Among The Bonding Elements	94
Deterrence And The Social Bond	101

The Social Bond, Deterrence, And Delinquency .	102
Delinquency And The Conventionality Of	
Significant Others	104
Regression Of Delinquency On Indicators Of	
The Bond	104
Regression Of Total Delinquency	105
The Regression Of Property Crimes	106
The Regression Of Violence	110
The Regression Of Drug Possession	111
The Regression Of Juvenile Misbehavior . . .	113
Summary Of The Regression Analysis	113
Sex, Delinquency, And The Social Bond	117
Locality, Delinquency, And The Social Bond . .	121
Summary Of The Findings	131
 VI. SUMMARY AND DISCUSSION	 132
 REFERENCES	 139
 APPENDIX A: QUESTIONNAIRE	 149
 VITAE	 165
 ABSTRACT	

LIST OF TABLES

Table	Page
1. Selected Characteristics Of The Sample	81
2. Scaled Indicators And Their Reliability	92
3. Zero-Order Correlation Matrix For Major Variables .	96
4. Regression Of Delinquency On Major Bond Scales . .	107
5. Regression Of Delinquency On Bonding Sub-Scales .	108
6. Summary Of Standardized Regression Coefficients .	115
7. Mean Scores On Major Variables By Sex	118
8. Regression On Major Bond Scales With Sex	119
9. Mean Scores By Size Of Community	124
10. Mean Scores By Locality	125
11. Mean Scores On Major Variables By Race	128
12. Mean Scores By Locality By Race	129

Chapter I

INTRODUCTION TO THE PROBLEM

The delinquent behaviors of youth have been a concern in most societies as far back as written records allow us to infer. In 2270 B.C. for example, the Code of Hammurabi addresses the problem of disobedient and runaway children (Kocourek and Wigmore, 1951). Specialized provisions for delinquent youth have been incorporated into laws and other formalized codes for behavior and in more recent centuries the proliferation of literature upon the topic of juvenile delinquency has been diverse and extensive.

In a review of selected documents from England, Scotland, Australia, and the United States, Sanders (1970) identifies 124 writings in the period from 688 A.D. to 1900 which deal with the topic of juvenile delinquency, punishment of delinquents, and the treatment of delinquent youth. He states, "so many books, pamphlets and articles on juvenile delinquency are pouring from the presses that the reading public is becoming skeptical as to whether anything new can be written about the subject" (1970: xvii). Whereas the accuracy of this statement is questionable, the phenomenon to which it refers is unmistakable. Not only has juvenile delinquency been the subject of public concern since the

beginning of recorded history, it has been the subject of intense concern in post-industrial, urban society.

Many explanations have been advanced for the increased emphasis upon juvenile delinquency in recent decades. However, central to most explanations is the increased frequency of juvenile delinquency in industrialized, urban societies; thus, increased delinquency rates are associated with greater concern. In turn, the view of delinquency as a social problem in post-industrial society is linked to such factors as changes in the family's structure and socialization function (Haskell and Yablonsky, 1982) and the changing nature of adolescence, youth subcultures, youth unemployment, and changing community and family relationships (Friday and Hage, 1976).

Just as delinquency rates and public concern have been on the increase, so also has the sociological study of crime and delinquency. In the first part of the 20th century, the study of crime and delinquency moved at a very slow pace (Quinney, 1975), but initially was given sociological relevance and empirical import in this period by Clifford Shaw and Henry McKay, Edwin Sutherland, and Robert Merton. According to Gibbons (1979) the period from 1930 to 1955, following the initial onset of sociological criminology, can be characterized by a "textbook explosion" and the

maturation of the study of criminology and juvenile delinquency, which became well established in the sociology departments of American colleges and universities. The period from 1955 to 1970 is characterized by the development of "mainstream criminology," which focuses on five major theoretical issues: hidden delinquency, offender typologies, gang and delinquent subcultures, corrections, and social control formulations (Gibbons, 1979). Each of these issues within mainstream criminology is in turn characterized by a theoretical history, major theories and proponents, and numerous operationalizations of relevant concepts.

The latter half of the 20th century has been characterized by an increasing rate of delinquent behavior, an increased public and academic concern with delinquency, and the rise and maturation of sociological criminology. Whereas no causal connection between any of these events is implied, it is reasonable to suggest that changes in one may either directly or indirectly produce an effect in another. For instance, policy implications derived from sociological research may influence public opinion as well as delinquency rates, if successfully implemented. If such an effect is positive in terms of public opinion, the sociological enterprise may benefit from further investments of the public's resources into research, thereby increasing academic activity.

Whatever the precise nature of the relationship, if any, between sociological criminology, public opinion, and delinquency, it should be understood that the relationship between delinquency and sociological criminology is qualitatively different from the relationship between delinquency and public opinion. The concern with juvenile misconduct by sociological criminologists must be free of moral pronouncements and platitudes, whereas public opinion is under no such restrictions. As a scientific enterprise, sociological criminology must be concerned with the generation and testing of propositions which explain the relationships between events in the empirical world. These propositions must be combined in a logical manner in order to account for empirical facts already known and to predict empirical relationships yet unknown. In sum, sociological criminology must be concerned with the creation and testing of theory. Furthermore, each of these is an equally legitimate scientific endeavor. The empirical validation of theory is as much an important part of the scientific process as is the creation of theory.

In the field of criminology there have been many competing, as well as complementary, explanations of juvenile delinquency. However, several of these explanations tend to fall short on theoretical grounds while

others tend to experience difficulty in empirical verification. For instance, one important line of thought embodies social disorganization (Shaw et al., 1929; Shaw and McKay, 1942) and anomie (Merton, 1968) perspectives which view delinquency as the result of disruption and instability in social structures and institutions. Such instability is generally viewed as producing ambiguity with regard to appropriate activity, resulting in a weakened ability to control behavior. But both concepts of disorganization and anomie have been difficult to operationalize at the microsocial level and thus difficult to test with regard to individual behavior.

A contrasting line of thought can be found in subcultural explanations of delinquency, which tend to focus on differences in value systems between social classes. For instance, Miller (1958) argues that lower class values and lifestyles are conducive to delinquent behavior. However, Miller's thesis has met with difficulty in attempts at operationalization and verification. Cohen (1955) has argued that poor school performance, and thus delinquency, results among lower class boys from conflicts with middle class values embodied in the educational institution. However, for the most part, Cohen's "middle class measuring rod" has not been consistently verified. As a final example

of subcultural theory, Cloward and Ohlin (1960) suggest differential access to opportunity among the lower classes produces poor self concepts and frustrations which become manifested in various forms of delinquency. But again, Cloward and Ohlin's "differential opportunity" thesis has not received substantial empirical verification.

Interpersonal and situational theories tend to attribute greater flexibility to behavior and view delinquency as a result of the same conditions as nondelinquent behavior. For instance, Sutherland's (1939) "differential association" views delinquent behavior as learned, just as any behavior is learned. Delinquency results from exposure to an excess of attitudes favorable to the violation of the law. Whereas differential association was originally stated in propositional form, it has experienced difficulty in the operationalization of key concepts and empirical verification has been problematic. Similarly, the situational theories of "neutralization" (Sykes and Matza, 1957) and of "drift" (Matza, 1964) suffer from vagueness in their formulations, and have been difficult to operationalize and to verify.

Another prominent theoretical perspective is classified as "societal reaction" or "labeling" theory. Proponents of this perspective (Lemert, 1951; Becker, 1963) propose a

relationship between the labeling or identification of a juvenile as delinquent and further participation in delinquent activity. Central to this approach is the notion that the self-concept is altered during the labeling processes. However, for the most part, the effect of labeling upon self-concept and subsequent behaviors has not been empirically substantiated, at least not to the extent predicted by theory.

These brief reviews of dominant perspectives point to discrepancies that often result when theoretical formulations and empirical requirements fail to coincide. Perhaps the greatest promise for a scientific sociological criminology lies in the middle ground between theoretical and empirical requirements. Among such possible examples is social bonding theory as proposed by Travis Hirschi (1969). Social bonding theory has been described as a "significant theoretical contribution" (Krohn and Massey, 1980: 529) and as a "benchmark for theory construction and research in the delinquency field" (Wiatrowski et al., 1981: 525). Furthermore, describing social control theory as a promising theoretical position, Shoemaker (1984) demonstrates the potential utility of bonding theory in the integration and synthesis of theoretical perspectives at the societal and interpersonal levels.

As proposed by Hirschi (1969), delinquent behavior is to be expected if juveniles are not held in check by or bonded to conventional society. The "social bond" is a connection between the individual and the conventional order which results from attachments and commitments to, and involvement in, basic social institutions such as the family and the school. Also important is the juvenile's belief in conventional values, such as the legitimacy of the law. The social bond serves to control temptations and opportunities to engage in delinquent activities. A weakened social bond may result from faulty socialization and faulty social experiences, thus allowing for the uncontrolled exposure to the always present temptations and opportunities for delinquent behavior.

As Hirschi was concerned with both the theoretical and empirical implications of bonding theory, the theory was designed with testability in mind. Furthermore, the concern with empirical verification allowed for research findings to have an initial input, thus strengthening the theory at the point of development. With very few exceptions (Rankin, 1977; Matsueda, 1982), Hirschi's bonding theory has consistently received support in empirical applications. The theory's explanatory power is typically described as "moderate" or "good" and subsequent reformulations and

extensions of the basic theory have resulted in an increased explanatory power (Minor, 1977; Wiatrowski et al., 1981).

Despite theoretical and empirical success with social bonding theory, there have been several shortcomings in its development and extension. For instance, there have been very few analyses of a multivariate nature examining the relationships among the variables and their combined impact on juvenile delinquency. While Hirschi (1969) hypothesized several multivariate relationships, he provided only a limited multivariate analysis. Another shortcoming has been a lack of integration of contemporary developments into the analysis. Several current formulations have identified important variables in addition to those originally proposed, such as deterrence factors and religiosity. However, these variables have yet to be combined into a single comprehensive analysis.

In light of such shortcomings, it may be suggested that a significant contribution to the further development of social bonding theory, and to the understanding of juvenile delinquency, may be found through a multivariate analysis including both "traditional" and the more current variables known to be related to social bonding. To this end, a review of Hirschi's (1969) bonding theory and of empirical research over the past two decades will be presented in the

following chapter. The overall goal of this research will be to delineate the relationships among the components of social bonding theory and to identify those variables that are more likely to increase the explanatory power of the theory as an explanation of juvenile delinquency.

Chapter II

SOCIAL BONDING: THEORY AND RESEARCH

A review of Hirschi's (1969) social bonding theory will be presented in this chapter along with a review of relevant research. A discussion of variables and issues found to both increase and decrease the explanatory power of bonding theory will be included. Based upon this review, a multivariate research design will be presented in the next chapter and will be examined in further detail in subsequent chapters.

HIRSCHI'S SOCIAL BONDING THEORY

The crux of Hirschi's argument has been parsimoniously, yet accurately, stated in his own words: "The theory I advocate sees in the delinquent a person relatively free of the intimate attachments, the aspirations, and the moral beliefs that bind most people to the law" (1969: Preface). Drawing upon the Hobbesian assumption that human behavior is not intrinsically conforming, Hirschi argues that delinquents generally fail to form and/or maintain a bond to society. Whereas "causes" are generally thought to be forces producing delinquency, in the case of the social bond a "cause" is also an obstacle to delinquency, preventing its

occurrence (Hirschi, 1977). It is the cause of conformity that must be explained.

The basic assumptions of social bonding theory have been delineated by Hirschi and are presented in the following passages.

Delinquent acts are acts contrary to law. Since the law embodies the moral values of the community (and insofar as it does not, the task of explaining delinquency is even easier), it follows that (1) delinquent acts are contrary to the wishes and expectations of other people; (2) they involve the risk of punishment, both formal and informal; (3) they take (and save) time and energy; and (4) they are contrary to conventional moral belief.

If these assumptions are true, it follows further that those most likely to engage in delinquent acts are (1) least likely to be concerned about the wishes and expectations of others; (2) least likely to be concerned about the risk of punishment; (3) most likely to have the time and energy the act requires; and (4) least likely to accept moral beliefs contrary to delinquency (1977: 329).

Conformity is achieved through socialization to a common morality and is maintained by ties to other people and institutions. Therefore, the search for causes necessarily entails a search for factors that reduce the effectiveness of controlling institutions and people. It should be noted, however, that "[s]uch causes do not require that the individual become delinquent; instead, they affect the likelihood that [s]he will be exposed and that [s]he will give in to temptation" (1977: 330).

In Hirschi's (1969) original formulation, the bond between the individual and society consisted of four major elements. The first element of the social bond is attachment to significant others. This affective or emotional component is concerned with the youth's ties to family, peers, and the school. If a person's conscience is not "tied" to the expectations of others, then (s)he is not bound by their norms. The second element of the bond is the rational component of commitment to conventional behavior. Commitment reflects a cost factor; the risks of losing an investment in conventional behavior must be weighed. Hirschi operationalized commitment in terms of academic and occupational aspirations, and passage to adult status. The third element of involvement in conventional activities is the opportunity component. It assumes the opportunity to

commit delinquent behaviors is inversely related to the quality and the quantity of participation in conventional activities which promote the social value of conformity. The fourth element is the moral component of belief. This is based on the assumption of "the existence of a common value system within the society or group whose norms are being violated" (1969: 23). Furthermore, "the less a person believes [s]he should obey the rules, the more likely [s]he is to violate them" (1969: 26).

RELATIONSHIPS AMONG THE COMPONENTS

According to the overall theory, the stronger each element of the bond, the less likely the temptation to participate in delinquent behavior. All four elements were thought to vary positively with each other: "In general, the more closely a person is tied to conventional society in any of these ways, the more closely [s]he is likely to be tied in other ways" (1969: 26). However, Hirschi fails to take into consideration the simultaneous effect of the four elements upon delinquent behavior. Furthermore, whereas he hypothesized various relationships among several of the elements, he did not systematically and empirically analyze these or various combinations among the elements of the social bond.

With these exceptions in mind, however, it is possible to discern several relationships among the elements of the bond as indicated by Hirschi's discussion. Delinquency is directly influenced by each element of the bond. But there also is a chain of influence from attachment to belief, from attachment to commitment, and from commitment to involvement.

According to Hirschi, respect for adults, especially parents, is associated with belief in and acceptance of their rules. When attachments to parents are weakened, their norms are less binding. Furthermore, this lack of parental attachment produces a "spill-over effect."

Those who do not care or think about the reactions of their parents are more likely to commit delinquent acts because they have less to lose. Risking the good opinion of some other person is easy when that person's opinion is not valued anyway... Lack of attachment to parents easily spills over into lack of "respect" for teachers and the police, for adults in general (Hirschi, 1977: 332 - 333).

Thus, "parental impotence" reduces the controlling power of all institutions. In turn, parental control is further

reduced when the controlling power of other institutions is reduced, and in the process, the norms of society become less binding.

Respect for the group's norms also plays a significant role in the linkage between attachment and commitment. Students with weak affective ties to their parents tend to dislike school and to question and/or deny the legitimacy of the school's authority. Denial of the school's authority, coupled with poor academic performance, may reduce the youth's investment in the school and thus its ability to have a controlling influence on his or her behavior.

When the stake in conformity is reduced by weak commitment, the probability of exposure to temptation to engage in delinquent behavior is increased. A weakened commitment affects the probability of decreased participation (involvement) in conventional behavior, thereby increasing the probability of involvement in nonconventional behavior.

As stated earlier, Hirschi (1969) operationalized the major propositions of his theory and subjected them to empirical verification. His findings will be presented in the next section along with the findings of other research on the model of the social bond.

EMPIRICAL ASSESSMENTS OF THE SOCIAL BOND

Although the individual elements of the bond have been the subject of much research, this first section on empirical assessments will present primarily a discussion of replication studies or tests of the full model. Additional evidence from tests of individual elements of the bond will be presented in the next section.

Hirschi's Assessment Of The Bond

Hirschi (1969) attempted to empirically verify his theory of the social bond using data from a sample of 1588 nonblack males surveyed in the Richmond Youth Project. This survey included information on 17,500 students from public junior and senior high schools in Richmond, California. Data were drawn from school records, police records, and questionnaires administered by the research staff.

Two measures of delinquency were employed. The first was a measure of official delinquency based upon information about the sample obtained from the records of law enforcement agencies. These agencies provided information upon juveniles in the sample regarding the total number of criminal offenses committed, the age at first offense, the most recent offenses, and the types of offenses committed. The second measure of delinquency was based upon

respondents' self-reports. Six items served as a delinquency index. Three of the items dealt with theft of property, each with an increasing range of value. The other three dealt with car theft, vandalism, and assault. Response categories measured recency and persistence of participation in the various delinquent activities. From these, a frequency index also was derived.

Hirschi (1969) found support for most all of his theory on measures of both self-reported and official delinquency. These findings are summed in the following pages beginning with the attachment element of the social bond.

Attachment

Hirschi identified four key components of attachment: to parents, to the school, to teachers, and to peers. Attachment to parents involves four specific elements: time spent with parents by the youth (direct control), supervision by the parents, intimate communication and emotional support, and affectual identification. Hirschi considers "time spent" to be of very little theoretical importance in delinquency prevention. "Indirect control" in terms of the parents' psychological presence is considered to be much more important. Such indirect control is the concern of the remaining three elements of the attachment to parents.

The element of supervision is concerned with whether or not the parents know where the youth is and with whom the youth is with when away from home. Hirschi found that juveniles with low levels of supervision were very likely to have committed delinquent acts. For instance, regarding the mother's supervision, among those with high levels of supervision 12% had committed two or more delinquent behaviors, whereas 63% had committed no delinquent acts. For those with low levels of supervision, 55% had committed two or more delinquent acts, but in the category of no delinquent behaviors there were no respondents.

Intimacy of communication with parents was measured using two indexes. The first index measured communication from the child to the parent and concerned the ability to share thoughts and feelings, and the frequency of discussions of future plans. The second index measured the level of communication from the parent to the child. It was concerned with the extent to which parents explained their thoughts, feelings, and understandings with the youth. Combining these indexes, Hirschi found a strong relationship between intimacy of communication and the commission of delinquent acts. For instance, of those with high levels of intimate communication with the father, 73% reported having not committed any delinquent acts whereas only 5% reported

two or more such behaviors. From those with low intimacy of communication 43% had committed two or more delinquent acts and 39% reported having committed none.

Affectual identification was measured in terms of the extent to which a youth would like to be like his parents. It was found that as affectual identification decreases, the likelihood of delinquent behavior increases. Among those with low levels of affectual identification, 41% had committed no delinquent acts and 38% had committed two or more such behaviors. In contrast, among those expressing high levels of affectual identification 64% reported having not committed any delinquent acts but 16% had committed two or more.

The relationship between school ties and delinquency is assumed to operate through attachment, commitment, involvement, and belief to produce delinquent acts (Hirschi, 1979: 113). Four dimensions of attachment to the school are investigated: academic competence, significance of the school, attachment to teachers, and acceptance of the school's authority. Concerning the first of these, Hirschi argues that the academically competent youth is more likely to earn higher grades, to enjoy school, and in turn, is less likely to be delinquent.

Two objective measures of academic competence suggested by Hirschi were verbal scores on a Differential Aptitude Test and earned grades in required subjects. However, Hirschi found the subjective measure of self perceived ability to be strongly related to performance in and tolerance of the school, regardless of objective measures of ability. Thus, Hirschi hypothesized that the more competent a boy thinks he is, the less likely he is to commit delinquent acts. To measure this dimension, the respondents were asked to rate themselves in school ability, as compared with other students in their school. For those students rating themselves as "among the best," 67% had committed no delinquent acts and 13% reported committing two or more delinquent behaviors. At the other extreme, among those students rating themselves as "below average," 36% had committed no delinquent behaviors and 35% had committed two or more such acts.

In order to measure significance of the school, the subjects were asked directly: "Do you like school?" Among those expressing dislike for the school, 33% had committed no delinquent acts and 49% had committed two or more. In contrast, for those responding as liking the school, 69% had not committed any delinquent acts but only 9% had committed two or more. Thus, Hirschi concludes that as attachment

(liking) to school increases, the occurrence of delinquent behavior declines.

Attachment to teachers was intended to measure the influence of conventional figures upon delinquency. The subjects were asked if they cared about what their teachers thought of them. Among those responding with "a lot," 66% had not committed any delinquent behaviors and 12% reported having committed two or more. For those subjects responding with the other extreme of "not much," 36% had committed no delinquent behaviors and 36% had committed two or more. Combining the findings from this and the previous measure, Hirschi argues that "positive feelings toward controlling institutions and persons in authority are the first line of social control" (1969: 127). Thus, the youth who does not like school and who does not care what teachers think of him is freer to commit delinquent behaviors.

Another related measure is that of feelings about the scope of the school's authority. The subjects were asked to choose among Likert-type responses to the issue of whether the school should be able to regulate smoking outside of the classroom. Hirschi found this particular item also to be strongly related to delinquency among both smokers and non-smokers.

Additional relationships between the school and delinquency are summed by Hirschi: (a) the set of school items account for more variation in delinquency ($R = .41$) than the parental items combined ($R = .36$); (b) academic competence has little direct effect on delinquency when the effects of school performance and attitudes toward the school are removed; (c) the effects of academic performance are not eliminated when attachment to the school is taken into account; (d) self perceptions of ability affect delinquency independently of "objective" ability but not independently of attachment to school; and (e) the three attitudinal measures (liking school, teachers' opinions, and school authority) each retain an effect on delinquency even when controlling the competence and performance variables.

As for interrelations between attachments to parents teachers and school, Hirschi found that an absence of attachments in one "setting" is not compensated for by attachments in another. Those subjects experiencing low levels of attachment to parents also tend to have less concern for the opinions of teachers and tend to dislike school (Hirschi, 1969: 131). However, attitudes toward school were found to have an affect upon delinquency independently of parental attachment and concern with teachers' opinions. Also, concern for the opinions of

teachers was found to have an effect upon delinquency independently of parental attachment and attitudes toward school. In contrast, parental attachment is strongly related to delinquency among students who dislike school, but the effect is negated when the youth has a favorable attitude toward school. Hirschi argues these interactions indicate that the affects of attachments are less important for those with high stakes in conformity than among those with low stakes.

The final component of the attachment element of the social bond was attachment to peers. Hirschi begins the discussion by noting that those youths who commit delinquent acts are more likely to have delinquent peers. The data show that among those who committed two or more delinquent acts 82% had delinquent friends, whereas only 34% of those committing no delinquent acts reported having delinquent friends. Hirschi argues, however, that attachment to peers is not conducive to delinquency. The data show those youth most closely attached or respectful of their friends are less likely to have committed delinquent behaviors, regardless of the delinquency of the peers. Hirschi attempts to explain this in terms of two hypotheses. The first is that the stronger the attachment to peers, the stronger the attachment to parents. The second is that the stronger the

commitment to individualistic success values (conformity stakes), the stronger the attachment to peers. As will be discussed below, both of these hypotheses were supported by the data.

The impact of delinquent peers was found to be related to the youth's attachment to his parents. Strong attachments to parents are associated with conformity and weak attachments are associated with delinquency, regardless of whether or not the youth has delinquent peers. However, it should be noted that those youth with weak attachments are more likely to have delinquent friends and, as already mentioned, the delinquency of friends is strongly related to the probability of delinquent behavior (Hirschi, 1969: 100). Furthermore, among those boys with high levels of attachment, those with delinquent friends were more likely to be delinquent. Thus, holding attachments constant, the delinquency of peers tends to have an influence upon the commission of delinquent acts.

A concern also related to the influence of delinquent peers is a composite measure of "stakes in conformity." The conformity items are attachment to parents, attachment to school, and commitment to conventional achievement. The first two of these have already been discussed individually. They are combined to represent attitudes toward conventional

persons and institutions. The third conformity item is composed of several sub-items: the importance of getting good grades, trying hard regardless of goals, and trying hard in school. All conformity items were found to be inversely related to delinquency regardless of the delinquency of peers. Furthermore, those subjects with a low stake in conformity were more likely to have delinquent friends, and both variables of delinquent peers and stakes in conformity were independently related to delinquency.

Commitment

The next major element of the social bond is that of commitment to conventional lines of action. This entails an examination of "those stakes in conformity that are built up by pursuit of, and by a desire to achieve, conventional goals" (Hirschi, 1969: 162). Three interrelated "career lines" are identified: passage to adult status, educational commitment, and occupational commitment. The first of these, passage to adult status is designed to indicate the extent to which the juvenile prematurely engages in adult behaviors. Although analytically separable from educational commitment, the concept of passage to adult status is closely tied to it in that "passage" indicates the school's lack of relevance for the juvenile. For it is the school's

lack of relevance that frees "the student from the shackles of childhood" making him "much more likely to adopt attitudes and behavior patterns normally reserved for adults, ...more likely to smoke, drink, date and be interested in automobiles" (Hirschi, 1973: 335).

This "passage to adult status" refers to an awkward period between adolescence and adulthood in which the juvenile has many adult privileges but without adult responsibilities. These adult behaviors provide "compensation" for those juveniles whose educational and occupational prospects hold little promise. Again, the adult activities identified by Hirschi are smoking, drinking, dating, and driving. Hirschi found these behaviors to be positively related to delinquency but inversely related to educational and occupational aspirations.

The second "career line" is that of educational expectations and aspirations. This component addresses the issues of how much education the student would like to have and the education the student actually expects to receive. Both low aspirations and low expectations were found to be associated with higher levels of delinquent behavior. However, educational expectations were found to be more strongly related to delinquency than aspirations. Hirschi attributes this to a greater reality component in

expectations, but both are thought to have an independent effect.

The third "career line" is that of occupational commitment. Both occupational expectations and aspirations were measured and the findings were very much like those of educational commitment. Both are negatively associated with delinquency and both have an independent effect. As a result, Hirschi argues, a "low status future" is not jeopardized by delinquent behavior. Therefore, in sum, when educational and occupational expectations and aspirations are low, the juvenile is freer to commit delinquent acts.

Involvement

The third major element of the social bond is involvement in conventional activities. After empirically assessing the concept of involvement, Hirschi reassigns it to the status of a limited concept whose primary utility is as an indicator of commitment. Initially, Hirschi had assumed that delinquency was a "full-time job." But it was found that most delinquents spend only a few hours each year engaged in delinquent acts, leaving much time for involvement in conventional activities. The specific activities indicating involvement were time spent in homework, riding around in cars, talking with friends and

level of boredom. The involvement variables were found to be associated with delinquency, but were more relevant as indicators of commitment to conventional action.

Belief

The fourth major element of the social bond is belief in the rules of society as binding. The bonding perspective suggests delinquency is caused by the absence of beliefs that restrict temptations. As stated earlier, Hirschi establishes a direct causal influence from attachment to belief: "The chain of causation is thus from attachment to parents, through concern for the approval of persons in positions of authority, to belief that the rules of society are binding on one's conduct" (1969: 200).

Two important indicators of belief were the respondent's respect for the police and opinions as to the validity of the law. Responses were measured on Likert-type categories and it was found that as respect for the police and for the law increase, delinquency tends to decrease. For instance, with regard to respect for the police, among those responding with "strongly disagree" 34% had not committed any delinquent acts and 45% had committed two or more. In contrast, for those responding with "strongly agree," 71% had not committed any delinquent acts whereas 12% had committed two or more.

Respect for the law was measured with the statement, "its alright to get around the law if you can get away with it." Among those responding with "strongly agree," two or more delinquent acts had been committed by 41%, while 31% had not committed any delinquent acts. Of those subjects repending with "strongly disagree," 71% had not committed any delinquent acts and only 9% had committed two or more. It is interesting to note that 62% of those committing delinquent acts disagreed with this particular statement, indicating both a respect for the law and an apparent lack of guilt or shame about its violation. Hirschi explains this contradiction in terms of weak ties to their parents and a lack of respect for conventional authority. "Thus the expectation of guilt or shame that arises from their allegiance to the law is to some extent negated by their lack of concern for the opinion of others, a concern that is itself an important source of 'conscience'" (Hirschi, 1969: 205).

This assertion receives some support in the data. The perception of being able to get around the law was found to be more strongly related to delinquency ($r = .32$) than was respect for the police ($r = -.28$), attachment to one's father ($r = -.26$), and concern for teachers' opinions ($r = -.23$). Thus, as the beliefs regarding the morality of

delinquent acts decline, there is an increased probability that the delinquent behaviors will be committed. As predicted in the theory, belief is influenced by attachment.

In retrospect, Hirschi's control theory was largely supported by the evidence with two general exceptions. The first of these, an overestimation of the significance of involvement in conventional activities, has already been discussed. Whereas its theoretical significance has been tempered by the evidence, the element of involvement seems to have greater promise as an indicator of the element of commitment, which appears to have the greater theoretical significance of the two.

The second exception was Hirschi's underestimation of the importance of delinquent peers. The evidence indicated that attachment to delinquent peers has a significant direct effect upon the commission of delinquent behaviors. However, still unwilling to attribute delinquency to any form of attachment (to delinquent peers or otherwise), Hirschi suggests this shortcoming must be explained in terms of motivations other than those of a "natural" nature; motivations which are not held in check by social bonding. Hirschi does conclude, however, that the effects of delinquent peer influences must be included in the theoretical model.

Subsequent Assessments

The next published test of the social bond following Hirschi was a replication study by Michael Hindelang (1973). Hindelang sampled both male and female rural youth from public junior and senior high schools. A self-report questionnaire was employed which included the same items used by Hirschi to test the major propositions of his bonding theory. For the most part, Hindelang replicated Hirschi's findings among the rural sample. However, there were two exceptions, the latter of which is of great theoretical import to bonding theory.

The first relationship that Hindelang failed to replicate was a positive relationship between attachment to one's peers and attachment to parents. The second, more important, exception was a failure to demonstrate that a low attachment to peers increases the likelihood of delinquent behavior. Hindelang found attachment to peers to be positively related to delinquency involvement. For instance, among those most identifying with their peers 51% reported high levels of delinquency involvement. In contrast, 33% of those least identifying with their peers reported high levels of delinquency involvement.

Because of these findings, Hindelang recommends that "...Hirschi's control theory will have to be more specific

about attachments to peers. That is, the theory may need to be reconceptualized in terms of attachment to conventional and unconventional peers" (Hindelang, 1973: 487). This is an important observation which would become an issue in much of the subsequent research.

The next full test of the bonding model was made by William Minor (1977). Noting a theoretical and empirical weakness in deterrence formulations, Minor attempts to integrate a deterrence component into Hirschi's bonding formulation and then subject the resulting formulation to empirical verification. Therefore, "fear of sanctions" is treated as an element of the social bond. Using self-reported criminality among an adult sample, Minor sets up a recursive model with the elements of attachment, commitment, belief, fear, and crime. In this particular sequence, each element of the bond is influenced by each preceding element, and influences each following element. Because of Hirschi's (1969) discussion of the weakness of the involvement variable, it was not included in the model.

In Minor's analysis, attachment was represented by a composite index of attachment to family, friends, school, and work. Commitment was measured by a single indicator of income. Belief was measured by responses to questions about the legitimacy of the law. Fear was measured by responses

to a set of hypothetical situations designed to test perceptions of the severity, celerity, and certainty of formal punishments and anticipated informal sanctions from family and friends. The dependent variables were speeding, driving under the influence, marijuana use, shoplifting, and tax fraud.

Severity, celerity, and fear of formal sanctions showed no apparent effect on participation in the criminal behaviors. On the other hand, certainty and fear of informal sanctions were negatively associated with crime, as was predicted. With regard to the dependent variables, the model accounted for less than 5% of the variation in all but marijuana use, in which it accounted for 22% of the variation. However, the explanatory power of the model for "crime in general" is much better than for any specific offense ($R^2 = .29$)

Although Minor had assumed a specific causal order, his findings did not support the full model. The element which does not receive any support is that of commitment ($r = .05$). Minor suggests the explanatory power of commitment had been "absorbed" by the other elements due to high multicollinearity. However, an alternative explanation may be that using income as a sole indicator of one's commitment is in error.

In contrast, the general frequency of crime was found to be directly influenced by each element of the model: attachment ($r = -.35$); belief ($r = -.48$); and fear ($r = -.36$). Minor concludes his analysis by suggesting the model is better able to explain "generalized patterns" of deviance rather than specific incidences.

Joseph Rankin (1977) reported findings which failed to support social bonding theory. The study was based on a randomly selected sample of 385 male and female public junior and high school students in Wayne County, Michigan. Data were drawn from a 1974 self-report survey involving responses to questions about delinquent peers (unconventional attachment), conventional activities (involvement), educational expectations (commitment), attitudes toward the law (belief), and attachments to the school (conventional attachments). Delinquency was measured by responses to five different acts, each one treated as a separate measure of delinquency (petty larceny, damaged property, drinking, fighting, and parental defiance).

Rankin conducted two separate analyses, each with very different findings. In the first analysis Rankin measured the effect of each component on the five delinquent behaviors. Involvement was found to have no effect on any delinquent behavior alone or in combination with any other

element of the bond. Commitment, belief, and attachment to the school were found to have no significant effect upon the delinquent behavior of fighting. Furthermore, commitment, belief, and attachment had a significant negative effect on all forms of delinquency except damaged property. Thus, the first analysis indicates there are more conforming juveniles when commitment, belief, and attachment are strong than when they are weak.

The second set of analyses performed by Rankin were much less supportive of bonding theory. In this analysis, interrelations were examined between the five delinquent behaviors, delinquent peers, belief, commitment, and attachment to school. Only four independent effects on delinquency were found: attachment and commitment upon parental defiance, belief on drinking behavior, and attachment upon the commission of petty larceny. However, each of these independent effects was found to be positive in nature, contrary to the predicted direction.

Significant interactions were uncommon. Rankin found only two significant interactions involving the components of belief, involvement, and delinquent peers upon the two delinquent behaviors of parental defiance and drinking behavior. But again, these interactions were in the opposite direction as predicted by the theory. Furthermore,

Rankin found that adolescents with low stakes in conformity and with many delinquent friends were less likely to commit delinquent behaviors than high stakes juveniles with many delinquent friends. This finding was particularly strong for the delinquent behavior of parental defiance.

Rankin concludes his analyses by asserting that the one sure finding is that involvement in conventional activities is unrelated to delinquent activity. In addition, the analyses from this particular study provided very little empirical support for the theory of the social bond. Rankin does, however, point to several differences between his study and Hirschi's (1969) study which might account for some of the discrepancies found between the two. Hirschi's sample consisted only of males whereas Rankin's study included both males and females, but the variable of sex was not controlled. A second major difference is that Hirschi combined six measures of delinquency into an index of delinquency involvement, whereas Rankin used five independent measures of delinquency.

A study which addressed the issue of bonding elements and seriousness of delinquent behaviors was published by Marvin Krohn and James Massey (1980). This investigation employed a two-stage random sampling design to survey 3065 male and female junior and high school students in three mid-western

states. The independent variables were attachment to parents and peers, commitment to the school, the church, and the community, and belief in parental norms, legal norms and the value of education. The dependent variables were four indexes of delinquent behaviors which varied in terms of seriousness. The first delinquency index measured alcohol and marijuana use. The second index concerned the use of more potent controlled substances. The third index was termed "minor delinquent behaviors" and included such behaviors as running away, sexual intercourse, truancy, and school suspension. The final index involved "serious delinquent behaviors" and measured reports of vandalism, grand theft auto, grand theft, and the use of or the threat to use a deadly weapon.

The major objective of this research was to specify which element of the social bond is more predictive of delinquency and if bonding explains one type of delinquency better than another. In addition to the relative effects of each bonding element, the overall effects of the model on the four categories of delinquency were also of concern. The findings supported the proposition that a weakening of any one or a combination of the bonding elements would increase the probability of the commission of delinquent acts.

Support for the theory was found for all four delinquency indexes; however, the overall model, as well as each individual element of the bond, was found to be more predictive of the less serious forms of delinquency ("soft" drugs and "minor" delinquencies) than they were of the more serious forms. The explanatory power for each element of the bond for minor substance abuse is as follows: the combined model ($R^2 = .29$), belief ($R^2 = .21$), commitment ($R^2 = .16$), and attachment ($R^2 = .12$). In contrast, the order of the explanatory power of these elements with regard to other acts of delinquency is the full model, commitment, belief, and attachment.

The attachment element is the weakest predictor in all categories of delinquency and, with the exception of the minor substance abuse scale, the element of commitment is the strongest across the categories. This is reflective of a conceptual rearrangement of the indicators of attachment and commitment by Krohn and Massey (1980), based on criticisms of Hirschi's (1969) original formulation. They argue that Hirschi's measure of attachment is conceptually difficult in that "attachment to the school" refers both to affectual ties to people (teachers) and affectual ties to a social institution (school). The central observation is that such measures as ability, grades, and level of boredom

lack an affective component. Thus, attachment should refer to ties to people, while those indicators of attachment to an institution would best serve as measures of commitment, along with the dimension of involvement. In the end, the attachment element was weakened, but by increasing the conceptual integrity of that element, the predictive importance of commitment was increased (Krohn and Massey, 1980). The authors suggest the need for further specification of these and other previously uninvestigated dimensions of commitment, including the commitment to religion.

One interesting finding of Krohn and Massey's research is the influence of the variable of sex. The overall model was found to explain more variation in the dependent variables for females than for males. Furthermore, the element of attachment was somewhat stronger for males but the commitment and belief elements were more strongly related to delinquency among females. The individual indicators of commitment were also found to have a differential effect by sex.

Krohn and Massey conclude their analysis by suggesting a delinquent associations component may need to be built into the bonding model to help account for the finding that weakened ties have a differential effect upon delinquent

activity. That is, we need to account for why some youth commit delinquent acts and others do not once the bond has been weakened or broken. Such findings may result from further attempts to specify the influence of peers upon delinquency.

Another test of the bonding model is that published by Michael Wiatrowski, David Griswold, and Mary Roberts (1981). These researchers attempted a partial test and extension of Hirschi's (1969) original model based on data from the Youth In Transition study (Bachman et al., 1969). This longitudinal study provided a sample of 2213 tenth grade boys from 87 schools surveyed in 1966. The exact items originally used by Hirschi were not used. However, equally weighted composite scales were constructed from items which coincided with the constructs employed by Hirschi (Wiatrowski et al., 1981). A major difference was a reconceptualization of belief to include items on lying and cheating with the assumption that disrespect for the police is not necessarily associated with delinquent behaviors. The overall purpose of the research was to test several multivariate models of bonding theory in order to determine how each element of the bond affects delinquency.

Three shortcomings in Hirschi's (1969) theory and research are cited as the basis for the three models

advanced and tested by Wiatrowski et al. The first was Hirschi's failure to demonstrate the extent to which each bond element represents distinct elements of socialization. The second issue is the identification of only four elements of the bond. And finally, whereas educational and occupational aspirations are central to Hirschi's theory, he failed to incorporate constructs (family SES for example) that previously have been demonstrated to be associated with such aspirations.

The first model tested by Wiatrowski et al. (1981) was designed to assess the extent to which each individual bond element makes a unique contribution to the explanation of delinquency. Twenty-three individual indicators corresponding to those employed by Hirschi (1969) were used to represent the various elements of the bond. The total variation explained by the full model ($R^2 = .318$) was much more substantial than the individual elements. The authors then deleted items on each element which were negatively correlated to the other items in each respective element. The amount of variation explained by the elements together decreased greatly ($R^2 = .174$) and the unique contributions then ranged from .000 (commitment) to .034 (attachment). The incremental contributions of the bond elements make only a minor difference in the explanation of delinquency as

compared to the full model. From these findings, the authors suggest that yet undefined elements of the social bond are in operation. Both these defined and undefined elements are part of the larger construct of socialization, which is negatively correlated with delinquency.

In the next analysis, Wiatrowski et al. examined by factor analysis the items they selected as elements of the social bond. The four elements of the bond did not appear as separate factors. According to the authors, this particular finding suggests the need to reinterpret the social bond to include only attachment to school, school involvement, high and low status commitments (aspirations), parental attachments, and peer attachments.

The next step involved setting up a "simple" multivariate path model of the four elements of the bond as proposed by Hirschi, but modified to include SES and mental ability as exogenous variables. The results show that each element of the bond makes a significant direct contribution to the explanation of delinquency. On the other hand, only 18.8 percent of the variation is explained by the model.

Wiatrowski et al. (1981) then construct a "complex" path model which includes those innovations and alterations suggested by the prior analyses in the study. SES and mental ability were treated as exogenous variables having an

influence on each element of the model. Attachment to parents was considered to be the foundation of the social bond and was positioned causally prior to the other elements of commitment to education, occupational aspirations, dating, attachment to the school, and involvement, and to belief as an independent component. It should be noted that dating was removed from earlier analyses because of a negative correlation with other items on the commitment scale, but was included in the complex model because results indicated that dating was a dimension of the bond independent of the other commitment items.

The revised 13-item model of the social bond was found to explain 32.5% of the variation in delinquency. This is of comparable power to the multiple regression initially performed ($R^2 = .318$) which utilized 23 items. Also, this complex model with less items explains 14% more of the variation than the "simple" path model. The authors offer this more parsimonious conceptualization of the social bond as an example and model for future refinements of bonding theory.

ADDITIONAL EVIDENCE

A review of partial tests of the social bond will be presented in this second section on empirical assessments. The major concern will be with those studies inspired by Hirschi's (1969) formulations; however, supporting evidence from empirical studies not directly concerned with a test of the social bond will also be presented. Although many of the following studies have relevance for more than one element of the bond, they will be classified according to a predominant concern for attachment, commitment, belief, or involvement.

Attachment

Hirschi himself noted "the fact that delinquents are less likely than non-delinquents to be closely tied to their parents is one of the best documented findings of delinquency research" (1969: 85). The research since then has tended to reveal the same consistency. Several recent studies have further demonstrated the importance of attachments to parents in the prevention of delinquency (Smith and Walters, 1978; Wilson, 1980; Austin, 1980; Canter, 1982) and others have successfully identified contingencies in the parental attachment element.

For instance, Gove and Crutchfield (1982) find strong support for the hypothesis that lack of attachment to the family is a major variable in delinquency causation. They also found that attachment to parents tends to specify the effects of other variables found to be related to delinquency. One interesting finding was that whereas "negative" variables, such as broken homes and lack of parental control, were found to be positively associated with delinquency, "positive" variables (that is, parental control and supportive parents) were found to be unassociated with juvenile delinquency. In another study which disproves part of Hirschi's original hypothesis, Jensen and Brownfield (1983) show that attachment to drug using parents does not significantly inhibit drug use among juveniles and when the juvenile perceives the parents as drug users, such an attachment tends to promote drug use. In contrast, attachments to "straight" parents does have an inverse effect upon juvenile drug use.

Since Hirschi's (1969) original formulation, there have been several tests of the bond focusing primarily upon the attachment element. Very often these tests are offered as comparisons of two or more contrasting theoretical perspectives. For example, utilizing the same data set as Hirschi (1969), Jensen (1972) attempts an evaluation of

differential association theory by examining the independent effects of delinquent peers, parents, and delinquent definitions upon the commission of delinquent behavior. Jensen found parental supervision and support to be negatively related to delinquent beliefs and delinquent peers, and that such attachments had a stronger influence among adolescents who held unconventional beliefs and attitudes.

A direct criticism of Hirschi (1969) and Jensen (1972) has been made by Matsueda (1982). Using the same Richmond Youth Project data, Matsueda acknowledges an inverse effect upon delinquency by attachment to parents and peers; however, he argues the effects of these are mediated by the process of learning definitions favorable and unfavorable to delinquency. Attempting to operationalize "ratio of definitions," Matsueda employs the common variance among belief indicators after removing measurement error. In a causal analysis, the ratio of definitions favorable to violation of the law explains almost half the variation in delinquency ($r = .678$). When controlling for the ratio of definitions, the effect of attachment to peers is negated and attachment to parents is rendered statistically insignificant and in the opposite sign from prediction. Matsueda (1982) concludes delinquent behavior is reduced by

parental attachment only because of exposure to anti-delinquent definitions, as consistent with a differential association perspective.

A similar comparative test is offered by Hepburn (1977), who begins by noting two consistent empirical regularities: (a) dimensions of family interaction are related to involvement in delinquent behavior and (b) juveniles who engage in delinquency tend to have delinquent friends. These two relationships serve as the basis for three competing models of delinquency: Sutherland's (1939) differential association, Glueck and Glueck's (1962) delinquency associates model, and Hirschi's (1969) social bond. Four variables identified as common to these models were subjected to causal analysis: family support, delinquent definitions, delinquent associates, and delinquent behavior.

Hepburn (1977) reports that all models received at least some limited support. But the model based on Hirschi's formulations received greater support than the others. Using partial correlation coefficients as a basis for causal inference, Hepburn concludes delinquency can result from either a lack of family attachment or from association with delinquent peers; however, delinquent definitions are causally prior to delinquent associates. The overall

conclusion is that strong ties to the family and conventional society tend to reduce delinquency. It should be noted that Hepburn's (1977) analysis openly recognized the effects of delinquent peers upon a youth's participation in delinquency. Contrary to bonding theory, many researchers have found a positive association between attachment to delinquent peers and delinquency. (Briar and Piliavin, 1965; Hirschi, 1969; Jensen, 1972; Hindelang, 1973; Linden and Hackler, 1973; Conger, 1976; Silberman, 1976; Linden, 1978; Poole and Regoli, 1979; and Mitchell and Dodder, 1980).

Both Jensen (1972) and Linden (1978) used the same data set as Hirschi (1969) and found a strong relationship between delinquency involvement and delinquent peers. Jensen found the number of delinquent friends to have an effect independent of parental attachment or unconventional belief. Very simply, Jensen found that as the number of peers increase, so does the likelihood of delinquent behavior. In a test of a partial control model on both self-reported and official delinquency, Linden (1978) found the closeness of delinquent peers to be strongly correlated with delinquency. A multiple regression performed on the self-report data yielded the following correlations: parental support ($r = -.28$); completion of homework ($r =$

-.38); skipped school ($r = .48$); and closeness to ties to delinquent peers ($r = .52$). The whole model was found to explain 38% of the variation in delinquency. The same model with official delinquency was somewhat less strong ($R = .32$), but delinquent ties remained the strongest component. Also using the same data base as Hirschi (1969) but supplemented with additional data, Conger (1976) found attachment to conventional peers to lower delinquency and attachment to delinquent peers to increase delinquency.

In contrast, Linden and Hackler (1973) have suggested that attachments to delinquent peers is in itself not a good predictor of delinquency involvement, except in the case when ties to conventional adults and/or peers is absent. This position is not that different from that offered by Hirschi (1969) and similar arguments have been presented by Stanfield (1966) and Poole and Reqoli (1979). However, Linden and Hackler (1973) develop an "affective ties model" based on the assumption that an actor is motivated to maximize the approval and esteem of close associates. Thus, they give the relationship a motivational component not recognized by Hirschi. In a comparison of the affective ties model to a bonding model, they find affective ties to both conventional peers and parents is a very strong predictor of delinquency involvement. Among those with ties

to delinquent peers and weak ties to conventional others, 58.3% were delinquent. In comparison, among those boys with no ties to any of these (in accordance with bonding theory), 42.9% were delinquent. Contrary to bonding theory, among those youth without conventional ties, attachment to delinquent peers is more strongly associated with delinquency than no attachments at all.

Commitment

Just as Hirschi (1969) placed much emphasis upon attachment to parents, he also suggested commitment to school is an important factor in delinquency causation. More recently, he has stated the possibility that "the best predictor of delinquency in American society is difficulty in school" (1977: 334). Those juveniles who do poorly in school and find themselves in a prevocational track are less likely to have an investment in the school as a future oriented institution and thus are less likely to express commitment to conformity. In the past, the connection between indicators of school commitment and future aspirations has received much support (Stinchcombe, 1964; Polk, 1969; and Hirschi, 1969). More recent attempts to specify these relationships have produced mixed results.

Several studies have tended to support the original formulation. For instance, in a test of a school commitment hypothesis derived from Hirschi's (1969) theory, Kelly and Pink (1973) proposed that decreasing levels of school commitment would be associated strongly with increasing rates of youth rebellion and delinquency. Commitment to school was operationalized using four indicators: accumulative grade point average, planned college attendance, participation in school clubs, and time spent on homework. Eight dependent variables were employed ranging in degree of seriousness. Findings revealed strong support for the hypothesis; however, it was found that commitment may be more restrictive of least serious forms of delinquency. In other supportive studies, Phillips and Kelly (1979) found support for the proposition that academic difficulty precedes delinquent behavior in causal order and Rankin (1980) found the student's perception of chances for graduation to be inversely related to participation in delinquent activities.

Other research has been less supportive or otherwise identifies key contingencies in the commitment hypothesis. For instance, Pink (1978) provides a test of the original proposition suggested by Stinchcombe (1964), which played such a prominent role in Hirschi's (1969) formulations.

This hypothesis states that adolescents will rebel in school when there is a discrepancy between present school roles and anticipated occupational roles. Pink (1978) found academic achievement to be the strongest predictor of school rebellion and delinquency when compared to the more future oriented indicators of college plans and occupational expectations. He concludes that "prospects" related to the more immediate experience of the juvenile are more important in the explanation of delinquency.

In a series of studies, Kelly (1975, 1976a, 1976b, 1978) found both school commitment (grades, activities, and aspirations) and academic self-esteem to have no effect upon participation in delinquent activities. However, it should be noted that Kelly had established a very strong relationship between track position and both official and unofficial delinquency. The tests of the effects of academic esteem and commitment were not directly upon delinquency; rather, he attempted to measure their effect upon the relationship between track position and delinquency. Toward clarification, it should be stated that Kelly's single most important finding is that track position has an independent effect upon delinquency. On the other hand, in the latest of these studies, Kelly (1978) found association with delinquent peers to have a "minor" impact upon this

relationship, but only with regard to such behaviors as cigarette smoking, drinking, and use of marijuana.

Belief

Conventional beliefs regarding the law and appropriate behavior were found by Hirschi (1969) to have a retaining effect upon the propensity to commit delinquent behavior. Jensen (1972) also found definitions favorable to law violation to be positively related to self-reported delinquency, regardless of attachment to parents or delinquent peers. More recent studies also have tended to confirm the importance of the belief element of the bond in retaining delinquency.

Silberman (1976) reports the findings of a study of the effects of moral commitment, perceived certainty of punishment, and deviant associations upon previous participation in delinquent behavior. It was found that as moral commitment and certainty of punishment increased, the probability of delinquency decreased. In addition, as delinquent associations increased, the probability of delinquent behavior also increased. The correlations of moral belief ($r = -.56$), certainty of punishment ($r = -.26$), and delinquent associations ($r = .34$) with a nine-item criminal involvement index were moderate to strong in

strength. One important interaction was found between moral belief and delinquent peers. Those who were less morally committed are more influenced by delinquent peers than those with more moral commitment.

Two reports on the same study by Cernkovich (1978a, 1978b) also provide support for the belief element. In a study of self-reported delinquency among male high school students, Cernkovich found subscription to "conventional value orientations" to inhibit involvement in delinquent activities, whereas adherence to "subterranean value orientations" tends to promote delinquency involvement. Values of a "conventional" nature were characterized by commitment to deferred gratification, hard work, the value of education, progress, and secular rationality. In contrast, values of a "subterranean" nature were characterized by commitment to short-run hedonism, thrills, excitement, trouble, toughness, the ability to make a fast buck and to con others.

In a replication of Cernkovich (1978b), Segrave and Hastad (1983) included the variable of sex. The model was found to explain less of the variation in delinquency among males ($r^2 = 12.4$) than among females ($r^2 = 13.3$). The effect of subterranean beliefs was slightly stronger in Segrave and Hastad's study among both males ($r = .294$) and

females ($r = .282$). In contrast, the relationship with conventional beliefs was somewhat stronger for females ($r = -.209$) than for males ($r = -.170$).

Involvement

Hirschi (1969) came to question the theoretical importance of involvement in conventional activities and finally suggested its greatest relevance is found in its use as an indicator of commitment. In fact, very little research has found an absence of a relationship between involvement and conformity (Kelly, 1976b; Bankin, 1980). A majority of studies have confirmed the importance of involvement as a predictor of commitment, especially to the school. For instance, involvement in school activities is strongly related to the drop-out rate (Vaughn, 1968; Schafer and Armer, 1968), to educational expectations and aspirations (Schafer and Rehberg, 1971; Spreitzer and Pugh, 1973) and to educational attainment (Otto and Alwin, 1977).

With regard to delinquency, participation in school activities is generally found to have a negative effect. For instance, Landers and Landers (1978) found official rates of delinquency to be highest among students who did not participate in any extracurricular activities. Thus, it is suggested that participation in school activities tends

to reinforce the student's commitment to school and his/her conformity, as proposed by Polk and Halferty (1966) and by Hirschi (1969). In sharp contrast, many current researchers are suggesting that participation in activities, especially athletics, does not mitigate delinquent behavior at all. Instead, it is argued that conventional activities simply attract conforming types (Schafer, 1969; Yiannakis, 1976, 1980; and Sugden and Yiannakis, 1982). This argument was originally formulated by Glueck and Glueck (1950) who suggested delinquents tend to avoid organized activities because they are in "exile" from conforming influences.

One aspect of involvement not considered by Hirschi, but recommended for inclusion in the analysis by Krohn and Massey (1980), is participation in religious activities. However, because the variable of religiosity has received much criticism as an explanatory factor in deviance research, Tittle and Welch note "social scientists cannot say with any confidence whether religiosity actually inhibits deviant behavior" (1983: 653). In their study, Tittle and Welch review 65 published studies reporting empirical evidence and suggest religiosity is "seriously underrated;" only 15% of the studies fail to find any support for the relationship between religiosity and deviant behavior. The perceived weakness of religiosity is thought

to be related to inadequacies in much of the previous research and involves several main issues: a general absence of adequate samples, a general absence of multivariate analyses, very little concern for causal ordering, and a tendency to view religiosity as a control variable without theoretical significance.

Tittle and Welch found the effect of religiosity on deviance to increase when secular controls are weak. In turn, the effect of religiosity is reduced when there is agreement about the morality of norms, when there are effective informal sanctioning systems, and when there is a predominance of conforming role models.

In another study, Elifson et al. (1983) tested the effect of religiosity on delinquency using a range of indicators rather than the traditional single variable of church attendance. They found the variables of religious salience, belief in the power of personal prayer, and religious orthodoxy to be more highly correlated to delinquency than the single attendance variable. Furthermore, victimless offenses such as drug use, alcohol use, gambling, and sexual deviance were found to be more strongly related to religiosity. The zero-order relationships are described as "weak to moderate," but there is no significant multivariate value. In regard to this finding, Elifson et al. (1983)

suggest religion is only one of a larger set of influences in society which encourage conforming behavior. Whereas both religious and non-religious youth tend to remain within the same boundaries of acceptable behavior, religious youth are less likely to be delinquent.

EXOGENOUS INFLUENCES

Very often, research findings tend to be contingent upon some basic socio-demographic variables. In regard to the study of delinquency, there are two variables which tend consistently to produce differentiation based upon their properties. These are the variables of sex and locality (rural/urban residence). Whereas these two factors have not been of great theoretical significance in bonding theory, their relevance cannot be dismissed. Therefore, available evidence that may be of relevance will be briefly reviewed.

Differential Effects Of Residence

One consistent finding in many studies of delinquency has been that rural youth tend to have lower rates of both official and self-reported delinquency than urban youth (Clinard, 1942, 1944; Clark and Wenninger, 1962; Nelsen et al., 1971; and Lyerly and Skipper, 1981). Furthermore, it

has been noted that a theoretical void exists with regard to the explanation of differential rates of rural-urban delinquency (Lyerly, 1980).

In an attempt to bridge this gap, Lyerly (1980) applies a modified version of the commitment element of the social bond. The bond to society is represented by the degree of commitment to five institutional orders: family, school, church, peers, and formal authority. It is suggested that rural society is characterized by conservatism, traditional life styles and value orientations, and a prevalence of informal social controls. Thus, interpreted via bonding theory, "the rural child develops a stronger bond to society, and is therefore less inclined to commit deviant acts" (Lyerly and Skipper, 1981: 389). A strong inverse relationship was found between commitment and delinquency and the commitment to school and legal authority were most strongly associated with delinquent behavior. Whereas there was less frequent and less serious involvement in delinquency among the rural youth, the theory of rural-urban bonding differences was not supported; commitment failed to specify the relationship between locality and delinquency.

A study which gives more support to bonding theory was reported by Nelsen et al. (1971). Regarding attitudes toward the law, the authors found respondents from rural residences

tended to express more favorable attitudes toward the law than those from an urban background. However, it was found that the effects of age and previous prison incarceration intervene in the relationship between residence and attitudes toward the law. Another study by Willits et al. (1973) also has found residence to be a key variable in accounting for traditional and moralistic attitudes with traditional and moral attitudes more characteristic of rural residents than urban residents.

In contrast to the studies discussed thus far, several recent reports have tended to question the existence of a relationship between delinquency and residence. For instance, Marsden (1979) examined both official and self-report arrest data in a sample of 175 Illinois communities in order to determine the existence of a gradient in delinquency rates among the communities. Official data revealed a distinct rural to urban gradient, as well as a non-metropolitan to suburban to central city gradient. However, the self-report data revealed a much more diffuse pattern of involvement across the communities. For the whole sample, and for males, no gradient was found to exist. There was a slight urban to rural decline in self-reported arrest rates for females. With regard to offenses, there was a distinct gradient for self-reported involvement in

theft and violence related offenses, but a review of status offenses provided no such differences. Marsden (1979) concludes that while differential rates of involvement may exist, differential rates of enforcement must be included in any consideration of rural-urban differences in delinquency.

In another recent study, Laub (1983) argues that crime rates across the rural-urban dimension can be accounted for by differences in the race of the area's residents. Using data from the National Crime Survey victimization reports for the years 1973 to 1977, Laub found that as size of area increases, the race of the offender becomes more important than locality. For the crimes of rape, robbery, assault, and personal larceny, race was found to explain 33% of the variation in urban-rural differences in victimization rates.

Differential Effects of Sex

Sex differences in delinquent behavior have been the subject of much investigation. Several themes are that females are less delinquent than males in both official and self-reported delinquency (Wise, 1967; Gold, 1970; Hindelang, 1971), females commit different types of delinquencies than males (Gibbons and Griswold, 1957; Morris, 1964; Vedder and Somerville, 1970), and that behavioral content patterns for males and females parallel each other but differ in

frequency (Hindelang, 1971). The most consistent point of agreement among these perspectives is that males and females do experience differential participation in delinquent activities. The key question here is whether or not social bonding theory can account for such differences.

As was reported earlier, sex is often found to be an important variable in differentiating among the effects of the elements of the bond. Krohn and Massey (1980) found their bonding model to explain more variation in the dependent variables for females than for males. Rankin (1980) found the effect of commitment to school to be somewhat stronger for females than for males. And Minor (1977) mentions the importance of the variable of sex to his bonding model, but fails to discuss the relationships.

In addition, several studies have attempted to determine whether or not bonding theory, as well as others, is as capable of explaining female delinquency as male delinquency. For instance, with regard to the variables of attachment to parents and belief in conventional norms, Simons et al. (1980) found the strength of the indicators to be the same for both males and females, indicating that separate theories are not needed for the sexes. Similar findings as these were reported by Smith (1979).

Some of the research on sex and social bonding has tended to produce mixed results. For instance, Jensen and Eve (1976) use the Richmond Youth Project data base in order to determine if the social bond variables could account for sex differentials in delinquent behavior. Individually, parental supervision, parental support, belief, liking school, attachment to teachers, importance of grades, time spent on homework, and youth culture activities all fail to explain sex differences in delinquent behavior. Most all of these tend to reduce the strength of the relationship, but not significantly. When they were taken together, along with the variable of delinquent peers, they were found to explain 28% of the variation in sex differences in delinquency among white respondents ($r = .532$). Perhaps this should be expected, as the theory of the social bond proposed by Hirschi (1969) was one of sequential and simultaneous effects.

Examining only the family bond, Canter (1982) found an inverse relationship between attachment to the family and delinquency, but the restraining effect of the family bond was incapable of discriminating between delinquency for males and females. Family ties, however, were found to have a greater inhibiting effect for males, but only for the more serious delinquent acts.

In an examination of the connection between social bonding and substance abuse among males and females, Ensminger et al. (1982) found the bonds of attachment to family, peers, and the school to be strongly inversely related to abuse for both males and females. The attachment to school was found to be strongly related to substance abuse for both males and females. Stronger family bonds were found to have a greater effect upon females than males with regard to all substances except cigarette smoking. Attachment to peers was positively related to substance abuse among males. This relationship is in the same direction for females but not statistically significant. In short, it was found that the bonds differed in importance by sex: family and school were more important for females, and peers and school more important for males. Ensminger et al. (1982) suggest the sex difference in frequency of abuse can be explained by the males' stronger peer bonds and females' stronger school bonds.

Similar findings were reported by Krohn and Massey (1980) with regard to the differential importance of the bonds by sex. The element of attachment was stronger for males but the commitment and belief elements were more strongly related to delinquency among females. However, Krohn and Massey's overall model was found to explain more variation in the dependent variables for females than for males.

Chapter III

AN EMPIRICALLY BASED BONDING MODEL

A review of Hirschi's (1969) bonding theory and related empirical research was presented in the prior chapter. Whereas much of the research tended to support bonding theory, it also tended to suggest contingencies with regard to the original formulation and the need for some revision. A revised version of Hirschi's bonding model will be presented in this chapter, based on the previous review of empirical evidence.

RELATIONS AMONG ELEMENTS OF THE SOCIAL BOND

As originally proposed by Hirschi (1969) and consistently verified by subsequent research, all elements of the social bond are hypothesized to vary in a positive relationship with each other. For instance, attachment is hypothesized to be positively associated with every other major element of the bond, as well as inversely related to delinquency. Those youths who are attached to significant others are more likely to hold conventional beliefs (Hirschi, 1969; Jensen, 1972; Hindelang, 1973; Hepburn, 1977; Minor, 1977; Krohn and Massey, 1980) and are more likely to be committed to the conventional order (Hirschi, 1969; Hindelang, 1973; Minor,

1977; Krohn and Massey, 1980; Wiatrowski et al., 1981). Furthermore, with the exception of studies by Krohn and Massey (1980) and Rankin (1977), all of the full tests of the bond find a significant inverse relationship between delinquency and attachment; many of the partial tests find the same relationship (Smith and Walters, 1978; Wilson, 1980; Austin, 1980; and Canter, 1982).

One major departure from Hirschi's original proposition is that attachment to unconventional others, particularly peers, is considered to decrease conventional beliefs, commitment, and fear of sanctions while increasing the probability of delinquent behavior. The quantity of evidence contrary to Hirschi's formulation cannot be ignored. As stated earlier, the observation that attachment to delinquent peers has a delinquency producing effect (contrary to bonding theory) has become rather commonplace (Briar and Piliavin, 1965; Hirschi, 1969; Jensen, 1972; Hindelang, 1973; Linden and Hackler, 1973; Conger, 1976; Silberman, 1976; Linden, 1978; Poole and Reoli, 1979; and Mitchell and Dodder, 1980). Therefore, an important consideration is the extent to which peers are attached to, committed to, and believe in the conventional order. Another related consideration is the extent to which the respondent's parents are committed to conventional society.

The element of commitment to the conventional order is hypothesized to be positively related to conventional beliefs (Minor, 1977; Krohn and Massey, 1980). In addition, as Hirschi suggested, commitment is inversely related to delinquency (Hirschi, 1969; Hindelang, 1973; Kelly and Pink, 1973; Krohn and Massey, 1980). Thus, it will be hypothesized that delinquency involvement decreases with increased commitment to the conventional order.

Conventional beliefs are hypothesized to have a negative effect upon delinquency. It is expected that high levels of conventional belief are associated with low levels of delinquency involvement (Hirschi, 1969; Jensen, 1972; Hindelang, 1973; Minor, 1977; Cernkovich, 1978a, 1978b; Segrave and Hastad, 1983). Similarly, fear of sanctions is thought to be inversely related to delinquency (Minor, 1977; Silberman, 1976). It should be noted that whereas fear of sanctions and the conventionality of beliefs seem to be similar and possibly related concepts, no relationship between the two is indicated by the literature and such a relationship will not be hypothesized. On the other hand, it has been demonstrated that fear of sanctions is positively related to the bond elements of attachment and commitment (Minor, 1977). Thus, high levels on attachment and commitment variables are hypothesized to be associated with an increased deterrence effect.

THE INFLUENCE OF SEX

The variable of sex did not figure into Hirschi's original conceptualization; however, in a later discussion he implies variations in attachments to parents are correlated with variations in delinquency by sex. "Girls are more closely supervised by their parents than boys and are more likely to be emotionally dependent on them, as well as on other adults" (Hirschi, 1977: 333 - 334).

As previously discussed, several studies have indicated that the full model has a greater effect upon females (Jensen and Eve, 1976; Minor, 1977; Krohn and Massey, 1980). Still others have specifically confirmed that attachments to significant others (Ensminger et al., 1982) and commitment to conventional activities (Bankin, 1980; Krohn and Massey, 1980) tend to be inversely correlated with delinquency more so among females than with males. However, because the connections between sex and other elements of the bond are rather ambiguous, the variable of sex will be treated as exogenous to the traditional bonding elements as a whole.

Specifically, it will be hypothesized that females tend to experience greater levels of attachment, commitment, involvement, and belief than do males. Because higher levels of these variables are associated with lower levels of delinquency, it is further hypothesized that females will report lower levels of delinquency involvement than males.

RURAL-URBAN RESIDENCE AND DELINQUENCY

The effect of residence upon delinquency via the social bond is very ambiguous. Existing evidence indicates that commitment levels cannot be differentiated by residence (Lyerly, 1980). Others have questioned whether residence is an appropriate variable in accounting for differences in delinquency (Marsden, 1979; Laub, 1983). On the other hand, a more consistent relationship has been documented regarding residence and belief in conventional values (Nelsen et al., 1971; Willits et al., 1973; Lyerly, 1980).

The limited supporting evidence leads to the conclusion that residence affects delinquency primarily through one's belief system. Therefore, it will be hypothesized that rural residents tend to experience higher levels of belief in conventional values and will report lower levels of delinquent behavior than urban dwellers. Given that relations between locality and other bond elements are questionable, as indicated by the literature, no other associations will be proposed at this time.

THE CASE OF INVOLVEMENT

The case of involvement is a special one. A very common observation has been that it is of very little theoretical value in accounting for delinquency (Hirschi, 1969; Hindelang, 1973; Rankin, 1977; Wiatrowski et al., 1981). However, it has been demonstrated to be a good indicator of commitment (Otto and Alwin, 1977; Landers and Landers, 1978). Therefore, it will be treated as an indicator or correlate of commitment and thus (logically speaking) is expected to be positively correlated with attachment and belief. Whereas no specific relationship between involvement and delinquency can be drawn from the literature, it may be hypothesized that higher levels of involvement will be associated with higher levels of commitment, attachment, and belief, and thus inversely related to participation in delinquency.

In addition to the activities delineated by Hirschi to indicate involvement in conventional activities, the evidence tends to suggest the concept of religiosity also should be employed as an indicator of involvement (Krohn and Massey, 1980; Tittle and Welch, 1983; Elifson et al., 1983).

NOTES ON THE USE OF MEASURES OF SELF-REPORTED DELINQUENCY

Measures of delinquency based on self-reports, such as those used by Hirschi (1969) and those employed here, have been questioned with regard to several potentially problematic concerns. For instance, Erickson et al. (1977) note a difficulty in identifying the proportion of respondents who cannot remember having committed an act in question, misunderstand statements or questions, and/or deliberately give an incorrect response. However, assessments of the overall validity of self-reported measures of delinquency generally have indicated that they are reasonably accurate.

Clark and Tift (1966) used several of the items employed in this study and compared responses to a follow-up interview and polygraph tests. Whereas some specific indicators were problematic, Clark and Tift found the self-reported data to be accurate, especially when a wide range of behaviors was considered. Also using some items similar to those employed in this study, Hardt and Peterson-Hardt (1977) evaluated the quality of self-report techniques using four controls: comparisons with official reports, the use of criterion groups, the use of scales to measure tendencies to lie about or misrepresent one's self-image, and measures of internal consistency within the instrument. The self-report technique was found to yield valid data. More recently,

Akers et al. (1983) assess the validity of self-reports of smoking behavior among adolescents. Using biochemical controls (salivary tests) and a randomized response instrument to verify responses, the authors substantiate the validity of self-report measures.

A related concern, particularly in studies in which socioeconomic status is a major variable, is whether self-reports or official reports are better indicators of actual behaviors. In Hirschi's (1969) original study, the major propositions of bonding theory were supported regardless of the use of self-reports or official data. The position taken here is that self-reports are neither more accurate nor superior to official reports. Rather, self-reports allow for the assessment of a wider range of behavior, especially the less serious forms of delinquent behavior. A more developed statement of this position has been made by Hindelang et al. (1979) and Elliott and Ageton (1980) who argue that both official and self-reported measures are valid indicators of criminality, but only within the domain of behavior they tap. The domain of official data tends to be the more serious delinquent behaviors whereas the scope of self-reported data tends to include more minor delinquencies. However, because several studies of the bonding elements have reported a differential effect of

social bonding dependent upon the seriousness of the delinquent behaviors in question (Minor, 1977; Rankin, 1977; Krohn and Massey, 1980; and Canter, 1982), the study is not limited only to minor delinquencies. Numerous indicators have been drawn from various studies to provide for a more varied selection in terms of both seriousness and types of delinquent behavior. The specific self-reported measures will be discussed in the next chapter.

VERIFICATION OF THE MODEL

Thus far, a review of literature on the social bond has been discussed and a new empirically derived model has been suggested based upon regularities found in previous research. Relationships between the elements have been hypothesized and five major alterations of Hirschi's social bonding theory have been recommended.

The first alteration has been the decreased importance assigned to the element of involvement. Second, a deterrence component has been added to the model. Third and fourth, the influence of the variables of sex and locality (rural/urban residence) are considered. And fifth, it is suggested that attachment to unconventional others (peers and parents specifically) will weaken the elements of the bond and increase delinquency. The relationships to be tested are summed below.

1. Attachment to significant others, commitment to conventional institutions, belief in conventional values, and involvement in conventional activities will vary positively with each other.
2. Fear of sanctions will be positively related to commitment to conventional institutions and attachments to significant others.
3. Attachment to significant others, commitment to conventional institutions, belief in conventional values, involvement in conventional activities and fear of sanctions will be inversely related to participation in delinquent activity.
4. Participation in delinquent activity will be inversely related to the conventionality of significant others.

The relationships discussed in the preceding four points will be combined in a multivariate analysis of the extent to which they can be utilized to explain participation in delinquent behavior.

5. Females will experience greater levels of affective attachments and conventional commitments, conventional involvements, and conventional beliefs than will males and also will be less involved in delinquent behavior than males.

6. Rural respondents will experience higher levels of conventional belief than urban respondents and will be less involved in delinquent behavior than urban respondents.

The program of research and the measurement of key concepts will be discussed in the following chapter.

Chapter IV

SAMPLE AND MEASUREMENT

The previous chapters provided a theoretical and empirical review of social bonding theory. From this review a revised bonding model was hypothesized. In this chapter the methodology employed for testing these hypothesized relationships will be discussed. The study utilizes a cross-sectional survey research design. The data collection instrument used in this survey is a questionnaire administered to a sample of respondents. The concern of this chapter will be with the sampling procedures and the measurement of basic concepts.

PRETEST

In order to locate difficulties in question wording and response categories, and to assess the average response time, a previous version of the instrument was administered to thirty 8th grade students at Blair Junior High School in Norfolk, Virginia and to 107 undergraduates at Virginia Tech in Blacksburg, Virginia. The pretest indicated the need for minor revisions which were incorporated into the final draft of the instrument.

THE SAMPLE

The sample consists of 733 students from middle and high schools in Virginia. A purposive nonrandom sampling method was employed in the selection of school systems and the students within each school. A key criterion for school selection was rural versus urban location. Two rural public schools were sampled in Franklin County, Virginia. From the Franklin County High School, 307 students were selected and 149 students were drawn from the Franklin County Middle School. Franklin County has a population of approximately 36,000 residents. The students come from 27 different incorporated and unincorporated localities within the county. However, there are four incorporated population centers in Franklin County in which many of the students reside: Rocky Mount (pop. 4198), Boones Mill (pop. 344), Union Hall (pop. 4583), and and Snow Creek (pop. 4754).

The school selected as an urban contrast was Armstrong-Kennedy High School located in Richmond, Virginia. All of the 277 students selected from this school reside in the city of Richmond, which has a central city population of approximately 219,000. The whole metropolitan area, including the city, cuts across three counties and has an urban population of nearly half a million residents.

The students included in each sample were selected by representatives of the respective school systems. An attempt was made to include at least three classrooms for each grade at each school. The grade distributions and other selected demographic characteristics are presented in Table 1. In the Franklin County Middle School and the Armstrong-Kennedy High School, questionnaires were administered to the students in their homerooms with the assistance of the school principals and the teachers. Students in the Franklin County High School were assembled in the school's two cafeterias and the questionnaires were administered with the assistance of the school principals.

MEASUREMENT

In order to operationalize the key variables, various indicators are employed to represent the concepts under study. A standard base of questions was drawn from the questionnaire used by Hirschi (1969) in the study discussed in the second chapter. Additional items or alterations in standard questions were designed to allow for greater discrimination between responses. Refer to the Appendix for specific examples. In discussing specific questions, two numbers will be given in reference. The first number is the section and the second number is the question number. As an

example, the combination 2,4 should be interpreted as referring to section 2, question 4.

The questionnaire consists of two major sections, in addition to a cover page. The first part is largely concerned with basic demographic variables such as age, sex, and race. Also included in the first section are questions without standardized response categories, some of which are used to indicate bond elements. The second section of the questionnaire contains those questions with standardized response categories. This includes a majority of the indicators of the bond elements and all of the delinquency measures.

Indicators Of The Bond

The variable of involvement in conventional activities is assessed primarily through a group of indicators developed by Hirschi which deal with school-related activities (1,16; 1,18; 1,19). Two additional indicators of involvement are participation in religious activities (2,47) and participation in youth oriented community activities (1,15). As suggested by bonding theory, high levels of participation in school-related activities, religious activities, and community activities will indicate high levels of involvement in conventional activities. These involvement

TABLE 1
Selected Characteristics Of The Sample

	Richmond, Va.		Franklin County, Va.	
	n	%	n	%
SEX				
male	116	42	226	49
female	160	58	230	51
AGE				
13	17	6	66	15
14	47	17	96	21
15	39	14	57	13
16	52	19	85	19
17	61	23	82	18
18	40	15	53	12
19	14	5	14	3
20	1	0	2	0
RACE				
white	26	9	381	84
black	250	91	75	16
GRADE				
eighth	65	23	149	33
ninth	50	18	75	17
tenth	51	18	71	16
eleventh	52	19	81	18
twelfth	59	21	78	17

indicators were used to form three basic scales. The first represents the respondent's total conventional involvements (INVTOTAL) and includes all of the involvement indicators. The second and the third indicate involvement in school-related activities (INVSCHOL) and involvement in conventional activities in the community, such as adult-guided youth activities and religious activities (INVCOMTY).

In accordance with the conceptual distinction made by Krohn and Massey (1980), attachment is considered to be an affective component indicative of ties to persons but not to institutions. The specific persons considered here will be parents, teachers, and peers. The indicators of attachments to parents are based on those employed by Hirschi. Indicators of attachments to teachers and to peers are basically the same statements with a change in the subject noun.

With regard to parents, measures of attachment are identification (1,21), supervision (2,1; 2,2), child to parent communication (2,5; 2,7), and parent to child communication (2,3; 2,4; 2,6; 2,8). As suggested by bonding theory, greater levels of communication, identification, and supervision are thought to indicate greater levels of attachment to parents. Similarly, measures of attachment to teachers are identification (1,22), teacher to child

interaction (2,12), child to teacher interaction (2,13), and concern for the opinion of teachers (2,9; 2,10). Attachment to peers is concerned with the measures of identification (1,23) and closeness of relationships (2,19 - 22). Higher levels of identification and communication with peers and with teachers indicate higher levels of attachment to peers and teachers. An additional attachment variable not previously identified will be intimacy of communication with fellow church members (2,50; 2,51). It is assumed that attachments to church fellows represents a tie to conventional others which should not go unassessed.

Several scales have been constructed from the numerous attachment indicators. All of the attachment to parent items have been combined to form a single parental attachment scale (ATTPAREN). Two related sub-scales are derived from this larger scale based on a distinction originally made by Hirschi (1969). These parental attachment sub-scales are parental supervision (PARSUPER) and communication with parents (PARNTALK). The attachment to teacher indicators are used to form one scale (ATTTEACH), as are the indicators of attachment to peers (ATTPEERS) and indicators of attachment to church fellows (ATTCHURCH). All of these indicators are themselves combined to form an index representing the respondent's total attachments (ATTTOTAL).

The variable of commitment will be operationalized as ties to conventional institutions, using indicators developed by Hirschi. The major concern will be with those commitments indicated by self-perceived academic ability (1,20) and the importance of school (2,11; 2,14 - 18). Another conventional institution is that of the church. Commitment to the church will be indicated by the perceived importance of the church (2,48 - 49). It is believed that a positive self-perception of academic ability and high levels of importance attributed to the school and the church will indicate high levels of commitment to conventional institutions.

The commitment items are utilized to form scales indicating commitment to school (COMSCHOL) and commitment to the church (COMCHRCH). These are also combined to form a single inclusive commitment index (COMTOTAL). The item of self-perceived academic ability was found to reduce the reliability of the scale indicating commitment to the school. However, because self-perceived academic ability was such a crucial variable in Hirschi's (1969) study, it will be used here as an individual indicator of commitment.

Belief in conventional values is indicated by Hirschi's questions assessing the respondent's belief in the validity of the law (2,33; 2,34), respect for the police (2,35;

2,36), the costs of delinquency (2;37), the ability to stay out of trouble (2,38), and the legitimacy of taking advantage of "suckers" (2,39). Higher levels of belief in the validity of the law and respect for the police are indicators of high levels of belief in conventional values. In contrast, there is an inverse relationship between conventional beliefs and the view of delinquency as not harmful, an inability to stay out of trouble, and belief in the legitimacy of taking advantage of suckers. Six of the seven belief items were combined to form an index of belief in conventional values (BELIEFS). The item indicating the respondent's view of delinquency as not harmful was not included as it lowered the reliability coefficient of the scale.

Additional Indicators

In addition to measures of the social bond, the proposed model includes numerous other variables hypothesized to influence the extent of participation in delinquent behavior. These are the respondent's sex and locality, a deterrence effect, and the conventionality of significant others.

The exogenous variables of sex and locality are measured rather directly (1,1 and 1,12; 1,13; 1,14, respectively).

Fear of sanctions is indicated by measures of perceived certainty of arrest (2,40), perceived certainty of punishment (2,41), and perceived severity of punishments (2,42). Based upon a format suggested by Jensen (1969), these indicators were specifically designed to assess a potential deterrence effect. When perceptions of certainty and severity are at their highest, the deterrence effect is hypothesized to be at its highest. All three of the items indicating fear of sanctions were combined to form an index of deterrence (SANCTION).

Another group of questions related to the bonding elements deals with the conventionality of significant others. The first set of questions is based on several employed by Hirschi to evaluate various attitudes and behaviors of the respondents in his study. They were adapted to this study by altering the noun subject to indicate the respondents' "friends" and by varying the subject of the noun clause to parents, police, and teachers. Specific concerns are with the involvement of peers in school-related activities (1,17), the peer's respect for the police (2,23), respect for teachers (2,26), respect for their parents (2,29), and the extent to which they try to stay out of trouble (2,28). Also employed are indicators of the extent to which the respondent's peers tend to get into

trouble with the police (2,24), their parents (2,25), and at school (2,27). All of the items related to the conventionality of peers are combined to form a single index (SIGPEERS).

Regarding the conventionality of the respondent's parents, three questions assess the extent to which parents are thought to respect the police (2,30), hold church attendance as important (2,31), and obey the law (2,32). Two of these three (2,30; 2,32) are combined to form an index of parental conventionality (SIGPAREN). The question regarding the parent's perceived importance of church attendance was not included in the scale as it was found to reduce significantly the alpha coefficient by as much as .20. The index of parental conventionality is combined with that of the peers to form a single indicator of the conventionality of significant others (SIGTOTAL).

Indicators Of Delinquency

As discussed in the previous chapter, numerous indicators have been drawn from various studies to provide for a more varied selection of the type and seriousness of delinquency. Two questions drawn by Hirschi (1969: 54) from previous studies are included (2,65; 2,66), as well as the scales from which he derived his other indicators. For instance,

three of the theft items (2,58; 2,64; 2,68) are from Dentler and Monroe (1961). Several items from Nye and Short's (1957) delinquency scale are included (2,57 - 63), of which one theft item (2,63) also comes from Dentler and Monroe (1961). Four vandalism items (2,52 - 55) and one item dealing with telephone harassment (2,56) were drawn from Gibson's (1971) delinquency scale. In order to make the selection more inclusive, one assault item (2,67), and three drug possession items (2,70 - 72) were taken from Reichel (1975), and one burglary item (2,69) and one robbery item (2,73) were drawn from Elliott and Ageton's (1980) delinquency index.

All of the delinquency items have been combined into a single index which represents general or total participation in delinquent behaviors (DELTOTAL). The individual delinquency items are rather diverse, as intended, and come from numerous sources. Therefore, an attempt was made to reduce these diverse items to smaller and more manageable sets of indicators. To this end, factor analytic techniques were employed. Specifically, the data were factor analyzed using a principal-component model with a varimax rotation to derive the factor matrix. Four components emerged from the analysis, indicating four dimensions of delinquency involvement. Whereas these four dimensions differ more in

terms of type of behavior rather than seriousness, it is suggested here that the first three are all serious delinquencies. The fourth dimension discussed is considered to be less serious than the other three.

The first specific delinquency index indicates participation in property related offenses (PROPERTY) and is composed of breaking out windows, breaking down fences or other property, banging up others' property, letting the air out of tires, theft of property worth less than \$2, property valued between \$2 and \$50, and property valued over \$50, car theft, breaking and entering, and forcefully robbing others of their property. A second delinquency index is participation in violent behaviors (VIOLENCE) which includes beating up other people and causing physical damage to their bodies. The third index of delinquency involvement indicates the respondent's possession of marijuana, psychedelics, and amphetamines (DRUGPOSS). The fourth category of delinquency includes the less serious juvenile misbehaviors such as marking on others' property, anonymous telephone harassment, driving a car without a permit, drinking alcohol, skipping school, and defying a parent's authority (JUVENILE).

Response Categories And Scoring Technique

The response categories chosen for questions indicating bond elements depart from traditional formats generally employed to assess the extent of the respondent's attitude or orientation toward a subject. It is felt that simple agreement or disagreement with statements fails to account for the variable nature of attitudes, beliefs, and opinions, as well as the complex nature of human activity. For instance, the statement "my friends understand my needs and problems" (2,19), can be responded to in terms of extent of agreement, but such responses indicate nothing about the variability of the occurrence of the behavior. In other words, it is assumed here that peer support is not an all or nothing phenomenon; behaviors such as peer support, parental support, and liking of school are of a variable nature. For the standardized bond categories the respondents are asked to respond in terms of the following: "never," "sometimes," "usually," and "always." While these categories are of an ordinal nature, they will be coded and analyzed as interval measures. A value of zero will be assigned to a response of "never" and will increase up to a value of three for a response of "always."

The standardized response categories for the delinquency indicators are more traditional. The respondents are asked

to rank their extent of participation in a particular behavior in terms of "never," "once or twice," or "several times." These categories also will be coded and analyzed as interval measures. A value of zero will be assigned to a response of "never" and will increase up to a value of two for a response of "several times."

Scale Construction

As discussed in the preceding sections, related indicators are combined with each other to form single scales for each of the major variables. The reliability of each scale is evaluated by using Cronbach's alpha. Those single indicators which decreased the power of the alpha coefficient were either dropped from the analysis or used individually, depending upon their theoretical importance. The scaled indicators were constructed in order to achieve maximum statistical reliability. All scaled indicators, the number of the items from which they were constructed, and their reliability coefficients are presented in Table 2.

TABLE 2
Scaled Indicators And Their Reliability

<u>Scale Name</u>	<u>Alpha</u>	<u>Items Included</u>
INVTOTAL	.51	1, 15; 1, 16; 1, 18; 1, 19; 2, 47
INVSCHOL	.47	1, 16; 1, 19
INVCOMTY	.46	1, 15; 2, 47
ATTPAREN	.78	1, 21; 2, 1 to 2, 8
PARSUPER	.72	2, 1; 2, 2
PARNTALK	.77	2, 3 to 2, 8
ATTTEACH	.67	1, 22; 2, 9; 2, 10; 2, 12; 2, 13
ATTPEERS	.80	2, 19 to 2, 22
ATTCHRCH	.78	2, 50; 2, 51
ATTTOTAL	.81	1, 21; 1, 22; 2, 1 to 2, 10; 2, 12; 2, 13; 2, 19 to 2, 22; 2, 50; 2, 51
COMSCHOL	.76	2, 11; 2, 14 to 2, 18
COMCHECH	.73	2, 48; 2, 49
COMTOTAL	.76	2, 11 to 2, 18; 2, 48 2, 49

TABLE 2 (continued)

<u>Scale Name</u>	<u>Alpha</u>	<u>Items Included</u>
BELIEFS	.65	2,33 to 2,36; 2,38 2,39
SANCTION	.55	2,40 to 2,42
SIGPEERS	.80	2,23 to 2,29
SIGPAREN	.62	2,30; 2,32
SIGTOTAL	.80	2,23 to 2,29; 2,30; 2,32
DELTOTAL	.89	2,52 to 2,73
PROPERTY	.85	2,53 to 2,55; 2,58; 2,63 to 2,65; 2,68; 2,69; 2,73
VIOLENCE	.75	2,66; 2,67
DRUGPOSS	.77	2,70 to 2,72
JUVENILE	.74	2,52; 2,56; 2,57; 2,59 to 1,61

Chapter V

FINDINGS

In the conclusion of the third chapter, six general propositions were stated regarding the model to be tested. These propositions now will serve as an equally general outline for the presentation and discussion of the findings of the research program described in the previous chapter. The findings will be classified according to the propositions pertaining to the relationships: (1) among the traditional bonding elements; (2) between the bonding elements and a deterrence effect; (3) between delinquency and the bonding elements (including deterrence); (4) between the conventionality of significant others and delinquency; (5) among sex, delinquency, and the social bond; and (6) among locality (rural/urban residence), delinquency, and the social bond.

RELATIONSHIPS AMONG THE BONDING ELEMENTS

It was hypothesized earlier that attachment to significant others (ATTOTAL), commitment to conventional institutions (COMTOTAL), belief in conventional values (BELIEFS), and involvement in conventional activities (INVTOTAL) will vary positively with each other. Support for these propositions

is found in an examination of the zero-order correlation coefficients presented in Table 3. The correlations between involvement and the indicators of the other traditional bonding elements of attachment (.27), commitment (.32), and beliefs (.28) are relatively weak but are in the hypothesized direction. Stronger positive correlations can be found between attachment and commitment (.50), attachment and beliefs (.33), and commitment and beliefs (.34).

Many weak to moderate correlations can be found among the sub-scales which comprise the major indicators. For instance, there are positive correlations between involvement in the school (INVSCHOL) and involvement in conventional activities in the community (INVCOMTY) (.22), between attachment to parents (ATTPAREN) and attachment to teachers (ATTTEACH) (.34), attachment to peers (ATTPEERS) (.17), and attachment to fellow church members (ATTCHRCH) (.29). Also, commitment to the school (COMSCHOL) is positively related to commitment to the church (COMCHRCH) (.32). Similarly, moderate positive correlations are found to exist between these sub-scales, and between the sub-scales and the larger composite indicators. However, the strongest correlations among these relationships tend to be found with the attachment scale (ATTTOTAL), and the attachment sub-scales to parents (ATTPAREN), teachers

TABLE 3

Zero-Order Correlation Matrix For Major Variables

	I N V T O T A L	I N V S C H O L	I N V C O M T Y	A T T P A R E N T	P A R S U P E R	P A R T N E R
INVTOTAL	1.00					
INVSCHOL	a	1.00				
INVCOMTY	a	-.22**	1.00			
ATTPAREN	-.20**	-.09**	-.15**	1.00		
PARSUPER	-.25**	-.10**	-.21**	a	1.00	
PARNTALK	-.15**	-.07*	-.10**	a	-.30**	1.00
ATTTEACH	-.30**	-.19**	-.20**	-.34**	-.25**	-.30**
ATTPEERS	-.14**	-.10**	-.11**	-.17**	-.08*	-.17**
ATTCHRCH	-.23**	.05	-.28**	-.29**	-.20**	-.28**
ATTTOTAL	-.27**	-.13**	-.20**	a	a	a
COMSCHOL	-.33**	-.24**	-.18**	-.36**	-.28**	-.34**
COMCHRCH	-.27**	.05	-.32*	-.29**	-.26**	-.24**
COMTOTAL	-.32**	-.18**	-.21**	-.40**	-.31**	-.36**
BELIEFS	-.28**	-.14**	-.22**	-.27**	-.34**	-.18**
SANCTION	-.01	-.03	-.01	-.10**	-.11**	-.09**
SIGPEERS	-.32**	-.18**	-.24**	-.40**	-.32**	-.35**
SIGPAREN	-.15**	.05	-.14*	-.28**	-.20**	-.25**
SIGTOTAL	-.32**	.17	-.25**	-.42**	-.33**	-.37**
DELTOTAL	-.27**	-.09*	-.24**	-.34**	-.44**	-.24**
PROPERTY	-.20**	-.06	-.17*	-.27**	-.34**	-.19**
VIOLENCE	-.23**	-.08*	-.22**	-.23**	-.33**	-.15**
DRUGPOSS	-.26**	-.09*	-.25**	-.23**	-.29**	-.15**
JUVENILE	-.19**	-.05	-.18**	-.31**	-.38**	-.22**
ACADEMIC	-.24**	-.27**	-.11**	-.14**	.03	-.13**

* p < .05

** p < .01

a The coefficient represents a correlation of a sub-scale with the larger scale which contains it.

TABLE 3 (continued)

	A T T T E A C H	A T T P E E R S	A T T C H R C H	A T T O T A L	C O M M U N I T Y	C O M M U N I T Y
ATTTEACH	1.00					
ATTPEERS	.14**	1.00				
ATTCHRCH	.30**	.16**	1.00			
ATTTOTAL	a	a	a	1.00		
COMSCHOL	.42**	.12**	.26**	.42**	1.00	
COMCHRCH	.25**	.11**	.58**	.41**	.32**	1.00
COMTOTAL	.40**	.14**	.45**	.50**	a	a
BELIEFS	.37**	.10**	.19**	.33**	.35**	.30**
SANCTION	.17**	.02	.14**	.13**	.24**	.18**
SIGPEERS	.39**	.28**	.15**	.48**	.44**	.29**
SIGPAREN	.19**	.13**	.08*	.26**	.25**	.15**
SIGTOTAL	.40**	.29**	.16**	.49**	.45**	.30**
DELTOTAL	-.35**	.05	-.19**	-.32**	-.41**	-.29**
PROPERTY	-.27**	-.04	-.11**	-.29**	-.31**	-.23**
VIOLENCE	-.29**	-.02	-.08*	-.27**	-.21**	-.22**
DRUGPOSS	-.26**	.03	-.20**	-.20**	-.32**	-.24**
JUVENILE	-.31**	.13**	-.20**	-.24**	-.39**	-.25**
ACADEMIC	.09**	.09**	.01	.14**	.16**	-.03

* p < .05

** p < .01

a The coefficient represents a correlation of a sub-scale with the larger scale which contains it.

TABLE 3 (continued)

	C O M M U N I T Y	B E L I E F S	S A N C T I O N	S I G N I F I C A N T	S I G N I F I C A N T	S I G N I F I C A N T
COMTOTAL	1.00					
BELIEFS	.34**	1.00				
SANCTION	.27**	.22**	1.00			
SIGPEERS	.43**	.49**	.19**	1.00		
SIGPAREN	.25**	.31**	.18**	.34**	1.00	
SIGTOTAL	.44**	.51**	.21**	a	a	1.00
DELTOTAL	-.38**	-.55**	-.19**	-.49**	-.28**	-.51**
PROPERTY	-.26**	-.50**	-.15**	-.41**	-.23**	-.42**
VIOLENCE	-.21**	-.43**	-.13**	-.37**	-.23**	-.38**
DRUGPOSS	-.29**	-.37**	-.13**	-.38**	-.17**	-.38**
JUVENILE	-.37**	-.42**	-.20**	-.40**	-.23**	-.41**
ACADEMIC	.10*	.01	-.17**	.09**	.01	.08*

* p < .05

** p < .01

a The coefficient represents a correlation of a sub-scale with the larger scale which contains it.

TABLE 3 (continued)

	D E L T O T A L	P R O P E R T Y	V I O L E N C E	D R U G P O S S	J U V E N I L E	A C A D E M I C
DELTOTAL	1.00					
PROPERTY	a	1.00				
VIOLENCE	a	.58**	1.00			
DRUGPOSS	a	.47**	.39**	1.00		
JUVENILE	a	.52**	.43**	.53**	1.00	
ACADEMIC	-.01	-.00	.01	-.03	-.01	1.00

* p < .05

** p < .01

a The coefficient represents a correlation of a sub-scale with the larger scale which contains it.

(ATTTEACH), and church fellows (ATTCHRCH). Whereas attachment to peers (ATTPEERS) also produces positive correlations with the other indicators and sub-scales, these are generally weak.

As mentioned earlier, the variable of self-perceived academic ability tended to decrease the statistical reliability of the scale indicating commitment to conventional institutions and was excluded from the scale. However, because the variable of self-perceived academic ability was so central to Hirschi's analysis, it is briefly examined here as an individual variable. As shown in Table 3, academic ability (ACADEMIC) tends to be only weakly correlated with involvement (INVTOTAL) (.24), attachment (ATTTOTAL) (.14), commitment (COMTOTAL) (.10), and belief (BELIEFS) (.01). The associations between self-perceived academic ability and the delinquency scales are almost nonexistent. Therefore, in contrast to Hirschi's (1969) original formulation, the variable of self-perceived academic ability appears to be of limited utility in the present study.

DETERRENCE AND THE SOCIAL BOND

A second aspect of the proposed bonding model focuses on the hypothesis that fear of sanctions (SANCTION) will be positively related to commitment to conventional institutions (COMTOTAL) and attachments to significant others (ATTOTAL). These relationships tend to be supported by the data. However, as seen in Table 3, the correlations are relatively weak. For instance, the correlation between fear of sanctions and total commitment (.27), commitment to school (.24), and commitment to the church (.18) are positive but weak. The associations between the deterrence effect and total attachments (.13), attachment to church fellows (.14), attachment to peers (.02), attachment to teachers (.17), and attachment to parents (.10) are even weaker, but still in the hypothesized direction.

No relationships were hypothesized between fear of sanctions and the bonding elements of conventional beliefs (BELIEFS) and involvement in conventional activities (INVTOTAL). However, it should be noted that a positive correlation is found between fear of sanctions and conventional beliefs (.22). In contrast, the deterrence effect is inversely related to total involvement (-.01), and to the sub-scales of involvement in school-related activities (INVSCHOL) (-.03) and in conventional community-

related activities (INVCOMTY) (-.01). Whereas these coefficients may be interpreted as being weak to nonexistent, the negative sign indicates that as involvement in conventional activities increases, interpretations of punishments as certain and severe tend to decrease. Again, while no relationship between fear of sanctions and involvement was hypothesized in the proposed model, it should be noted that this particular finding is contrary to a general bonding model.

Overall, the hypothesized relationships between the fear of sanctions, commitment to conventional institutions, and attachment to significant others are supported by the findings. Both commitment and attachment were found to vary positively with fear of sanctions. The bonding element of belief also was found to vary positively with fear of sanctions.

THE SOCIAL BOND, DETERRENCE, AND DELINQUENCY

It was proposed earlier that attachment to significant others, commitment to conventional institutions, belief in conventional values, involvement in conventional activities, and fear of sanctions all would be inversely related to participation in delinquent activity. The zero-order correlations presented in Table 3 provide nearly blanket

support for this third general proposition. With three exceptions, all of the bonding variables and the deterrence variable are inversely related to the five delinquency scales.

The exceptions concern the variable of attachment to peers (ATTPEERS) in association with the total delinquency scale (.05), the drug possession scale (.03), and the indicator of juvenile misbehavior (.13). These findings tend to suggest that attachment to peers is positively correlated with participation in these delinquent behaviors, a finding in contradiction of the traditional bonding model yet supportive of the more widely accepted position that the conventionality of peers is important in determining participation in delinquency.

As mentioned, all other associations are inverse and the strength of the coefficients vary greatly from indicator to indicator. The weakest associations are found with involvement in school activities (INVSCHOL). In contrast, the strongest relationships with the delinquency indicators are found with parental supervision (PARSUPER), attachment to teachers (ATTTEACH), commitment to the school (COMSCHOL), and especially with conventional beliefs (BELIEFS).

DELINQUENCY AND THE CONVENTIONALITY OF SIGNIFICANT OTHERS

A fourth general proposition derived from the proposed bonding model is that the conventionality of significant others, particularly conventional peers and parents, is inversely related to participation in delinquent behavior. The correlation coefficients presented in Table 3 show moderate inverse relationships between all five delinquency scales and the indicators of conventional others in general (SIGTOTAL) and the conventionality of peers (SIGPEERS). The relationships between the delinquency indicators and the conventionality of parents (SIGPAREN) are somewhat weaker, but also are inverse, as predicted in the model. In addition, the three scales indicating the conventionality of significant others are positively correlated with all of the bond indicators.

REGRESSION OF DELINQUENCY ON INDICATORS OF THE BOND

Thus far the discussion primarily has been concerned with the strength and direction of the relationships among many of the major indicators. It has been established that delinquency is inversely related to nearly all of the indicators of the social bond and that all of the bond indicators are positively correlated with each other. The present task now is to examine the extent to which

indicators of the proposed bonding model can be utilized to explain participation in delinquent behavior. To this end, several regression techniques are employed.

The findings will be reported by the dependent variables and each section will contain an examination of the regression of the delinquency variables on both the major scales and the sub-scales. As was indicated by many of the correlations presented in Table 3, the sub-scales are often stronger predictors at the zero-order level than are the larger composite scales. A separate treatment of the sub-scales will be presented for this reason.

The regression of delinquency on major bond scales is presented in Table 4. In addition to the standardized (beta) and unstandardized (b) regression coefficients, information is provided for each scale on the coefficient of determination (r^2). The same information is provided for the regression of delinquency on the sub-scales as presented in Table 5.

Regression Of Total Delinquency

The regression of the total delinquencies on the major bond scales shows that the model explains nearly 35% of the variation in general delinquency (DELTOTAL). An examination of the standardized and unstandardized regression

coefficients presented in Table 4 reveals that the greatest contribution is made by the variables of commitment to conventional institutions (COMTOTAL), belief in conventional values (BELIEFS), and the conventionality of significant others (SIGTOTAL).

A substantial increase in the amount of explained variation of general delinquency ($R^2 = .423$) occurs when the sub-scales are utilized rather than the composite scales. As shown in Table 5, the greatest contribution to the explained variation is made by the three variables of belief in conventional values (BELIEFS), conventionality of peers (SIGPEERS), and attachment to peers (ATTPEERS). Whereas these three appear to be the most important of the independent variables, many of the other bonding variables also are important in the overall explained variation. Exceptions are the variables of fear of sanctions (SANCTION), commitment to the church (COMCHRCH), and attachment to church fellows (ATTCHRCH).

The Regression Of Property Crimes

The regression of the property crimes on the major bond scales shows that the model explains 26% of the variation in property crimes (PROPERTY), as shown in Table 4. The values of the beta weights indicate the most important

TABLE 4

Regression Of Delinquency On Major Bond Scales

	I N V T O T A L	A T T O T A L	C O M M U N I T Y	B E H A V I O R	S C H O O L	S I G N I F I C A N C E
DELTOTAL						
R ² =	.347					
beta	-.009	-.008	-.145**	-.342**	-.027	-.217**
b	-.200	-.323	-.385	-.523	-.176	-.475
r ²	.040	.104	.148	.272	.031	.226
PROPERTY						
R ² =	.261					
beta	.005	-.058	-.028	-.359**	-.039	-.153**
b	-.146	-.280	-.268	-.478	-.151	-.391
r ²	.021	.078	.072	.228	.023	.153
VIOLENCE						
R ² =	.212					
beta	-.043	-.081	.037	-.284**	-.031	-.186**
b	-.172	-.268	-.210	-.413	-.117	-.377
r ²	.030	.072	.044	.169	.013	.142
DRUGPOSS						
R ² =	.156					
beta	-.032	.029	-.172**	-.182**	.025	-.157**
b	-.168	-.207	-.295	-.320	-.082	-.318
r ²	.028	.043	.087	.103	.006	.101
JUVENILE						
R ² =	.236					
beta	.011	.042	-.220**	-.216**	-.038	-.193**
b	-.150	-.250	-.372	-.390	-.174	-.389
r ²	.022	.063	.138	.150	.030	.151

* p < .05 ** p < .01

TABLE 5

Regression of Delinquency On Bonding Sub-Scales

	I N V S C H O L	I N V C O M M U N I T Y	A T T E N D E N C E	A T T E N D E N C E	A T T E N D E N C E	A T T E N D E N C E
DELTOTAL						
	R ² = .423					
beta	.069	-.088*	-.104*	.244**	-.106*	.013
b	-.013	-.195	-.329	.073	-.351	-.184
r ²	.001	.038	.108	.005	.124	.034
PROPERTY						
	R ² = .285					
beta	.056	-.041	-.101*	.090*	-.088	.075
b	-.002	-.138	-.267	-.029	-.278	-.111
r ²	.000	.019	.071	.001	.077	.012
VIOLENCE						
	R ² = .254					
beta	.034	-.085*	-.103*	.081	-.142**	.120*
b	-.021	-.178	-.247	-.038	-.289	-.082
r ²	.000	.032	.061	.001	.083	.007
DRUGPOSS						
	R ² = .200					
beta	.048	-.088*	-.002	.188**	-.052	-.090
b	-.018	-.180	-.186	.055	-.230	-.195
r ²	.000	.032	.034	.003	.052	.038
JUVENILE						
	R ² = .354					
beta	.076	-.078	-.092*	.335**	-.091*	-.050
b	.003	-.151	-.288	.173	-.304	-.181
r ²	.000	.023	.083	.030	.092	.033

* p < .05 ** p < .01

TABLE 5 (continued)

	C O M C H R C H	C O M S C H O L	S I G P A R E N	S I G P E R S	B E L I E F S	S A N C T I O N
DELTOTAL						
beta	-.034	-.083	-.066	-.223**	-.301**	-.021
b	-.281	-.343	-.291	-.457	-.520	-.176
r-2	.079	.118	.084	.210	.271	.031
PROPERTY						
beta	-.061	.008	-.066	-.131**	-.328**	-.036
b	-.221	-.226	-.259	-.373	-.473	-.151
r-2	.049	.051	.067	.139	.224	.023
VIOLENCE						
beta	-.103*	.095*	-.080	-.140**	-.253**	-.027
b	-.217	-.151	-.248	-.355	-.415	-.116
r-2	.047	.023	.061	.126	.172	.013
DRUGPOSS						
beta	-.020	-.110*	-.030	-.195**	-.151**	.034
b	-.226	-.257	-.171	-.313	-.318	-.081
r-2	.051	.066	.029	.100	.101	.007
JUVENILE						
beta	.007	-.151**	-.032	-.235**	-.176**	-.030
b	-.240	-.349	-.218	-.377	-.390	-.174
r-2	.057	.121	.047	.142	.152	.030

* p < .05

** p < .01

contributions are made by the variables of conventional beliefs (BELIEFS) and the conventionality of significant others (SIGTOTAL).

As shown in Table 5, only a slight increase in the explained variation in property crimes occurs when the subscales are employed in the analysis ($R^2 = .285$). In addition to the variables of conventional beliefs (BELIEFS) and the conventionality of peers (SIGPEERS), significant contributions to the overall explained variation are made by attachment to parents (ATTPAREN) and attachment to peers (ATTPEERS). The variables of fear of sanctions (SANCTION), commitment (COMCHRCH and COMSCHOL), attachment to church fellows (ATTCHRCH), attachment to teachers (ATTTEACH) and community involvement (INVCOMTY) appear to be less important in the overall explanation of property crimes, and the variable of involvement in school-related activities (INVSCHOL) is the least important.

The Regression Of Violence

The regression of violent delinquency (VIOLENCE) on the major bond scales shows the model to explain 21% of the variation in violent delinquency (see Table 4). As was the case with property related offenses, the most important contributions are made by the variables of conventional

beliefs (BELIEFS) and the conventionality of significant others (SIGTOTAL).

An increase in the amount of explained variation results when the sub-scales are analyzed ($R^2 = .254$). The standardized regression coefficients presented in Table 5 show the greatest contribution to the explanation of violent delinquency is made by the variables of conventional beliefs (BELIEFS), attachment to teachers (ATTTEACH), conventionality of peers (SIGPEERS), attachment to church fellows (ATTCHRCH), attachment to parents (ATTPAREN), commitment to the church (COMCHRCH), commitment to the school (COMSCHOL), and community involvement (INVCOMTY). The commitment variables (COMSCHOL and COMCHRCH), attachment to parents (ATTPAREN), attachment to the church (ATTCHRCH), and community involvement (INVCOMTY) are of lesser importance, while involvement in the school (INVSCHOL) and fear of sanctions (SANCTION) appear to be the least important in explaining participation in violent delinquency.

The Regression Of Drug Possession

The regression of drug possession (DRUGPOSS) on the major bond scales shows the model to explain only 15% of the variation in this form of delinquency (see Table 4). With both the standardized and unstandardized regression

coefficients, the variables of conventional beliefs (BELIEFS), commitment (COMTOTAL), and the conventionality of significant others (SIGTOTAL) are of greatest importance in predicting drug possession.

The amount of explained variation increases when the subscales are employed in the analysis ($R^2 = .20$). An examination of the beta weights presented in Table 5 indicates the greatest contribution to an understanding of drug possession would involve the variables of the conventionality of peers (SIGPEERS), attachment to peers (ATTPEERS), conventional beliefs (BELIEFS), commitment to the school (COMSCHOL), attachment to fellow church members (ATTCHRRCH), and conventional community involvement (INVCOMTY). A further examination of the unstandardized regression coefficients and the coefficients of determination reveals other important variables, although to a lesser extent, are attachment to teachers (ATTTEACH), commitment to the church (COMCHRRCH), attachment to parents (ATTPAREN), and the conventionality of parents (SIGPAREN). The variables of fear of sanctions (SANCTION) and involvement in school-related activities (INVSCHOL) are the least important in accounting for the possession of drugs.

The Regression Of Juvenile Misbehavior

As presented in Table 4, the regression of juvenile misbehavior on the major bond scales shows the model to explain almost 24% of the variation in juvenile misbehavior (JUVENILE) led by the three variables of conventional belief (BELIEFS), commitment (COMTOTAL), and the conventionality of significant others (SIGTOTAL). A substantial increase in the amount of explained variation occurs when the sub-scales are utilized in the analysis of juvenile misbehavior ($F-2 = .354$). An examination of the beta weights presented in Table 5 indicates that the greatest contributions are made by the variables of attachment to peers (ATTPEERS), the conventionality of peers (SIGPEERS), conventional beliefs (BELIEFS), commitment to school (COMSCHOL), attachment to parents (ATTPAREN), and attachment to teachers (ATTTEACH). The variables of attachment to church fellows (ATTCHRCH), commitment to the church (COMCHRCH), the conventionality of parents (SIGPAREN), and the fear of sanctions (SANCTION) are less important in the explanation of juvenile misbehavior.

Summary Of The Regression Analysis

Several general statements regarding the predictive utility of the proposed bonding model may now be made based on the findings from the regression analyses discussed in the

preceding sections. First, the model explains greater amounts of variation in the dependent variables when the independent variables are broken down into their respective sub-scales. This reflects to some extent that the actual relationships are inconsistent among varying dimensions of composite indicators. For instance, as shown in Table 5, attachment to peers (ATTPEERS) is positively correlated with total delinquency (DELTOTAL), drug possession (DRUGPOSS), and juvenile misbehavior (JUVENILE), whereas all other attachment scales (ATTPAREN, ATTCHRCH, ATTTEACH) are inversely correlated with these dependent variables.

A second general finding is that regardless of the use of the major scales or the sub-scales, the variable of fear of sanctions is consistently the weakest predictor of delinquency involvement. The variables of involvement in school-related activities and commitment to the church are equally weak when considering only the sub-scales. In contrast, the variable of conventional beliefs is consistently the strongest predictor of the dependent variables. Conventionality of peers is the second most important predictor when the sub-scales are taken into consideration. As indicated by the summary presented in Table 6, all other independent variables tend to vary in importance according to the dependent variable under consideration.

TABLE 6

Summary Of Standardized Regression Coefficients

	D E L T O T A L	P R O P E R T Y	V I O L E N C E	D R U G P O S S	J U V E N I L E
INVSCHOL	.069	-.056	-.034	-.048	.076
INVCOMTY	-.088*	-.041	-.085*	-.088*	-.078
ATTPAREN	-.104*	-.101*	-.103*	-.002	-.092*
ATTTEACH	-.106*	-.088	-.142**	-.052	-.091*
ATTPEERS	.244**	.090*	.081	.188**	.335**
ATTCHRCH	.013	.075	.120*	-.090	-.050
COMSCHOL	-.083	.008	.095*	-.110*	-.151**
COMCHRCH	-.034	-.061	-.103*	-.020	.007
BELIEFS	-.301**	-.328**	-.253**	-.151**	-.176**
SANCTION	-.021	-.036	-.027	.034	-.030
SIGPEERS	-.223**	-.131**	-.140**	-.195**	-.235**
SIGPAREN	-.066	-.066	-.080	-.030	-.032

* p < .05

** p < .01

In general, conventional beliefs and the conventionality of peers are important predictors with regard to all of the delinquency indexes. Attachment to peers is an important predictor of all of the delinquencies except juvenile violence and attachment to parents is strongly related to all of the delinquencies except drug possession. Attachment to teachers is important with regard to total delinquency, violent behavior, and juvenile misbehavior. Attachment to fellow church members is an important predictor of drug possession. The importance of the conventionality of parents is greatest with regard to the variable of juvenile violence. Commitment to the school is an important predictor when considering violence, drug possession, and juvenile misbehavior. Commitment to the church is important with regard to violence. Conventional community involvement is important with regard to the total delinquency, drug possession, and juvenile violence. The importance of involvement in school-related activities is greatest when considering total delinquency and juvenile misbehavior. Fear of sanctions does not appear as an important predictor of any of the dependent variables.

In terms of the overall explained variation (see Tables 4 and 5), the proposed bonding model is a fairly good predictor of the delinquent behaviors included in the study.

Its utility is greatest when applied to delinquency in general and to those behaviors classified as juvenile misbehavior. It is also a good predictor of property-related delinquency and juvenile violence, but to a lesser extent. The model's weakest application would be as an explanation of the possession of drugs.

SEX, DELINQUENCY, AND THE SOCIAL BOND-

A fifth general proposition derived from the proposed model is that females will experience greater levels of affective attachments, conventional commitments, conventional involvements, and conventional beliefs than will males; thus, females will be less involved in delinquent behavior than males. As seen in Table 7, the mean score for females is greater than for males on all indicators of the bond and is lower than that of males on all indicators of delinquency. The strength of these relationships is indicated by the zero-order correlations (η) between sex and the various scaled variables.

The variable of sex is coded in such a way that an inverse correlation would be interpreted as showing males to have higher scores than females on the variable in question. The findings presented in Table 7 support the proposition that females experience greater conventional bonding than

TABLE 7

Mean Scores On Major Variables By Sex

	SEX		F	eta
	males	females		
INVTOTAL	6.384	7.944	**	.22**
INVSCHOL	2.336	2.665	*	.09*
INVCOMTY	2.581	3.422	**	.18**
ATTPAREN	16.340	17.221	*	.08*
PARSUPER	3.732	4.535	**	.27**
PARNTALK	10.568	10.723		.02
ATTTEACH	6.688	7.398	**	.12**
ATTPEERS	6.587	7.731	**	.20**
ATTCHRCH	3.140	3.301		.04
ATTTOTAL	33.464	36.038	**	.15**
COMSCHOL	12.209	13.374	**	.18**
COMCHRCH	3.654	4.303	**	.19**
COMTOTAL	16.234	17.864	**	.20**
BELIEFS	11.726	13.061	**	.20**
SANCTION	5.458	5.960	**	.13**
SIGPEERS	13.561	15.211	**	.21**
SIGPAREN	5.456	5.643	**	.10**
SIGTOTAL	19.000	20.841	**	.22**
DELTOTAL	11.162	6.702	**	-.31**
PROPERTY	3.394	1.052	**	-.38**
VIOLENCE	1.375	.507	**	-.36**
DRUGPOSS	1.054	.634	**	-.14**
JUVENILE	5.233	4.370	**	-.14**

* p < .05

** p < .01

TABLE 8

Regression On Major Bond Scales With Sex

	I N V T O T A L	A T T O T A L	C O M M O N T A L	B E L I E F S	S A N C T I O N	S I G N I F I C A N T	S E X
DELTOTAL							
R ² =	.378						
beta	.016	-.020	-.126**	-.336**	-.010	-.190**	-.183**
PROPERTY							
R ² =	.338						
beta	.043	-.072	-.000	-.349**	-.013	-.112*	-.291**
VIOLENCE							
R ² =	.290						
beta	-.002	-.092*	.061	-.274**	-.003	-.140**	-.293**
DRUGPOSS							
R ² =	.158						
beta	-.026	.027	-.168**	-.180**	.029	-.151**	-.044
JUVENILE							
R ² =	.236						
beta	.013	.040	-.218**	-.215**	-.036	-.190**	-.018

* p < .05 ** p < .01

males and participate in delinquent behavior to a lesser extent than do males. In order to assess whether these sex differences in delinquency participation are due to the effects of the bond, a regression analysis was performed on the major bond scales and included the variable of sex. The standardized regression coefficients from this analysis are presented in Table 8. Some sex differences in general delinquency, property related offenses, and violent delinquency are accounted for by the bond. However, the addition of the variable of sex to these three equations resulted in an increased explained variation (R^2) for each delinquent behavior, thus indicating the existence of sex differences apart from the social bond for these categories of delinquency. In contrast, significant differences in the bond by sex are not found when examining possession of drugs and juvenile misbehavior, and the introduction of the variable of sex does not increase the amount of explained variation. The differences by sex for these two types of delinquent behavior, therefore, appear to be accounted for by elements of the social bond.

LOCALITY, DELINQUENCY, AND THE SOCIAL BOND

The sixth general proposition drawn from the proposed bonding model is that respondents with a rural background will experience higher levels of conventional beliefs than respondents with an urban background; thus, rural respondents will be less involved in delinquent behavior than urban respondents. Whereas no hypotheses were advanced with regard to locality and other elements of the bond, the proposed (and demonstrated) positive association among the bonding elements allows for the inference that rural respondents also will experience higher levels of the other bonding elements than will urban respondents.

As these relationships are examined, it is useful to delineate several difficulties encountered in establishing a distinction between urban and rural respondents. The first problem specifically relates to the assignment of respondents to a category of locality. Locality was assessed by three questions relating to the size of the place where the respondent lived most of his/her life (1,12), the place where s/he lives now (1,13), and the number of years spent at the current locality (1,14).

The locality at the time of questionnaire administration does not allow for the assessment of rural-urban migration of the respondent's family. In fact, 76.2% of the urban

sample report having lived in Richmond for more than 5 years (62.7% report more than 10 years in residence). Of the rural sample, 83.1% report having lived in their present location for more than five years and 67.9% report more than 10 years in residence. Furthermore, there is no way to assess the size of the community where these respondents lived prior to the date of data collection.

The question assessing the size of the place where the respondent lived most of his/her life assumes the respondent's knowledge of the population of the particular community. Unfortunately, such knowledge was not available to many of the respondents. Among those subjects who responded as having lived "all my life" in one of the rural locations in Franklin County, 17.7% report having spent most of their life in a community with a population size over 10,000. Similarly, among those subjects who responded as having lived "all my life" in the city of Richmond, 25.3% report having lived most of their life in a place with a population less than 50,000.

As both measures of locality may be questioned with regard to the shortcomings discussed, both will be presented in the analysis without preference for either. The mean scores on the scaled variables by the size of the community where most of the respondent's life was spent are presented

in Table 9. The mean scores on the scaled variables by the locality of the respondent at the time of questionnaire administration are presented in Table 10. A brief examination of these two tables reveals that the direction of the relationships in terms of community size tends to be the same regardless of the measure of locality employed.

The hypothesized relationship between conventional beliefs and residence is supported on both measures of locality. Rural respondents have higher levels of conventional beliefs than urban respondents. However, the hypothesized relationships between locality and delinquency tends not to be fully supported and the findings vary according to the measure of locality employed. When considering the size of the community where the majority of the respondent's life was spent (Table 9), urban respondents display greater participation in all of the delinquencies than do rural subjects with the exception of drug possession. When considering the location at the time of questionnaire administration (Table 10), urban subjects show higher participation than rural respondents only with regard to property-related offenses and physical violence; rural respondents show significantly higher levels of drug possession and juvenile misbehavior, and slightly larger scores on general delinquency.

TABLE 9

Mean Scores By Size Of Community

	SIZE OF COMMUNITY WHERE MAJORITY OF LIFE WAS SPENT						F	r
	100k plus	50000 to 99999	10000 to 49999	2500 to 9999	less than 2500	open farm		
INVTOTAL	6.692	7.000	7.131	7.678	7.460	7.409		.07*
INVSCHOL	2.372	2.738	2.614	2.512	2.480	2.674		.03
INVCOMTY	2.647	2.306	2.820	3.487	3.250	3.119	*	.10**
ATTPAREN	16.840	15.975	17.366	17.294	16.980	15.790	*	-.08**
PARSUPER	3.828	3.927	4.290	4.165	4.331	4.195	*	-.10**
PARNTALK	11.098	9.976	11.010	11.050	10.604	9.580	**	-.10**
ATTTEACH	7.098	6.625	7.108	7.390	6.948	6.978		-.01
ATTPEERS	6.634	6.150	6.950	7.832	7.358	7.421	**	.12**
ATTCHRCH	3.255	2.310	3.260	3.719	3.097	3.093	*	-.00
ATTTOTAL	34.053	31.071	35.487	37.500	34.844	33.829	**	.02
COMSCHOL	13.492	13.195	12.833	12.595	12.582	12.463		-.11**
COMCHRCH	4.081	3.758	3.961	4.333	3.952	3.804		-.03
COMTOTAL	18.071	17.586	17.526	17.364	16.520	16.411	*	-.15**
BELIEFS	11.839	12.243	12.182	12.647	12.706	12.670		.09**
SANCTION	6.016	5.833	5.580	5.737	5.770	5.447		-.08*
SIGPEERS	14.469	14.081	14.140	14.917	14.470	14.391		.01
SIGPAREN	5.692	5.737	5.465	5.592	5.516	5.451		-.09*
SIGTOTAL	20.116	19.811	19.600	20.500	19.980	19.842		-.01
DELTOTAL	9.135	8.353	9.362	8.586	8.450	8.631		-.03
PROPERTY	2.732	1.500	2.516	1.766	1.950	1.961		-.08*
VIOLENCE	1.043	.857	1.113	.805	.801	.908		-.06
DRUGPOSS	.583	1.114	.875	.903	.755	1.015		.06
JUVENILE	4.643	4.829	4.835	5.000	4.826	4.572		-.00

* p < .05

** p < .01

TABLE 10

Mean Scores By Locality

	LOCALITY		F	eta
	Richmond (urban)	Franklin County (rural)		
INVTOTAL	7.139	7.294		.02
INVSCHOL	2.511	2.517		.00
INVCOMTY	2.820	3.154		.07*
ATTPAREN	17.271	16.580		-.07*
PARSUPER	3.886	4.321	**	.14**
PARNTALK	11.370	10.222	**	-.14**
ATTTEACH	7.145	7.026		-.02
ATTPEERS	6.714	7.496	**	.13**
ATTCHRCH	3.306	3.191		-.03
ATTTOTAL	34.707	35.061		.02
COMSCHOL	13.970	12.149	**	-.27**
COMCHRCH	4.230	3.912	*	-.09*
COMTOTAL	18.625	16.366	**	-.27**
BELIEFS	12.064	12.655	*	.09*
SANCTION	6.040	5.565	**	-.12**
SIGPEERS	15.008	14.146	**	-.11**
SIGPAREN	5.679	5.487	**	-.10**
SIGTOTAL	20.659	19.629	**	-.12**
DELTOTAL	8.139	8.938		.05
PROPERTY	2.178	2.045		-.02
VIOLENCE	.934	.811		-.02
DRUGPOSS	.596	.934	**	.11**
JUVENILE	4.350	4.960	*	.09**

* p < .05

** p < .01

No clear relationships emerge with regard to locality and the other bonding variables. In general, regardless of the measure of locality, rural respondents tend to experience higher levels on all involvement indicators, parental supervision, and attachment to peers. In contrast, urban respondents display higher levels on attachment to parents, parental communication, attachment to teachers, attachment to church fellows, all indicators of conventionality of significant others, and on fear of sanctions.

A second problem in establishing a distinction between rural and urban respondents is the finding that 91% of the urban sample is black and 84% of the rural sample is white. Thus it is possible that any relationships between locality and the scaled variables may be either confounded or suppressed by the variable of race. An examination of the mean scores on the scaled variables by race (Table 11) lends partial support for an interaction effect as whites tend to score higher on several of the bonding variables previously associated with rural residence: community involvement, parental supervision, attachment to peers, and conventional beliefs. However, the same data show that blacks experience higher levels on measures of total involvement and school involvement than whites, and these were more characteristic of rural respondents in the prior analysis. Furthermore,

whites score higher on all delinquencies than blacks, a trend not consistent with the rural-urban distinction if race were intervening into the relationship. Yet the strongest correlations between race and delinquency are with total delinquency, drug possession, and juvenile misbehavior. These trends are consistent with the rural-urban distinction in the prior analysis.

Using the locality at the time of questionnaire administration, a breakdown of the mean scores on the scaled variables and race by locality is presented in Table 12. The hypothesized relationship between conventional belief and locality remains the same regardless of race. Similarly, the relationships between locality and involvement, parental supervision, attachment to church fellows, and the commitment variables basically remain the same regardless of race. In contrast, the relationships between locality and attachment to parents, parental communication, attachment to teachers, attachment to peers, the conventionality of significant others and fear of sanctions are altered when controlling for race, indicating that the variable of race intervenes into many of the relationships between locality and the social bond.

TABLE 11

Mean Scores On Major Variables By Race

	RACE		F	eta
	white	black		
INVTOTAL	7.146	7.372		.03
INVSCHOL	2.429	2.619		.05
INVCOMTY	3.110	2.942		-.04
ATTPAREN	16.442	17.340	*	.08**
PARSUPER	4.276	4.012	*	-.09**
PARNTALK	10.116	11.327	**	.15**
ATTTEACH	6.857	7.337	*	.08*
ATTPEERS	7.731	6.533	**	-.21**
ATTCHRCH	3.207	3.264		.01
ATTTOTAL	35.022	34.828		-.01
COMSCHOL	11.929	13.979	**	.31**
COMCHRCH	3.909	4.174		.08*
COMTOTAL	16.197	18.413	**	.28**
BELIEFS	12.600	12.231		-.05
SANCTION	5.386	6.195	**	.21**
SIGPEERS	14.060	14.958	**	.11**
SIGPAREN	5.495	5.637	*	.08*
SIGTOTAL	19.550	20.571	**	.12**
DELTOTAL	9.428	7.592	**	-.12**
PROPERTY	2.162	1.993		-.03
VIOLENCE	.931	.856		-.03
DRUGPOSS	.987	.584	**	-.14**
JUVENILE	5.231	4.080	**	-.18**

* p < .05

** p < .01

TABLE 12

Mean Scores By Locality By Race

	LOCALITY OF WHITES				LOCALITY OF BLACKS			
	urban	rural	F	eta	urban	rural	F	eta
INVTOTAL	5.583	7.247	*	.11*	7.316	7.534		.03
INVSCHOL	1.923	2.464		.07	2.568	2.784		.05
INVCOMTY	2.000	3.181	*	.12**	2.918	3.013		.02
ATTPAREN	15.760	16.487		.03	17.426	17.053		-.03
PARSUPER	3.692	4.316	*	.10*	3.911	4.347	*	.12*
PARNTALK	10.077	10.118		.00	11.504	10.747		-.08
ATTTEACH	7.040	6.847		-.01	7.152	7.946	*	.11*
ATTPEERS	7.333	7.756		.03	6.639	6.187		-.07
ATTCHBCH	3.678	3.181		-.06	3.273	3.238		-.01
ATTTOTAL	33.867	35.081		.03	34.778	34.968		.01
COMSCHOL	12.692	11.877		-.06	14.114	13.533		-.08
COMCHRCH	4.312	3.888		-.05	4.223	4.032		-.05
COMTOTAL	17.125	16.148		-.05	18.755	17.413	**	-.17**
BELIEFS	11.800	12.652		.06	12.085	12.667		.08
SANCTION	5.080	5.406		.04	6.134	6.378		.05
SIGPEERS	13.792	14.077		.02	15.106	14.493		-.07
SIGPAREN	5.480	5.496		.00	5.700	5.440	*	-.13*
SIGTOTAL	19.250	19.569		.02	20.777	19.933		-.08
DELTOTAL	9.454	9.426		-.00	8.015	6.458		-.10*
PROPERTY	2.545	2.139		-.03	2.148	1.575		-.09
VIOLENCE	1.000	.927		-.01	.931	.648		-.10*
DRUGPOSS	.565	1.014		.06	.602	.534		-.03
JUVENILE	5.227	5.231		.00	4.261	3.575		-.11*

* p < .05

** p < .01

With regard to the dependent variables, urban respondents score higher on indicators of property-related offenses and violent delinquency regardless of race. The same distinction by locality holds for drug possession, juvenile misbehavior, and the total delinquency among blacks but not among whites. The associations between juvenile misbehavior and locality, and total delinquency and locality are almost nonexistent for whites; however, rural whites have higher scores on the drug possession index than do urban whites. Furthermore, with one exception, whites have higher levels of participation on all delinquency indexes than do blacks regardless of locality. The one exception is that urban blacks have higher participation in drug possession than urban whites.

In summarizing the relationships between locality, delinquency, and the social bond, it is found that the hypothesized relationships receive limited support. Rural respondents experience higher levels of conventional belief, but also experience higher levels of most (but not all) delinquencies than urban respondents. And, the non-hypothesized inferences mentioned at the beginning of this section are not easily supported by the data. For the most part, there are no consistent relationships between other elements of the social bond and locality, and many of the

existing relationships are confounded by the variable of race. Because predicted differences by locality in the bonding elements and in delinquency did not appear, a further analysis of the effects of the bond by locality was not conducted.

SUMMARY OF THE FINDINGS

This chapter has presented a discussion of the findings from a test of an empirically derived social bonding model. Six general propositions were advanced and the data support the model with few exceptions. The exceptions are a weak but positive correlation of attachment to peers with total delinquency, drug possession, and juvenile misbehavior, a slight inverse relationship between fear of sanctions and the variables indicating conventional involvement, differences by sex in participation in general delinquency, property offenses, and violence were not accounted for in full by the bond, and a tendency for rural respondents to experience higher levels of drug possession than urban respondents. With these exceptions, all other hypothesized relationships were supported and the relationships generally tend to be moderate in strength.

Chapter VI

SUMMARY AND DISCUSSION

The objective of this research has been to develop and test an empirical model explaining delinquent behavior based on the tenets of social bonding theory as originally proposed by Travis Hirschi (1969), but incorporating innovations to the model which have been empirically demonstrated by subsequent research. The basic model asserts that delinquency is inversely related to the affective ties of attachments, commitments to conformity, involvement in conventional activities, and conventional beliefs. The basic innovations are the addition of a deterrence component, the consideration of the influence of the variables of sex and locality, the perspective that the influence of attachments is mediated by the conventionality of the persons to whom one is attached, the perspective that attachments are with people and that commitments are with institutions, and the addition of questions pertaining to religiosity as indicators of commitment, involvement, and attachment.

Six general propositions were derived from the synthesized model and served as a guideline for tests of the model. The first proposition stated that attachments,

commitments, involvements, and conventional beliefs would vary positively with each other. These relationships were supported by the data although the strength of the associations varied. The second proposition stated that fear of sanctions would be positively related to commitment and attachment. These relationships were supported by the findings. However, the relationship between involvement and the fear of sanctions was found to be inverse. While not one of the hypothesized relationships, this inverse association is anomalous in consideration of the positive correlation demonstrated between involvement and the other elements of the bond. A third proposition stated that the elements of attachment, conventional belief, involvement, commitment, and fear of sanctions would be inversely related to participation in delinquency. These relationships were all supported. Similarly, a fourth proposition stated that participation in delinquent activity is inversely related to the conventionality of significant others (peers and parents specifically). This proposition also was supported by the findings.

The variables of attachment, conventional belief, involvement, commitment, fear of sanctions, and the conventionality of significant others were joined together in an analysis of the predictive utility of the synthesized

model which employed regression techniques. The model was found to be a good predictor of general delinquency, juvenile misbehavior, violent delinquency, and property-related offenses. Its weakest application would be to the explanation of the possession of drugs. The best overall predictor was found to be conventional beliefs. The conventionality of peers, and attachments to peers, parents, and teachers were of significant, though secondary, importance in explaining participation in delinquent behavior.

The fifth and the sixth propositions predicted relationships between delinquency, social bonding, and the exogenous variables of sex and locality in terms of rural/urban residence. The fifth proposition stated that females would experience greater levels of attachment, commitment, involvement, and conventional belief than males and would be less involved in delinquency than males. These relationships were supported by the data without exception, but differences by sex in participation in general delinquency, property offenses, and violence were not fully accounted for by the bond. The sixth proposition predicted subjects from a rural background would experience greater levels of conventional belief than respondents from an urban background and would be less involved in delinquent behavior

than urban subjects. This final proposition received only partial support. Rural respondents displayed greater levels of conventional belief, but had lower levels of delinquency participation only on measures of violent delinquency and property-related offenses. Rural respondents reported higher levels of drug possession than urban respondents and were nearly equal with urban respondents on measures of juvenile misbehavior and total delinquency. It is interesting to note that the single delinquent behavior on which rural respondents scored higher than urban subjects was that of drug possession. And as demonstrated by the regression analysis, the weakest application of the synthesized model is to the behavior of drug possession.

Having discussed the primary objective and findings of this particular research program, it is important to discuss its relevance in terms of larger theoretical issues. As stated, a multivariate analysis of a social bonding model which incorporated contemporary developments was conducted in order to test propositions which explained relationships in the empirical world. Although the synthesized model was successful in explaining juvenile delinquency, it is far from being a totally absolute and accurate predictor of these behaviors. It is not unreasonable to suggest that an increased accuracy in prediction may result from the

combination of this bonding model with other theories of delinquency which have been supported through empirical tests. Numerous integrated models have been proposed in recent years which combine social bonding theory, or elements of it, together with both complementary and contrasting theories in efforts to better explain the phenomenon of juvenile delinquency (Conger, 1976; Friday and Hage, 1976; Cernkovich, 1978b; Aultman and Wellford, 1979; Elliott et al., 1979; Bales, 1982; Colvin and Pauly, 1983; Segrave and Hastad, 1983; and Shoemaker, 1984). However, many of these integrated models of delinquency causation have yet to be tested in the empirical world and the specific linkages between the theories will need to be demonstrated.

Whereas the synthesized model presented here is not an attempt at theoretical integration, several elements of the model might be useful as linkages to other models. As an example, a major point of contrast between social bonding theory and differential association theory is that the latter hypothesizes delinquency (and criminality in general) to vary with the frequency, duration, priority, and intensity of exposure to definitions favorable to law violation relative to definitions unfavorable to law violation. In contrast, social bonding theory assumes such

exposure to be a given part of everyday life; the key criterion is whether the exposure to unconventional definitions is mediated by the social bond. Yet three of the strongest predictors of delinquency from the synthesized model were conventional beliefs, attachment to peers, and the conventionality of peers, indicating attachment to unconventional peers could decrease conventional belief, thereby lessening the effectiveness of the bond and increasing the probability of delinquency. These findings confirm support for studies such as that by Matsueda (1982) in which the bonding variable of belief lends more support to a differential association explanation of delinquency than to the bonding perspective.

Such bonding variables as conventional beliefs, attachment to peers, and the conventionality of peers possibly could serve as linkages from the updated bonding model to modified versions of differential association and social learning theories, or they could serve as linkages from these alternative models to the bonding model. In either instance, the potential for linkages should not be interpreted as weakness in the bonding model, the associations between the three elements mentioned above and the other elements of the social bond do not support a refutation of the model.

Rather, the potential for linkages should be interpreted as characteristic of greater flexibility resulting from the modification and adaptation of an existing model to the requirements of empirical reality. Attempts to integrate various theories of juvenile delinquency will necessarily occur at the empirical as well as the theoretical level. The present research has demonstrated the utility of social bonding theory as a starting point in the explanation of delinquency and in the development of integrated scientific models of delinquency causation.

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Appendix A
QUESTIONNAIRE

DO NOT SIGN YOUR NAME TO ANY PART OF THIS QUESTIONNAIRE.

YOU HAVE BEEN SELECTED TO PARTICIPATE IN A SURVEY CONDUCTED BY SOCIOLOGISTS FROM VIRGINIA TECH, PLEASE COMPLETE THIS QUESTIONNAIRE AND RETURN IT PROMPTLY

ALL RESPONSES WILL BE CONFIDENTIAL, NO INDIVIDUAL SCORES WILL BE REPORTED OR OTHERWISE REVEALED.

THE FOLLOWING QUESTIONS ARE DESIGNED TO ALLOW YOU TO GIVE YOUR INDIVIDUAL RESPONSE, THEY ASK ABOUT YOUR OPINIONS AND YOUR BEHAVIORS.

PLEASE READ EACH QUESTION AND EACH RESPONSE SET CAREFULLY. USE ONLY THOSE RESPONSE SETS PROVIDED WITH EACH QUESTION.

READ ONLY ONE PAGE AT A TIME AND ANSWER THE QUESTIONS ON THAT PAGE BEFORE TURNING TO THE NEXT PAGE.

THANK YOU VERY MUCH FOR YOUR COOPERATION

PLEASE ANSWER THESE QUESTIONS BEFORE TURNING THE PAGE

1. Sex:
male _____
female _____

2. What is your age? _____

3. Race:
White _____
Black _____
Other _____ (please specify) _____

4. What grade are you in now? _____

5. What is the name of your school?

6. Do you live with: (check one):
Both parents _____
Mother, but not father _____
Father, but not mother _____
Neither parent _____ (please specify) _____

7. Is your father employed?
NO _____
YES _____ If YES, what is his job? (Please describe exactly what he does) _____

8. Is your mother employed?
NO _____
YES _____ If YES, what is her job? (Please describe exactly what she does) _____

9. Please indicate your father's educational level by checking the highest level completed in the list below.
- Less than 6th grade_____
- 6th grade to 8th grade_____
- Some High School_____
- High School Graduate_____
- Some College or other training after high school_____
- College Graduate_____
- Post College Education_____
10. Please indicate your mother's educational level by checking the highest level completed in the list below.
- Less than 6th grade_____
- 6th grade to 8th grade_____
- Some High School_____
- High School Graduate_____
- Some College or other training after high school_____
- College Graduate_____
- Post College Education_____
11. Do you work?
- NO_____
- YES_____ If YES, what is your job? (Please describe exactly what you do)_____
12. What is the size of the community, town, or city where you have lived most of your life?
- ____1. On a farm or open country.
- ____2. Less than 2,500 people.
- ____3. 2,500 to 9,999 people.
- ____4. 10,000 to 49,999 people
- ____5. 50,000 to 99,999 people
- ____6. Over 100,000 people
13. What is the name of the community, town, or city that you live in now? _____
14. How many years have you lived at the location you named in question number 13?
- ____1. all my life
- ____2. ten years or more
- ____3. five to nine years
- ____4. one to five years
- ____5. less than one year

15. How often do you attend meetings of the scouts, 4-H, YMCA, YWCA, or other youth groups?
- 0. never
 - 1. less than once a month
 - 2. once a month
 - 3. 2 or three times a month
 - 4. once a week or more
16. In which of the following school related activities do you participate? (check as many as you need)
- Athletic teams
 - Cheerleaders
 - Hobby Clubs
 - Science Clubs
 - Service Clubs
 - Musical Groups
 - School Publications
 - Student Government
 - Honor Societies
 - Other (please specify) _____
17. Are your friends here at school active in school activities? (check only one)
- very active
 - somewhat active
 - not very active
 - not active at all
18. Approximately how many hours per day do you spend on homework?
- none at all
 - less than one hour
 - one to two hours
 - three to five hours
 - more than five hours
19. Approximately how many hours per week do you spend in school related activities other than homework and attending classes?
- none at all
 - less than one hour
 - one to two hours
 - three to five hours
 - more than five hours

20. How do you rate yourself in school ability as compared with other students in your school.
- among the best
 - above average
 - average
 - below average
 - among the worst
21. Would you like to be the kind of person your parents are?
- In every way
 - In most ways
 - In some ways
 - In a few ways
 - Not at all
22. Would you like to be the kind of person your teachers are?
- In every way
 - In most ways
 - In some ways
 - In a few ways
 - Not at all
23. Would you like to be the kind of person your friends are?
- In every way
 - In most ways
 - In some ways
 - In a few ways
 - Not at all

PLEASE ANSWER THE QUESTIONS ON EACH PAGE BEFORE GOING ON TO THE NEXT PAGE, UNLESS YOU ARE OTHERWISE DIRECTED TO DO SO.

INSTRUCTIONS -- For each of the following questions, rate the particular activity's general occurrence in terms of the categories provided. PLEASE, circle the answer you choose.

1. My parents know where I am when I am away from home.
never sometimes usually always
2. My parents know who I am with when I am away from home.
never sometimes usually always
3. My parents want to help me when I have problems.
never sometimes usually always
4. My parents know what is best for me.
never sometimes usually always
5. My parents and I talk over my future plans.
never sometimes usually always
6. My parents explain why they feel the way they do.
never sometimes usually always
7. I can share my thoughts and feelings with my parents.
never sometimes usually always

8. When my parents make a rule I don't understand, they will explain the reason.

never sometimes usually always

9. I care about what my teachers think of me.

never sometimes usually always

10. My teachers know what is best for me.

never sometimes usually always

11. I try hard in school.

never sometimes usually always

12. My teachers want to help me when I have problems.

never sometimes usually always

13. I share my thoughts and feelings with my teachers.

never sometimes usually always

14. I dislike school.

never sometimes usually always

15. The things I do in school seem worthwhile and meaningful to me.

never sometimes usually always

16. Getting good grades is important to me.

never sometimes usually always

17. School attendance is important to me.

never sometimes usually always

18. Whatever my goals, I try hard to achieve them.

never sometimes usually always

19. My friends understand my needs and problems.

never sometimes usually always

20. My friends would stick up for me if I really got myself into bad trouble.

never sometimes usually always

21. My friends want to help me when I have problems.

never sometimes usually always

22. I can share my thoughts and feelings with my friends.

never sometimes usually always

23. My close friends respect the local police.

never sometimes usually always

24. My friends tend to get into trouble with the police.

never sometimes usually always

25. My friends tend to get into trouble with their parents.

never sometimes usually always

26. My friends respect their teachers.

never sometimes usually always

27. My friends tend to get into trouble at school.

never sometimes usually always

28. My friends try to follow the rules and stay out of trouble.

never sometimes usually always

29. My friends respect their parents.

never sometimes usually always

30. My parents respect the local police.

never sometimes usually always

31. Regular church attendance is important to my parents.

never sometimes usually always

32. My parents try to obey the law and stay out of trouble.

never sometimes usually always

33. It is alright to get around the law if you can get away with it.

never sometimes usually always

34. To get ahead, you have to do some things which are not right.

never sometimes usually always

35. I have a lot of respect for the local police.

never sometimes usually always

36. Policemen try to give all kids an even break.

never sometimes usually always

37. Most things people call "delinquency" don't really hurt anyone.

never sometimes usually always

38. I can't seem to stay out of trouble no matter how hard I try.

never sometimes usually always

39. Suckers deserve to be taken advantage of.

never sometimes usually always

40. People who break the law are likely to get caught.

never sometimes usually always

41. People who get caught breaking the law are likely to be punished.

never sometimes usually always

42. Most punishments are so harsh that breaking the law is not worth any possible gain.

never sometimes usually always

43. Do you ever feel there is "nothing to do"?

never sometimes usually always

44. Do you have regular access to a car for your own personal use?

never sometimes usually always

45. Having regular access to a car is very important to me.

never sometimes usually always

46. How frequently do you spend your leisure time on dates.

never sometimes usually always

INSTRUCTIONS: For the remainder of the questions indicate the extent to which you have participated in the activity, responding by circling one of the categories provided.

PLEASE REMEMBER: Your answers will remain confidential

52. Marked with a pen, pencil, knife, chalk, or paint on walls, sidewalks, desks or property not belonging to you:

never once or twice several times

53. Broken out any windows:

never once or twice several times

54. Broken down anything such as fences, a flower bed, or a clothes line:

never once or twice several times

55. Let the air out of somebody's tires:

never once or twice several times

56. Made anonymous phone calls just to annoy the people you called:

never once or twice several times

57. Driven a car without a driver's license or permit:

never once or twice several times

58. Taken little things (worth less than \$2) that did not belong to you:

never once or twice several times

59. Bought or drank beer, wine, or liquor (including drinking at home):

never once or twice several times

60. Skipped school without a legitimate excuse:

never once or twice several times

61. Defied a parent's authority (to his/her face):

never once or twice several times

62. "Run away" from home:

never once or twice several times

63. Taken things of some value (between \$2 and \$50) that did not belong to you:

never once or twice several times

64. Taken a car for a ride without the owner's permission:

never once or twice several times

65. Banged up something that did not belong to you on purpose:

never once or twice several times

66. Not counting fights you may have had with a brother or sister, have you ever beaten up on anyone or hurt anyone on purpose:

never once or twice several times

67. Hit someone in such a way as to break their nose, arm, etc., or disfigure the person (e.g. black eye):

never once or twice several times

68. Taken things of large value (worth over \$50) that did not belong to you:

never once or twice several times

69. Broken into a building or vehicle (or tried to break in) to steal something or just to look around:

never once or twice several times

70. Been in possession of any amount of marijuana:

never once or twice several times

71. Been in possession of LSD, psilocybin (mushrooms), peyote, or cocaine:

never once or twice several times

72. Been in possession of "speed" or any amphetamines:

never once or twice several times

73. Not counting brothers or sisters, have you used or threatened to use force or violence to get money or property from other people:

never once or twice several times

74. How often have you been stopped by the police or sheriff?

never once or twice several times

75. How often have your friends been stopped by the police or sheriff?

never once or twice several times

76. How often have you been arrested by the police or sheriff for something you did that was against the law?

never once or twice several times

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SOCIAL BONDING AND DELINQUENCY: A MULTIVARIATE ANALYSIS

by

Robert LeGrande Gardner, III

Committee Chairman: Donald J. Shoemaker

Sociology

(ABSTRACT)

This study presents a multivariate analysis of the basic propositions of social bonding theory, including the refinement of some of the basic indicators and the addition of many relevant variables as indicated by recent research. A synthesized model is proposed and six general propositions are derived: (a) attachment to significant others, commitment to conventional institutions, belief in conventional values, and involvement in conventional activities will vary positively with each other; (b) fear of sanctions is positively related to commitment to conventional institutions and attachments to significant others; (c) attachment to significant others, commitment to conventional institutions, belief in conventional values, involvement in conventional activities and fear of sanctions will be inversely related to participation in delinquent activity; (d) participation in delinquent activity is inversely related to the conventionality of significant others; (e) females will experience greater levels of

affective attachments, and conventional commitments, involvements, and beliefs than will males and also will be less involved in delinquent behavior than males; and (f) rural respondents will experience higher levels of conventional belief than urban respondents and will be less involved in delinquent behavior than urban respondents. The model was tested using primary data on 733 middle and high school students from public schools in Richmond, Virginia and in Franklin County, Virginia. Nearly all proposed relationships are supported; significant exceptions are discussed. The importance of the synthesized bonding model for integrated theories of delinquency is discussed.