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Causes and Prevention of Juvenile Delinquent Behavior

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**CAUSES AND PREVENTION OF
JUVENILE DELINQUENT BEHAVIOR**

By

Brian Scruggs

**A Thesis Submitted to the Faculty of the Graduate School
of Loyola University of Chicago in Partial Fulfillment
of the Requirements for the Degree of**

Master of Arts

April

1985

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VITA

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INTRODUCTION

Juvenile delinquent behavior has long been considered a serious social problem and worthy of substantial efforts to reduce its occurrence. However, after decades of research and programs conducted by public and private institutions, delinquent behavior is as prevalent as ever and there is still a considerable variety of opinions about who is a juvenile, what is delinquent behavior, and what can and should be done about this problem.

Juvenile delinquency broadly refers to the actions of youth that are disapproved by conventional adults. It is an imprecise term; the designated set of unacceptable behaviors and the age range of those considered youths varies over the time, place, and person using the term. However defined, youthful behavior that is unacceptable to adults has been common throughout recorded history. After reviewing reports of delinquent behavior from a broad range of historical periods, Lamar Emrey (1978) concluded that youthful misbehavior has not increased over the centuries. Recent studies based on self report surveys indicate that as much as eighty to ninety percent or more of American youth

have engaged in misbehavior of "sufficient seriousness that it could, if detected, result in delinquency or felony charges" (Shireman & Lawrence, 1980, p. 2).

According to Emprey, while youthful behavior has not changed, what has changed is the way adults view and react to children and their behavior. Overall, it appears that the number of types of behavior considered unacceptable has increased, the degree of unacceptability of various behaviors has increased, and adult concern about youth and their behavior has increased (Emprey, 1978). As awareness and concern about young persons and their behavior grew, youth more and more became the object of intense thought and study.

The result is a diversity of academic, professional, and popular views about the definition and causes of youthful misbehavior and what to do about it. A given misbehavior, such as some act of vandalism, may be viewed as delinquency by a police officer, acting out by a psychologist, a sin by a religious leader, or mischief by a person who views a certain amount of youthful misbehavior as a normal part of growing up. The differing viewpoints lead to differing responses--involvement with the juvenile justice system, psychological therapy, repentance, or a mild reprimand.

Throughout history, societal responses to misbehavior have taken several forms. Sanctions and punishment have always been popular means of dealing with behavior considered unacceptable by conventional society. Attempts at rehabilitation and reform began to emerge in the 1800's and are still widely used. More recently, preventing delinquent behavior from occurring in the first place has become an increasingly popular approach. During the 1970's the preventive approach became official policy of the federal government when it was written into federal law: the 1972 Juvenile Delinquent Prevention Act, the 1974 Juvenile Justice and Delinquency Prevention Act, and the 1977 Juvenile Justice Amendments established the prevention of juvenile delinquency as a national priority (Hawkins, Pastor, Bell, & Morrison, 1980, p. ii).

The main contemporary meaning of delinquency prevention is the removal of the causes of delinquent behavior. The current prevention concept also includes increasing restraints against delinquent behavior while enhancing the factors that contribute to conventional social behavior and removing the factors that detract from conventional behavior. As pointed out earlier, however, a thorough awareness and understanding of the factors that affect delinquent behavior and the most effective means of

preventing it are lacking. This has been attributed to the relative newness of the study of prevention and the failure of many practitioners to create prevention programs designed to remove or change specific causes of delinquency and to rigorously evaluate the effects (Hawkins et al., 1980; Hawkins & Weis, 1980; Johnson, Bird, & Little, 1980).

The 1974 Juvenile Justice and Delinquency Prevention Act provided that the Office of Juvenile Justice and Delinquency Prevention assume leadership in planning and programming to reduce delinquent behavior specifically through prevention. Toward this end a report was prepared by Johnson, Bird, and Little (1980) to help interested parties plan effective delinquency prevention strategies. The report, Delinquency Prevention: Theories and Strategies, includes a critical review of the diverse academic, professional, and popular views of what causes delinquent behavior and how to prevent it. The authors concluded that research supports some explanations and prevention strategies more than others, and some not at all. The more supportable explanations point to a variety of factors and settings as potential contributors to delinquent behavior. While concluding on the one hand that this diversity of contributors indicates that there are several paths to engaging in delinquent behavior,

Johnson et al. contend on the other hand that the supportable explanations and defensible prevention options have enough in common to form the basis of a coherent framework:

In brief, the emerging picture is that distinct and identifiable practices in main socializing institutions of family, schools, peers, and work regulate the opportunity to establish a stake in conventional lines of action, to form attachments with conventional persons, and to learn a belief in the moral validity of present arrangements in our society. (1980, p. 2-75)

This view places the majority of factors that most contribute to youths engaging in delinquent behavior in social settings, not in individuals. This view does not necessarily exclude potential contributing factors that reside in the larger social setting (e.g., national economic policies or conditions, national or world social climate, etc.) nor other traditional sources. The emphasis here, however, is on factors that have substantial influence and that are accessible and amenable to change by local program planners.

Some of these situational factors affect all youth, and others affect categories of youth by operating discriminately on the basis of personal and background characteristics, such as personality, gender, and social economic status. These latter factors limit opportunities, the acquisition of skills to use opportunities, and the rewards that successes bring. The result is youths who see no

future in conventional persons, institutions and values, nor believe in their validity. Such youths are free to consider and act on unacceptable means to achieve legitimate and illegitimate goals, and are thus susceptible to peer influence toward these unacceptable alternatives.

This model specifically rules out the point of view that there is a type of young person who engages in delinquent behavior and a type of young person who does not. In other words, youth who engage in delinquent behavior (however defined) are not distinguishable on the basis of personal traits or background characteristics from youth who do not do so. Instead, according to this model, it would be said that youth in a particular school or community engage in more delinquent behavior than youth in another school or community.

This does not necessarily mean that the level of engaging in delinquent behavior is the same across subgroups within a particular setting. As stated earlier, background or personal characteristics can mediate the main effect of local social practices such that delinquent behavior varies across subgroups within a setting. At the same time, a difference in social practices between two settings would be expected to result in a difference in delinquent behavior among all subgroups. To support this point of view, Johnson

et al. (1980) cite studies that compare delinquent behavior between social settings that use both individual and aggregate measures of delinquent behavior and social economic status (pp. 26-28). In other words, while personal variables are ruled out as a direct cause of misbehavior, personal variables interact with situational variables to increase or decrease the opportunity for social bonds to form, which in turn affect involvement in delinquent behavior.

The work of Hawkins and Weis is considered by Johnson et al. as representative of contemporary thought and research that integrates the most supportable contending arguments, reconciling them with one another and with research findings. The Hawkins and Weis (1980) social development model is primarily an integration of control theory (Hirschi, 1969) and social learning theory (Burgess & Akers, 1966). In terms of social development, delinquent behavior results from an inadequate process of social development, and different casual elements are more salient than others at different stages of the development process. Control theory posits that conformity to conventional social norms of behavior occurs when individuals are bonded to those norms (a) by means of the control processes of commitment, attachment, involvement, and belief in the

validity of social rules and (b) through their affiliation with social institutions such as home, school, church, and work places. While control theory specifies the "elements" (i.e., control processes) and "units" (i.e., social institutions) of the bonding process, social learning theory specifies its nature, namely that behavior is learned and maintained by reinforcement contingencies. In addition, the integration of control theory with learning theory permits the inclusion of peers as an important unit of socialization in the social development model (Hawkins & Weis, 1980, pp. 11-12).

The peer factor plays a complex role in the social development model. It is a delayed role, however, compared to family and school factors. In other words, family and school factors have the opportunity to encourage social bonding before nonsibling peers begin playing a role. Peers soon become as influential and contribute to the balance of social forces, as mediated by personal characteristics, that determine the net outcome in terms of behavior. It is a hypothesis of this study that, regardless of the net sources of social influence, the degree of social bonding (as measured by the degree of a person's attachment, involvement, and commitment to conventional values and institutions) is inversely related to delinquent behavior.

School Focused Delinquency Prevention Program

The social development view was used to guide research into the causes and prevention of delinquent behavior in Evanston, Illinois. The goal was to create a crime prevention curriculum for elementary schools in that community that was based on data collected locally on the nature and extent of delinquent behavior. It was not possible to directly investigate the presence and effects of specific school practices that may affect the opportunity to form social bonds to conventional institutions. Instead, the research method was limited to using a questionnaire to measure conventional attachment, involvement, and commitment variables, as well as misbehavior. In other words, the questionnaire was designed to measure the effects of practices of social institutions and other social influences (e.g., peers) on the social bonding variables of individuals, in addition to measuring delinquent behavior. It was hoped that establishing the relationships among these variables would indicate their usefulness as prime targets of a school crime prevention program.

Operational Definition of Juvenile Delinquent Behavior

As described at the beginning of this report, there is considerable variation in the definitions of juvenile delinquent behavior presented by law makers, social scientists, and others. One of the most common general definitions of delinquency is behavior that is not law abiding, including acts prohibited by delinquency laws called status offenses. Delinquency laws define acts that, if committed by an adult, are not in violation of criminal laws, but, when committed by a minor (as locally defined), can result in legal intervention by the juvenile justice system. These acts, known as status offenses, include behaviors such as violating curfew, truancy, running away from home, and so on.

While legalistic definitions of delinquent behavior vary across legal jurisdictions, they generally include acts that are of greatest general concern. The set of measures used in this study is largely composed of behaviors prohibited by law in Evanston, including status offenses such as truancy. (See Appendix A for complete list of delinquency measures.)

Additional misconduct was also measured that would be less likely to result in intervention by public agencies, yet is generally considered troublesome behavior. These

include disobedience at home and school, causing a class disturbance, cheating on a test, or showing disrespect. Including these items in the questionnaire increased the ability of the study to examine the causal variables against a broader spectrum of misconduct.

Limitations on Research Design.

The field setting imposed several restrictions on the research design. First, restricting the method of data collection to the use of a questionnaire limited the availability of information to self report data. Thus, other potential sources of new or corroborating data, such as police records, school performance records (academic and behavioral), parent and teacher surveys, and so on, were not available (see discussion below).

In addition, the number of items included in the questionnaire was limited due to both the sensitivity of the research setting and the practical need to design a survey with a reasonable length, considering student attention span and patience. This resulted in omitting potentially useful measures of behaviors and attitudes such as those regarding drug use, sexual conduct, sensitive home issues, and so on.

The size of the student sample was also restricted by the field setting. The plan was to administer the

questionnaire to a sample of students in each of the four middle schools in the school district. As it turned out, the sample consisted of fifth, sixth, and seventh grade students in one middle school.

Self Report Data

As described above, the circumstances of the research environment limited the study to the use of a self report method of data collection. Hindelang, Hirschi, and Weis (1981) attempted to sort out the official data versus self report data debate and identify the strengths and limitations of self report procedures. In short, the argument began when some researchers became dissatisfied with the traditional method of data collection for delinquency research, namely the records produced and maintained by the criminal justice system. Self report methods developed as an attempt to solve the problems associated with official data, especially the misrepresentativeness of the data in terms of the type and quantity of adolescent crime and who commits it. While self report methods allow more representative sampling, critics of self report data have no confidence that those who engage in misbehavior, especially serious law violations, report their actions accurately. Both sides provide evidence for the reliability

and validity of their method while criticizing the other on the same grounds (pp. 13-25).

The authors conclude that in general self report methods work--that is, people will report crime and their reports are internally consistent--but not necessarily with equal reliable and valid results in all demographic groups and under all research conditions.

In general terms of reliability and validity, the authors conclude that when standard research methods are adhered to, researchers are able to measure delinquent behavior with self report instruments about as well as other variables of interest.

[Given that the variable indicators and gammas discussed by the authors' are acceptable], the self-report method appears to behave reasonably well when judged by standard criteria available to social scientists. By these criteria, the difficulties in self-report instruments currently in use would appear to be surmountable; the method of self-reports does not appear from these studies to be fundamentally flawed. Reliability measures are impressive and the majority of studies produce validity coefficients in the moderate to strong range. (Hindelang et al., 1981, p. 114)

In addition, the authors' data indicate that methods of collecting self report data, questionnaire versus interview and anonymous versus not anonymous conditions, are generally equally valid.

These conclusions seem to be most true within the population these methods are often used, namely white

students who are not seriously delinquent. It seems to be less true among other subgroups. The subgroups where the least reliable and valid results are found are those with high rates of official delinquency, especially the black, male, official delinquency group, and those who score low on an everyday knowledge instrument (p. 206). It is the view of Hindelang et al. (1981) that the data indicate a "strong tendency of black male official delinquents to under report substantially the offenses found in the official record" (p. 180).

Regarding sex differences, there does not seem to be a difference in the degree of accuracy of reporting. Hindelang et al. (1981) warn, however, that sex differences in terms of type and extent of behavior can be missed unless the data are carefully categorized by type. In other words, males and females seem to have different patterns of involvement in delinquent behavior (pp. 148-154).

The analyses of social status correlations with delinquent behavior were based on white males. Hindelang et al. (1981) did not find a consistent pattern of differential reporting by members of different social classes. The authors did find differences in ecological measures that suggest, in concurrence with the findings by Johnson et al. (1979) discussed earlier, that the difference is associated with the areas in which lower class adolescents

are more likely to reside (Hindelang et al., 1981, pp. 193-197).

The work of Hindelang et al. (1981) generally provides a sense of confidence to the use of self report methods for the etiological study of delinquent behavior to the degree there is confidence in survey research in general. The question is not so much can it be done, but how. While Hindelang et al. did not answer all the questions, their review of the problem underscored the importance of representative sampling and background variable measures. Personal and background characteristics are important to delinquency research as mediating factors affecting not only delinquent behavior (social development theory) but also self reporting behavior. The implication is that not only must research include good measures of background variables, but also samples must be large and representative enough to carefully stratify them.

Expected Results

Based on police records, community perceptions, and delinquency studies, it was expected that most students would report engaging in some form of delinquent behavior within the last six months, but that the frequency of participation and the seriousness of the acts would vary as a function of the degree of social bonding. In other words, it was expected that the results of this survey would

reflect the social development model's theoretical relationship among delinquent behaviors and measures of attachment to, commitment to, and belief in the conventional social order. Specifically it was expected that the greater the level of involvement, attachment, and commitment youths have regarding parents and school, the greater would be their acceptance of conventional values and beliefs, and the less would be their involvement in delinquent behavior. Figure 1 displays the expected relationships among the study variables.

Peer influence, while recognized as an important component of social development, was not included in Figure 1 and not measured in this study. The focus of the study, at the time of its planning, was on (a) measuring individual levels of social bonding variables (i.e., attachment, involvement, commitment, and conventional personal attributes), which are influenced by the social environment (including peers), and (b) comparing them to measures of delinquent behavior. In other words, the independent variables of interest were the effects of the social environment (including peers) on individuals (i.e., the degree of social bonding), not measures of the social environment itself.

However, since the presence and level of intensity of causal factors was expected to vary across social environments, the exact nature and extent of both delinquent

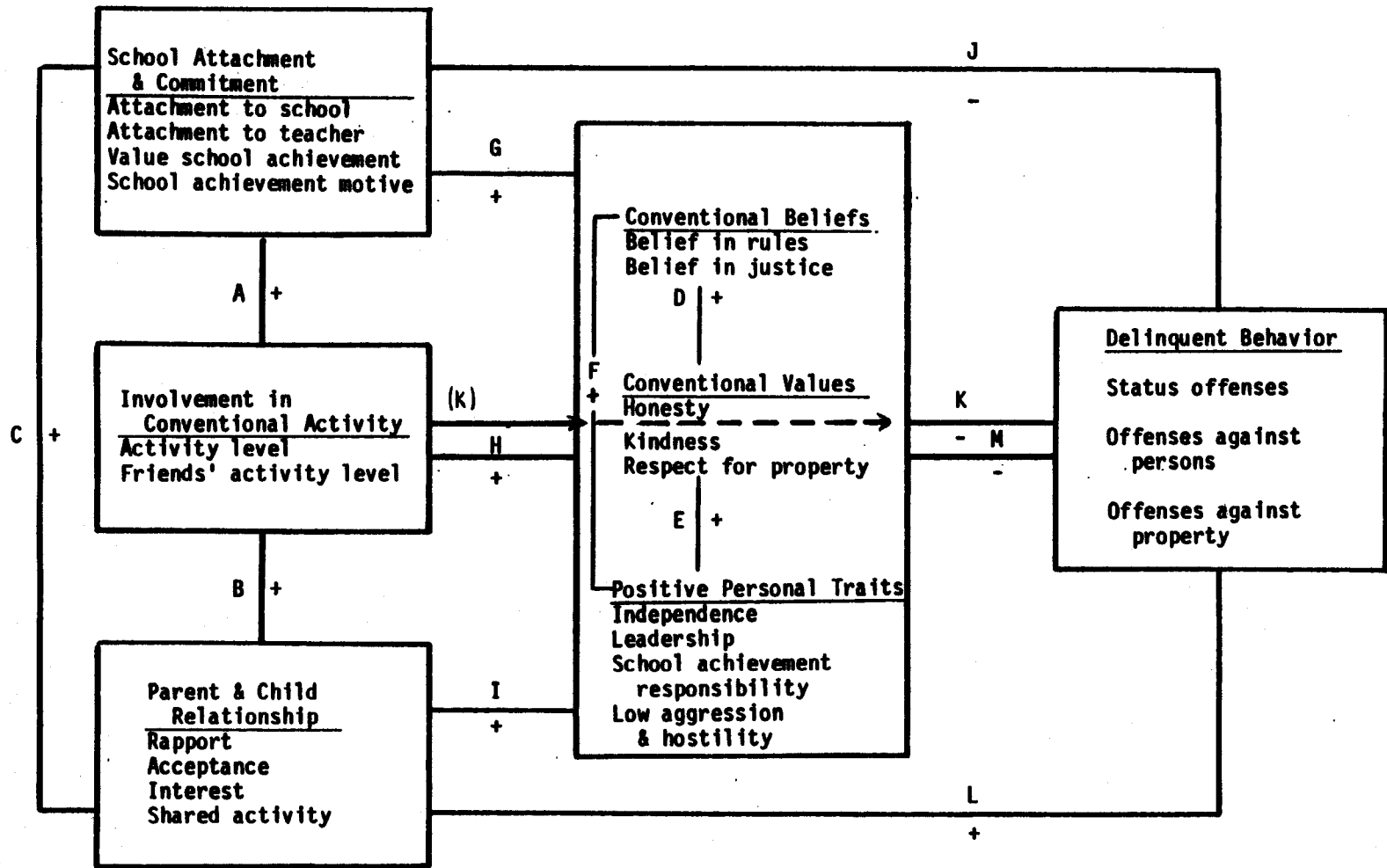


Figure 1. Relationships between social bonding elements and delinquent behavior. (The signs on the arrows indicate predicted directions of relations. The letters refer to specific relationships to be examined in the results chapter.)

behavior and its contributors was not predictable. In other words, while the social development model asserts that the presence of delinquent behavior predicts the presence of contributing factors, it does not predict precisely which contributing variables are currently present and to what extent they are in force. Conversely, while the model asserts that the presence of contributing factors leads to the occurrence of delinquent behavior, it does not predict the type or frequency of delinquency that will result.

For example, for youths in a particular setting, attachment and commitment to family may be strong, while attachment and commitment to school may be weak. In another setting, the reverse may be true. In both cases, however, it would be expected that engagement in delinquent behavior would be less across all youth groups than in an environment where attachment to school and family were both very low. If school and family attachment were both very high, it would be expected that delinquent behavior would be lowest of all in that setting.

This study does not compare social settings, but rather examines the relationship between social bonding and delinquency within individuals who share the same school district. Nevertheless, the same relationship between variables applies and was expected to be seen in the survey results.

Ideally, to be fully tested, this model needs to be

examined across a variety of schools, communities, and eventually across time. As a single project, this would be a massive undertaking. However, a series of smaller projects, such as this one, could also lead to a fair test of the model and serve the local needs of the communities being researched as well. In other words, a study of this size is valuable for identifying particular variables associated with delinquent behavior within a community so that a delinquency prevention program can be developed that is designed specifically for the school or community in which it is implemented. That was a goal of this study.

Scope of Report

This report will describe the development, administration, and analysis of the student questionnaire and discuss the implications of the results for designing the school focused delinquency prevention curriculum in Evanston. Analysis and discussion will focus on assessing the type and extent of delinquent behavior in this setting, as well as the relationship of social bonding and delinquent behavior.

METHOD

Questionnaire Development

Sets of questions were included in the survey instrument for each variable in the study as listed in Figure 1 (except leadership and friends' activity level, which were represented by one item each). These were later used to derive multiple item measures for analysis.

Demographic and background variables were also included in the study even though they were not viewed as direct casual variables in the social development model. Since background variables are viewed as mediators of the effects of casual variables, they can be considered indicators of how the practices of social institutions affect one group of students versus another. Thus measures of age, sex, race, number of siblings, what parents or guardians the student lives with, the number of years living at the present address, employment status of the parent or guardian, and the job status of the parent or guardian were included. Employment status refers to whether a person works fulltime, part time, or not at all, while job status refers to the relative social standing of a person's job. In view of Hindelang's et al. (1980) study of self report data, which was not available at the time of the planning

and administration of this questionnaire, these variables take on added importance.

The survey instrument also contained questions to measure the students' knowledge of crime prevention practices. These were included because a second purpose of this research project, which is not discussed further in this report, was to develop a victim prevention curriculum for elementary schools (i.e., how to avoid becoming a victim of crime). See Appendix A for more information about this aspect of the study.

Most of the sets of questions for each measure were created for the survey instrument out of specific local research needs, while others were modifications of existing scales. Measures that were found in the delinquency or psychological literature were generally not appropriate in their original form. For the most part, these scales were designed for an older population or were too long for the space limitation of this questionnaire. The measures that were most influenced by previous research were parent and child relationships, personal values, hostility and aggression, and delinquent behavior; the sources of these influences are reported here.

Parent and child relationship. Stover, Guerney, and O'Connell (1971) provided some guidance in the development of the parent and child relationship items, especially in the areas of acceptance, interest, and praise. The scales

developed in their study were to be used by raters observing adults play activity with a child. Thus, no specific items were available for use in the present study. However, several relevant areas of adult behavior with children were suggested by their research. Additional questions in this area were adapted from a report from The Institute for Juvenile Research, "Youth and Society in Illinois Project" (1968).

Two additional studies provided conceptual guidance to the construction of measures of parent and child relations: Brunkan and Crites (1964) discussed and reviewed the literature on measures of parental acceptance, concentration, and avoidance; Robertson and Dotson (1969) discussed perceived parental expressivity. While these studies provided useful conceptual guidance, few items were taken verbatim from their scales.

Personal values. The work of Scott (1965) was very useful for the concepts of kindness, honesty, and independence, as well as valuing academic achievement. However, his questions, which were developed for college students, had to be revised for use with fifth to seventh graders.

Hostility and aggression. The items used to measure hostility and aggression were largely drawn from the work of Green and Stacey (1967). Their scale had to be modified for the present study due to its length and because the wording of the original items was designed for British adults.

Delinquent behavior. A substantial portion of the delinquent behavior items were taken, with slight modification, from material developed under the National Institute for Juvenile Justice and Delinquency Prevention (National Evaluation Design for the Deinstitutionalization of Status Offender Program, n.d., pp. 84-89).

The research instruments used in the large delinquency study by Hirschi (1969) influenced the scale construction of the present study in several areas: parent and child relations, peers, and school related variables.

The final version of the survey instrument contained 197 multiple choice questions: 129 social and psychological items, 20 delinquency items, 16 personal and background items, and 32 items related to preventing crime at home, on the street, and in school. The questionnaire was divided into five sections, ranging from 32 to 50 questions per section. The questions and response format varied depending on the type of information asked. Each student received five computer readable cards, one for each section, which were labeled A through E. Sections A through D focused on social and psychological contributors to delinquency. Section E comprised all of the delinquent behaviors and background items. The complete questionnaire as presented to the students is provided in Appendix A.

Questionnaire Administration

The elementary school district and the police department were interested in jointly preparing and presenting a crime prevention curriculum for all students in the district. Separate materials were planned for each grade level, but the set of primary and intermediary level materials (kindergarten through fifth grade) was considered a different program than the middle school materials (grades six through eight). Thus the middle school students in the school district were chosen as the target population of this study. The research plan was to give the questionnaire to a sample of students in each grade level in each of the four schools that enrolled middle school students.

Instead, due to school district time (and other) constraints, the school district staff administered the questionnaire in only one school, although the students attending this school lived in all parts of the city. Another unexpected occurrence was that the questionnaire was given to fifth, sixth, and seventh grade students, but no eighth grade students. This occurred because this school mixed grade levels in its classes. However, since the crime prevention curriculum would also be administered in this school to mixed grade classes that include fifth grade students, their responses were used in analyses.

The survey instrument was administered in class by the students' regular teachers, and introduced as a

questionnaire for the city of Evanston. The following statement, which appeared on the first page of the survey, was used to describe its purpose:

This survey is part of a study to learn more about young people in Evanston. In order to plan useful programs, we need to know a great deal about your opinions, feelings, experiences, and problems.

Your name should not be on this survey. No one will know how you mark your answers. Please answer the questions honestly. We need to know your opinions.

Scale Construction

Factor analysis, as well as correlation and reliability testing procedures, were used to derive a scale for each of the multiple item measures of social, psychological, or behavioral variables. The initial factor matrix was extracted by the principal axis factoring method with iterative estimations of commonalities, allowing a maximum of twenty five iterations. The initial estimates of commonality used to substitute for the unities in the main diagonal of the correlation matrix were the squared multiple correlations (R^2) between each variable and the remaining variables. Subsequent commonality estimates were based on the commonalities (h^2) of the previous stage. The Kaiser criterion was used to decide the number of factors to be extracted for the initial factor matrix (i.e., eigenvalue > 1.0). Missing data were processed by pairwise deletion of cases.

Each a priori scale was factored separately,

except for the set of parent and child measures which were factored together. See the factor matrices in Appendix B. Having fixed the number of factors and commonalities of each variable in the initial factoring step, the varimax method of orthogonal factor rotation was used to find simpler, more interpretable factors. Generally, items were chosen for inclusion in the final scale (pending reliability testing) from those in the first factor, and whose factor loading and commonality values were equal to 0.3 or greater. In the few cases where factor analysis did not produce a factor with a set of items having acceptable loadings and commonalities, correlation matrices were examined to find at least a pair or triplet of items with significant intercorrelations.

The resulting sets of items were then subjected to a test of reliability to arrive at the final scales. The reliability test used to evaluate these multiple item subsets was Cronbach's alpha, the maximum likelihood estimate of the reliability coefficient. A reliability coefficient of zero indicates that the variation in the observed scores is due entirely to errors of measurement, and a reliability coefficient of one indicates there is no error measurement (Specht & Bubolz, 1979, p. 75). In this context, an alpha of 0.7 or greater was considered good, while an alpha of 0.5 or less was considered marginal to unsatisfactory. Items that contributed very little to the alpha were dropped, and scales that contained too many items

were shortened by dropping items that contributed least to the reliability coefficient. Due to practical limitations on the total length of subsequent surveys and the desire to include as many relevant variables as possible, the optimal length of any one scale was limited to a range of three to five items.

Although all efforts were made to arrive at multiple item scales in order to capture a broad operational definition of each construct, five measures did not produce satisfactory multiple item scales by the above criteria. In those cases, in order to retain for study some measure of the variables of interest, a single item was chosen on theoretical or conceptual grounds to best represent the construct.

School attachment and commitment. Four measures of school attachment and commitment were developed and used in analyses. These measures and their reliability coefficients are listed in Table 1, and the factor matrices on which they are based are presented in Table B-1 in Appendix B.

The attachment to school scale was based on two items with an alpha level of 0.641: "In general, do you like or dislike school?" (B9) and "Do you enjoy going to your school?" (B13). Item B10, which asked the student whether school rules are fair or not, emerged in the same factor as B9 and B13, but was dropped because it contributed very little to the reliability coefficient. The attachment to

Table 1

School Attachment and Commitment Measures

| Survey Item No. | Scale Questions ^a | Reliability Coefficient (Cronbach Alpha) |
|-----------------|--|--|
| | <u>Attachment to School</u> | .641 ^b |
| B9 | In general, do you like or dislike school? (Three point, like dislike scale) | |
| B13 | Do you enjoy going to your school? (Four point scale from <u>always</u> to <u>never</u>) | |
| | <u>Attachment to Teacher</u> | - |
| C9 | Do you like your teachers? (Four point scale from <u>always</u> to <u>never</u>) | |
| | <u>Value of School Achievement</u> | .784 |
| | (Five point scale from <u>like this person a lot</u> <u>to dislike this person a lot</u>) | |
| A3 | Someone who doesn't care about grades | |
| A4 | Someone who makes fun of students who study hard | |
| A6 | Someone who thinks school is a joke | |
| | <u>School Achievement Motive</u> | .789 |
| | (Four point scale from <u>very important</u> to <u>not</u> <u>at all important</u>) | |
| B14 | Is getting good grades important to you? | |
| B15 | Do you think grades are important for getting the kind of job you want when you finish school | |
| B17 | Do you think school is important for achieving your goals in life? | |

^aSee Appendix A for original question and response format. ^bAlpha is equivalent to Guttman's split half coefficient (λ_4) for two item scales.

teachers measure did not produce a satisfactory multiple item scale, so item C9 "Do you like your teachers?" was chosen to represent this variable.

Three items emerged in the first factor of the value of school achievement scale, which attained a Cronbach alpha level of 0.784. This scale indirectly measured the value the student places on grades by asking how much the student likes or dislikes someone who does not care about grades (A3), someone who makes fun of students who study hard (A4), and someone who thinks school is a joke (A6).

The factor matrix for the school achievement motive scale suggested three items, which attained a reliability coefficient of 0.789. This scale was designed to indicate the level of commitment the student had toward school by measuring how much the student perceived that his or her future is dependent upon achievements in school. Thus, the school achievement motive scale inquired about the general importance of grades to the student (B14), the importance of grades for getting the type of job desired by the student (B15), and the importance of school for achieving the student's goals in life (B17).

Involvement in conventional activities. The six items for the nonacademic activity level scale were considered conceptually as an additive set and, therefore, not reduced. The alpha level for this scale was 0.473 (see Table 2). The measure of friends' activity level remained

in the analysis in its original single item form: "Are your friends active in activities after school?" (B27).

Parent and Child Relationship and Involvement. The four parent and child relationship measures (rapport, acceptance, interest, and activity) were combined under one factor matrix (see Table B-2 in Appendix B). The resulting measures, as used in analyses, are listed in Table 3 with their reliability coefficients.

The parent and child rapport scale emerged intact in the first factor with the exception of item C13 ("When your parents are upset, do they tell you why?"). In addition, item C14 ("Do your parents really understand you?") loaded significantly on this factor. Since the concept of parental understanding fits with the general concept of rapport, and since parental acceptance, the scale to which C14 originally belonged, did not emerge as an independent factor, this question was included in the rapport scale (replacing C13). These four rapport items (C10, C11, C12, C14) combined with a Cronbach alpha of 0.738. Thus, the rapport construct consisted of being able to talk freely with, getting along with, being cheered up by, and being understood by one's parents.

The second factor supported the parent and child activity level scale in terms of commonality values (h^2) and factor loadings. The weakest item, C27, had an acceptable h^2 (0.345) and a marginal loading (0.289). Two other

Table 2

Involvement in Conventional Activities Measures

| Survey Item No. | Scale Questions ^a | Reliability Coefficient (Cronbach Alpha) |
|-----------------------|--|--|
| | <u>Nonacademic Activity Level</u> (Two point scale, either participating or not participating in the activity) | .473 ^b |
| B36 | Sports team | |
| B37 | School group or club | |
| B38 | Groups or clubs outside of school | |
| B39 | Church or temple groups | |
| B40 | Volunteer work | |
| B41 | Park District program | |
| | <u>Friends' Activity Level</u> | --- |
| B27 | Are your friends active in activities after school? (Four point scale from <u>not at all active</u> to <u>very active</u> '') | |

^aSee Appendix A for original question and response format. ^bAlpha is equivalent to the Kuder Richardson 20 reliability coefficient for dichotomous response formats.

Table 3

Parent and Child Relationship Measures

| Survey Item No. | Scale Questions ^a | Reliability Coefficient (Cronbach Alpha) |
|-----------------|---|--|
| | <u>Parent-Child Rapport</u> | .738 |
| C10 | Can you talk freely with your parents about things that trouble you? | |
| C11 | Do you get along with your parents? | |
| C12 | Do your parents try to cheer you up when you are unhappy? | |
| C14 | Do your parents really understand you? | |
| | <u>Parent-Child Interest and Praise</u> | .668 |
| C15 | Do your parents praise you for things you do? | |
| C20 | When you have problems with homework, do your parents help you? | |
| C22 | If you brought in a good report card, would your parents praise you? | |
| C25 | Do your parents seem interested in the things you do? | |
| | <u>Parental Monitoring</u> | .504 ^b |
| C17 | Do your parents check to see whether you have done what they tell you to do | |
| C21 | Do your parents ask about how you are doing in school? | |
| | <u>Parent-Child Activities</u> | .737 |
| C26 | Do you make household repairs with your parents? | |
| C27 | Do you go to sports events with your parents | |
| C28 | Do you watch television with your parents? | |
| C29 | Do you play games with your parents in the house? | |
| C30 | Do you go shopping with your parents? | |
| C31 | Do you prepare meals with your parents? | |
| C32 | Do you visit friends with your parents? | |

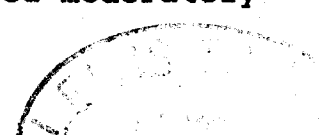
^aAll items were answered with a four point scale, always to never.

^bAlpha is equivalent to Guttman's split half coefficient (λ_4) for two item scale.

items, C23 and C25, also met the selection criteria in this factor. In that they refer to parents having time to play (C23) and being interested in what the child does (C25), they seemed somewhat related to parents and children doing things together. However, it was decided on conceptual grounds not to include them in the scale and retain the original parent and child activity level scale as a quantitative measure of the number and type of activities that the survey respondents engaged in with their parents.

The third factor combined one item (C15) from the parental acceptance scale with three items (C20, C22, and C25) from the parental interest scale, which attained a reliability coefficient of 0.668. In addition, the item from the acceptance scale referring to parental praise (C15) conceptually blended with the parental interest items regarding parents helping with homework (C20), praising a good report card (C22), and showing interest (C25). To reflect the two "praise" items, this scale was retitled parental interest and praise.

The fourth factor combined two other items from the original interest scale, C17 ("Do your parents check to see whether you have done what they tell you to do?") and C21 ("Do your parents ask about how you are doing in school?"). These items seemed to express a particular kind of parental interest, namely, a checking or monitoring of how well a child is doing. Since these two items correlated moderately



($r = .35$, $p < .001$) and showed a marginally acceptable alpha (0.504), they were used to define a new variable and scale called parental monitoring.

Conventional beliefs. Factor and reliability analyses did not produce multiple item scales for the measures of belief in rules and justice. In order to retain a measure of these constructs for analysis, single representative items were chosen for each scale. Belief in rules was defined by the following item to which the student indicated a level of agreement or disagreement: "People could get along with each other just fine without any rules or laws" (D27). Using the same format, the following statement was used to represent belief in justice: "People are usually punished when they do somethign wrong" (D21). See Table 4.

Conventional values. Three measures of conventional values (honesty, kindness, and respect for property) were developed and used in analyses. These measures and their reliability coefficients are listed in Table 5, and the factor matrices on which they are based are presented in Table B-3 in Appendix B.

The three value scales were designed as indirect measures, asking the student to indicate a liking or disliking of a person who either displays a particular value or does not. Two items suggested by the first factor for the honesty scale, A7 and A9, which had a marginal

Table 4

Belief Measures

| Survey Item No. | Scale Questions ^a | Reliability Coefficient (Cronbach Alpha) |
|-----------------|---|--|
| | <u>Belief in Rules</u> | — |
| D27 | People could get along with each other just fine without any rules or laws. (Five point scale from <u>strongly agree</u> to <u>strongly disagree</u>) | |
| | <u>Belief in Justice</u> | — |
| D21 | People are usually punished when they do something wrong. (Five point scale from <u>strongly agree</u> to <u>strongly disagree</u>) | |

^aSee Appendix A for original question and response format.

Table 5

Value Measures

| Survey Item No. | Scale Questions ^a | Reliability Coefficient (Cronbach Alpha) |
|-----------------------|--|--|
| | <u>Honesty</u> | .430 ^b |
| A7 | Someone who always tells the truth, even if it hurts someone else. | |
| A9 | Someone who never cheats, even for a friend. | |
| | <u>Kindness</u> | .691 |
| A25 | Someone who makes fun of other people. | |
| A26 | Someone who thinks of himself first. | |
| A27 | Someone who doesn't feel sorry for people who get themselves in trouble. | |
| A28 | Someone who hurts peoples' feelings. | |
| | <u>Respect for Property</u> | .789 |
| A29 | Someone who borrows things without permission | |
| A32 | Someone who is careless and damages things that do not belong to him. | |
| A33 | Someone who enjoys destroying things just because you are not supposed to do it. | |

^aAll items were answered with a five point scale from dislike this person a lot to like this person a lot. ^bAlpha is equivalent to Guttman's split half coefficient (λ_4) for two item scales.

reliability coefficient (0.430) and a moderate correlation ($r = +.28$, $p < .001$). The honesty construct, then, was represented by the following items: "Someone who always tells the truth, even if it hurts someone else" (A7), and "Someone who never cheats, even for a friend" (A9).

The factor matrix for the kindness scale produced two factors, the first factor reflecting the positive image items and the second containing the negative image items. The second factor attained a substantial Cronbach alpha level (0.691) and was retained for use in further analysis. The kindness construct, then, was represented by the student's attitude toward someone who makes fun of other people (A25), thinks of himself first (A26), doesn't feel sorry for people who get themselves in trouble (A27), or hurts peoples' feelings (A28).

Six of the eight items that composed the initial respect for property scale fell into the first factor of its factor matrix. These were reduced to three items by successively deleting those items that contributed least to the reliability coefficient, resulting in a final alpha level of 0.789 for items A29, A32, and A33, which present the following images: "Someone who borrows things without permission" (A29), "Someone who is careless and damages things that don't belong to him" (A32), and "Someone who enjoys destroying things just because you are not supposed to do it" (A33).

Positive personal traits. Two sets of items were included in the questionnaire to measure the degree to which a student was independent from peer influence (items A12-19) or susceptible to peer influence (items B22-25, B28, B29). The measure of susceptibility to peer influence did not yield a multiple item scale after factor and reliability analyses, and the construct was dropped from further analysis. Four other measures of positive traits were developed and used in analyses. These measures and their reliability coefficients are listed in Table 6, and the factor matrices on which they are based are presented in Table B-4 in Appendix B.

Three items (A13, A17, and A19) were chosen for the independence scale from the first factor of the rotated factor matrix of this scale. These items, to which the students responded on a like or dislike scale, are the following: "Someone who does things to get approval from others" (A13), "Someone who keeps his opinions to himself to avoid any problems with friends" (A17), and "Someone who is careful not to say things against what his friends believe" (A19). While the commonality for item A17 was marginal, their moderate intercorrelations were significant ($p < .001$) and the reliability coefficient for these items was marginally acceptable at 0.520.

One item (B26) represented a measure of leadership in the questionnaire and the analysis: "Do you consider

Table 6

Positive Personal Trait Measures

| Survey Item No. | | Reliability Coefficient (Cronbach Alpha) |
|-----------------|---|--|
| | <u>Independence</u> | .520 |
| | (Five point scale from <u>like this person a lot</u> to <u>dislike this person a lot</u>) | |
| A13 | Someone who does things to get approval from others | |
| A17 | Someone who keeps his opinions to himself to avoid any problems with his friends | |
| A19 | Someone who is careful not to say things against what his friends believe | |
| | <u>Peer Group Leadership</u> | - |
| B26 | Do you consider yourself the leader of your group of friends? | |
| | <u>School Achievement Responsibility</u> | - |
| | (Two point scale) | |
| B3 | If you did better than usual in a subject at school, it happened because (a) someone helped you or (b) you tried harder | |
| | <u>Low aggression</u> | - |
| | (Two point scale) | |
| A41 | (a) Sometimes I feel like picking a fight with someone (b) I never feel like picking a fight with anyone | |
| | <u>Low Hostility</u> | .552 ^b |
| A40 | (a) Most people are mean; (b) most people are kind | |
| A44 | (a) Most people are stupid; (b) Most people are bright | |
| A48 | (a) Most people are selfish; (b) Most people are unselfish | |

^aSee Appendix A for original question and response format. ^bAlpha is equivalent to the Kuder Richardson 20 reliability coefficient for dichotomous response formats.

yourself the leader of your group of friends?"

The school achievement responsibility scale, a measure of the self perception of the ability to succeed academically, did not produce a satisfactory multiple item scale. For the purposes of analysis, the measure was operationally defined by the single item "If you did better than usual in a subject at school, it happened because (a) someone helped you or (b) because you tried harder" (B3).

All of the aggression and hostility items were combined into one factor matrix with poor results. The fourteen items broke into five factors with generally low factor loadings and communalities. However, the third factor contained three items (A40, A44, and A48) that seemed to capture a hostile, negative perception of people as mean, stupid and selfish versus the positive view that people are kind, bright, and unselfish. This scale, with an alpha level of 0.552, was chosen as a measure of hostility. A single item (A41) was chosen to represent a tendency toward or away from physical aggression: (a) "Sometimes I feel like picking a fight with someone," versus (b) "I never feel like picking a fight with anyone." For the purposes of analysis and interpretation, these variables were viewed from their more positive side, which put them in the same perspective as the other personal traits of independence, leadership, and responsibility for school achievement. Thus, the following discussions will refer to

low aggression, a tendency toward nonviolence, and low hostility, or a generally positive outlook toward other people.

Delinquent behaviors. The operational definition of each of the offense types corresponds to legal distinctions and groupings. Therefore the full range of behaviors for each category was retained as a scale in the analysis. The alpha coefficients all attained acceptable levels, ranging from 0.675 to 0.898 (see Table 7).

Summary. The scale construction procedure produced four delinquency measures (status offenses, offenses against persons, offenses against property, and a combined offenses measure) and twenty measures of social and psychological measures. Of these latter measures, eighteen were derived as planned from their respective sets of questions in the survey instrument, while two others were dropped and two were added. Among parent and child measures, the acceptance measure was dropped, but replaced by a measure of a similar concept, parental monitoring. Under personal traits, susceptibility to peer influence was dropped, although a similar measure, independence of peers was retained. Another trait measure was added when the single low aggression and hostility measure was split into two separate measures, low aggression and low hostility. Thus, all of the variables presented in the theoretical model (Figure 1) were represented by some measure for analyses.

Table 7

Delinquent Behavior Measures

| Survey Item No. | Offenses | Scale Questions ^a | Reliability Coefficient (Cronbach Alpha) |
|------------------------|---------------------|--|--|
| <u>Status Offenses</u> | | | .675 |
| | | In the last six months have you... | |
| E2 | School Disobedience | -refused to obey teachers or school officials? | |
| E3 | Home Disobedience | -refused to obey your parents or guardian about something they considered important? | |
| E17 | Truancy | -stayed away from school for the entire day without permission? | |
| E18 | Class Disturbance | -caused a disturbance in your classroom? | |
| E19 | Test Cheating | -cheated on a test? | |
| E20 | Disrespect | -been disrespectful to someone? | |
| <u>Against Persons</u> | | | .756 |
| | | In the last six months have you... | |
| E4 | Assault | -threatened another person? | |
| E5 | Battery | -beaten up another person? | |
| E6 | Group Assault | -been part of a group that threatened another person? | |
| E7 | Group Battery | -been part of a group that beat up another person? | |
| E15 | Robbery with Threat | -used threat of force to take something from another person? | |
| E16 | Robbery with Force | -used force to take something from another person? | |

(Table continues)

Table 7 (Continued)

Delinquent Behavior Measures

| Survey Item No. | Offenses | Scale Questions | Reliability Coefficient (Cronbach Alpha) |
|-----------------|--------------------------------------|--|--|
| | <u>Against Property</u> | | .847 |
| | | In the last six months have you... | |
| E8 | Vandalism (private property) | -damaged any private property (like throwing rocks at cars, spraying paint on walls of businesses or homes, or breaking windows on purpose)? | |
| E9 | Vandalism (public property) | -damaged any public property (like throwing rocks at buses, spraying paint on walls of schools or park buildings, or breaking windows on purpose)? | |
| E10 | Theft (received stolen goods) | -bought or received anything that you know was stolen by someone else? | |
| E11 | Theft (shoplifting) | -taken anything from a store or business without paying? | |
| E12 | Theft (other) | -taken anything (not from a store or business) without permission? | |
| E13 | Attempted Burglary | -tried to break into a house or building? | |
| E14 | Burglary | -broken into a house or building and taken something? | |
| | <u>Combined Scale (All offenses)</u> | | .898 |

^aAll items were answered with a five point scale: none, one time, two times, three times, four or more times.

In some cases, the variables were represented by single items of unknown reliability or by multiple item scales of low reliability. However, in view of the pragmatic nature of field research, these measures were deemed adequate for assessing the relationships among the variables. In other words, there was no opportunity to redesign measures and recollect data.

The following list of social and psychological variables were included in the analyses as described in the results section.

- School attachment and commitment
 - Attachment to school
 - Attachment to teachers
 - Value of school achievement
 - School achievement motivation
- Involvement in conventional activities
 - Nonacademic activity level
 - Friends' activity level
- Parent and child relationship
 - Rapport
 - Monitoring
 - Interest and praise
 - Shared activity
- Conventional beliefs
 - Belief in rules
 - Belief in justice
- Conventional values
 - Honesty
 - Kindness
 - Respect for property
- Personal traits
 - Independence
 - Leadership
 - School achievement responsibility
 - Low aggression
 - Low hostility

RESULTS

Demographic Characteristics of the Sample

As described earlier, the target population was all middle school students in the school district, who were dispersed in four schools and three grade levels. The questionnaire was administered to 162 students in grades five, six, and seven, all in one school. The data for 20 students (12.3%) were not used in the analysis because of demonstrated patterns of inappropriate, out of range, or absent responses. Of the remaining students in the study, about half of the sample (48.9%) were in sixth grade, most of whom were eleven and twelve years old. The remainder of the sample was split almost evenly between fifth (28.4%) and seventh (22.7%) grade students, with ten and eleven year olds in the fifth grade, and twelve and thirteen year olds in the seventh grade (see Table 8). The actual proportion of students in these grades is more evenly dispersed.

The male to female ratio was nearly balanced, with the females representing only 8% more of the sample than males. More than three quarters of the sample was white. Blacks made up more than half of the minority group (60%), but composed only 12.9% of the total sample. The white

Table 8

Relative Frequency Distribution (Percents):Demographic Characteristics by Grade

| Demographic Characteristics | | Percent | | | |
|-----------------------------|-------------------------|-------------------|--------------|--------------|--------------|
| | | Grade | | | |
| | | <u>5th</u> | <u>6th</u> | <u>7th</u> | <u>Total</u> |
| Age | | | | | |
| | 9 | 1.4 | - | 1.4 | 2.8 |
| | 10 | 9.2 | 5.7 | - | 14.9 |
| | 11 | 13.5 | 14.2 | 1.4 | 29.1 |
| | 12 | 4.3 | 28.4 | 6.4 | 39.0 |
| | 13 or more | - | 0.7 | 13.5 | 14.2 |
| | Total <u>N = 141</u> | 28.4 | 48.9 | 22.7 | 100.0 |
| Sex | | | | | |
| | Female | 17.5 | 26.3 | 10.2 | 54.0 |
| | Male | 10.9 | 21.9 | 13.1 | 46.0 |
| | Total <u>N = 137</u> | 28.5 | 48.2 | 23.4 | 100.0 |
| Race | | | | | |
| | Minorities ^a | 4.3 | 10.7 | 6.4 | 21.4 |
| | White | 24.3 | 37.9 | 16.4 | 78.6 |
| | Total <u>N = 140</u> | 28.6 | 48.6 | 22.9 | 100.0 |
| Sex | | Race | | | |
| | | <u>Minorities</u> | <u>White</u> | <u>Total</u> | |
| | Female | 14.0 | 39.7 | 53.7 | |
| | Male | 7.4 | 39.0 | 46.3 | |
| | Total <u>N = 136</u> | 21.3 | 78.7 | 100.0 | |

Note. N Varies due to missing data on various cards. ^a Percentages for individual minority groups are as follows: blacks = 12.9%, Latinos = 4.3%, Orientals = 2.1%, Other = 2.1%.

portion of the sample was evenly split between males and females, while there were twice as many minority females as minority males.

The familial characteristics of the sample largely reflected a fairly stable, nuclear family home environment; see Table 9. Just over 70% of the students reported living with both their natural parents, while an additional 9% reported living with one natural parent and one step parent. Only 12% reported living with a single parent or had some other living arrangement. Nearly 70% reported having either one or two siblings, and 11% reported no brothers or sisters.

Most of the sample reported that their fathers worked full time (78.2%) as did nearly half of their mothers (46.2%), while most of the remaining mothers were described as working part time. An additional indication of familial stability was suggested by the number of years the students reported having lived at their present address. Just over half of the students have not moved in five years or more, and more than seventy percent have been at the same address for at least three years.

Demographic Characteristics and Delinquent Behavior

The pattern of mean scores of the delinquency items

Table 9

Relative Frequency Distribution:Family CharacteristicsFamily Characteristics

Parents or Guardians

(with whom student lives)

| | |
|-----------------------|------|
| Mother and Father | 71.8 |
| Mother and Stepfather | 6.4 |
| Father and Stepmother | 2.6 |
| Mother or Father only | 10.3 |
| Other | 1.9 |

Number of Siblings

| | |
|--------------|------|
| None | 10.9 |
| One | 39.1 |
| Two | 29.5 |
| Three | 7.1 |
| Four or more | 6.4 |

Employment Status of Parents

MotherFather

| | | |
|-----------|------|------|
| Full time | 46.2 | 78.2 |
| Part time | 34.6 | 9.0 |

Job Status of Parents

| | | | |
|------|---|------|------|
| Low | 1 | 5.8 | 31.4 |
| | 2 | 28.8 | 22.4 |
| | 3 | 30.8 | 16.7 |
| High | 4 | 1.9 | 1.3 |

Number of Years at Present Address

| | |
|------------------|------|
| One year or less | 4.5 |
| One to Two | 13.5 |
| Three to Four | 18.6 |
| Five or more | 53.8 |

Note. N = 156. ^a Percentages do not total 100% due to missing data.

across grade and age levels is generally consistent with other studies that show that juvenile behavior increases with grade and age (Shireman & Lawrence, 1980, p. 27-8). In this sample, however, the statistical test (analysis of variance) found that few of these observed increases were statistically significant.

The delinquency items were answered on a five point scale: (1) none, (2) one time, (3) two times, (4) three times, and (5) four or more times. The overall mean (average response across all delinquency items) difference between males (1.61) and females (1.44) approached significance, $F(1, 135) = 3.301$, $p < .07$; however, the actual size of the difference (11.8%) was not considered substantial. In other words, both males and females reported involvement in misbehavior at about the same level, which fell between no reported incidents and one reported incident of misbehavior during six months.

A more substantial difference was found between whites and minorities. The overall item mean for minorities (1.87) was higher (30%) than for whites (1.45) and the difference was statistically significant $F(1, 138)$, $p < .001$. However, this difference must be judged with caution since the sample was not representative of the actual racial proportions in the school district (see

Discussion section).

Nature and Extent of Delinquent Behavior

The response frequency distributions of the delinquency items indicate that few youths never misbehave, but much of the misbehavior reported was of the less serious offenses. While status offenses were reported most frequently, criminal offenses against persons and property were also reported at substantial levels.

Extent of delinquent behavior. The prevalence of delinquent behavior can be judged in part by how many types of misbehaviors the students reported engaging in during the six months prior to the survey (see Table 10). Only 8.5% of the sample responded with a "no" to all nineteen delinquent behavior items on the survey. In other words, less than one tenth of the youths deny all misbehavior, and the remainder admit to engaging in at least one type of misbehavior during the last six months. Almost three fourths of the respondents (72.5%) reported engaging in at least three types of misbehaviors, and about half (49.2%) admit to at least five. However, only one fifth of the students (20.3%) reported engaging in ten or more types of delinquent behaviors in the six months prior to the survey. In short, a substantial number of the sample admit

Table 10

Relative Frequency Distribution (Percents):Number of Types of Delinquent Behavior Reported

| Number of Types of Delinquent Behaviors Reported Engaging In | Status (Max = 6) | Types of Delinquent Behavior | | | |
|--|---------------------|---------------------------------|----------------------------------|-------------------------|-------------------------|
| | | Aganist Persons (Max = 6) | Aganist Property (Max = 7) | Frequency (Max = 19) | Cumulative Frequency |
| None | 14.1 | 33.1 | 50.0 | 8.5 | - |
| 1 | 13.4 | 16.9 | 26.1 | 9.9 | 91.6 |
| 2 | 21.1 | 22.5 | 5.6 | 9.2 | 81.7 |
| 3 | 18.3 | 8.5 | 3.5 | 13.4 | 72.5 |
| 4 | 16.2 | 8.5 | 3.5 | 9.9 | 59.1 |
| 5 | 10.6 | 6.3 | 4.9 | 9.9 | 49.2 |
| 6 | 6.3 | 4.2 | 3.5 | 9.2 | 39.3 |
| 7 | - | - | 2.8 | 5.6 | 30.1 |
| 8 | - | - | - | 2.1 | 24.5 |
| 9 | - | - | - | 2.1 | 22.4 |
| 10 | - | - | - | 2.1 | 20.3 |
| 11 | - | - | - | 3.5 | 18.2 |
| 12 | - | - | - | 2.8 | 14.7 |
| 13 | - | - | - | 1.4 | 11.9 |
| 14 | - | - | - | 2.8 | 10.5 |
| 15 | - | - | - | 1.4 | 7.7 |
| 16 | - | - | - | 2.1 | 6.3 |
| 17 | - | - | - | 0.7 | 4.2 |
| 18 | - | - | - | 1.4 | 3.5 |
| 19 | - | - | - | 2.1 | 2.1 |
| One or more (Sum of 1 through max) | 85.9 | 66.9 | 49.1 | 91.6 | - |

Note. N = 142

to misbehaving up to a moderate level, but those engaging in many types of misbehavior are a minority.

Nature of delinquent behavior. Comparing the number of affirmative responses among the three categories of offense questions revealed different levels of involvement in the different types of delinquent behavior (see Table 10). More students admitted to engaging in the less serious status offenses at least once during six months than in the more serious criminal offenses. A large majority of the sample (85.9%) admitted to engaging in at least one type of status offense during the six month period. The proportion of those reporting involvement in offenses against persons dropped to two thirds (66.9%), and offenses against property attracted the fewest participants, with half of the respondents (49.1%) admitting to such activity.

Even within each offense category, the less serious behaviors were the ones in which the students most frequently reported involvement (see Table 11). Among status offenses, most students reported that they have not been truant (77.6%), nor cheated on a test (65.4%), yet about half admitted being disobedient at home (50.7%), causing a class disturbance (50.0%), or being disrespectful (59.0%) at least once. Similarly, among crimes against persons, more respondents admitted to one or more incidents of assault

Table 11

Relative Frequency Distribution (Percents):Responses to Delinquent Behavior Items

| Type of Delinquent Offenses | Item No. | Survey Response Choices | | | | | Summary Freq's | |
|--------------------------------|-------------|-------------------------|------------------|-------------------|---------------------|--------------------|-----------------|------------------|
| | | A None | B One Time | C Two Times | D Three Times | E Four Times | Once or More | Twice or More |
| Status | | | | | | | | |
| School Disobedience | E2 | 48.7 | 26.9 | 7.1 | 4.5 | 6.4 | 44.9 | 18.0 |
| Home Disobedience | E3 | 42.9 | 25.0 | 12.2 | 7.7 | 5.8 | 50.7 | 25.7 |
| Truancy | E17 | 77.6 | 5.8 | 6.4 | 2.6 | 1.3 | 16.1 | 10.3 |
| Class Disturbance | E18 | 43.6 | 26.3 | 14.1 | 3.2 | 6.4 | 50.0 | 23.7 |
| Test Cheating | E19 | 65.4 | 19.2 | 3.8 | 2.6 | 1.9 | 27.5 | 8.3 |
| Disrespect | E20 | 33.3 | 28.2 | 14.1 | 7.1 | 9.6 | 59.0 | 30.8 |
| Against Persons | | | | | | | | |
| Assault | E4 | 42.9 | 21.8 | 11.5 | 6.4 | 10.9 | 50.6 | 28.8 |
| Battery | E5 | 65.1 | 17.3 | 5.8 | 1.9 | 4.5 | 29.5 | 12.2 |
| Group Assault | E6 | 57.7 | 24.4 | 7.7 | 2.6 | 1.3 | 36.0 | 11.6 |
| Group Battery | E7 | 76.9 | 10.3 | 3.2 | 2.6 | 0.6 | 16.7 | 6.4 |
| Robbery with Assault | E15 | 71.8 | 15.4 | 1.9 | 2.6 | 1.9 | 21.8 | 6.4 |
| Robbery with Battery | E16 | 78.2 | 9.6 | 3.8 | 1.9 | 0.0 | 15.3 | 5.7 |
| Against Property | | | | | | | | |
| Vandalism (private property) | E8 | 80.1 | 5.8 | 4.5 | 2.6 | 0.6 | 13.5 | 7.7 |
| Vandalism (public property) | E9 | 79.5 | 6.4 | 2.6 | 1.3 | 3.8 | 14.1 | 7.7 |
| Theft (received stolen goods) | E10 | 78.8 | 6.4 | 4.5 | 1.9 | 1.9 | 14.7 | 8.3 |
| Theft (shoplifting) | E11 | 76.9 | 10.3 | 3.2 | 1.3 | 1.9 | 16.7 | 6.4 |
| Theft (other) | E12 | 58.3 | 18.6 | 10.9 | 3.2 | 2.6 | 35.3 | 16.7 |
| Attempted Burglary | E13 | 80.8 | 5.8 | 3.8 | 2.6 | 0.6 | 12.8 | 7.0 |
| Burglary | E14 | 82.7 | 5.8 | 1.9 | 3.2 | 0.0 | 10.9 | 5.1 |

Note. N = 156

(50.6%) than either battery (29.5%) or robbery (12.1%). Among property crimes, theft (all categories) and vandalism (both categories) were reported more prevalently (66.7% and 27.6% respectively) than burglary (23.7% including attempts).

Another perspective of the nature and extent of delinquent behavior is provided by ranking the behaviors according to the percent of students who reported engaging in each behavior at least once in six months (see Table 12). The distributions of the offense types rank in the following order, from most frequently reported to least: status offenses, against persons, against property. In other words, status offenses tended to rank higher in terms of reported frequency than offenses against persons and property, and offenses against property tended to rank lower than status offenses and offenses against persons.

Social Bonding and Delinquent Behavior

This final section of results reports the intercorrelations among the social bonding variables and delinquent behaviors in the order that they appear in Figure 1.

Relationships among school, activity, and parent variables. The correlations among these variables are presented in Table 13 and refer to Relationships A, B, and C

Table 12

Delinquent Behaviors Ranked by Frequency of Reported Involvement^a

| <u>Offense Type</u> | | | Delinquent Offenses | Rank | Relative Frequency of Affirmative Responses (Percent) | | | |
|---------------------|---------------|-----------------|-------------------------------|------|---|------|--------------|---------------|
| | | | | | None | Once | Once or More | Twice or More |
| <u>Status</u> | <u>Person</u> | <u>Property</u> | | | | | | |
| + | | | Disrespect | 1 | 33.3 | 28.2 | 59.0 | 30.8 |
| + | | | Home Disobedience | 2 | 42.9 | 25.0 | 50.7 | 25.7 |
| | + | | Assault | 3 | 42.9 | 21.8 | 50.6 | 28.8 |
| + | | | Class Disturbance | 4 | 43.6 | 26.3 | 50.0 | 23.7 |
| + | | | School Disobedience | 5 | 48.7 | 26.9 | 44.9 | 18.0 |
| | + | | Group Assault | 6 | 57.7 | 24.4 | 36.0 | 11.6 |
| | | + | Theft (not shoplifting) | 7 | 58.3 | 18.6 | 35.3 | 16.7 |
| | + | | Battery | 8 | 64.1 | 17.3 | 29.5 | 12.2 |
| + | | | Test Cheating | 9 | 65.4 | 19.2 | 27.5 | 8.3 |
| | + | | Robbery with Assault | 10 | 71.8 | 15.4 | 21.8 | 6.4 |
| | + | | Group Battery | 11 | 76.9 | 9.6 | 16.7 | 6.4 |
| | | + | Theft (shoplifting) | 12 | 76.9 | 10.3 | 16.7 | 6.4 |
| + | | | Truancy | 13 | 77.6 | 5.8 | 16.1 | 10.3 |
| | + | | Robbery with Battery | 14 | 78.2 | 9.6 | 15.3 | 5.7 |
| | | + | Theft (received stolen goods) | 15 | 78.8 | 6.4 | 14.7 | 8.3 |
| | | + | Vandalism (public property) | 16 | 79.5 | 6.4 | 14.1 | 7.7 |
| | | + | Vandalism (private property) | 17 | 80.1 | 5.8 | 13.5 | 7.7 |
| | | + | Attempted Burglary | 18 | 80.8 | 5.8 | 12.8 | 7.0 |
| | | + | Burglary | 19 | 82.7 | 5.8 | 10.9 | 5.1 |

Note. N = 156. ^aBehaviors are ranked by the percentage of students who report having engaged in the behavior at least once in the last six months, i.e., see once or more column.

Table 13

Correlation Matrix of Social Bonding Elements

| Social Bonding Elements | School | | | | Conventional Activity | | Parent & Child | | | |
|--------------------------------------|--------|--------|--------|--------|-----------------------|---|----------------|--------|--------|--|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| School Attachment and Commitment | | | | | | | | | | |
| 1 Attachment to School | - | | | | | | | | | |
| 2 Attachment to Teachers | .32** | - | | | | | | | | |
| 3 Value School Achievement | .24** | | - | | | | | | | |
| 4 School Achievement Motive | .44*** | .28*** | .36*** | - | | | | | | |
| Involvement in Conventional Activity | | | | | | | | | | |
| 5 Nonacademic Activity Level | | | | | - | | | | | |
| 6 Friends' Activity Level | .14* | | | | .26*** | - | | | | |
| Parent and Child Relationship | | | | | | | | | | |
| 7 Rapport | | | .19** | .43*** | | | - | | | |
| 8 Monitoring | | | .25*** | .17* | | | .27*** | - | | |
| 9 Interest Praise | | | .18* | .41*** | | | .52*** | .25*** | - | |
| 10 Shared Activity | .18* | .21** | | | .18* | | .32*** | .30*** | .32*** | |

Note. N = 138. * p<.05. ** p<.01. *** p<.001.

in Figure 1. Relationship A, between the involvement in conventional activity measures and the school attachment and commitment measures, and Relationship B, between the parent relationship and conventional activity measures, were essentially unsupported. This may be partly due to the low reliability of the activity measure. The strongest set of significant correlations ($p < .05$) occurred in Relationship C between the parental measures of rapport, monitoring, and interest and the school measures of valuing school achievement and school achievement motive. The value of r for these six correlations averaged .27.

Relationships among belief, value, and trait variables. The correlations among these variables are presented in Table 14 and refer to Relationships D, E, and F in Figure 1. Relationship D, between the value and belief measures, received moderate support for the expected positive relationships. Relationship E, between the trait and value measures, not only received proportionately fewer positive correlations than Relationship D, but included two negative correlations as well. Relationship F, between the trait and belief measures, seemed essentially unsupported.

Relationships between attachment and belief variables. The correlations between attachment and involvement in school, conventional activity, and parents on the one

Table 14

Correlation Matrix of Beliefs, Values, and Traits

| Beliefs, Values and Traits | Conventional Beliefs | | Conventional Values | | | Personal Traits | | | | |
|--|----------------------|------|---------------------|----------------|---|-----------------|------|------|---|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | |
| Conventional Beliefs | | | | | | | | | | |
| 1 Belief in Rules | - | | | | | | | | | |
| 2 Belief in Justice | | - | | | | | | | | |
| Conventional Values | | | | | | | | | | |
| 3 Honesty | | | - | | | | | | | |
| 4 Kindness | .21** | | | - | | | | | | |
| 5 Respect for Property | .39*** | .16* | | .61*** | - | | | | | |
| Personal Traits | | | | | | | | | | |
| 6 Independence | | | Relationship E | | | - | | | | |
| 7 Leadership | | | | Relationship E | | | | - | | |
| 8 School Achievement Responsibility | | | | Relationship E | | | | | - | |
| 9 Low Aggression | | | | | | | .20* | .14* | | - |
| 10 Low Hostility | | | | | | | | .14* | | |

N = 138. * p<.05. ** p<.01. *** p<.001.

hand, and conventional beliefs, values, and traits, on the other, are presented in Table 15 and refer to Relationships G, H, and I in Figure 1. Relationship G, between school attachment measures and the belief, value, and trait measures, was moderately supported with significant ($p < .05$) correlations. Relationship H, between the two activity measures and the belief, value, and trait measures, produced only two significant ($p < .05$) correlations, which were both negative. Relationship I, between parent measures and the belief value, and trait measures, received fewer significant ($p < .05$) positive correlations than Relationship G, plus one negative correlation.

Relationships between social bonding variables and delinquent behaviors. The correlations between the measures of social bonding and delinquent behavior are presented in Table 16 and refer to Relationships J, K, L, and M. Unlike the expected positive correlations between and within the categories of social bonding variables, the expected direction of correlation here is negative. Relationship J refers to the correlations between school attachment measures and misbehaviors. This relationship was moderately supported with significant ($p < .05$) negative correlations. Relationship K, on the other hand, between activity measures and misbehavior produced four positive correlations out of a

Table 15

Correlations Between Attachment and Belief Variables

| | Conventional Beliefs | | Conventional Values | | | | Personal Traits | | | |
|---|----------------------|-------------------|---------------------|----------|----------------------|--------------|-----------------|-----------------------------------|----------------|---------------|
| | Belief in Rules | Belief in Justice | Honesty | Kindness | Respect for Property | Independence | Leadership | School Achievement Responsibility | Low Aggression | Low Hostility |
| Social Bonding Elements | | | | | | | | | | |
| School Attachment & Commitment | | | | | | | | | | |
| | Relationship G | | | | | | | | | |
| Attachment to School | .16* | | | | | .17* | .19** | .19** | | .31*** |
| Attachment to Teachers | | | | | | | .31*** | .29*** | | .21** |
| Values School Achievement | .23** | .30*** | | .41*** | .40*** | | | | | .15* |
| School Achievement Motive | .21** | | | | .24** | | | | | .22** |
| Involvement in Conventional Activity | | | | | | | | | | |
| | Relationship H | | | | | | | | | |
| Nonacademic Activity Level | | | | | | | | | | |
| Friends' Activity Level | | | | | | | | | | -.15* |
| Parent and Child Relationship | | | | | | | | | | |
| | Relationship I | | | | | | | | | |
| Rapport | | .15* | | | | | .21** | | | .31** |
| Monitoring | | | .31*** | .18* | .20** | | | | .16* | .27*** |
| Interest/Praise | | | | | | | | | .16* | .16* |
| Shared Activity | -.30*** | | .22** | | | | | | | |

$N = 138.$ * $p < .05.$ ** $p < .01.$ *** $p < .001.$

Table 16

Social Bonding Correlates of Delinquent Behaviors

| Social Bonding Elements | Status | Delinquent Offenses | | Combined |
|--|---------|---------------------|------------------|----------|
| | | Against Persons | Against Property | |
| School Attachment & Commitment | | | | |
| Relationship J | | | | |
| Attachment to School | .18* | | | -.14* |
| Attachment to Teachers | | -.15* | -.19** | -.18* |
| Value School Achievement | | -.14* | -.21** | -.17* |
| School Achievement Motive | | | -.17* | |
| Involvement in Conventional Activities | | | | |
| Relationship K | | | | |
| Nonacademic Activity Level | +.29*** | +.29*** | +.18* | +.28*** |
| Friends' Activity Level | | | | |
| Parent-Child Relationship | | | | |
| Relationship L | | | | |
| Rapport | | | | |
| Monitoring | | | | |
| Interest /Praise | | -.15* | -.18* | -.15* |
| Shared Activity | | | +.19* | |
| Conventional Beliefs | | | | |
| Relationship M | | | | |
| Belief in Rules | -.19** | -.30*** | -.38*** | -.33*** |
| Belief in Justice | | | -.19** | |
| Conventional Values | | | | |
| Honesty | | | | |
| Kindness | -.20** | -.26** | -.37*** | -.31*** |
| Respect for Property | -.16* | -.21** | -.33*** | -.26*** |
| Personal Traits | | | | |
| Independence | | -.15* | -.19** | |
| Leadership | | +.16* | +.15* | +.16* |
| School Achievement | | | | |
| Responsibility | -.19** | -.30*** | -.32*** | -.31*** |
| Low Aggression | -.16* | | | |
| Low Hostility | | | | |

N = 138. * $p < .05$. ** $p < .01$. *** $p < .001$.

possible eight relationships, all occurring between the student's activity measure and misbehavior measures.

Another positive correlation occurred among the correlations of Relationship L, between parent and misbehavior measures, which was otherwise poorly supported. Finally, among the correlations of Relationship M, between the belief, value, and trait measures and misbehavior, the measures of beliefs and values received fair support. Between traits and misbehavior, however, the leadership measure correlated positively with three of the measures of misbehavior (including the combined measure). The school achievement responsibility measure, on the other hand, produced significant negative correlations ($p < .01$) with all four measures of delinquent behavior.

Other analyses. In the planning stages of this study, additional analyses were planned for the social bonding and delinquent behavior variables. Multiple regression techniques, such as path analysis, were planned to establish the determinants of delinquent behavior. However, these could not be completed due to the low number of significant correlations, unsatisfactory sample size and representativeness, and marginal or unknown reliability of many of the social bonding measures.

DISCUSSION

Review of Main Findings

Nature and extent of delinquent behavior. As generally expected, the results indicate that while less serious behavior is prevalent, more serious behavior is much less frequent but substantial. Only a very small portion of the sample denied all misbehavior during six months, while almost three fourths of the students reported engaging in at least three types of misbehaviors. In terms of type of misbehavior, a large majority admitted to engaging in at least one type of status offense, but the proportion of those reporting involvement in more serious offenses was substantially lower.

The study by Hindelang et al. (1981) of self report methods indicated variation in the way subgroups report delinquent behavior. Therefore, stratifying these and other variables in this study by race and socioeconomic level would have been desirable but was not possible. In addition to having too many variables to stratify in terms of the sample size, the sample was also too unrepresentatively homogeneous compared to the demographic make up of the community. In terms of race, all minorities comprised less than 22% of the sample, with blacks accounting for only

12.9% of the sample. Further, there were twice as many minority females as males.

In terms of socioeconomic status, the measures used depended heavily on the memory and interpretation of youths (as young as nine and ten years old) regarding information about their parents' jobs. In retrospect, after attempting to analyze their responses, the validity of this measure seemed questionable.

Since the reports about the type and extent of delinquent behavior are not grossly out of line with other studies or this author's expectations, there is no reason to think they are seriously at error, for either judging the type and extent of delinquency in the community or exploring the relationship of social bonding to that behavior.

Social bonding and delinquent behavior. The social development model, as a whole and as interpreted and measured in this study, did not receive adequate support by the correlation data, in terms of number and size of significant correlations, and in a few instances, in terms of the direction of the correlations. At the beginning of this section, the correlations will be discussed in terms of a .05 level of probability; later a more stringent criteria will be used to assess relationships.

Among the social bonding categories, the three "most supported" relationships between bonding categories were only able to produce significant correlations ($p < .05$)

between half of the total relationships possible in terms of the individual variables involved. Those three relationships were C (between school variables and parent variables), D (between beliefs and values), and G (between school and beliefs-values-traits). Among the remaining six social bonding relationships, the highest proportion of significant correlations did not quite reach one third, and three relationships (E, I, and H) each received one or two negative significant correlations ($p < .05$) where positive r values were expected.

The relationships between the social bonding variable categories and delinquent behaviors showed similar results. For instance, using a criteria of at least three significant correlations ($p < .05$) between an individual variable and the four measures of delinquent behavior, the "most supported" relationships between categories of social bonding variables and delinquent behavior are between school measures and misbehavior (Relationship J) and between conventional beliefs and conventional values (both under Relationship M). In two of the remaining three categories, each contained a variable that produced an unexpected significant positive correlation ($p < .05$) (respondent's activity level and leadership).

Even though the relationships between categories of social bonding elements were not well supported, several individual bonding variables seemed to be negatively related

to delinquent behavior. If so, this information would be useful for planning a delinquency prevention program.

However, the quality of the correlations and the reliability of the scales should be considered further before making these judgments.

So far the discussion for bonding and behavior correlations has been on the basis of a .05 significance level. If the more stringent .01 significance level were used to avoid Type I error, there would be almost 40% fewer significant correlations, leaving the model even less supported. At either probability level, there would still be a degree of uncertainty since, due to the number of relationships examined, some significant correlations may have occurred by chance. The risk of Type I error is minimized by generally keeping the higher standard in mind.

In regard to the significant correlations (including for the moment, those at the .05 probability level), the r values throughout the model ranged from .14 to .43, with 50% of the r values falling between .14 and .20, and 31% falling between .21 and .30. As low as this may seem at first glance, it is within the general range expected based on (a) the large number of variables in and outside of the model that influence these relations, (b) imprecision of social psychological variables, and (c) the results of other studies. Thus, the size of the correlations is less of a problem in terms of judging the relationships among vari-

ables than the proportion of significant correlations.

As suggested above, a major point to consider in judging the strength and significance of the correlations, and thus the potential degree of the relationship between individual variables, is the reliability of the scales. As described earlier, the factoring and other procedures resulted in some low or unknown reliabilities. Specifically, seven were unknown (the measures were based on one item), five were marginal (with alpha's near the minimally acceptable .5 level), and eight were satisfactory (with alpha's near .7 or better). The scales of bonding variables reaching satisfactory reliability were the following:

- Attachment to school
- Value school achievement
- School achievement motive
- Parental rapport
- Parental interest and praise
- Parent and child activity
- Kindness
- Respect for property

Further it should be recalled that the reliability of the indices of these types of delinquent behavior were all nearly .70 or higher. Looking again at the relationships among the social bonding variables with the above points in mind, the significant correlations ($p < .01$) involved primarily the eight reliable scales. In partic-

ular, the reliable scales that produced significant correlations ($p < .01$) with each other were in Relationships C and G. In Relationship C (Table 13), both value school achievement and school achievement motive correlated with rapport. In addition, school achievement motive correlated with interest. In Relationship G (Table 15), again both value school achievement and school achievement motive correlated with respect. In addition, value school achievement correlated with kindness.

Of the eight reliable scales, kindness and respect were most related to the four measures of delinquent behavior, each producing three or more significant correlations at the .01 probability level. Value school achievement and interest each produced three significant correlations at the .05 level with delinquent behaviors.

Three other variables also produced three or more significant correlations with delinquency measures at the higher probability level (.01)--the respondent's activity level, belief in rules and school achievement responsibility. The activity measure, however, is particularly difficult to assess since it produced positive correlations with the misbehavior measures where as negative correlations were expected. The activities themselves are certainly not to be discouraged--team sports, church groups, volunteer work, and so on. If the correlation was not chance, then the connection must be indirect. For instance, perhaps an

outgoingness or curiosity factor leads to a natural involvement in both acceptable and not acceptable activities at this age.

In summary, only a few social bond variables can (with any degree of confidence) be judged as interrelated as expected with each other and delinquent behavior: kindness, respect for property, value school achievement and parental interest.

Conclusions

Social development model. As stated previously, the data did not support the overall model. All things considered, it is more reasonable to conclude that the model was not well tested rather than to reject the theory.

First, the results may have looked somewhat better if it had been possible to stratify the results by subgroups. This sample was neither large enough nor representative enough to do this. In addition, to include socioeconomic variables as a factor, sound individual and ecological measures would have been necessary.

Second, a lack of correlation between the social bonding variables and misbehavior could result when youth accept the norms and misbehave due to peer influence. This study did not measure what the social attitudes and delinquent behaviors of the respondents' friends were. The present instrument included questions about the conventional

activities of the respondents' friends, but not their misbehavior. Further studies that combine measures of attachment to peers with perceptions of peer misbehavior might yield a better account of the respondent's own delinquency.

Third, the measuring instrument in this study was undoubtedly weak in terms of reliability and, probably, validity. The content of some of the items had questionable interpretability (see honesty scale, Table 5). In addition, some of the wording may have been too sophisticated for the target age group in general and the less intelligent youth in particular (who have been found to be associated with delinquent behavior; Hindelang et al., 1981, pp. 202-4). Quality scales need to be developed to test this model at different age levels.

Fourth, close attention should be given the actual administration of the survey instrument. In this study, the teachers were given instructions, but there was, in retrospect, concern about how well the questionnaires were administered. The quality of presentation and other situational variables (such as amount of time given, and so on) could easily influence attitudes about the questionnaire, and therefore the quality of the responses.

Fifth, to fully test the relationships suggested by the social development theory, future studies should also be longitudinal, instead of the one time only survey method

conducted here. By assessing predictors such as school attachment, conventional beliefs, and so on, plus outcomes like delinquent behavior at different points in time (as well as in more than one school), the implied causal connections and effects of context suggested by the theory would be better tested. The present method is subject to consistency bias, which could produce false (or exaggerated) correlation. For instance, a student who just finished reporting believing in rules and valuing school achievement may be less likely to report, a few minutes later, behavior inconsistent with the ideals. However, if all variables are measured at several points in time, then this bias would be less likely to affect the results.

School focused delinquency prevention program.

Field research could appropriately adopt the old show business slogan "The show must go on." Regardless of the level of success in measuring and evaluating the relationship of social bonding variables and delinquent behavior, a delinquency prevention school curriculum was going to be implemented. The purpose of the program was to prevent juvenile delinquency, that is to reduce the incidence of delinquent acts through intervention before they occur. The program objective was to achieve prevention by affecting causes of behavior, that is to reduce factors that contribute to delinquent acts and detract from conventional behavior and to increase factors that detract from delin-

quent acts and enhance conventional behavior. The preventive approach required that the program be directed at youth who were (a) not yet engaging in or only moderately engaging in delinquent behavior, and (b) in the early stages of developing their social attitudes and behaviors. Thus the school setting was chosen because it provided practical access to most of the target group and because it was viewed as a setting that plays an important role in social development.

Program recommendations. First, it was recommended that the school delinquency prevention program base its main objectives on the social development theories. Even though the model was not adequately supported by the survey results, the theories have much support elsewhere, as described in the introduction. In terms of the model, the program should aim to encourage involvement, attachment, and commitment to traditional social structures and values.

Second, the program should be directed at the total student population, not subgroups. This point is recommended on the basis of contemporary social development theory plus the results of the survey, which indicate that involvement in relatively serious misbehavior is fairly wide spread among youth.

Third, to expand on the previous point, the program should be introduced at all grade levels of elementary schools (tailored to the abilities of the students at each

grade level). The study found a sufficient level of misbehavior at the fifth grade level to suggest intervention should start early.

Fourth, the program should be evaluated in order to continue to improve the impact of the program, as well as to test the theory on which it is based. It is hoped that such evaluations will benefit from lessons learned from the present investigation.

A final general recommendation is directed at supporting the empirical, cause focused approach to program planning in the field of delinquency prevention and the necessity of careful program evaluation. In spite of a wealth of theory, speculation, experience, and study on the problem of preventing and controlling delinquency, there is still a relative paucity of hard data. In short, what we do not know we will not find out without using sound research techniques within clear, theoretical frameworks to (1) identify the causes of delinquent behavior in particular settings and their effect on bonding processes, (2) design programs and other interventions to have an impact on those causes and bonding processes, and (3) carefully evaluate the impact of the interventions on the presumed causes, bonding processes, and delinquent behavior.

At the same time, there must be acknowledgment and consideration of the legitimate needs, wants, and rights of individuals, social institutions, and communities for

privacy and the unhampered routine of carrying out their daily business. The most successful approach, namely the cooperative, combined effort of researchers, practitioners, and community members, begins with the recognition that the end goal of all concerned is the same: to create social structures that attract support and contribution from all their members because these social structures provide support and contribution to all their members. Under such reciprocal rewarding circumstances, antisocial actions are minimized.

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APPENDIX A

STUDENT SURVEY

JUNE 1981

This survey is part of a study to learn more about young people in Evanston. In order to plan useful programs, we need to know a great deal about your opinions, feelings, experiences, and problems.

Your name should not be on this survey. No one will know how you mark your answers. Please answer the questions honestly. We need to know your opinions.

PART I

Start Card A

Read the following statements carefully. Each statement describes the way someone acts. Fill in the bubble on the mark sense card with your answer.

Mark "a" if you would like this person a lot.
Mark "b" if you would like this person.
Mark "c" if you like and dislike this person about the same.
Mark "d" if you would dislike this person.
Mark "e" if you would dislike this person a lot.

1. Someone who studies hard to get good grades in school.
2. Someone who is proud of doing well in school.
3. Someone who doesn't care about grades.
4. Someone who makes fun of students who study hard.
5. Someone who tries for the top grade on a test.
6. Someone who thinks school is a joke.
7. Someone who always tells the truth, even if it hurts someone else.
8. Someone who tells little lies.
9. Someone who never cheats, even for a friend.
10. Someone who tries to punish dishonest people.
11. Someone who is dishonest in order to help a person who is in trouble.
12. Someone who doesn't care what others think of his opinions.
13. Someone who does things to get approval from others.
14. Someone who stands up for what he thinks is right, even if his friends may not like him as much.
15. Someone who goes along with the crowd.
16. Someone who speaks up and tells people what he likes and dislikes.
17. Someone who keeps his opinions to himself to avoid any problems with friends.
18. Someone who wants to be independent and different from other people.

Mark "a" if you would like this person a lot.
Mark "b" if you would like this person.
Mark "c" if you like and dislike this person about the same.
Mark "d" if you would dislike this person
Mark "e" if you would dislike this person a lot.

19. Someone who is careful not to say things against what his friends believe.
20. Someone who is kind to others, even when they are not kind to him.
21. Someone who sees good in everyone.
22. Someone who cares about other peoples' feelings.
23. Someone who forgives others when they harm him.
24. Someone who tries hard to make other people happy.
25. Someone who makes fun of other people.
26. Someone who thinks of himself first.
27. Someone who doesn't feel sorry for people who get themselves in trouble.
28. Someone who hurts peoples' feelings.
29. Someone who borrows things without permission.
30. Someone who borrows things and forgets to return them.
31. Someone who takes good care of things borrowed from others.
32. Someone who is careless and damages things that don't belong to him.
33. Someone who enjoys destroying things just because you are not supposed to do it.
34. Someone who treats other people's property as if it were his own.
35. Someone who understands how important things are to people.
36. Someone who destroys or damages public property (school, parks).

Read each group of statements carefully. Pick one of the statements (a or b) that best describes the way you would feel. Fill in the bubble on the mark sense card with your answer.

37. a) If someone is rude to me, I usually let it pass.
b) If someone is rude to me, I usually answer back.
38. a) I like to play practical jokes on my friends.
b) Practical jokes do not appeal to me.
39. a) There is no need to hurt other people's feelings to make it in life.
b) To make it in life, you cannot be worried about the other people's feelings.
40. a) Most people are kind.
b) Most people are mean.
41. a) Sometimes I feel like picking a fight with someone.
b) I never feel like picking a fight with anyone.
42. a) I find it easy to be patient, even with people who behave foolishly.
b) I tend to lose my patience with people who behave foolishly.
43. a) When someone teases me, I tend to get upset.
b) When someone teases me, I hardly ever get annoyed.
44. a) Most people are stupid.
b) Most people are bright.
45. a) I lose my temper less often than most people.
b) I lose my temper more often than most people.
46. a) I soon forgive people who let me down.
b) I cannot forgive people who let me down.
47. a) I sometimes argue with people.
b) I never argue with people.
48. a) Most people are unselfish.
b) Most people are selfish.
49. a) Revenge is sometimes necessary.
b) Revenge is never necessary.
50. a) If it looks like a fight is starting, it is best to wait and see what is going to happen.
b) If it looks like a fight is starting, it is best to get your blow in first.

PART II

Start Card B

Read the following multiple-choice questions carefully. Choose the one answer that best describes the way you would feel. Fill in the correct bubble on your mark sense card.

1. When you do well on a test at school, it is more likely to be:
 - a. because you studied for it
 - b. because the test was especially easy
2. When you have trouble understanding something in school, it is usually:
 - a. because the teacher didn't explain it clearly
 - b. because you didn't listen carefully
3. If you did better than usual in a subject at school, it happened:
 - a. because you tried harder
 - b. because someone helped you
4. If you solve a puzzle quickly, it is:
 - a. because it wasn't a very hard puzzle
 - b. because you worked on it carefully
5. When you read a story and can't remember much of it, it is usually:
 - a. because the story wasn't well written
 - b. because you weren't interested in the story
6. If people think you are bright or clever, it is:
 - a. because they happen to like you
 - b. because you usually act that way
7. If your parents said you aren't doing well in school work, it would more likely be:
 - a. because your work isn't good
 - b. because they are feeling cranky
8. If you are showing a friend how to play a game and your friend has trouble with it, it would happen:
 - a. because your friend wasn't able to understand how to play
 - b. because you couldn't explain it well
9. In general, do you like or dislike school
 - a. I like it
 - b. I like it and dislike it about equally
 - c. I dislike it

Read the following multiple-choice questions carefully. Choose the one answer that best describes the way you would feel. Fill in the correct bubble on your mark sense card.

10. Do you feel school rules and regulations are fair to the students?
 - a. Very fair
 - b. Quite fair
 - c. Somewhat fair
 - d. Not at all fair

11. Do you think students should care about how their school building looks?
 - a. Yes
 - b. No

12. During the past year, how often did you stay away from school just because you had other things you wanted to do?
 - a. Very often
 - b. Quite often
 - c. Sometimes
 - d. Never

13. Do you enjoy going to your school?
 - a. Always
 - b. Usually
 - c. Sometimes
 - d. Never

14. Is getting good grades important to you?
 - a. Very important
 - b. Quite important
 - c. Somewhat important
 - d. Not at all important

15. Do you think grades are important for getting the kind of job you want when you finish school?
 - a. Very important
 - b. Quite important
 - c. Somewhat important
 - d. Not at all important

16. What kind of grades do you think you are capable of getting?
 - a. Far above average
 - b. Above average
 - c. Average
 - d. Below average
 - e. Far below average

17. Do you think school is important for achieving your goals in life?
 - a. Very important
 - b. Quite important
 - c. Somewhat important
 - d. Not at all important

Read the following multiple-choice questions carefully. Choose the one answer that best describes the way you would feel. Fill in the correct bubble on your mark sense card.

18. On the average, how much time do you spend on homework each school day?
- a. 2 hrs. or more
 - b. Between 1 hr. and 2 hrs.
 - c. Between $\frac{1}{2}$ hr. and 1 hr.
 - d. Less than $\frac{1}{2}$ hr.
 - e. No time
19. How often do you finish your homework assignments?
- a. Always
 - b. Usually
 - c. Sometimes
 - d. Never
20. How often do you have trouble keeping your mind on your studies?
- a. Always
 - b. Usually
 - c. Sometimes
 - d. Never
21. How much education would you like to eventually get?
- a. Some high school
 - b. High School diploma
 - c. Some college
 - d. College Degree
 - e. More than a College Degree
22. Is being with a group of friends a more rewarding experience than being in school?
- a. Always
 - b. Usually
 - c. Sometimes
 - d. Never
23. If you hang around with friends outside of school who are often in trouble, how often will you get into trouble yourself?
- a. Always
 - b. Usually
 - c. Sometimes
 - d. Never
24. How much influence do you feel your friends have on you?
- a. Almost complete
 - b. A lot
 - c. Some
 - d. None
25. In a group of friends, how much influence does the group leader have over other members?
- a. Almost complete
 - b. A lot
 - c. Some
 - d. None

Read the following multiple-choice questions carefully. Choose the one answer that best describes the way you would feel. Fill in the correct bubble on your mark sense card.

26. Do you consider yourself the leader of your group of friends?
- Always
 - Usually
 - Sometimes
 - Never
 - Don't really have a group of friends
27. Are your friends active in activities after school?
- Very active
 - Quite active
 - Somewhat active
 - Not at all active
28. When you grow up, do you want to keep the same friends you have now?
- Yes
 - Maybe
 - Maybe not
 - No
29. If you had a choice to go to a summer camp that had things you were interested in, or go to a camp where all of your friends were going but didn't have things you were interested in, which would you choose?
- I am sure I would go to the camp with my friends
 - I am fairly sure I would go to the camp with my friends
 - I am fairly sure I would go to camp where they have things I am interested in.
 - I am sure I would go to camp where they have things I am interested in.
30. If you see something suspicious happen in your neighborhood, you should:
- call a neighbor
 - call the police
 - check it out yourself
 - don't get involved
31. What is the best protection against someone who tries to break in your home to steal something?
- enough lights in the house and yard area
 - good locks on doors and windows
 - neighborhood watch program
 - all of the above
32. If you are leaving for vacation, who should you ask to watch your house?
- the newspaper boy
 - a friend who is not a neighbor
 - a reliable neighbor
 - the mail carrier

Read the following multiple-choice questions carefully. Choose the one answer that best describes the way you would feel. Fill in the correct bubble on your mark sense card.

33. The best lock for an exterior door is
- a. double cylinder deadbolt
 - b. snap lock
 - c. snap lock with a chain bolt
 - d. snap latch lock
34. The method used most frequently by a burglar to enter a home is
- a. picking a lock
 - b. breaking a window
 - c. removing hinge pins
 - d. unlocked door or windows
35. How worried are you that someone will harm you while you are outside in your neighborhood?
- a. Very worried
 - b. Quite worried
 - c. Somewhat worried
 - d. Not at all worried

Here is a list of groups and clubs. Fill in the correct bubble on your mark sense card.

Mark "a" if you are in this.
Mark "b" if you are not in this.

36. a sports team
37. a school group or club (like band, school newspaper, or science club)
38. groups or clubs outside of school (like Scouts or Campfire Girls)
39. church or temple groups (like youth groups or Hebrew school)
40. Volunteer work (like hospital work or recycling)
41. Park District Program

PART III

Start Card C

Reach each question carefully. After each question mark the one answer which best describes your feelings. Fill in the bubble on your mark sense card with your answers.

ANSWERS: a. Always
b. Usually
c. Sometimes
d. Never

1. Do your teachers care about how well you do in school?
2. Do your teachers expect too much from you?
3. Do you care what your teacher thinks about you?
4. Do your teachers give credit for trying hard?
5. Do the teachers care more for the students who are the smartest in the class?
6. Do you go to your teachers when you have school work problems?
7. Do you make trouble for your teachers in class?
8. Do you ever want to become someone like your teachers?
9. Do you like your teachers?
10. Can you talk freely with your parents about things that trouble you?
11. Do you get along with your parents?
12. Do your parents try to cheer you up when you are unhappy?
13. When your parents are upset, do they tell you why?
14. Do your parents really understand you?
15. Do your parents praise you for things you do?
16. Are you allowed to make your own decisions about things that are important to you?
17. Do your parents check to see whether you have done what they tell you to do?
18. Do your parents know where you are when you are away from home?
19. Do your parents know who you are with when you are away from home?
20. When you have problems with homework, do your parents help you?
21. Do your parents ask about how you are doing in school?

ANSWERS: a. Always
b. Usually
c. Sometimes
d. Never

22. If you brought home a good report card, would your parents praise you?
23. Do your parents have enough time to play with you?
24. Do your parents encourage you to get involved in things like sports, music, or hobbies?
25. Do your parents seem interested in the things you do?
26. Do you make household repairs with your parents?
27. Do you go to sports events with your parents?
28. Do you watch television with your parents?
29. Do you play games with your parents in the house?
30. Do you go shopping with your parents?
31. Do you prepare meals with your parents?
32. Do you visit friends with your parents?
33. Do you check the doors, windows, and locks at your home?
34. Do you mark an identification number on your personal property?
35. Do you make a complete list and record of your property?
36. Do you leave a light on and a radio playing while no one is home?
37. Do you keep a watch for crime or suspicious persons in your neighborhood?
38. Do you watch a house or apartment for a neighbor?

PART IV

Start Card D

Below are some statements about the neighborhood where you live. Fill in the bubble on your mark sense card.

Mark "a" if you strongly agree with the statement
 Mark "b" if you agree with the statement
 Mark "c" if you disagree with the statement
 Mark "d" if you strongly disagree with the statement

1. Most of the families on my block know each other.
2. People sometimes drop papers and garbage on the sidewalks and lawns in my neighborhood.
3. Many families got together for parties, block meetings, etc.
4. Some kids in my neighborhood damage property (like throwing rocks at cars, spray painting walls or breaking windows on purpose).
5. Some kids in my neighborhood break into houses or buildings and take things.
6. The kids in my neighborhood hardly ever get into fights or arguments.
7. Some adults in my neighborhood break into houses or buildings and take things.
8. The adults in my neighborhood hardly ever get into fights or arguments.
9. There are many fun things for kids to do in my neighborhood.
10. Many of the kids who hang around my neighborhood don't really live there.
11. Many of the adults who I see in my neighborhood don't really live there.
12. The people who live in my neighborhood enjoy going outside and talking to their neighbors.
13. People try hard to keep the neighborhood clean.
14. People really care about each other in my neighborhood.
15. There aren't enough places for kids to play
16. The people in my neighborhood are very friendly.
17. If I saw a kid go into a house where he didn't belong, I would tell somebody.
18. If I saw an adult go into a house where he didn't belong, I would tell somebody.
19. I really like my neighborhood.
20. In my neighborhood, you don't tell on people, even if you know they are doing something wrong.

Answer the following questions in the same way.

Mark "a" if you strongly agree with the statement
Mark "b" if you agree with the statement
Mark "c" if you disagree with the statement
Mark "d" if you strongly disagree with the statement

21. People are usually punished when they do something wrong.
22. Having rules does not help. Some people will always act right, others won't.
23. Laws don't have anything to do with me.
24. If someone hurts other people, sooner or later it will catch up with him.
25. There are not as many fights when people play by the rules.
26. Sometimes people get punished when they don't deserve it.
27. People could get along with each other just fine without any rules or laws.
28. It's easy to take advantage of someone when there are no rules or laws.
29. Good people run into as many problems in life as bad people.
30. Kids who do well in school usually deserve it.
31. Someone who is good to other people will be treated good in return.
32. Often people don't get enough credit for doing a good job.

PART V

Start Card E

The following questions are about things that some kids do. We are interested in knowing whether you have done any of these things in the last six months. If you have not, mark "a" (no). For example, if you have done it once, you would mark "b"; if you have done it two times, you would mark "c"; if you have done it three times, you would mark "d"; if you have done it four or more times, mark "e". Fill in the bubble on your mark sense card.

ANSWERS: a - No
 b - One Time
 c - Two Times
 d - Three Times
 e - Four or More Times

1. In the last six months have you ridden a bicycle at night without a light?
2. In the last six months have you refused to obey teachers or school officials?
3. In the last six months have you refused to obey your parents or guardian about something they considered important?
4. In the last six months have you threatened another person?
5. In the last six months have you beaten up another person?
6. In the last six months have you been part of a group that threatened another person?
7. In the last six months have you been part of a group that beat up another person?
8. In the last six months have you damaged any private property (like throwing rocks at cars, spraying paint on walls of businesses or homes, or breaking windows on purpose)?
9. In the last six months have you damaged any public property (like throwing rocks at buses, spraying paint on walls of schools or park buildings, or breaking windows on purpose)?
10. In the last six months have you bought or received anything that you knew was stolen by someone else?
11. In the last six months have you taken anything from a store or business without paying?
12. In the last six months have you taken anything (not from a store or business) without permission?
13. In the last six months have you tried to break into a house or building?

- ANSWERS: a - No
b - One Time
c - Two Times
d - Three Times
e - Four or More Times

14. In the last six months have you broken into a house or building and taken something?
15. In the last six months have you used the threat of force to take something from another person?
16. In the last six months have you used force to take something from another person?
17. In the last six months have you stayed away from school for the entire day without permission?
18. In the last six months have you caused a disturbance in your classroom?
19. In the last six months have you cheated on a test?
20. In the last six months have you been disrespectful to someone?

The following questions ask you to describe yourself and your family.

21. What is your age?
 - a. 9 yrs. old
 - b. 10 yrs. old
 - c. 11 yrs. old
 - d. 12 yrs. old
 - e. 13 yrs. or older
22. What is your sex?
 - a. Boy
 - b. Girl
23. What is your race?
 - a. Black
 - b. White
 - c. Latino
 - d. Oriental
 - e. Other
24. How many brothers or sisters do you have?
 - a. 0
 - b. 1
 - c. 2
 - d. 3
 - e. 4 or more

25. Who are you living with now:
- Mother and Father
 - Mother and Stepfather
 - Father and Stepmother
 - Mother only or Father only
 - Other
26. In your family, when were you born?
- the 1st and only child
 - the 1st child born
 - the 2nd child born
 - the 3rd child born
 - the 4th or later child born
27. How long have you lived at your present address?
- less than one year
 - 1-2 years
 - 3-4 years
 - 5 or more years
28. About how many days have you been absent from school this year?
- No days
 - 1-2 days
 - 3-4 days
 - 5-9 days
 - 10 or more days
29. Which school subject do you like the best?
- Social Studies
 - Science
 - Math
 - Language Arts
 - Other
30. Is your mother working full-time?
- Yes
 - No
31. Is your mother working part-time?
- Yes
 - No
32. Is your father working full-time?
- Yes
 - No
33. Is your father working part-time?
- Yes
 - No

34. What school do you go to?

- a. Chute
- b. Haven
- c. King Lab
- d. Nichols

Please turn your mark sense card over to answer the last two questions.
On the back of your mark sense card, write in ink the answers to questions
35 and 36. Please number each written answer.

35. If your mother is working, what type of work does she do?

36. If your father is working, what type of work does he do?

STOP HERE

APPENDIX B

Table B-1

Factor Matrices of School Scales

| Scale | Item No ^a | Factors | | | Commonality |
|--------------------------------|----------------------|---------|------|------|-----------------|
| | | I | II | III | (\bar{h}^2) |
| Attachment to School | B9 | .70* | .45 | | .70 |
| | B10 | .65 | -.12 | | .44 |
| | B11 | .14 | .32 | | .12 |
| | B12 | -.03 | .43 | | .18 |
| | B13 | .58* | .18 | | .37 |
| Value of School Achievement | A1 | .10 | .73 | | .54 |
| | A2 | .08 | .82 | | .69 |
| | A3 | .76* | .13 | | .53 |
| | A4 | .64* | .17 | | .44 |
| | A5 | .12 | .48 | | .25 |
| | A6 | .79* | .04 | | .63 |
| School Achievement Motive | B14 | .79* | .02 | .24 | .68 |
| | B15 | .64* | .24 | .11 | .48 |
| | B16 | .14 | .08 | .34 | .14 |
| | B17 | .55* | .04 | .27 | .38 |
| | B18 | -.04 | -.65 | -.00 | .42 |
| | B19 | .13 | -.05 | .42 | .19 |
| | B20 | .09 | .19 | .40 | .21 |
| B21 | .18 | .40 | .28 | .28 | |

^aSee Appendix A for complete wording of each item. *Indicates items satisfying selection criteria and retained for use in final scales (see Table 1).

Table B-2

Factor Matrices of Parent and ChildRelationship Scales

| Scale | Item No ^a | Factors | | | | Commonality |
|------------|----------------------|---------|------|------|------|-------------|
| | | I | II | III | IV | (h^2) |
| Rapport | C10 | .53* | .16 | .10 | .00 | .37 |
| | C11 | .57* | -.15 | .14 | .38 | .56 |
| | C12 | .59* | .00 | .18 | .30 | .54 |
| | C13 | .22 | .12 | .12 | .18 | .82 |
| Acceptance | C14 | .67* | .18 | .15 | -.14 | .57 |
| | C15 | .17 | .08 | .51* | .17 | .34 |
| | C16 | .19 | .10 | -.27 | .05 | .52 |
| Interest | C17 | .07 | .11 | .02 | .51* | .31 |
| | C18 | .16 | .00 | .08 | .04 | .47 |
| | C19 | .18 | .13 | .03 | .18 | .38 |
| | C20 | .37 | .07 | .42* | .16 | .36 |
| | C21 | .06 | .11 | .29 | .61* | .49 |
| | C22 | .11 | -.10 | .65* | -.04 | .52 |
| | C23 | .15 | .36 | .08 | .06 | .32 |
| | C24 | .09 | .13 | .17 | .08 | .28 |
| | C25 | .37 | .30 | .41* | .05 | .47 |
| Activity | C26 | -.04 | .34* | -.11 | .24 | .37 |
| | C27 | .15 | .28* | -.00 | .05 | .34 |
| | C28 | .27 | .43* | .26 | .16 | .37 |
| | C29 | .18 | .66* | .04 | .12 | .60 |
| | C30 | .06 | .30* | .25 | .23 | .35 |
| | C31 | -.00 | .58* | .13 | .11 | .40 |
| | C32 | .00 | .58* | -.13 | .10 | .41 |

^aSee Appendix A for complete wording of each item.

*Indicated items satisfying selection criteria and retained for use in final scales (see Table 3).

Table B-3

Factor Matrices of Value Scales

| Scale | Item No ^a | Factors | | Commonality |
|-------------------------|----------------------|---------|-------|-------------|
| | | I | II | (h^2) |
| Honesty | A7 | .61* | .10 | .39 |
| | A8 | .12 | .22 | .06 |
| | A9 | .47* | .13 | .24 |
| | A10 | .24 | .20 | .10 |
| | A11 | .12 | .73 | .55 |
| Kindness | A20 | .41 | .20 | .21 |
| | A21 | .54 | -.07 | .30 |
| | A22 | .50 | .26 | .32 |
| | A23 | .79 | .15 | .65 |
| | A24 | .63 | .25** | .46 |
| | A25 | .12 | .59** | .36 |
| | A26 | .19 | .61** | .41 |
| | A27 | .06 | .54** | .29 |
| A28 | .13 | .59 | .37 | |
| Respect for Property | A29 | .79* | .03 | .63 |
| | A30 | .63 | .17 | .43 |
| | A31 | .23 | .55 | .35 |
| | A32 | .73* | .10 | .55 |
| | A33 | .67* | .05 | .46 |
| | A34 | -.08 | .32 | .11 |
| | A35 | .45 | .53 | .49 |
| A36 | .55 | .45 | .51 | |

^aSee Appendix A for complete wording of each item. *Indicates items satisfying selection criteria and retained for use in final scales (see Table 5).

Table B-4

Factor Matrices of Independence and
Low Aggression/Hostility Scales

| Scale | Item No ^a | Factors | | | | | Commonality |
|--------------|--------------------------------|---------|------|------|------|------|-------------|
| | | I | II | III | IV | V | (h^2) |
| Independence | A12 | -.06 | .03 | .31 | | | .10 |
| | A13 | .61* | -.14 | -.00 | | | .39 |
| | A14 | .13 | .39 | .40 | | | .34 |
| | A15 | .30 | .01 | .06 | | | .09 |
| | A16 | -.06 | .85 | .10 | | | .74 |
| | A17 | .40* | .04 | -.31 | | | .26 |
| | A18 | .17 | .14 | .70 | | | .54 |
| | A19 | .53* | .09 | -.00 | | | .29 |
| | Low Aggression Hostility | A37 | .64 | .06 | -.04 | .20 | -.09 |
| A38 | | .36 | -.05 | -.07 | .11 | .13 | .17 |
| A39 | | .07 | -.02 | .11 | .07 | .41 | .19 |
| A40 | | -.21 | -.04 | .43* | .12 | .00 | .25 |
| A41 | | .18 | .12 | -.13 | .27 | .02 | .14 |
| A42 | | .11 | -.24 | -.06 | .61 | .03 | .45 |
| A43 | | .17 | -.03 | .05 | .21 | -.69 | .55 |
| A44 | | .11 | .21 | .49* | -.08 | .17 | .34 |
| A45 | | .04 | .06 | .03 | .43 | -.07 | .19 |
| A46 | | -.03 | .12 | .22 | .29 | .28 | .23 |
| A47 | | .27 | -.32 | .06 | .06 | .09 | .19 |
| A48 | | .09 | -.08 | .62* | -.09 | .02 | .41 |
| A49 | | .54 | -.05 | .14 | -.04 | -.12 | .33 |
| A50 | | .03 | .83 | .06 | .08 | .07 | .72 |

^aSee Appendix A for complete wording of each item. *Indicates items satisfying selection criteria and retained for use in final scales (see Table 6).

APPROVAL SHEET

The thesis submitted by Brian E. Scruggs has been read and approved by the following committee:

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The final copies have been examined by the director of the thesis and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the thesis is now given final approval by the Committee with reference to content and form.

The thesis is therefore accepted in partial fulfillment of the requirements for the degree of Master of Arts.

April 19, 1985

Date

John D. Edwards

Director's Signature