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AND ITS EFFECT UPON ADOLESCENT BEHAVIOR**

presented by

Emilie.Phillips Smith

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of the requirements for

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**LABELING: THE PROCESS OF SELF-FULFILLING PROPHECY AND
ITS EFFECT UPON ADOLESCENT BEHAVIOR**

BY

Emilie Phillips Smith

A DISSERTATION

Submitted to

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ABSTRACT

**Labeling: The Process of Self-fulfilling Prophecy and
Its Effect Upon Adolescent Behavior**

By

Emilie Phillips Smith

Self-fulfilling prophecy has been and still is a very controversial topic. It is probably so controversial because the implications for action stemming from accepting or rejecting the self-fulfilling prophecy are so divergent. The study to be reported here of self-fulfilling prophecy was undertaken in labeling theory using a conceptual framework borrowed from the educational field. This framework assumes that labeling occurs in a sequential fashion. Therefore, the process was examined by which labeling from others, and the youth accepting a label influences the young person to behave congruent with the label.

This study was a re-analysis of data collected in an evaluation of statewide juvenile diversion programs which sought to decrease delinquent behavior. Adolescents in four sites across a midwestern state participated, which represented three different intervention programs. This rigorous, longitudinal, naturalistic experiment utilized random assignment to condition and multiple manipulation checks. The research instruments included measures of official

delinquency at multiple time points, program evaluation measures, several measures of labeling from others, and self-perceptions of the youth. Path analysis was used to examine the relationships between these variables; a different path-analytical model was developed for each intervention program.

In one site, the path model exhibited decreased delinquent behavior attributable to the intervention program. In another site, the path model revealed effects upon labeling attributable to the intervention program.

The labeling variables evidenced varying relationships to behavior and the data varied slightly across site. In two of the three sites, Other's Awareness of Delinquency, when not accompanied by expecting future delinquency, was found to be related to decreased Official Delinquency. Contrastingly, in those same sites, expectations for future delinquency was found to be related to increased Official Delinquency. Perceptions from other people (parents, teachers, and neighbors) that the youth had a negative reputation was related to increased delinquency in one site and decreased delinquency in another site. However, the issue of multicollinearity arose in the site in which Perceived Negative Reputation was inversely related to Official Delinquency causing this finding to be viewed with caution. In only one site did negative self-perceptions have a notable

relationship with adolescent behavior. In most instances, labeling from others had a stronger influence upon behavior than self-labeling. This led to the conclusion that the perceptions of others are important, sometimes even more so than the youth's own self-perceptions, in affecting adolescent behavior.

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"And there went a man of the house of Levi and took to wife a daughter of Levi. And the woman conceived a son: and when she saw him, that he was a goodly child, she hid him three months. And when she could no longer hide him, she took for him an ark of bulrushes, and daubed it with slime and with pitch, and put the child therein; and laid it in the flags by the river's brink. And his sister stood afar off, to wit what would be done to him.

Exodus 2: 1-4

Dedicated to my parents, Bettie and Alonzo Phillips, who have always had hope and high expectations for me.

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It is very difficult to try to stop and acknowledge all the people who have helped me to make this dream come true. To do a thorough job, I would probably have to go back to the day I was born. Certainly, I would have to go back to age sixteen, when somehow a little black girl from Atlanta, Georgia decided she wanted to get a Ph.D. in psychology even though she never knew anyone who had one. There are so many aunts, uncles, cousins, teachers, friends, neighbors, and church members that I could mention who could take some of the credit for what is being accomplished now. Though I cannot mention them all here, I remember and I thank you for what you gave to me.

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and relationship will always be an example for me.

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Emilie Phillips Smith

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CHAPTER 1 - INTRODUCTION

Social science researchers have been intrigued for at least three decades with a phenomenon known as "the self-fulfilling prophecy." Those who have studied this concept have used slightly varied nomenclature. In educational research, it is known as "the Pygmalion effect" in which teacher expectations are hypothesized to affect student behavior. In the study of deviance it is known as "labeling theory" and involves the effect of stigmatization by societal agents upon subsequent deviant behavior. In both fields, the self-fulfilling prophecy is a highly controversial concept. Those who espouse the concept would propose social policies opposed by those who believe that self-fulfilling prophecy is a hoax with no supporting evidence. Despite the far-reaching implications of the self-fulfilling prophecy for social policy in education and juvenile justice, evidence on its validity is mixed. Even after three decades of research in various settings, scholars and laypersons alike disagree on the existence of such a phenomenon and its theorized effects. Yet, self-fulfilling prophecy has been cited as the basis for a number of important decisions.

Self-Fulfilling Prophecy in Education

Merton, the sociologist who is credited with coining the phrase in a 1948 paper, viewed self-fulfilling prophecy as the process in which a definition of a situation, even if it is false, engenders behavior that brings the situation into conformity with the initial definition. Though Merton is credited with coining the phrase, "self-fulfilling prophecy," the idea predated Merton. Wineburg (1987) views Merton's definition as a paraphrase for W.I. Thomas' dictum "if men define situations as real, they are real in their consequences." He lists others who posited variants of this idea as early as the 17th century. It is interesting that in the 20th century this idea persists.

It seems that the idea of self-fulfilling prophecy is controversial because it strikes at the root of many people's basic philosophies and ideas about life and society in the United States. In fact, the adversaries in the debate over self-fulfilling prophecy seem to represent two very different schools of thought. This can be illustrated by examining the debate over "Pygmalion" in the field of educational research. Kenneth Clark is credited with being the first to use the term, "self-fulfilling prophecy," in reference to the educational arena in 1963:

"If a child scores low on an intelligence test because he cannot not read and then is not taught to read because he has a low score, then such a child is being imprisoned in an iron circle and becomes the victim of educational self-fulfilling prophecy." (Clark, 1963, p. 150 quoted in Wineburg, 1987).

The study of self-fulfilling prophecy that generated national attention and debate was Rosenthal and Jacobson's 1968 book, Pygmalion in the Classroom. Pygmalion was concerned with the effects a teacher's expectations can have upon a student's I.Q. score, asserting that students whom the teacher expected would "bloom," or perform well, scored higher than students for whom teachers held no such expectations.

The supporters and critics of this study have been numerous and vehement. Some of the most cited critics have been experts in measurement and testing. The critiques of Elashoff & Snow (1971) and Thorndike (1968) were concerned with the reliability and validity of the I.Q. test used in the study, and with the appropriateness of the statistical analyses employed. They argued that the test had not been developed, nor normed for all of the grade levels in the study. Additionally they felt that the test was not behaving properly at all grade levels, particularly at the grades which evidenced the greatest effects supporting the Pygmalion hypothesis. Rosenthal (1987) responded that had the test been unreliable, the unreliability would have attenuated the results. Thus, significant

and systematic, differences between the groups would not have been detected. These exchanges are but a sample of the critiques and discourse generated by the study.

The common thread between many of Pygmalion's most noted critics was a firm belief in the hereditability and immutability of intelligence as measured by I.Q. tests. Indeed, it was Thorndike who was a noted psychometrician and developer of early I.Q. tests. Among those holding such beliefs about I.Q., it was implausible that I.Q. could be changed, particularly within the short experimental timeline of Pygmalion and certainly not without intervening educationally with the participating students. It is a belief among some of those who hold to the immutability of I.Q. that significant changes in I.Q. cannot be obtained even with educational intervention (Jensen, 1969). The entire idea of Pygmalion, that change in I.Q. could be accomplished merely by manipulating the expectations of the teachers, ran counter to the theory of I.Q. Consequently, the implications for social policies would be very different from those who believed that the "Pygmalion" phenomenon was real. To those who viewed human intelligence, learning, and performance as hereditary and immutable, the actions of teachers were of little consequence to student performance.

The supporters of Pygmalion in fact represented an

entirely different school of thought. These were people who felt that the interaction of teachers, and society in general could affect performance, learning, and even I.Q. There were a number of attempts to replicate Pygmalion. By one estimate, there have been between 300 and 400 publications relating to educational self-fulfilling prophecy (Meyer, 1985). Rosenthal & Rubin (1978) reviewed 345 experimental studies of interpersonal expectancy effects. Their review included studies of expectancy in animals, in people, in laboratory settings, and in naturalistic settings. From the overall probabilities of all the studies, they concluded that "the Pygmalion effect" was a real phenomenon and had nontrivial effect sizes upon behavior.

It is noted that some attempts to replicate the initial study have failed, though some of these may have been due to methodological difficulties. Raudenbush (1984) found that in studies in which the teacher had less prior knowledge of the student, teacher expectations had a larger effect size upon student performance. The size of the effect depended upon the teacher's prior experience with the child before the onset of the experiment.

Substantial effort has also been expended in examining the process of expectancies, or rather how one person's expectancies affect the behavior of

another. First, it seems that teachers develop expectations as to differential academic performance based upon their subjective opinions of the student's characteristics (Rist, 1970). Further, the findings seem to suggest that teachers interact differently: with students for whom they hold high expectations (Brophy & Good, 1970); with female students than they do with male students (Dweck, Davidson, Nelson, and Enna, 1978); with students of different socio-economic status (Rist, 1970); and with students of different races (Trujillo, 1986). The overall message seems to be that teachers form differential expectations based upon these ascriptive characteristics, consequently, they provide different types of feedback to those for whom they hold high expectations.

Based upon research in this area, the implications for action are much different than what would be proposed by opponents of self-fulfilling prophecy. If one believes that student behavior can be affected by categorization and interactions based upon those categorizations from important people like teachers, then it behooves us to be certain that those interactions communicate positive messages to the students, messages that say they can learn.

In examining the research done in the field of expectancy effects, Cooper and Good (1983) have attempted to encompass this work into a model, "the

expectation communication model," for analyzing self-fulfilling prophecy. This framework will be discussed later as a way of looking at self-fulfilling prophecy in another field.

Self-Fulfilling Prophecy and Deviance

Among sociologists and others who devote their energies to studying deviance, the self-fulfilling prophecy has been a popular topic and no less controversial. As in the educational arena, very different social policies could be adopted, depending upon whether one espouses the premises of self-fulfilling prophecy (Rausch, 1983; Thomas & Bishop, 1984). In this field, a great deal of the study of self-fulfilling prophecy has been undertaken under the rubric of "labeling theory," or "social interactionist" perspectives.

Sociologists have been credited with developing the social interactionist perspective in which the reaction of society to an act is thought to influence subsequent acts (Becker, 1963). Kituse (1962) explains that though someone may commit an initial or primary act considered deviant in society, it is not the act itself that determines whether one will be labeled "deviant." Societal reaction, be it ignoring the act or foreclosing other legitimate avenues of behavior because of the initial act, can influence the development of secondary or career deviance. Lemert

(1951; 1967) distinguishes primary from secondary deviance. Secondary deviance results because of the societal stigmatization and sanctions that push one further into deviance. In progressing into secondary deviance, one turns to illegitimate means, begins to cultivate deviant peer groups to facilitate illegitimate means, and slips further down the path of career deviance.

The key issue here is the reaction to the initial acts of deviance. According to labeling theorists, society reacts differently to various individuals, regardless of the frequency and/or severity of their deviant act. Becker (1963) argued frequently that the reaction is often more a result of ascriptive characteristics such as race, social class, and educational background, than it is a result of the actual act. For example, an affluent child with parents of high occupational status may be treated differently for committing acts of vandalism than a poor child with parents of lower occupational status. Thereby, this suggests that people often are treated differentially not because of what they did, but rather, who they are. Similar to the teachers studied in the expectation literature, classifications are made and the reactions result from those initial classifications. However, the classifications may or may not be accurate, or may not necessarily mean that

the child is individually disposed to more deviant acts. However, if that child is treated differently and opportunities are closed to him/her, the resulting behavior is likely to be different.

Labeling theorists propose very different methods for handling initial deviance than do their opponents. The debate is often seen as one between "deterrence" theorists versus "diversion" theorists. Deterrence theorists argue that labels are given to people because of their actions, and not before. Consequently, their focus is on preventing further deviant actions by making the penalties high enough to ward off future actions. Diversion theorists argue that labels are given often with no regard for the action but, rather are based upon the amount of status one holds in society. Therefore, some people in society are labeled for acts of deviance while others are not labeled for the same or similar acts. It is the objective of diversion theorists to "divert" the potential labelee from sources (e.g. police, court, other justice officials) who would label the individual and thus react to them by eliminating any other courses of action but deviant or unlawful ones. Once again, it can be seen that the implications of action are quite divergent. More certainty of the effects of self-fulfilling prophecy and how it affects deviance is needed before formulating broad, far-reaching policy

based upon it.

CHAPTER 2 - REVIEW OF THE LITERATURE

A Framework for Studying Self-Fulfilling Prophecy

As can be seen from the previous chapter, the notion of self-fulfilling prophecy has generated debate on public policy in more than one field. Earlier, a model by Cooper and Good (1983) was mentioned which suggested a sequence of actions and interactions through which self-fulfilling prophecy operates. It has attempted to give insight into each stage of the supposed process. Their original model was developed to analyze self-fulfilling prophecy as it operated between teachers and students in the classroom. However, the general sequence of events provides a framework that can be useful here. Firstly, they suggest that various individual background factors influence the expectations a teacher has of an individual student. In the labeling process, this could be called the "assignment of labels." One makes a judgement about who that person is and the type of behavior they expect from that person. Cooper and Good explain that one behaves toward the individual congruent with what one's expectations of, or labeling of that person. The behavior exhibited toward the individual affects their self-perception. This second

stage can be seen as the effect of "labeling upon self-labeling." These perceptions in turn affect behavior and lead us to examine the effects of "labeling upon adolescent behavior."

To further detail the development of the conceptual framework in this context, articles dealing with labeling were located via the Social Science Index for the years of 1974 to 1988. The next section presents research detailing the various processes in the labeling sequence. Table 1 presents the supposed processes or stages in the self-fulfilling prophecy and the reviewed articles which examine each stage.

Table 1
Review of Pertinent Research on
Theorized Stages of Labeling

Assignment of Labels

- a. Cohen & Stark (1974)
- b. Phillips & Dinitz (1982)
- c. Blankenship & Singh (1976)

Societal Labeling/Treatment and Youth Self-Perceptions

- a. Gibbs (1974)
- b. Ageton & Elliott (1974)
- c. Thomas & Bishop (1984)
- d. Aultman & Wellford (1979)

Labeling and Adolescent Behavior

- a. Kaplan (1976)
- b. Rausch (1983)
- c. Klein (1976)
- d. Aultman & Wellford (1979)
- e. Klein (1986)

The Assignment of Labels

One of the basic assumptions of labeling theorists is that no act is intrinsically deviant or criminal; it becomes criminal when society so labels it (Tannenbaum, 1938; Lemert, 1951, Becker, 1963). Many may debate that criminal law is arbitrary and state that at least, deviant behavior is variant from the average. Even with this in mind, some credence should be given to Becker's premise that the existence of a rule does not guarantee its enforcement; every law is not enforced each time it is broken. He maintains that enforcement is an enterprising act and the more powerful do so when it is advantageous to them. Thus, some break rules and are not labeled as deviant nor criminal while others do not break rules and are labeled simply because of their social background.

A few researchers have attempted to challenge this assumption of labeling theory using empirical analysis. Cohen & Stark (1974) attempted to look at shoplifting and labeling to examine if differential dispositions were given based solely on demographic characteristics. This study seemed to examine an earlier stage in self-fulfilling prophecy, namely if the person in control treats or interacts with individuals differently based upon who they are.

The data was collected in 1969 by means of

participant observation by the experimenter, raising the issues of possible experimenter effects. Data was collected in selected department stores in the chosen city. Recorded were the age, race, gender, and occupational status and alleged offenders.

Apprehension and disposition statistics were obtained from case records of the 371 people apprehended in 1969. The various types of interaction that could be initiated by the person in control (in this instance store security) was apprehending a suspect or not, and once apprehended, turning them over to the police or not.

It was found that minorities were overrepresented in the in the apprehension records. However, the authors assert that when the value of the item shoplifted was controlled, this bias disappeared. No tests of significance nor tests of the strength of the relationship between the variables is provided. In multiple regression analyses, the sole statistical analyses presented, it was found that value of the item and occupational status were predictive of the disposition of the offender. Though the authors conclude differently, the study shows some support for labeling theory. Socio-economic status was related to whether a youth apprehended for shoplifting was referred to the police or not.

Phillips and Dinitz (1982) in a study designed to

predict which youths in a small county received certain dispositions found some support against and for labeling theory. In a discriminant function analysis designed to distinguish those who were institutionalized from those who were not, the offense and the youth's prior record were the more important variables. Because demographic variables were not relatively important in this function, they concluded that offense and not background characteristics seemed to predict institutionalization. This evidence counters labeling theory.

The support for labeling theory appeared in an attempt to predict dispositions less severe than institutionalization. The possible dispositions were informal supervision, formal supervision, and brief detention. In this function, age and family income were salient predictors (though race was not). Prior offenses accounted for little of the variance here. Overall, Function 2 was less able to distinguish between cases receiving different dispositions. Thus, this study presents unclear, mixed results for labeling theory.

Evidence contradicting labeling premises can be found in the work of Blankenship and Singh (1976). In their multivariate study they investigated the variables which distinguished youth who were handled by the corrections system from youth who were committed to

the mental health system. They found that the youth in corrections had a series of prior encounters, had committed felonies, and differed in the type of offenses. Acts of arson, rape, and murder were related to mental health commitment.

In summarizing the studies investigating the basis of labeling, two out of the three studies found background variables (occupational status, family income, and age) to account in part for how officials handled youthful offenders. In the case where the disposition would be handled by totally different agencies (criminal justice agency or mental health agency), the behavior of the youth made a distinguishable difference. In the prior two studies, apprehension and disposition were related in part to demographic characteristics. Those of less status were found to be treated more harshly than those who wielded higher status. Once societal agents become aware of the status of the offender, this seems to affect one's perceptions and actions toward another person. The evidence is unclear and conclusive empirical support for or against labeling theory is lacking.

Effects of Societal Labeling upon Self-Labeling: Do We Believe Everything that Others Believe About Us?

Becker (1963) conceptualized the labeling model as more sequential than simultaneous. That is, all of the causes do not operate at the same time. Instead, people make a "sequence of movements" from one stage to another in the process. It seems logical that the subsequent stage in the process would be the degree to which the labelee accepts the label imposed by societal agents.

Recall Lemert's argument (1951), that labeling does not necessarily influence the initial act of deviance but, does influence the development of secondary deviance. The bearing of a negative label theoretically causes societal agents to prevent access to legitimate means of goal attainment; the labelee perceives this and begins to feel alienated. As a result the labelee resorts to deviant subgroups and illegitimate methods of goal attainment. This results in more deviant acts, known as career or secondary deviance. In this conception of labeling theory, the integrative feature of the theory becomes apparent. The components of different theories emerge, including Cloward and Ohlin's theory (1960) of differential opportunity to access legitimate means of goal

attainment, Merton's (1938) theory of anomie (sharing cultural goals but not the means), and Sutherland's premise (1947) that deviant behavior is learned as a function of differential (deviant) associations. Yet, the first step in the process is being labeled as a deviant. The latent assumption is that the labelee must perceive the label and the closing of legitimate opportunity associated with the negative label, and accept the label before one acts congruent with the negative label.

In an attempt to examine the impact of contact with societal agents upon self-perception, Gibbs (1974) investigated if the legal system increased a delinquent self-concept among young males encountering the system. Delinquent self-concept was measured immediately after apprehension for the offense and also after disposition. The young males were also compared to a non-random control group on the measure of delinquent self-concept. At both time periods offenders were found to have higher delinquent self-concepts than nonoffenders. However, this relationship may have been due to a number of variables unrelated to contact with the legal system. Additionally, contrary to the author's hypothesis, the offending youth were found to have higher delinquent self-concepts immediately after apprehension than 45 days after disposition.

Self-concepts were expected to be lower after disposition because the youth would have had more opportunity for labeling from the system. The author concludes (and this writer agrees) that the timing of measurement was probably very problematic in that the immediate shock of apprehension may increase delinquent self-concept but a more accurate measure would probably be acquired if measurement occurred later in the process. This study failed to provide evidence that labeling from the legal system increased self-perceptions of a delinquent label.

Thomas & Bishop (1984) also sought to examine the effect of official contact (formal sanctions) upon delinquent self-perceptions. Using data collected in fall and spring terms in a sample of 2,147 students with a mean age of 15, it was found that those who had experienced legal sanctions had higher delinquent self-perceptions. They conclude it provides modest evidence for labeling theory. There were no measures of perceived labeling from the official sources. Therefore, information about the degree of labeling experienced as a result of legal sanctions is lacking. Here, it was presumed that increased sanctions was equivalent to increased labeling.

Ageton & Elliott (1974) conducted a similar study to evaluate the the effect of police contact upon

self-perceptions. The authors hypothesized that contact with the legal system would result in a delinquent orientation and, that youth would begin accepting the values and orientations consonant with a delinquent label (once again it was assumed that any youth who had contact with the police was labeled by the police). The question of official contact and labeling was examined in a longitudinal study of 2,000 ninth grade students with no prior police contact. They examined the relationship between police contacts at one period and delinquent orientation gain scores. (Gain scores were used in an effort to control for any prior orientation toward delinquency at the first testing.) It was found that police contact was significantly related (albeit a small zero-order correlation of .10) to increased delinquent orientations. Neither self-reported delinquency nor peer associations had a significant relationship with gains in delinquency orientation. Therefore, the authors concluded that neither behavior nor peer associations were as influential upon increased tendencies toward delinquent values as having contact with police. However, these conclusions should be regarded with caution in light of the small correlation coefficient.

The authors assert that police contact seemed to

be a salient factor, especially for Caucasian males, controlling for the amount of exposure they had with police. To these researchers and others (Ageton & Elliott, 1974; Morash, 1982) it seems puzzling that African American youth seem less susceptible to official labeling evidenced by smaller correlations between criminal justice system contacts and delinquent orientations (although too many of the authors have failed to report the actual correlation which would facilitate interpretation by the reader and comparison to other studies). A number of researchable explanations are plausible. It is possible that these youth employ rationalization which devalue the opinions of such persons. Using the terminology used by Sykes and Matza (1957) they may "condemn the condemners" or they may have "higher loyalties" than are exhibited to criminal justice personnel. This would be congruent with Rotenberg's premise (1974) that labeling from some sources is more influential than labeling from other sources. Juvenile justice contact may not be the most salient to African American youth and empirical evidence is needed to ascertain this. At any rate, in a society where stereotypes and negative perceptions of African Americans abound, it is actually encouraging to know that these youth may be selective in the messages that they believe.

It is highly possible that people possess varying susceptibility to labeling. Rotenberg (1974) thought that analyzing "what makes a label stick" is an important endeavor. He argues that of labeling theorists, at least Schur (1971) had briefly acknowledged "variations in individuals' susceptibility and resistance to labeling" but at the time many issues had been largely ignored. Rotenberg raises thought-provoking questions including: are all labels equal(e.g. is being labeled a diabetic the same as being labeled schizophrenic); do all labelees accept the label given to them; and importantly, do labelees give sources of labeling equal credence? Chassin, Presson, Light, & Young (1981) have found that "delinquent labels" seem to have worse consequences than the label of "emotionally disturbed." Rotenberg suggests that "the relation between social and self-labeling is a function of the degree of the significance of referent others to the actors in the specific labeling context." Thus, the source of labeling may in large part affect whether the actor accepts the label. It is proposed that primary and secondary others exist. Primary others are defined as "those whose relative valuations are incorporated into the actor's self-identity," and secondary others as those "audiences who have power or

prestige and whose valulative reactions are situationally significant but not incorporated into the actor's self-identity" (Rotenberg, 1974). This raises very intriguing questions yet to be addressed by research including whether the primary others have earlier contact with the actor than secondary others. Further, perhaps primary and secondary others differ in the frequency and quality of contact with labelee.

In reviewing the studies reported earlier which attempted to analyze the link between societal labeling and self-labeling, one assumption was present in both, that labeling was an inevitable consequence of contact with certain societal agents. They seem to ignore that in the process of interacting with potential labelers, negative messages may be communicated to some youth but not to others. The labels communicated may differ in quality; which may vary from being simply "a good kid caught doing something bad" to a label of an inevitable "juvenile delinquent." The communication from the labeler may also differ in intensity, from somewhat believing that the label is applicable to the youth to strongly believing so. Neither of the previously reported studies sought to measure the amount of societal labeling the youth actually perceived.

Aultman and Wellford (1979) sought to include a measure of perceived labeling in their path-analytic

study of the relationship between perceived labeling, social alienation, self-esteem, and delinquent behavior. Using a sample of 1500 junior and senior high students surveyed in 1975 they found that negative labeling from parents and teachers exhibited a direct effect upon social alienation, exhibiting a path coefficient of $+0.32$. (Social alienation measured the degree to which the youth felt that socially unapproved behavior was needed to achieve goals and, powerlessness over their lives.) Labeling also had a direct effect upon access to goals (path coefficient of -0.29) and an indirect effect upon alienation through this variable. Alienation was found to have a direct effect on delinquent behavior of $+0.19$. A direct effect of labeling upon delinquent behavior was tested but labeling seemed to influence delinquent behavior through the youth's feelings of alienation.

This piece of research provides the most convincing and integrative test of labeling theory. It provides evidence of the hypothesized sequential nature of the framework. It does not presume contact to be equated with labeling and measures most of the theorized processes. What is lacking here is a measure of the degree to which the youth labeled themselves, this variable may moderate both feelings of alienation and subsequent delinquent behavior.

In summary, in looking at the research presented in this section, it seems that official contact can impact self-perceptions. In the research of both Thomas & Bishop (1984) and Ageton & Elliott (1974), youth with greater amounts of official contact evidenced greater delinquent self-perceptions. Because measures of the amount of perceived labeling from officials was lacking, it is left unclear as to how contact affected self-perceptions. It cannot be concluded that official contact resulted in more official labeling which in turn increased delinquent self-perceptions. A measure of official labeling would be needed to make this inference.

The research of Aultman & Wellford (1979) included a measure of perceived labeling from others as well as measures of youth's feelings of social alienation and youth behavior. In this study, labeling was found to have a direct effect upon alienation and an indirect effect upon delinquent behavior. Missing here was the measurement of self-labeling. In this case, the reader is informed that labeling indirectly affected behavior, but is uninformed as to whether the labels of others led youth to accept the label and subsequently feel alienated. Thus, two of the studies lacked measures of labeling from others and one lacked a measure of self-labeling. To fully examine the

variables through which labeling may affect behavior, the model should include measures of labeling from others, self-labeling, and other theorized intervening variables between self-labeling and behavior.

In examining the design of the studies reported above, each utilized a longitudinal, quasi-experimental design. though often more feasible, such designs do not facilitate the strongest causal inferences. A longitudinal, experimental design in which the amount of labeling is manipulated would permit examination of labeling as a cause of self-labeling and delinquent behavior.

Labeling and Deviant Behavior

Presumably, one of the final stages in the labeling process is the effect of labeling upon actual behavior. It should be remembered however, that this model is a recursive one, meaning that the behavior could then in turn affect the degree of subsequent labeling, which further affects self-perception, etc. Though this may seem contradictory to the labeling model, behavior may influence labels to some degree, the question is, do ascriptive variables influence labeling more than behavior, particularly when applied to initial acts of deviance? The attitude-behavior link is often an elusive one and, at this point we will turn to empirical investigations of this relationship.

The relationship of negative self-attitudes to a range of deviant behaviors has been studied by Kaplan (1976). 9,459 seventh grade students were interviewed three times in 1971, 1972 and 1973. Self-derogatory attitudes were measured by some items from the Rosenberg self-esteem scale and an inventory of self-reported deviant acts was utilized. Students were categorized into low, medium and high self-derogations groups and the likelihood of having committed deviant behavior was analyzed using the Chi-Square statistic. Students with low self-derogation were found to be less likely to report deviant behavior but the nonparametric measures of association (gamma) evidenced small relationships between these variables (.18).

This provides scant support of the labeling-behavior connection since with large sample sizes, chi-square is easily found to be significant; in these instances the measures of association tend to be more informative. Actually it was not surprising that there was not a stronger relationship between negative self-attitudes, a measure of self-esteem and deviancy. The author seems to equate self-esteem with the perception of self or self-concept. It is plausible that one may have a deviant identity (delinquent, mental-retarded, or trouble-maker) and accord much esteem to that identity. Stager, Chassin, & Young

(1983) have demonstrated that self-esteem is not always lowered in groups labeled as socially deviant.

Rotenberg argues that four conditions must precede the decrease in self-esteem: awareness of the label; agreement with the negative label; personal relevance, or applying the societal view to oneself; and significance of the label which varies with different situations or settings. The research of Stager et al. partially supports Rotenberg's premise in that they found students labeled as educably mentally retarded did not evidence low self-esteem unless they believed that the label had personal relevance, or rather that the negative aspects of the label applied to them. Kaplan's research fails to show a strong link between attitude and behavior, particularly between labeling and behavior. Perhaps this is partially true because of his confusion of the concepts, "self-concept" and "self-esteem."

One of the assumptions of labeling theory is that having more contact with justice officials results in increased labeling and increased subsequent deviant behavior. The contradictory thought of deterrence theorists is that contact with justice officials frightens or shocks youth into more compliance with the law and decreased delinquency. Klein (1974) sought to provide an empirical test of the two theories by

classifying 49 police agencies into high or low diverting police departments. The high diverting departments were those who attempted to steer youth away from the criminal justice system. The low diverting departments infrequently released youth or referred them to other agencies. It was found that the available departments could be differentiated and that the variability was not due to city size, city demographics, staff ratio or arrestee characteristics. The researcher verified local rates with state statistics with a reliability of .96. Case records were obtained of the offenders to examine the frequency and seriousness of arrest. Overall, among the offenders, high diverting and low diverting departments did not seem to differ in the number of new police contacts nor the seriousness of subsequent contacts for youth. However, when the sample of offenders was classified into first offenders versus multiple offenders it was found that first offenders recidivated more frequently in low diversion departments.

The author recognizes that though this offers some evidence in favor of labeling theory (less frequent official contact seem to be associated with lesser recidivism), this research does not tell us about the process. The question remains if high diverting departments were really high or low labelers.

Measurement of the amount of labeling communicated by the department and self-labeling reported by the youth would be more informative about the process of labeling theory.

Rausch (1983) also sought to use empirical evidence to compare the validity of labeling versus deterrence theories. Using a similar methodology, Rausch examined 350 status offenders who were receiving varying types of contacts; maximum court contact (court processing), minimum court contact (probation officer), maximum community treatment (from all the services that could be provided) and minimum community treatment (crisis intervention with family). The author recognizes Klein's argument that with community treatment there is still the potential for high labeling. Rausch found no difference in the different modes of treatment and the recidivism rates and concludes no support for either labeling nor deterrence theories.

This research suffers from a common flaw in labeling research; it is presumed that these options differ in the amount of labeling and there is no attempt to measure how much labeling actually occurred.

In a more recent study by Klein, effort has been expended to examine the amount of labeling which actually occurred in different justice dispositions

(1986). In this study youth were randomly assigned to either the court disposition, the service program, or were simply released. One portion of the study examined the effects of labeling upon youth self-perceptions. It was hypothesized that the degree of "label encapsulation," or the degree to which the disposition "enmesh(es) and encapsulate(s) the offender into a label" varies by disposition. To examine this question, label encapsulation was measured by analyzing the number of people who knew about the youth's offense (label spread) and the number of people who perceived of the youth as someone who would get into trouble (label application). Klein found a significant relationship between disposition and encapsulation, with the court yielding the highest score on the variable and release yielding the lowest score.

Subsequently, the effects upon "label acceptance" by the youth was investigated. Though the dispositions did differ in the amount of labeling conferred upon the youth, the did not differ in the amount of label acceptance exhibited by the youth (Klein, 1986). Further, it was found that the higher labeling dispositions resulted in greater levels of youth recidivism. Thus, Klein attempted to examine two stages in the labeling process; the degree to which labeling from others affects self-labeling, and the

degree to which labeling from others affects adolescent behavior. He did find that labeling affects behavior but not self-perceptions. This shows mixed results for labeling theory.

Klein's 1986 study advanced labeling theory in that it did not presume that different dispositions resulted in greater labeling. However, it was deficient in that it did not truly analyze the sequential process of labeling theory. Had this been done, the relationship of self-labeling (label acceptance) to delinquent behavior would have been analyzed as opposed to examining the relationship between labeling from others (label encapsulation) to delinquent behavior. An integrated study of the above variables is still needed.

Summary and Rationale for Research

In reviewing the research which has attempted to examine the concept of labeling, three major aspects of labeling theory deserving empirical attention seem to be evident:

- 1) the basis upon which labels are assigned:
actual behavior versus social background
- 2) the relationship of labeling from others to
to self-labeling
- 3) the relationship of self-labeling to deviant
behavior; bearing in mind that self-labeling

may be directly related to behavior or indirectly related to behavior through other intervening variables.

In the studies reviewed in the previous sections above, each attempted to empirically test some aspect of labeling theory. Of them, only two (Aultman & Wellford, 1979; Klein, 1986) attempted to test the theory in somewhat of an integrative manner. Usually, in a single study, only one premise of labeling theory was examined-- be it the assignment of labels, the relationship of labeling to self-labeling, or the relationship of labeling to behavior. Research studies reviewed here investigating the basis for labeling did not use very rigorous statistical methods, and when they did, mixed support for labeling theory surfaced. In one study, (Phillips & Dinitz, 1982) some evidence seemed to suggest that only behavior was important to officials, while other evidence in the same study seemed to suggest that background variables were also important. Additionally, these studies looked at the effect of behavior versus background characteristics upon disposition, but not upon the labels that may have been assigned to youth. Failing to examine behavior, background characteristics, and the relationship to labeling may mean that subtle effects upon variables other than disposition may not have been detected.

Rigorous methodology and statistical analyses are needed to amass empirical evidence as to the actual basis of labeling. A presumption of diversion advocates is that less official contact results in decreased labeling. The influence of contact with official personnel versus outright release needs to be investigated to answer how much labeling results from each mode of intervention. Further, an experimental design which manipulates disposition and hopefully, subsequent levels of labeling would give more information than the quasi-experimental designs that prevail.

In studies examining the relationship of labeling to self-labeling, a common flaw was detected. Process measures, which actually measured the amount of labeling from others or amount of self-labeling, were frequently lacking. A common assumption was that formal contact was synonymous with labeling and no actual measure of the degree of labeling was attempted. In cases where the perception of labeling was measured, measures of the relationship between accepting the label, and delinquent behavior were lacking (Aultman & Wellford, 1979; Klein, 1986). Future research should include measures of both and their intercorrelations.

The studies examining the relationship between labeling and behavior evidenced shortcomings also. In

one study (Kaplan, 1976) self-esteem was confused with labeling oneself. As stated before, one might identify with a deviant label and still ascribe esteem to it. Here, the theoretical concepts were confused. In other studies of labeling and behavior (Klein, 1974; Rausch, 1983) it was presumed that different dispositions resulted in differential labeling without measuring labeling. Rausch concluded that there was scant support for labeling theory because he did not find that modes of treatment affected adolescent behavior. Klein (1974) found that mode of treatment only made a difference for multiple offenders, who recidivated more frequently in police departments which infrequently used diversion. Process measures were lacking which would ascertain if conditions both authors thought were low-labeling dispositions were indeed low-labeling dispositions. If dispositions presumed to be low-labeling were actually high-labeling and vice versa; this could account for the scant evidence in favor of labeling. This would mean that the results were moderated by the amount of labeling; a variable which was not observed in either of these studies. As asserted before, a better test of labeling theory would include observations of the amount of labeling accompanying dispositions and then evaluate the effect of labeling upon behavior. This would be preferable to

making an inferential leap from disposition to behavior; in such a model a step in the process is ignored.

In a subsequent study by Klein (1986), measures of the amount of labeling in each disposition were included. Analysis of the effect of labeling upon behavior were conducted but, not of the effect of self-labeling upon behavior, which is the theoretical premise in labeling.

Lastly, and importantly, the three aspects of labeling theory have not been studied in an integrative model. Each of them, or at most two of them, are evaluated in individual studies. It would be more informative to examine the sequence of labeling theory by examining all of the steps (assignment of labels, labeling and self-labeling, self-labeling and behavior) in the context of one comprehensive model. A longitudinal design including observations of all the above would be most informing and add critical empirical information about the process and impact of self-fulfilling prophecy.

The research to be described here seeks to account for many of the failings in the literature. Specifically, a longitudinal study of labeling will be undertaken. The longitudinal design will facilitate analysis of whether certain variables actually

preceeded others temporally. The experimental nature will allow manipulation of disposition experimentally, which will probabilistically equate the youth, making comparisons of disposition more valid. Measures of labeling from others, self-labeling, and delinquent behavior will all be included to study the process by which labeling theory affects behavior. The relationships between the above variables will be examined using a structural equations model. This approach is especially appropriate for examining the theoretical model of labeling. In the context of this research, inferences would be more valid, and more information about the hypothesized nature of labeling theory could be examined.

CHAPTER 3 - METHODOLOGY

The following section details the methodology used to answer these research questions:

1. What is the relationship between labeling from others and self-labeling?
2. What is the relationship between self-labeling and behavior?
3. What are the probable variables which intervene between labeling and behavior?
4. What is the sequence of events, if any, by which labeling affects delinquent behavior?

These questions raise the examination of the process by which labeling affects adolescent behavior.

At this point we will proceed to examining the methodology used to investigate these questions. A precise description of the actual variables and the analyses will be presented later in this section.

This study re-analyzed data collected while evaluating a state-wide juvenile diversion program. The evaluation was a rigorous, longitudinal study conducted in four sites in a mid-western state (Davidson & Johnson, 1984). This study included random

assignment of youth to condition and analyses supporting the initial equivalence of the treatment conditions, lending internal validity to the study. Process analyses or manipulation checks were included to assure the integrity of group assignment; that those in the experimental groups actually received the treatment for their groups. The results of this study demonstrated that diversion with services resulted in significantly less recidivism than either the group which had intense contact with justice officials or the group which was released with no further contact (Davidson & Johnson, 1984). However, the significant effect was only evident in one site. Measures of labeling and self-labeling were also included. Ironically, in the site in which the diversion with services group evidenced significant effects upon recidivism, it was found that this condition had higher levels of labeling than the other groups. This is contradictory to traditional thought in labeling theory. The reason for this deserves further attention.

This data provided an excellent context to examine all of the stages in labeling theory presented in the literature review, except one. Because the data were collected from participants who were in large part homogenous on variables of socio-economic status, education, and employment status, restricted variance

would prevent sufficient analysis of the role of demographics in the assignment of labels. However, the other processes could be addressed in the context of this data quite well. Further, the application of structural modeling (path analysis) to this data could perform a few purposes. First, it would allow a test of the sequence and process of labeling theory. Second, in the same analyses, it could allow an examination of whether the pattern of the data in sites with statistically insignificant effects was in accordance with labeling theory and the rationale for diversion programs. Higher level of diversion from court and/or justice personnel should result in less perceived labeling. Additionally, one would expect lower labeling to be associated with decreased delinquent self-perceptions and decreased delinquent behavior. Third, it would give information as to "how" program effects were achieved. It has been posited that path-analytic methods are actually a better approach to program evaluation with multiple dependent variables than multiple analysis of variance (Hunter, 1987).

Thus, this research re-analyzed the data from Davidson & Johnson's longitudinal, experimental, statewide study of juvenile diversion programs. Four sites participated in the statewide diversion program.

The criteria for site selection was determined by giving priority to locations with the following characteristics: 1) a large number and proportion of youth entering and/or more deeply penetrating the juvenile justice system; 2) a willingness to implement diversion within the framework outlined in the planning document and; 3) the organizational capability to successfully implement diversion (State Plan for Diversion in Michigan, 1981). This resulted in four sites being included for participation in the study. Site 1, which will be referred to here as "Metro," represented a large, urban, metropolitan city. Metro received its referrals from four police precincts in the city. Sites 2 and 3, which will be referred to here as "Southwest" and "Southeast", represented medium-sized counties in their respective regions of the state. Southwest accepted referrals from four law enforcement agencies in the county, and Southeast received all of its referrals from the county juvenile court. The fourth site, "Rural," represented three small rural counties located in the northern part of the state. This site received all of its referrals from the intake division of the juvenile court.

The experimental design for the project was a modified Pretest-Posttest Control Group in which the actual innovative program was nested within site

(Campbell & Stanley, 1967). A research methodology was used in which youth in each site were randomly assigned to one of three conditions or dispositions: outright release without adjudication or the delivery of services (diversion without services); release and participation in a service/intervention program in the site (diversion with services) or; traditional juvenile justice court processing. As stated before, the actual service/intervention program varied with each site. The next section will describe the participants, design, procedures, program, measures, and potential analyses for each site. A large proportion of the text describing the methodology was extracted from the original report, Diversion in Michigan (Davidson & Johnson, 1984).

The Participants

Participants were received via referrals in each site from police precincts, law enforcement agencies or county juvenile courts. Referred youth had to meet eligibility criteria for program participation.

The eligibility criteria specified that the youth:

- 1) be between 12 and 16 years of age; 2) be a resident of one of the four referring precincts;
- 3) be charged with an offense that would have normally been referred to court; 4) not be on

probation or have other cases pending in juvenile court or be receiving services from a program operated by the juvenile court; and 5) had not participated in the project in the past.

(Davidson & Johnson, 1984, p.20)

Participation in the project was voluntary and both the youth and parent(s) had to agree to participate. Therefore, either the youth, the parent, or both had the opportunity to refuse to participate. "The reason for non-participation was usually attributed to a youth/parent belief that s/he was innocent of the charge. Other reasons for non-participation varied from dislike of the service program to a belief that the juvenile court would not take action against the youth" (Davidson & Johnson, 1984, p.20).

The original study provided a demographic description of the youth. The description from Davidson & Johnson (1984) is summarized here for each site. The project in Metro was in operation for approximately 25 months. During that time, 521 eligible youth were referred. Of the eligible youth, 395 volunteered to participate. After agreeing to participate and signing the consent form, youth were randomly assigned to one of the three dispositions: 134 participants were assigned to diversion without services (outright release); 137 were assigned to

diversion with service (Family Support and Education Program); and 124 received traditional juvenile justice processing (court petitioned), the treatment-as-usual control group.

The majority of the project participants were African American (90.6%), male (83.5%), and approximately 14 years of age. They had completed an average of 7.4 years of formal education at the time of project referral. The percentage living in two-parent households was 41.7%, and 58.3% lived in a single-parent household.

The diversion project in Southwest was in operation for approximately 26 months, beginning in March of 1982. During the span of the project, 613 youths were referred. The referrals were provided by four police departments located in the county.

Of the 613 eligible referrals received by the project, 487 volunteered to participate. As in Metro, participation in the project was voluntary, meaning that both youth and parent(s) had to agree to the conditions of the project. The decision not to participate therefore, could be made by youth and/or parent(s).

Participants were randomly assigned to the three alternative dispositions. The results of the random assignment were: 173 youths assigned to diversion

without services (release to parent(s); 164 assigned to diversion with services (Community Service and Restitution Program); and 150 assigned to traditional juvenile justice processing (petition to court).

Project participants tended to be Caucasian (75.2%) and approximately 14.2 years of age. Nearly three-fifths of the youth were males (58.7%). The average grade level completed at the time of intake was 7.7.

Approximately 37% of the participants lived in two parent households, while another 40% lived with a single parent. Nearly seventy percent of the referral offenses were for property crimes (i.e., breaking and entering, larceny).

The diversion project in Southeast was in operation for approximately 27 months. During the span of the project, 240 youths were referred. The referrals were provided by juvenile court intake division. Of the 240 eligible referrals received by the project, 219 volunteered to participate.

As in the other sites, participants were randomly assigned to dispositions. This resulted in 72 youths assigned to diversion without services; 73 youths in diversion with services (Youth Skills Training); and 74 receiving traditional juvenile justice processing (petition to court). Project participants tended to be white (86.7%), male (85.8%), and approximately 14.2

years of age. The average grade level completed at the time of intake was 7.6. Approximately 57% of the participants lived with both natural parents, while another 38% lived with a single parent. Over seventy-five percent of the referral offenses were for property crimes (i.e., breaking and entering, larceny).

In Rural, the diversion project was in operation for approximately 28 months. 47 youths were referred during the span of the project. The referrals were provided by the juvenile court intake divisions in three counties. Of the 47 eligible referrals received, 42 volunteered to participate. Random assignment to disposition was used resulting in 13 participants in the diversion without services disposition; 14 in diversion with services (Youth Skills and Training Program); and 15 in the traditional juvenile justice processing (petition to court) disposition.

All project participants in Rural were Caucasian, and approximately 15.3 years of age. The majority were male (76%) and the majority also lived with both parents (66.5%). Participants had completed an average of 8.4 school grades. Over three-quarters (78.6%) of the referral offenses were for property crimes (i.e., breaking and entering, larceny).

Design

The experimental design for the project was a modified Pretest - Posttest Control Group (Campbell & Stanley, 1967; Davidson & Johnson, 1984). It was a randomized experiment comprised of four sites (location) by three groups (disposition) across three time periods (baseline, post, and follow-up). Participants in each site were randomly assigned to condition (Figure 1).

FIGURE 1

*EXPERIMENTAL DESIGN

Condition	Baseline	Post	Follow-Up
Diversion w/o Service (Outright Release)	X	X	X

Diversion w/Service (Service varied by site)	X	X	X

Court Processing	X	X	X

* Design replicated in each site

There were three alternative dispositions; diversion without services (outright release to parents),

diversion with services (receipt of intervention program) and traditional juvenile justice processing (petitioned to court). The actual program implemented for those assigned to the diversion with service condition varied by site. In Metro, youth participated in the Family Support and Education (FSE) Program. In Southwest, the program provided was the Community Service and Restitution (CSR). In both Southeast and Rural, youth participated in the Youth Skills and Training (YST) Program. The specific program philosophy, objectives and procedures of each project will be explained in more detail under the Alternative Dispositions section.

There were three time periods for which measures were obtained from the youth participants: pre, post, and follow-up. The pre-project assessment period (baseline) covered 12 months prior to the referral offense, post assessment period included 16 weeks from the intake date; and the follow-up assessment period covered 8 months from the end of the post assessment period.

Procedures

Youth were referred to the project from their respective referrals source(s). Each source, upon receiving the preliminary complaint report, reviewed it

to determine if the youth met eligibility criteria. If so, the youth was referred to a Diversion Project Intake worker who verified that the youth met eligibility criteria. If any of the initial criteria were not met, the youth's application was returned for traditional court processing. For the youth who met eligibility criteria, the Intake Worker contacted the youth's parent(s) to set up the initial intake/pre interview. This first contact, on the average across the four sites, occurred within 6 days of referral to the project.

The Treatment Conditions: Alternative Dispositions

Once participation was agreed to, the youth and parents were interviewed either at home or in the project office. During the intake interview, demographic information was obtained and a self-reported delinquency measure was administered. After collection of this information, the youth was randomly assigned to one of three dispositions. The Intake Worker opened an envelope (stratified by sex) that contained a slip of paper that had the disposition assignment written on it. These envelopes were prepared by research staff and the Intake Worker was not aware of the assignment until after the envelope was opened. The opened random assignment envelope was

then attached to the pre-assessment package. The procedures for each disposition are presented below.

Traditional Juvenile Justice Processing

Davidson & Johnson (1984, p.29) describe the treatment-as-usual control group as follows:

For youths assigned to the juvenile court condition, it was explained that the youth's application would be returned to the police for petitioning to court. The Intake Worker submitted a form to the referring officer that designated those youth that needed to be formally handled by the juvenile system. It was explained to both the youth and parent(s) that they would be asked to complete two additional interviews for which the youth would be paid \$5 each."

Diversion without Services

In this disposition, youth were simply released to their parent(s) without further intervention by the police or court for the referring offense. According to labeling theorists, this condition should facilitate the least amount of labeling, as the youth has no reason based upon the current offense to have further contact with either the court or service personnel. All referring (instant) charges were therefore dismissed. It was explained to both the youth and parent that they would have two additional interview contacts, 4 months later (post) and 8 months later (follow-up) with the Intake Worker. In addition, the youth was told that s/he would be paid five dollars for completion of each of these interviews.

Diversion with Services

The actual program associated with this condition varied by site. Metro implemented the Family Support and Education Project; Southwest-- the Community Service and Restitution Program; and in Southeast and Rural-- the Youth Skills Training Program was implemented. The following is a more detailed explanation of these programs.

Family Support and Education--Metro. In the original study, Davidson & Johnson (1984, p.20) describe this program as follows:

The Family Support and Education model combined the techniques of child advocacy (Davidson and Rapp, 1976; Melton, 1982) and behavioral contracting (Stuart, 1971; Karoly & Stefan, 1982; Patterson, 1982). The goal of the program was to develop family advocacy and family management skills, with the parent(s) of the youth being the primary focus of the intervention.

This strategy can be seen as one "empowering" the family (Rappaport, 1980). Rather than have the families become dependent upon a perceived "expert," the program sought to facilitate the development of advocacy and management skills by the family members themselves. Thus, the parent (s) were the focus of intervention. The Family-Worker first provided education and skill training in methods of management, and then encouraged the parent(s) to pursue courses of action to fit within the family's values and lifestyle.

The initial role of the family worker was to:

...perform a needs assessment...[subsequently]... the Family-Worker and family agreed upon a plan of action utilizing the techniques of contracting and/or advocacy. These procedures were conducted within the family's home (direct service was not provided in the office)" During the active phase, the family worker was directly involved with the family for a period of 12 weeks. During the final four weeks (the follow-up phase) the family conducted both contracting and advocacy efforts on their own without the assistance of the Family Workers. Each family spent a total of sixteen weeks in the service program and was provided a minimum of three hours a week during the first 12 weeks and a maximum of one and one-half hours a week during the remaining 4 weeks of service (Davidson & Johnson, 1984, p. 30-31).

Community Service and Restitution Program--

Southwest. The description of this program is as follows:

This program combined arbitration of a formal complaint with community service placements. The arbitration process focused on resolving the conflict between the complainant and the youth to their mutual satisfaction, and on facilitating victim restitution when appropriate...Once the arbitration meeting was concluded the youth and parent(s) entered the second component of the program.

The second major component of the program was the placement of the youth in volunteer service positions within existing community organizations. The community service activities focused on skill building, active involvement in community organizations and social restitution...The youth performed community service work for three to four hours per week for a duration of 12 weeks...

Once the youth was placed into a community service agency, project staff monitored the quantity and quality of the youth's work. In order to accomplish this, the project staff maintained regularly scheduled contacts with the youth and the project liaison. These contacts were either via phone or face to face. In addition, the staff recruited and maintained community service placements (Davidson & Johnson, 1984, p. 69-70).

Youth Skills Training Program--Southeast & Rural.

The description of this program is as follows:

This program model incorporated social learning techniques with a focus on general and specific life skills. Communication skills and the use of community resources were taught to every youth participating in the program. First, in the communication area, each youth was taught to recognize effective and ineffective ways of communicating with authority figures in problem situations. Role playing was used to give the youth practice in using effective communications skills in four situations: making a request, responding to a request or demand, discussing a problem, and responding to a confrontation. Using community resources was the second required skill area. By using the community resource manual (this manual was compiled by staff) the Youth-Worker was able to introduce the youth to a broad range of resources available in the community. Some of the resources were the library, youth groups, social services, job clubs, recreational centers. The youth was encouraged to phone two or more resources and gather additional information about the resource. The Youth-Worker helped the young person to plan the questions to be asked, and if necessary, role plays were utilized prior to making the actual call.

In addition, to the required skill areas, each youth chose one or more specific life skill areas for concentration during his/her association with the program. These optional skill areas were employment and job seeking skills, study skills, and/or budgeting-consumerism. Each curriculum was individually tailored to fit the needs of the youth. The youth was to have a total of 24 contacts with the program service staff. (Davidson & Johnson, 1984, p.104-105)

Instrumentation

This section presents the measures developed in the initial study, their items, item-total correlations, and Cronbach's alphas. The data for all of the measures was collected as scale scores, which did not facilitate reanalysis of the scales. Thus,

Davidson and Johnson's (1984) original measures will be used and their properties will be reported here.

Demographic Characteristics

In this study, descriptive information was collected by the Intake Worker at the initial meeting with the youth. These were collected only at the baseline assessment period. Variables measured included date of birth, educational status, employment status, educational status of parent(s), employment status of parents, gender and race. Table 2 details the measures, time periods, and sites in which they were collected.

Delinquent Behavior

Information was obtained about the delinquent behavior of the youth prior, during, and after program involvement. This was done using a measure of Official Delinquency obtained from police and court archival data as well as a Self-Report Delinquency Measure.

However, there has been as long and fervent debate about what is actually assessed by self-reported delinquency measures (See Hindelang, Hirschi, & Weiss, 1981 for a more in-depth discussion). Furthermore, it could be argued that in a study of self-fulfilling prophecy that it is actually more appropriate to use official measures of delinquency. In research examining the process of self-fulfilling prophecy,

attention has focused upon examining how one's expectations of a person affects how one treats that person (Brophy & Good, 1970; Trujillo, 1986). Though there are other issues with official delinquency, it certainly measures the youth's contact and treatment by the juvenile justice system. In general, youth could be released, referred to services, or referred to court based upon someone's evaluation of the youth. Thus, it seemed totally inappropriate to examine the effect of labeling using a measure that reflected in part, how potential labelers treated the youth.

The Official Delinquency Instrument attempted to measure youth involvement in unlawful activities. The information for this instrument was obtained using police and court archival data. The Law Enforcement Information Network was searched for all youth by researchers "blind" to the disposition of the youth.

The data collected from the police were: 1) number of police contacts for delinquency; 2) average seriousness of police contacts; 3) most serious police disposition and; 4) number of times filed to court. The data collected from the juvenile court were: 1) number of court petitions; 2) average seriousness of court offenses/charges; 3) most serious court disposition and; 4) number of days out of home. The seriousness of police and court offenses was assessed using the

following scale: 1 = status offenses; 2 = misdemeanor offenses and; 3 = felony offenses. Dispositions at the police level were: 1 = dismissed or warned/released; 2 = referred to non-court agency; 3 = petitioned to court. Dispositions at the court level were coded; 1 = dismissed; 2 = refer to program at court intake; 3 = probation; 4 = probation, residential; 5 = waived to adult court.

Rationally, each of these items represented individual information, and varying scales of measurement were used for a number of the items. High correlations existed among variables collected from the same source (police or court records). Moderate correlations existed among variables which were collected from differing sources. Because this study was a reanalysis of data in part to examine the process of experimental results, a decision was made to use the Official Delinquency measure which evidenced statistically significant effects in the original Davidson & Johnson study (1984). Therefore, the number of court petitions served as the measure of Official Delinquency.

Labeling

A major variable of interest was that of labeling. This study was particularly concerned with the interim effects of labeling from others upon self-labeling and

the relationship between labeling, other theorized intervening variables, and subsequent delinquent behavior. It seemed insufficient to uncover empirical evidence that labeling is related to subsequent delinquent behavior. Such knowledge suggests that labeling has almost a magical effect; one is labeled a particular character and immediately becomes that character. Lacking here is acknowledgement of the probable delay between acquiring a label and acting upon it. Also missing is some description of the perceptions of labelers, and the response of the youth which leads to further deviant behavior. This suggests an observable sequence of perceptions and actions which will be the focus of these analyses.

Several scales measuring aspects of labeling were collected at both post and follow-up intervals. The data was only available in scale scores and not in scores for individual items. Thus, this section describes the labeling measures derived from the original study.

The Label Encapsulation measure examined the extent to which the youth felt negatively labeled from others. Recall that Klein (1986) felt that youth might be "encapsulated," or categorized into a label by other people. Label Encapsulation, or Labeling from Other's, included the Other's Awareness of Delinquency Scale and

the Expected Delinquency Scale. In the Other's Awareness of Delinquency measure, the youth was asked how many people in a number of areas in their lives (the court, people living in the youth's home, relatives not living with the youth, close friends, school personnel) knew about their official offense. The youth could respond to each of the six items by telling how many people in each area, from zero to 99, they thought knew about their contact with the police and/or court. Thus, this was a measure of the youth's report of other's awareness of their delinquency. This item had a standardized alpha of .41. The items, their corrected item-total correlations, and their alphas are presented in Table 4.

The Expected Delinquency Scale asked the youth to report how many people (on a scale of zero to 99) they thought expected more delinquency from them. Similar to the measure of Other's Awareness of Delinquency, this scale assessed the youth's perception of labeling from others. The empirical information for this scale is also contained in Table 4.

Youth were also asked about the degree to which they thought others ascribed negative labels to them. The Perceived Reputation measure consisted of nine semantic- differential items. The youth could respond on a scale from one to seven as to whether they were

perceived as: 1)good or bad; 2)law-abiding or delinquent; 3)troublesome or cooperative. The youth was asked to describe how they thought they were perceived on each of these three dimensions by three different groups of people; their parents, their teachers, and their friends. These nine items were combined into a scale having an alpha of .87. Further scale information is reported in Table 4.

The degree to which the youth accepted labels from others is an important aspect of this study and is also known as Label Acceptance or Self-Labeling (Davidson & Johnson, 1984; Klein, 1986). The Self-Perception scale served as a measure of the youth's ascription of negative labels to his/herself. The three items were also seven-point semantic-differential items which asked if the youth perceived themselves as troublesome/cooperative, law abiding/delinquent, and good/bad. The internal consistency for these items was .81. More detailed information is offered in Table 5.

Site-Specific Outcome Measures

This section presents the site-specific outcome measures which were used to look at effects of the individual intervention programs. Detailed information about these scales is available in Table 6.

Family Support and Education. Each site had its own set of such measures administered at both post and

follow-up intervals. In Metro, a measure was administered to examine if the program had accomplished its interim goal of improving Family Relationships. The Family Relationships Scale consisted of 8 items measuring knowledge of activities, time spent with parents, and subjective ratings of parental relationships.

Community Service and Restitution. Outcome variables specific to Southwest were included in the Community Service and Restitution Outcome Measure. The subscales examined pro-social attitudes. Youth were given statements to which they could report their agreement on a 5 point scale from strongly agree to strongly disagree. This scale was administered at post and follow-up intervals.

Youth Skills Training. The outcome variable specific to Southeast and Rural was Perception of Competence. Youth were asked to rate their skills in a number of areas relative to other people. They could respond on a scale of 1 to 5, where 1 meant that the youth estimated his/her skill in that area to be worse than almost all people their age, 2=worse than over half the people their age, 3=the same as other people their age, 4=better than over half the people their age and 5=better than almost all the people their age. This was measured at post and follow-up intervals.

Table 2
The Measures

<u>Measure</u>	<u>Pre</u>	<u>Post</u>	<u>F'up</u>	<u>*Site</u>
Demographics	X			All
Self-Reported Delinquency	X	X	X	All
Official Delinquency	X	X	X	All
<u>Labeling from Others</u> <u>(Label Encapsulation)</u>				
Other's Awareness of Delinquency		X	X	All
Expected Delinquency		X	X	All
Perceived Reputation		X	X	All
<u>Self-Labeling</u> <u>(Label Acceptance)</u>				
Self-Perception		X	X	All
<u>Site Specific Outcome</u> <u>Measures</u>				
Family Relationships		X	X	M
Pro-social Attitudes		X	X	SW
Perception of Competence		X	X	SE, R

*M=Metro, SW=Southwest, SE=Southeast, R=Rural

Table 3**Intercorrelations of Official Delinquency Items**

Item	Police Off.	Police Ser.	Police Disp.	Police Pet.	Court Pet.	Court Ser.	Court Disp.	Days out of home
Police Off.	1.00							
Police Ser.	.924	1.00						
Police Disp.	.837	.822	1.00					
Police Pet.	.727	.703	.955	1.00				
Court Pet.	.568	.536	.679	.664	1.00			
Court Ser.	.524	.571	.638	.620	.922	1.00		
Court Disp.	.494	.523	.601	.605	.845	.866	1.00	
Days out of home	.238	.244	.282	.301	.379	.405	.520	1.00

Table 4

Label Encapsulation Instruments - Psychometric Properties

OTHER'S AWARENESS OF DELINQUENCY STAND. ALPHA - .41

6 items inquiring about the number of people who know about police offense(s).

<u>Items</u>	<u>Corrected Item- Total Correlations</u>
Court	.16
People living in youth's house	.03
Relatives (not living with youth)	.25
Close friends	.28
School Personnel	.26
Neighbors	.26

EXPECTED DELINQUENCY STAND. ALPHA - .45

3 items examining number of people who expect the youth will get into trouble in the future.

<u>Items</u>	<u>Corrected Item- Total Correlations</u>
People living in youth's house	.23
Close friends	.33
School Personnel	.30

Table 4 - cont'd

PERCEIVED REPUTATION

STAND. ALPHA - .81

Nine 7-point semantic differential items

<u>Items</u>	<u>Corrected Item- Total Correlations</u>
*Parents: Troublesome - cooperative	.40
Parents: Law abiding - delinquent	.61
Parents: Good - Bad	.68
*Teachers: Troublesome - cooperative	.50
Teachers: Law abiding - delinquent	.68
Teachers: Good - Bad	.71
*Friends: Troublesome - cooperative	.45
Friends: Law abiding - delinquent	.70
Friends: Good - bad	.63

*These items were reversed prior to analysis

Table 5
Label Acceptance - Psychometric Properties

SELF-PERCEPTION

STAND. ALPHA - .81

3 items measuring the youth's perceptions of self

<u>Items</u>	<u>Corrected Item- Total Correlations</u>
*Self: Troublesome - cooperative	.67
Self: law abiding - delinquent	.62
Self: good - bad	.68

***This item was reversed prior to analysis**

Table 6

Site-Specific Measures - Psychometric Properties

Metro - Family Support and Education

FAMILY RELATIONSHIPS

STAND. ALPHA - .72

5 items assessing the nature of family interaction on a 5 point scale.

<u>Items</u>	<u>Corrected Item- Total Correlations</u>
youth and parents getting along better	.38
parents help youth in skill/activitiy	.54
frequency in which youth & parents talk	.66
improvement in relationship among entire family	.40
frequency with which family spends time together	.41

Southwest - Community Service and Restitution

PROSOCIAL BELIEFS

STAND. ALPHA - .61

3 items examining acceptance of respect for law and police on 5 point scale of strongly agree to strongly disagree

<u>Items</u>	<u>Corrected Item- Total Correlations</u>
*alright to get around law if possible	.46
have a lot of respect for police	.34
*to have nice things have to break law	.42

*These items were reversed prior to analysis

Table 6 - cont'd

Southeast and Rural - Youth Skills Training**PERCEPTION OF COMPETENCE**

STAND. ALPHA - .85

21 items examining youth's assessment of skills relative
other people on 5-pt. scale from worse than others to
better than others

<u>Items</u>	<u>Corrected Item- Total Correlations</u>
write a resume	.45
complete job application	.54
participate in job interview	.54
find a job	.36
write a check	.52
save money	.21
balance checkbook	.41
find a book	.40
use dictionary to look up word	.46
find tutor for school	.41
use local public transportation	.32
use the library	.44
find help for substance abuse	.39
talk to parents	.32
stay out of trouble	.44
talk to a policeman	.40
ask to stay out late	.39
use advertisements	.46
understand a lease	.51
return merchandise	.44

Analyses

The research questions presented concerned the "how" of labeling effects. Examining the process and structure gives further insight into the "black box" of how labeling works. Specifically, analysis was dedicated to examining the labeling variables, and their direct and indirect effects upon behavior. This research sought to investigate the relationship between labeling from others and self-labeling, and the relationship between labeling and delinquent behavior. Additionally, there was interest in the sequence of variables prior and subsequent to labeling and delinquent behavior. All of these questions were addressed in one integrative model.

Path analysis is especially appropriate for theory-based tests where some knowledge is known of the direction of the effects. This provided the opportunity to examine the effect of the program on a number of variables as well as to examine the sequential nature of labeling.

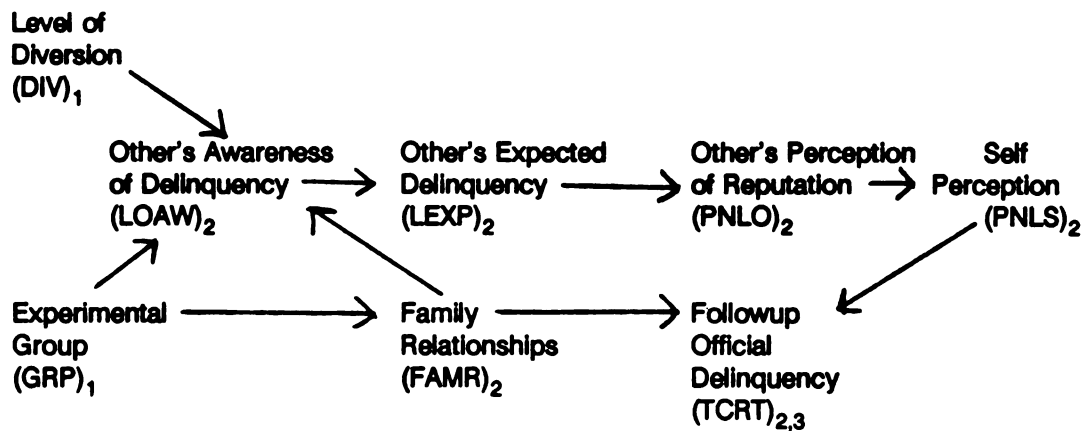
A path-analytic model was developed for each site since the labeling and delinquent behavior measures were identical in all four sites but, the actual program differed. There was a programmatic variable that was specific to each site which was included in

the analysis of the structural relationship between labeling and behavior. Separate path-analytic models were developed for each, which included the participants for that site (across disposition) and added the site-specific variable to the model. The model for the Metro site is contained in Figure 2.

Figure 2

Theoretical Model

Metro - Family Support and Education



According to labeling theory, actual delinquent behavior often has little or no effect upon how an adolescent is labeled. It would have been desirable to have measures of delinquency prior to the assignment of labels to observe the influence of previous behavior upon labeling. However, the baseline measure of

official delinquency, court contacts, was confounded with experimental group. This was construed as positive given the experimental nature of this research; baseline court contacts actually served as manipulation check. Recall that youth were assigned to one of three dispositions: outright release; the service program or; court processing. At the baseline interval only those in the court processing condition were to have court contacts, the measure of official delinquency. At the post and follow-up interval, participants in the other two conditions might have had court contacts for offenses committed after entree into the research program. Because baseline court contact was strongly related to condition, as it should have been, this variable could not be used to assess the amount of labeling attributable to previous delinquent behavior.

In this model, Level of Diversion and Experimental Group were both variables that were manipulated experimentally. Experimental Group was ordered so that the highest level of this variable represented assignment to the intervention program, the second level was composed of both those who were released and those who underwent court adjudication. This variable was ordered in this manner to examine program effects. Those who received program intervention should have

less official and self-report delinquency than either those who were merely released or those who further penetrated the justice system. The experimental interventions might accomplish this by decreasing negative labeling.

Level of Diversion was the same variable as Experimental Group recoded so that greatest amount of diversion from court or service personnel occurred in the outright release condition. Moderate diversion was received by those who were diverted from court but not services. Court adjudication was the lowest level of diversion. Higher diversion, in the labeling theoretical model is normally thought to result in decreased numbers of people being aware of delinquent act. In the model for this site, the converse was expected. A detailed explanation will be presented later.

Other's Awareness of Delinquency was thought to be positively related to Expected Delinquency, though not highly. This was expected to be true because it is possible that some people can know about delinquency and not anticipate further such acts. Increased Expected Delinquency was thought to result in increased delinquent perceptions of the youth from other people (Perceived Reputation). Normally, according to labeling theory, greater delinquent perceptions from

others will probably increase delinquent self-perception on the part of the youth. It is at this point that self-fulfilling prophecy becomes an issue. Theoretically, youths who have been viewed by others as a delinquent, begin to view themselves as delinquent. Deviant behavior becomes an available avenue to achieve one's goals as opposed to using legitimate means for goal achievement. If others had not classified the youth and then interacted with the young person as if the adolescent was a delinquent, the young person would have been less likely to behave accordingly.

The model for the Metro site differed somewhat from traditional labeling theory in that it added a variable measured in the Family Support and Education Outcome measure, namely the Family Relationships Scale. The intervention program was specifically designed to affect the relationship between the youth and the parent, as well as increase parental knowledge of their child's activities. Therefore, Experimental Group should be positively related to Family Relationship. This relationship should be relatively high. Only a small to moderate relationship was expected with Level of Diversion, since the intervention program was not the highest level of diversion.

In this model, some hypothesized relationships were

expected to be the opposite of their anticipated direction in traditional labeling theory. The diversion with services group was expected to moderate the typical negative relationship thought to exist between diversion and Other's Awareness of Delinquency. In this case, diversion would result in somewhat greater awareness of delinquency. This was because preliminary analyses from the original study suggested that the intervention group was significantly higher than the other groups on Other's Awareness of Delinquency (Davidson & Johnson, 1984). Possibly by improving family communication and interaction, parents become more aware of their child's actions.

A positive relationship was still anticipated between the number of people aware of delinquency and the number of people expecting future delinquency. Also, a positive relationship was still anticipated between Expected Delinquency and Perceived Negative Reputation. In this model, it was expected that Family Relationship would have a direct effect upon Self-Perceptions. Parents knowledgeable of youth's activities would exercise more direct intervention with the youth and exhibit better family relationships. Positive family relationships were hypothesized to be negatively related to delinquent self-perceptions on the part of the youth. A direct path from Family

Relationships to Official Delinquency and Self-Report Delinquency was included to test which is stronger, the direct or indirect effect upon delinquency.

A strength of the design of the original study is its longitudinal nature. Longitudinal designs are especially informative in causal modelling for they can give some sense as to whether one variable actually has a temporal effect on another. An ideal longitudinal model would use a design in which each exogenous or causal variable would be measured at a time preceding the endogenous variable it is thought to affect. This would mean that each variable would be measured at a different time point. This is the often infeasible and uneconomical ideal. However, information can be gained with this model which included measurements at three time points. At the baseline assessment, demographic characteristics, Level of Diversion and Experimental Group were the variables available. Labeling variables, program variables and other intervening variables were measured at both 4 months into the program and 8 months into the program. In all of the models presented here, the baseline measure of Level of Diversion, the exogenous variables, was utilized. This is indicated in the model by a subscript "1," that these variables were observed at baseline or Time 1. Post assessments (4 month) were used for the labeling

and program variables, symbolized by subscript "2" for Time 2. The outcome variable of official delinquency was measured by combined post and follow-up court contacts. Post and followup measurements were combined to observe the total amount of court contacts for delinquent acts committed during and after program involvement. These combined measures will be referred to as "followup" delinquency although they combine the post and followup time periods. This variable was collected via court archival data. It was presumed that the reliability of this measure was 1.00.

(Test/retest reliability would have been an inappropriate assessment of reliability because change was anticipated during program involvement.

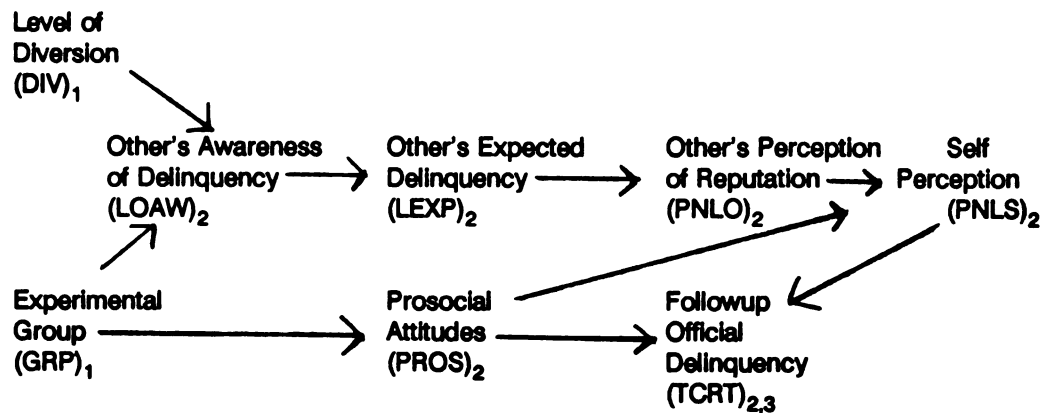
Internal consistency was not applicable with a one-item index retrieved from an archival source.) This official measure of delinquent behavior (designated "2,3" for Time) was the endogenous variable in the causal chain, the outcome variable.

A site-specific structural model of labeling was also be investigated for Southwest. The site-specific model included only the participants in Southwest and analyzed the labeling and behavioral variables across site, in addition to the outcome variables measured exclusively in the Southwest site. Figure 3 details the theoretical model.

Figure 3

Theoretical Model

Southwest - Community Service and Restitution

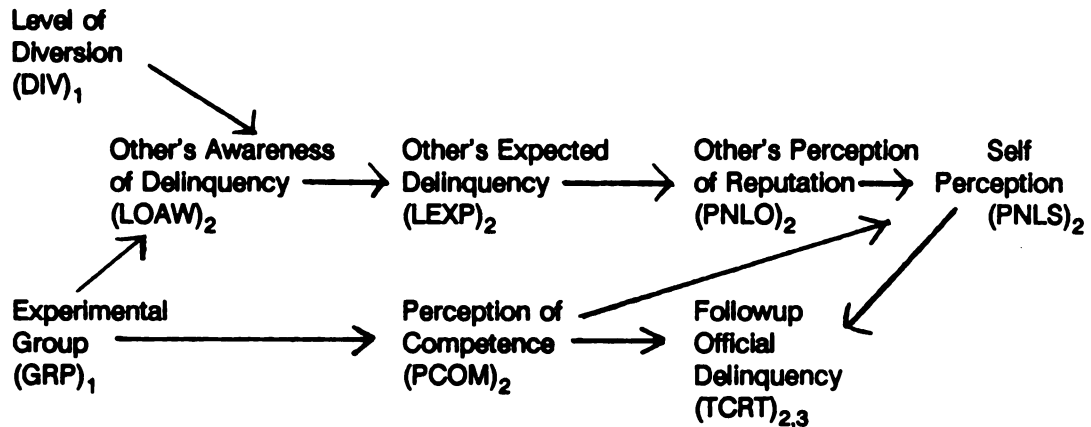


This model was similar to the traditional model of labeling in a number of ways. The hypothesis was that Diversion decreases Other's Awareness of Delinquency, which is positively related to Expected Delinquency. Expected Delinquency increases negative perceptions of reputation, which leads to the youth having more delinquent self-perceptions and delinquent behavior. In Southwest, another variable was available to add to the model namely, Prosocial Attitudes. It was expected that with the espousal of prosocial attitudes (the degree to which one accepts societal values of right

and wrong), one does not view delinquent behavior as a viable method of goal attainment. It is possible that Pro-social Attitudes may affect delinquency directly or indirectly through self-perceptions such that it affects one's perceptions of self and decreases delinquency in this manner. The model in this site is a test of an alternative to labeling theory proposed by Hirschi (1969) who feels that delinquent acts are the result of a lack of attachment to society and societal values.

The Southeast and Rural sites were combined in a path analytic model. The Youth Skills Training Program was implemented for the Diversion with Services Disposition in both sites. The number of program participants in Rural was very small (42 participants), and combining these sites for this analysis resulted in a larger, more acceptable sample size of 261 youth. Only the participants in Southeast and Rural were included for this model and a variable measured exclusively in these sites were added. The theoretical model is presented in Figure 4.

Figure 4
Theoretical Model
Rural - Youth Skills Training



This model was theorized to operate similarly to the others in terms of the relationships between Other's Awareness of Delinquency, Expected Delinquency, Perceived Negative Reputation, Delinquent Self-Perceptions, and Delinquent Behavior. This model allowed addition of the variable, Perception of Competence. Perceived Competence in a number of skill areas is expected to be related to viewing possible areas of opportunity and/or achievement other than delinquent activity. Consequently, delinquent self-perceptions should be affected, thus, decreasing subsequent delinquent behavior. It is hypothesized that the indirect effect of this variable through

self-perceptions will be stronger than the direct path from Perception of Competence to delinquency.

CHAPTER 4 - RESULTS

The three path models examining each intervention program and labeling theory were analyzed using Path, a computer program developed by John Hunter for testing path-analytical models (1986). Mainframe and micro-computer versions were available. The micro-version was used because it included tests for model-fit. Also, it was more "user-friendly" than other programs designed to test structural models.

Pearson correlation matrices were computed for each site using a subprogram of SPSS-X (1988). These matrices were downloaded from the mainframe computer and then corrected for attenuation using a routine in the Path program. Correction for attenuation estimates what the correlations between the variables would have been had there been no error of measurement. The results are estimates of the "true" correlations based upon classical test theory (Ghiselli, Campbell and Zedeck, 1981). The corrected matrices were utilized for model testing.

Path estimates the path coefficients using ordinary least squares regression, in other words

multiple regression. It also computes the sum-of-squared deviations between the correlations that were actually observed and the correlations that were reproduced from the estimated path coefficients. The program uses these to compute a Chi-Square test of goodness-of-fit (Hunter, 1986). Usually, a model with better fit should have fewer discrepancies between observed and reproduced correlations, and consequently should have a smaller Chi-Square statistic. Parsimony is also desirable in that a model with fewer variables and/or paths with only a slightly increased Chi-Square is preferable to a model with more variables and/or paths with a slightly smaller Chi-Square.

The initial theoretical models for each site were evaluated by looking at the path coefficients and the overall Chi-Square. The interpretation of path coefficients is similar to the interpretation of beta weights in multiple regression: generally they range from -1.00 to +1.00; larger numbers represent a stronger relationship and smaller numbers a weaker one; the relationship may be either positive or negative. The convention used in this data was that in most cases, path coefficients less than .20 were regarded as close to zero. At times coefficients less than .20 were included when they were of particular theoretical interest. In most cases, when the indirect path

coefficient was larger than the direct path coefficients, the path(s) with the smaller coefficient(s) were deleted (again, unless they were of particular theoretical interest). The reader will see examples of this where it will be explained further. The following sections present the correlation matrices, and the model for each site intervention program.

Metro: The Family Support and Education Model

As explained before, a correlation matrix was computed for each intervention program. The matrix was then corrected for attenuation. Both the raw and corrected matrices are presented in Table 7. The relationships between the variables will be discussed in the context of the path models since this provides a better framework for examining them.

In the models for each site, the variables in the models were in one of three categories. The first type were the program evaluation variables. These variables were helpful in examining the effect of the program primarily upon delinquency and secondly upon labeling. Group and Family Relationships (the site specific outcome variable) fell under this category. Figure 5 illustrates the different types of variables. It was expected that being in the intervention group would

increase the site specific outcome which would in turn decrease delinquency. The second type of variables were labeling variables. This category included Level of Diversion, Other's Awareness of Delinquency, Expected Delinquency, Perceived Negative Reputation, and Self-Perception. The outcome measure of adolescent behavior, was combined post and follow-up Official Delinquency, measured by court contacts. The results section for each of the sites was organized based upon the different types of variables in the model. The variables in the model are considered in this order.

The Initial Model

In the initial model, all of the variables and a number of direct and indirect paths were included, some of which were not congruent with labeling theory. These variables and paths were included as tests of alternative hypotheses. As stated earlier, by examining the path coefficients and overall Chi-Square, and keeping the underlying theory in mind, this model was revised to a more concise model. The path coefficients of the initial model, which had a Chi-Square of 0.05 (df = 1), are presented in Table 8. (The table of coefficients is presented as opposed to a figure because the large number of direct and indirect paths might be jumbled and more difficult to follow.)

This initial model was presented to acquaint the

reader with the rationale for deleting certain variables and paths from the final model.

Program Effects. Program effects were examined in part by looking at the paths from the variables, Experimental Group and Family Relationships. Because the interim objective of the experimental intervention was to enhance family relationships, it was expected that there would be a direct path from Group to Family Relationships. The path coefficient was a small .07. Recall that Group was binary-coded so that the lower level was the non-intervention group (combined release and court group), and the higher level was the intervention group (the Family Support and Education program). It seemed that being in the intervention group did not result in an outstanding increase in positive family relationships over the other treatment groups. This finding should not be interpreted as meaning that the youth in the program did not actually receive services. In the initial report, Davidson and Johnson (1984) conducted several analyses to assess if their naturalistic experiment had been successfully implemented. They found that among the participant families: an average of 35 hours of direct service was received; 95% had completed at least one behavioral contract among family members; and 98% had made advocacy attempts at least once. All of which were

goals of the program. However, the program did not create strong differences between the groups in family relationships. The finding here is a replication of Davidson and Johnson's results (1984).

The plausible alternative hypothesis was that the intervention affected recidivism (acts of delinquency committed at the follow-up interval) without affecting family relationships. The direct path coefficient of .12 with follow-up Official Delinquency reveals that Group had some direct influence upon official delinquency.

In terms of labeling, Group did not have a strong relationship with the labeling variables. It seemed that simply being in the experimental group did not affect labeling. Group was maintained in the final model with the paths to Official Delinquency and Family Relationships included.

Family Relationships (FAMR) did have a direct effect upon one of the labeling variables, Expected Delinquency (LEXP). The path coefficient between these variables was $-.37$ indicating that positive family relationships was related to decreased numbers of people expecting future delinquency from the youth. This variable seemed to have a larger indirect effect upon the labeling variables following Expected Delinquency, therefore the direct paths were deleted.

The path between Family Relationships and official delinquency was unremarkable (.10) Family Relationships was retained as a variable as well as the path to Expected Delinquency.

Labeling. An important determinant of labeling was hypothesized to be the amount of contact with criminal justice or service personnel, measured by the variable, Level of Diversion. Outright release, according to labeling theory, should result in less perceived labeling because the young person does not come in contact with as many sources who could potentially label the youth. In this model, level of diversion was unrelated to labeling and unrelated to recidivism, the youth's commission of more illegal acts. Those who were diverted from justice and service personnel did not seem to report lesser labeling and delinquent behavior than those who experienced lower levels of diversion. The diversion variable was eliminated from the final model.

The investigation then turned to the sequence of labeling. In examining the path coefficients between the labeling variables, the data suggested that they were sequential. Other's Awareness of Delinquency was more highly correlated with Expected Delinquency, the variable immediately following it, than any of the others. Expected Delinquency was more highly

correlated with Perceived Negative Reputation, the variable immediately following it, than with Self-Perception. Perceived Negative Reputation was the variable most highly correlated with Self-Perceptions, its immediate successor. For variables that were not neighboring each other, the indirect paths were stronger than the direct paths, the majority of the time. For example, Expected Delinquency was hypothesized to influence Self-Perception via its impact upon Perceived Negative Reputation; i.e. one who expects future delinquency from a child, attributes a negative reputation to that child which the child then attributes to self. If this was true, then the indirect path coefficient between Expected Delinquency and Self-Perception should have been larger than the direct coefficient. In fact the data demonstrated this to be true. The direct path coefficient from Expected Delinquency to Self-Perception was .15. The indirect path coefficient between Expected Delinquency and Self-Perception was .44 . (The path coefficient between Expected Delinquency and Perceived Negative Reputation was .74, and the coefficient between Perceived Negative Reputation and Self-Perception was .59. To obtain the indirect coefficient one takes the product of all of the path coefficients between the two variables in their respective order: $.74 \times .59 = .44$)

Here, the indirect link was stronger and the direct link was deleted.

In the case of Other's Awareness of Delinquency and Perceived Negative Reputation, another issue emerged. The direct path coefficient between these two variables was a negative value, $-.37$, while the indirect coefficient via Expected Delinquency was a positive value, $+.46$ ($.62 \times .74 = .46$). Though the indirect effect was larger, the direct effect is noteworthy because the the effects were in opposite directions. It was interpreted as meaning that the indirect effect of Other's Awareness of Delinquency increased Expected Delinquency, which in turn increased other's negative perceptions of the youth. However, it seemed that when others were aware of delinquency without expecting future delinquency, other's negative perceptions of the youth was decreased.

Therefore in large part, the sequence of the labeling variables seemed appropriate. The variables were more highly correlated with their immediate neighbor variables than variables that were more distant in the process. In general, between variables that were not neighboring each other, the indirect links were stronger than the direct links. However, in the case of awareness of delinquency, its direct effect of decreasing perceived negative reputation was the

opposite of its indirect effect via expected delinquency of increasing negative reputation.

Outcome. In examining factors related to official delinquency, it was found that other's perceptions were more strongly related to official delinquency than the youth's self-perceptions. Expected delinquency had a coefficient of .23 with official delinquency and Other's Awareness of Delinquency had a coefficient of -.19 with official delinquency. (The opposite direction of the effects will be addressed momentarily.) Self-perceptions had a smaller coefficient of .13 with official delinquency.

In the path models, other's perceptions were more strongly related to behavior, as measured by official delinquency, than the youth's own perceptions. This was interpreted as meaning that other's perceptions affected the youth's self-perceptions and the youth's behavior. This is in stark contrast to the idea that other's perceptions affect behavior only through the youth's perceptions. The idea that other's perceptions affect both youth perceptions and behavior is not a novel idea. Cooper and Good's model (1983) included self-perceptions and behavior as outcomes that are influenced by teacher expectations and interaction with the teacher. The perceptions of significant people can influence how the youth responds. This is much more of

an ecological explanation of how adolescent behavior is affected. It is not the youths alone, but also interaction with people they respect that can influence and lead to delinquent behavior.

Paths were evidenced in the model that implied that the perceptions of others can influence young people positively or negatively. To exemplify this, let us look at an initially enigmatic finding. The variable, Other's Awareness of Delinquency had an indirect effect of increasing negative self-perceptions and delinquent behavior through Expected Delinquency. However, the direct effect of Other's Awareness of Delinquency decreased negative perceptions and official delinquency (path coefficients of $-.36$ and $-.19$ respectively). Expected Delinquency had the opposite direct effect of increasing negative perceptions and official delinquency (path coefficients of $+.74$ and $+.30$ respectively). This suggested that awareness of the youth's activities, without negative expectancies can decrease delinquency. On the other hand, expectancies for delinquent behavior seemed to cause more delinquency.

What seemed to be apparent in the statistical sense was a suppressor effect. A suppressor effect can occur when one uses multiple predictors of an outcome that are correlated. The total variance in each of the

multiple predictors may be divided in the following ways, as illustrated in Figure 6. They may each: 1) have unique variance that is neither shared with the other predictor nor with the criterion; 2) share some variance with the other predictor that is not shared with the criterion; 3) share some variance with both the other predictor and the criterion; 4) share some variance with the criterion but not with other predictor; and 5) leave some variance in the criterion that is not shared with either predictor. The numbered areas in Figure 6 correspond to the above explanation. Statistically, when the predictor variables are correlated with each other but each is correlated with the criterion differently, one variable may suppress the variance in the other that is not correlated with the criterion. A portion of awareness was correlated with expecting future delinquency, and when that portion of its variance was suppressed, awareness correlated negatively with delinquency. Let us apply this example to this research program. An objective of the intervention program was to increase parental awareness of their child's activities. It seemed that Awareness did not have to lead to negative expectations. In Davidson and Johnson's original study, it was found that youth in the intervention group reported higher levels of awareness of their

activities than the other two experimental groups (1984). However, it was not found that the intervention group was higher than the other two groups on Expected Delinquency. Indeed, in the intervention program, parents were trained and encouraged to be aware of their children's activities. Contracts were drawn up where youth would be explicitly rewarded for positive activities and penalized for negative ones. It also provided the youth with a time and structure for communicating with their parents. Parents had to be cognizant of their child's activities in order to justly reward them. A plausible explanation is that this heightened awareness, without negative expectancies, led to decreased delinquency. Control theorists like Hirschi (1969) who state that delinquency is a result of the lack of familial control would applaud this finding. Yet, another interpretation of this finding is that there are societal elements who label children negatively and contribute to their delinquency. In this program, parents may have countered the negative labeling which would normally predispose these youth to criminal activities. It identified a potential strength of empowered family systems.

The Revised Model

In the revised model, some variables and paths

were omitted and some paths were included that were not initially expected theoretically. The final model had a Chi-Square of 4.81, $df = 11$. It is presented in Figure 7.

The final model included the program evaluation variables, Experimental Group and Family Relationships. The paths from Group to Family Relationships and Official Delinquency (court contacts) was retained. The coefficient of .07 with Family Relationships was small empirically but theoretically salient. The statistically significant effect of Group upon court contacts reported in Davidson and Johnson (1984) was reflected by the path coefficient of -.12. Family Relationships was retained in the final model along with the inverse beta of -.36 with Expected Delinquency.

In regards to labeling theory, Level of Diversion had no impact upon the subsequent variables and was not retained. The remaining labeling variables were related to each other and the original sequence of the variables was logical theoretically and supported to some extent, empirically. This order was retained in the final model. Increased numbers of people being aware was related to increased numbers of people expecting future delinquency, which was related to increased negative perceptions from others which was

related to increased negative self-perceptions on the part of the youth. The direct path coefficients between these four variables ranged from .62 to .70. In all but one case, the direct paths between non-neighboring labeling variables were deleted. The direct path between Other's Awareness of Delinquency and Perceived Negative Reputation was retained because the indirect effect was positively related to other's negative perceptions through Expected Delinquency (indirect path coefficient of $+.43$) while the direct effect was negatively related to perceptions of a delinquent reputation (coefficient of $-.35$).

In examining the effect of labeling upon behavior, other's perceptions were more strongly related to official delinquency than self-perceptions. Expected Delinquency had a coefficient of $.24$, while Other's Awareness of Delinquency had a path coefficient of $-.19$ with official delinquency. Please note however, that the direction of the effect was the opposite; the data implied that Awareness decreased official delinquency while negative expectancies increased official delinquency. Clearly, other's perceptions were related to adolescent behavior. However, the type of perceptions could have either a positive or negative impact upon whether or not the youth committed further criminal acts.

In summary, of the program effect variables, Experimental Group did not exhibit much influence on Family Relationships but did seem to exert some influence upon official delinquency. Family Relationships was related to one of the labeling variables, Expected Delinquency. The labeling variables all seemed to be positively related except that Other's Awareness of Delinquency had a direct inverse relationship with Perceived Negative Reputation. When examining the effect of labeling upon behavior, labeling from others was more salient than self-labeling. Expected Delinquency was found to be related to increased recidivism while Awareness, without negative expectancies, was related to decreased recidivism. The findings concerning labeling in the Metro site point to the importance of other's opinions. They fly in the face of those who attribute sole importance to self-perceptions, self-concept, and other such constructs without attending to the systems in which they are developed.

Table 7

Metro Raw and Corrected Correlation Matrices

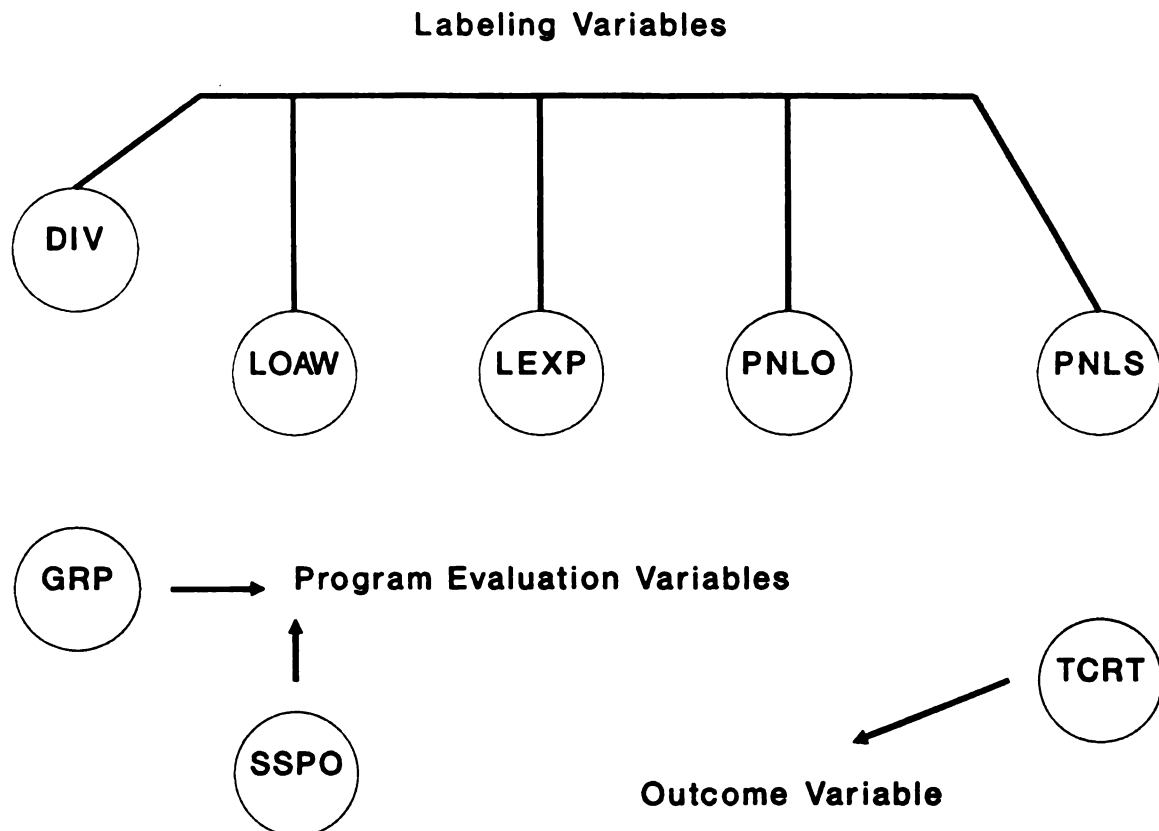
	DIV	GRP	PANR	LOAN	LEXP	PNLO	PNLS	TCBT
DIV	1.00							
GRP	-0.02	1.00						
PANR	-0.02	0.05	1.00					
LOAN	-0.03	0.06	0.02	1.00				
LEXP	0.00	0.06	-0.19	0.26	1.00			
PNLO	0.04	-0.07	-0.17	0.04	0.30	1.00		
PNLS	0.03	-0.07	-0.09	0.02	0.21	0.52	1.00	
TCBT	-0.01	-0.12	-0.02	-0.03	0.08	0.17	0.11	1.00

$p < .01$ for $r > .13$

Corrected Correlation Matrix

	DIV	GRP	PANR	LOAN	LEXP	PNLO	PNLS	TCBT
DIV	1.00							
GRP	-0.02	1.00						
PANR	-0.02	0.07	1.00					
LOAN	-0.05	0.09	0.04	1.00				
LEXP	0.01	0.08	-0.34	0.61	1.00			
PNLO	0.05	-0.07	-0.22	0.08	0.49	1.00		
PNLS	0.03	-0.08	-0.12	0.04	0.35	0.64	1.00	
TCBT	-0.01	-0.12	-0.02	-0.05	0.12	0.19	0.12	1.00

Figure 5
Diagram of Variable Categories



SSPO=Site Specific Outcome (FAMR, PROS, PCOM)

DIV - Level of Diversion	LOAW - Other's Awareness of Delinquency
GRP - Experimental Group	LEXP - Expectation of Future Delinquency
FAMR - Family Relationship *	PNLO - Other's Perception of Neg. Reputation
PROS - Prosocial Attitudes **	PNLS - Negative Self-Perception
PCOM - Perception of Competence ***	TCRT - Time 2 Official Delinquency (Post & Followup Court Contacts)

* Measured only in Metro Site
 ** Measured only in Southwest Site
 *** Measured only in Rural Site

Table 8
Metro Initial Path Coefficients

	DIV	GRP	FAMR	LOAW	LEXP	PNLO	PNLS	TCRT
DIV								
GRP								
FAMR		0.07						
LOAW	-0.05	0.09	0.03					
LEXP	0.03	0.05	-0.37	0.62				
PNLO	0.02	-0.10	0.05	-0.36	0.74			
PNLS	-0.01	-0.05	0.07	-0.09	0.15	0.59		
TCRT	-0.03	-0.12	0.10	-0.19	0.23	0.13	-0.03	

Chi-Square = .05, df = 1

KEY

DIV - Level of Diversion	LOAW - Other's Awareness of Delinquency
GRP - Experimental Group	LEXP - Expectation of Future Delinquency
FAMR - Family Relationship *	PNLO - Other's Perception of Neg. Reputation
PROS - Prosocial Attitudes **	PNLS - Negative Self-Perception
PCOM - Perception of Competence ***	TCRT - Time 2 Official Delinquency (Post & Followup Court Contacts)

* Measured only in Metro Site
 ** Measured only in Southwest Site
 *** Measured only in Rural Site

Figure 6
Partitioning of Variance

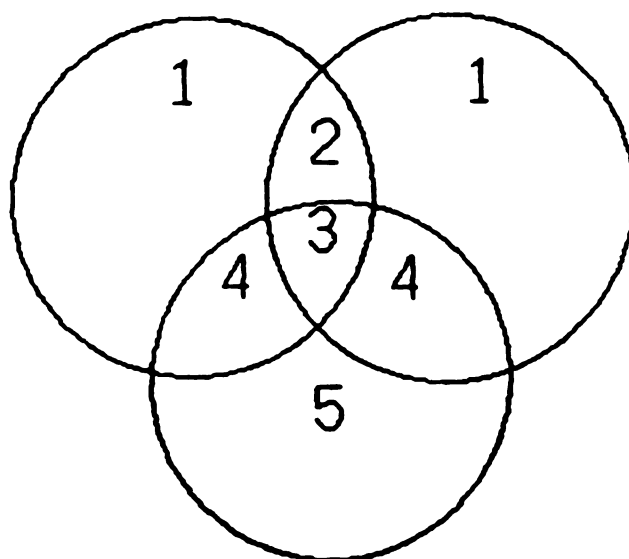
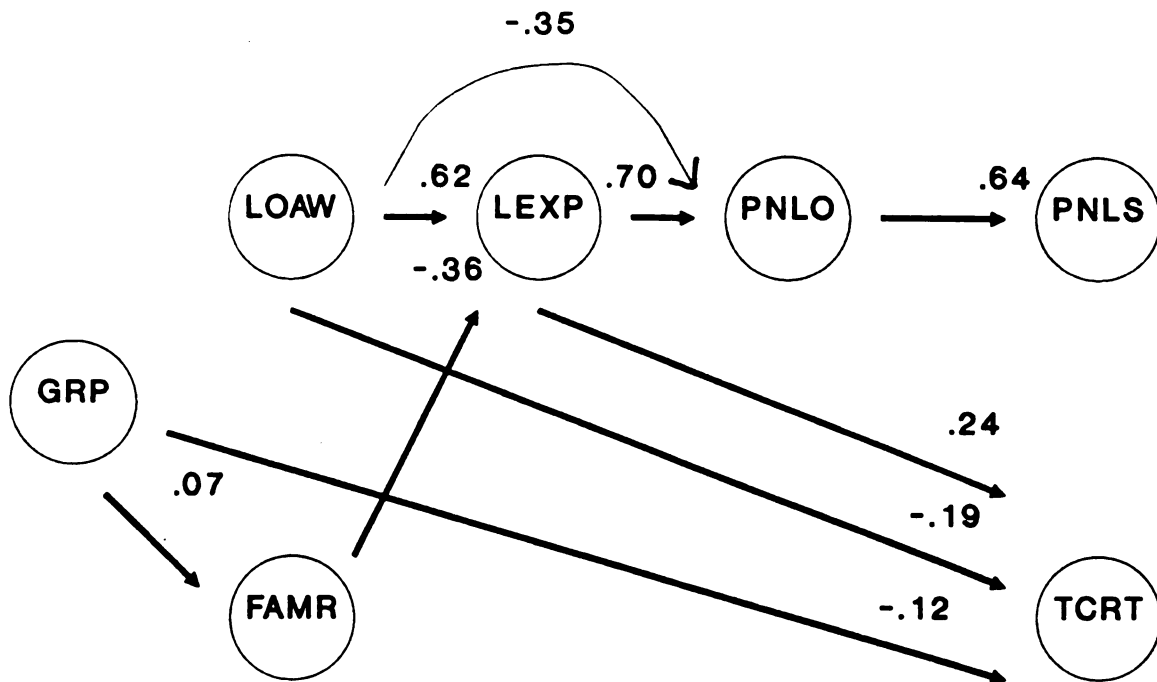


Figure 7
Metro Revised Path Model



X-square = 4.81, df = 11

KEY

DIV - Level of Diversion	LOAW - Other's Awareness of Delinquency
GRP - Experimental Group	LEXP - Expectation of Future Delinquency
FAMR - Family Relationship *	PNLO - Other's Perception of Neg. Reputation
PROS - Prosocial Attitudes **	PNLS - Negative Self-Perception
PCOM - Perception of Competence ***	TCRT - Time 2 Official Delinquency (Post & Followup Court Contacts)

* Measured only in Metro Site
 ** Measured only in Southwest Site
 *** Measured only in Rural Site

Southwest: Community Service and Restitution Model

The raw and corrected correlation matrices for Southwest are presented in Table 9. The relationships between these variables will be discussed in the context of the path model.

Initial Model

Similar to the initial model for Metro, the initial model for Southwest included program evaluation variables, variables, labeling variables and an outcome variable. The variables were identical except that one of the program evaluation variables, Prosocial Attitudes, was specific to Southwest. Again like Metro, a number of direct and indirect paths were included, some of which were not consistent with self-fulfilling prophecy, but were tests of alternative hypotheses. The initial model is presented to familiarize the reader with the reason for retaining or deleting particular links and/or variables. The initial model had an overall Chi-Square of 0.01 ($df = 1$) and is presented in Table 10.

Program Effects. Once again, it was expected that a strong link would exist between Experimental Group and the site-specific outcome variable, Prosocial Attitudes. Recall that young participants in the

program contracted with the victims of their legal offenses on how to make restitution and were also required to volunteer three to four hours a week for twelve weeks in a community service organization. It was hoped that participation in the Community Service and Restitution Program would help the youth feel more attached to society and thereby increase their belief in promoted societal values as measured by the Prosocial Attitudes Scale. Hirschi (1969) postulated that attachment to society and societal values would decrease youth delinquent self-perceptions and subsequent delinquency. The first step was to evaluate whether the intervention participants had higher prosocial attitudes.

Examining the variable Experimental Group, it had a negligible impact of .05 upon Prosocial Attitudes. This was interpreted as meaning that being in the intervention program did not cause noted increases in prosocial attitudes. This was consistent with the original finding that the intervention group did receive services as evidenced by the average of 38 hours doing community service, but this did not impact their prosocial attitudes (Davidson & Johnson, 1984). Neither did Group have a notable influence on labeling or recidivism.

However, some effects were attributable to

Prosocial Attitudes. Youth possessing prosocial beliefs reported that fewer people were aware of their delinquency or expected future delinquency from them (path coefficients of $-.25$ and $-.23$ respectively). The relationship of Prosocial Attitudes with the theoretically more distant variables, Perceived Negative Reputation and Negative Self-Perception evidenced betas of $-.04$ and $-.09$, suggesting that the indirect effects upon these were more notable. This finding was not congruent with Hirschi's theory which stated that prosocial attitudes would directly affect the youth's opinion of his/herself. In this model other's opinions were more largely influenced by the youth's prosocial attitudes.

Thus, Group did not have a large impact upon labeling but the possession of prosocial attitudes did. Prosocial Attitudes was inversely related to labeling from others.

Labeling. Level of diversion was investigated to determine if greater diversion from court and service personnel resulted in decreased labeling. Like in Metro, diversion seemed to have little effect, though the path coefficients for this variable were slightly larger than those found in Metro. It had a coefficient of $+.07$ with Other's Awareness of Delinquency and $-.11$ with Expected Delinquency (the direction expected).

Level of Diversion was not retained in the final model.

In examining the sequence of labeling, the evidence pointed to the proper ordering of these variables. In general, the links between variables directly next to each other were stronger than the other links, therefore the direct links between nonneighboring variables were deleted. The direct path coefficients ranged from .28 to .80. Each variable was positively related directly and indirectly to increased levels of its succeeding variables; Other's Awareness was related to increased Expected Delinquency, which was related to increased Perceptions of a Negative Reputation which was related to increased Negative Self-Perceptions. The finding in Metro that Other's Awareness had an inverse, direct effect upon other's negative perceptions was not evident in the Southwest site.

Outcome. The finding that labeling from others had a larger causal impact upon recidivism than self-perceptions was absent in this site. Self-Perceptions had a beta of .19 with official delinquency. In contrast, awareness, expected delinquency and other's attribution of a negative reputation all had smaller coefficients. Awareness was related to decreased official delinquency (path coefficient of $-.10$) while Expected Delinquency seemed

to have no relationship with official delinquency (path coefficient of .06). The enigmatic result was that Perceived Negative Reputation was inversely related to delinquency as evidenced by the beta of $-.15$.

The presence of a correlation of .80 between Awareness and Expected Delinquency alerted the author to problems in the model for Southwest. "When correlations among the independent variables are too high [conventionally around .70 or .80], the problem of multicollinearity arises and difficulties occur in drawing inferences on the basis of the regression [path] estimates (Asher, 1983, p. 50).

Multicollinearity poses a threat to validity because the path coefficients will probably vary from sample to sample. Large variations would mean that the average of the coefficients from several samples would be further away from the true score of that coefficient. Multicollinearity makes estimates of the true beta weights less accurate.

One approach to solving this problem would be to combine the variables which have a large intercorrelation. In this site, the correlation coefficient between Other's Awareness and Expected Delinquency is .80 and the correlation between Perceived Negative Reputation and Negative Self-Perception is .73. However, it is dubious that

Other's Awareness and Expected Delinquency are measuring the same underlying construct. In Metro, these two variables had zero-order correlations and path coefficients with official delinquency that suggested that they were measuring different constructs. In addition to the evidence on their discriminant validity, all four of the labeling variables were theretically different which would also preclude combining them.

Fortunately, this particular data set had an advantage not always available to other researchers. This model of labeling and adolescent behavior was being tested in three different sites. Therefore, the researcher was not dependent upon the coefficients in Southwest as the only estimates of the population values. The beta coefficient for any particular pair of variables could be averaged across site to get an idea of the true population value. This is illustrated in Table 11 using the initial path coefficients for each of the three sites. However, these means were also affected by the coefficients found in the Southwest site. Because of the possible multicollinearity, inferences should be made with caution when considering the values obtained in Southwest site, especially when considered apart from the other sites.

The Revised Model. The revised model for Southwest is presented in Figure 8. The final Chi-Square was 2.09 with 11 degrees of freedom.

Both program evaluation variables were included in the model. Experimental Group, with its path coefficient of .05 with Prosocial Attitudes was included simply because of its theoretical significance. Group did not seem to strongly influence any of the variables in the model. The site specific outcome variable, Prosocial Attitudes had an influence on the first two labeling variables in the model. Youth who possessed Prosocial Attitudes reported that fewer people were aware of their delinquent act (coefficient of $-.25$) and that fewer people expected future delinquency from them (coefficient of $-.23$). Contrary to what would be expected by Hirschi, prosocial attitudes seemed to impact other's negative perceptions more than the youth's self-perceptions. A young person who seemed to exhibit some attachment to society thought that others would be less likely to perceive them negatively. In summary, only one of the two program evaluation variables had notable influence in the model, namely Prosocial Attitudes. It was included in the final model along with the paths to labeling.

In terms of labeling, it was expected that

diversion would influence delinquency indirectly by decreasing negative labeling. The hypothesized direct effect upon labeling and the indirect effect upon delinquency were absent and the diversion variable was deleted from the final model.

In examining the sequence of labeling, the variables seemed to be ordered appropriately. Each variable was more highly correlated with the variable immediately neighboring it than with variables more distant in the process. Thus, Other's Awareness of Delinquency seemed to lead to Expected Delinquency, which seemed to lead to Perceived Negative Reputation, which seemed to lead to Negative Self-Perceptions. Congruent with the theoretical model, for variables that were not neighboring each other, the indirect effects were greater than the direct effects. This lent credence to the idea that the variables were in the proper order and part of a sequential process by which labeling from others caused the youth to label self negatively. All four labeling variables were retained along with the direct paths between neighboring variables.

The process by which labeling affected delinquency was not exactly as expected. It was hypothesized that negative labeling from others increased negative self-labeling which increased delinquent behavior.

Labeling from others was related to increased self-labeling (as measured by Negative Self-Perceptions). Negative Self-Perceptions was positively related to followup Official Delinquency (beta of .18). However, Perceived Negative Reputation was inversely related to Official delinquency by a coefficient of $-.16$. These results are to be interpreted with caution because of the high correlations between the predictors which indicated that multicollinearity might be present in the data. These coefficients should best be seen as the results from one sample and compared to the coefficients from the other two sites to get a more accurate indication of their true values in the population.

To summarize the final model for Southwest, the program evaluation variable of Prosocial Attitudes did seem to decrease labeling from others. The labeling variables were related to each other as expected in that labeling from others led to increased self-labeling. Negative self-perceptions was related to increased court contacts, while Perceived Negative Reputation was related to decreased court contacts. However, the findings is this site should be viewed with caution.

Table 9
Southwest Raw and Corrected Matrices

	DIV	GRP	PROS	LOAW	LEXP	PNLO	PNLS	TCRT
DIV	1.00							
GRP	-0.04	1.00						
PROS	-0.01	0.04	1.00					
LOAW	0.05	0.02	-0.13	1.00				
LEXP	-0.03	-0.01	-0.23	0.37	1.00			
PNLO	-0.03	-0.04	-0.15	0.25	0.28	1.00		
PNLS	0.03	-0.05	-0.15	0.19	0.21	0.60	1.00	
TCRT	0.00	-0.00	-0.02	-0.03	-0.02	-0.03	0.06	1.00

$p < .01$ for $r > .12$

Corrected Correlation Matrix

	DIV	GRP	PROS	LOAW	LEXP	PNLO	PNLS	TCRT
DIV	1.00							
GRP	-0.04	1.00						
PROS	-0.01	0.05	1.00					
LOAW	0.08	0.03	-0.25	1.00				
LEXP	-0.05	-0.01	-0.43	0.85	1.00			
PNLO	-0.03	-0.04	-0.21	0.43	0.46	1.00		
PNLS	0.03	-0.05	-0.22	0.33	0.34	0.74	1.00	
TCRT	0.00	0.00	-0.03	-0.05	-0.02	-0.03	0.06	1.00

Table 10
Southwest Initial Path Coefficients

	DIV	GRP	PROS	LOAW	LEXP	PNLO	PNLS	TCRT
DIV								
GRP								
PROS		0.05						
LOAW	0.07	0.04	-0.25					
LEXP	-0.11	-0.03	-0.23	0.80				
PNLO	-0.03	-0.04	-0.04	0.19	0.28			
PNLS	0.04	-0.02	-0.09	0.07	-0.09	0.73		
TCRT	0.00	0.00	-0.02	-0.10	0.06	-0.15	0.19	

Chi-square = .01, df = 1

KEY

DIV - Level of Diversion	LOAW - Other's Awareness of Delinquency
GRP - Experimental Group	LEXP - Expectation of Future Delinquency
FAMR - Family Relationship *	PNLO - Other's Perception of Neg. Reputation
PROS - Prosocial Attitudes **	PNLS - Negative Self-Perception
PCOM - Perception of Competence ***	TCRT - Time 2 Official Delinquency (Post & Followup Court Contacts)

* Measured only in Metro Site
 ** Measured only in Southwest Site
 *** Measured only in Rural Site

Table 11
Path Coefficients Between Labeling and Delinquency:
Across Site

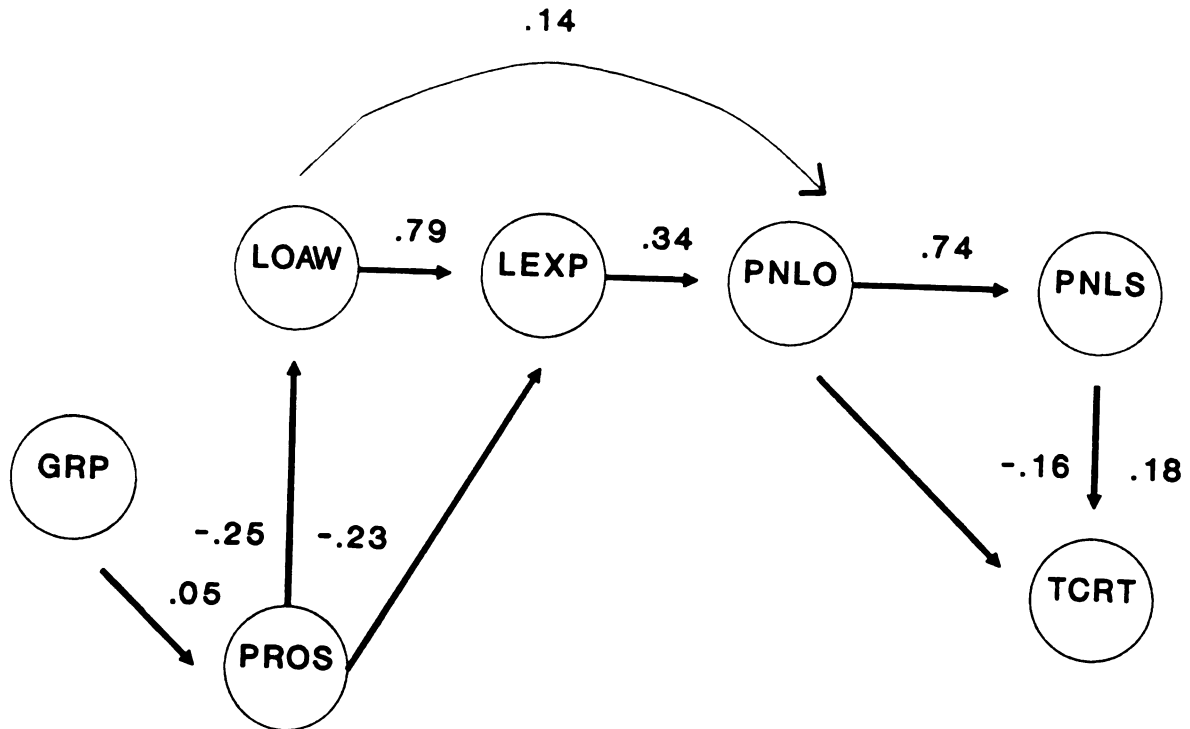
	<u>Metro</u>	<u>Southwest</u>	<u>Rural</u>	<u>Mean</u>
LOAW ----> FOFD	-.19	-.10	-.13	-.14
LEXP ----> FOFD	.23	.06	.21	.16
PNLO ----> FOFD	.13	-.15	.25	.08
PNLS ----> FOFD	-.03	.19	.04	.06

KEY

DIV - Level of Diversion	LOAW - Other's Awareness of Delinquency
GRP - Experimental Group	LEXP - Expectation of Future Delinquency
FAMR - Family Relationship *	PNLO - Other's Perception of Neg. Reputation
PROS - Prosocial Attitudes **	PNLS - Negative Self-Perception
PCOM - Perception of Competence ***	TCRT - Time 2 Official Delinquency (Post & Followup Court Contacts)

* Measured only in Metro Site
 ** Measured only in Southwest Site
 *** Measured only in Rural Site

Figure 8
Southwest Revised Path Model



X-square=2.09, df=11

KEY

DIV - Level of Diversion	LOAW - Other's Awareness of Delinquency
GRP - Experimental Group	LEXP - Expectation of Future Delinquency
FAMR - Family Relationship *	PNLO - Other's Perception of Neg. Reputation
PROS - Prosocial Attitudes **	PNLS - Negative Self-Perception
PCOM - Perception of Competence ***	TCRT - Time 2 Official Delinquency
	(Post & Followup Court Contacts)

* Measured only in Metro Site
 ** Measured only in Southwest Site
 *** Measured only in Rural Site

Rural: Youth Skills Training Model

The raw and corrected matrices for Rural are found in Table 12. The relationships are detailed in the section describing the path models.

Initial Model

The initial model for Rural had a Chi-Square of 0.00, $df = 1$. This initial model included the same initial variables and paths as the other two sites. The path coefficients for Rural's initial model are presented in Table 13.

Program Effects. In Rural we some effects due to being in the intervention group. Firstly, being in the intervention group had a larger coefficient with the site-specific outcome variable, Perception of Competence (path coefficient = .13). Youth in the intervention were taught a number of different skills ranging from communication to using community resources. This was done in hopes of increasing the youth's feeling of being a skillful and competent person as well as to counter feelings of being a delinquent who had to turn to criminal means of goal attainment.

For the first time, it was found that Group exerted some influence upon at least one of the labeling variables, namely Other's Awareness of

Delinquency (path coefficient of $-.20$). Similar direct effects upon subsequent labeling variables were not detected. This is congruent with the thought that Group would be related to the first variable in the labeling sequence and less so with the following ones.

In Rural, Group had a stronger relationship with labeling than the site-specific variable, Perception of Competence. However, Perception of Competence did not exhibit effects upon labeling nor the outcome. The coefficients for the paths from perception of Competence ranged from $-.07$ to $.03$; these were very small, near zero coefficients.

Experimental Group had some influence upon Perception of Competence and upon labeling. Perception of Competence did not seem to affect any of the subsequent variables in the model. It was retained in the final model for comparison to the other site-specific outcome variables.

Labeling. In Rural, notable effects of Level of Diversion were evident. Being diverted from official contact was related to a decreased number of people aware of delinquent acts (path coefficient of $-.19$). Yet, ironically, being diverted was positively related to increased numbers of people expecting future delinquency (path coefficient of $+.16$). It was expected that Diversion would decrease both awareness

and negative expectancies. Group (which was based upon the same questionnaire item but, recoded in a different manner) was negatively related to Awareness and unrelated to negative expectancies. This is closer to the model that would be hypothesized according to labeling theory.

As before, the ordering of the labeling variables seemed appropriate. Labeling variables were most highly correlated with the labeling variable immediately neighboring it. Variables that were thought to be related indirectly had smaller direct coefficients. However, the same exception that occurred in Metro occurred in this site. While Other's Awareness had an indirect, positive relationship with Perceived Negative Reputation (indirect coefficient of $+.29$) it had a direct, inverse relationship with Perceived Negative Reputation (direct coefficient of $-.22$). Again it seemed that other people being aware of the youth's delinquent act, without expecting future delinquent acts works to decrease the perception of the youth as a delinquent or trouble-maker.

Outcome. Other's Awareness of Delinquency was found to be inversely related to official delinquency (beta of $-.13$). On the other hand, Expected Delinquency had a positive relationship with court contacts whereby it seemed to increase official

delinquency (coefficient of $+0.21$). Perceived Negative Reputation exhibited a similar relationship (coefficient of $+0.25$). A notable path coefficient between Self-Perceptions and court contacts was not detected (path coefficient of 0.04).

The Revised Model

The revised model for Rural had a Chi-Square of 3.08 with $df = 15$. This model is presented in Figure 9.

In terms of the program evaluation variables, Experimental Group was also found to be negatively related to others being aware of the youth's delinquent act ($\beta = -0.20$). Also, Group had a β of 0.13 in the direction of the intervention group having greater perceptions of their competence. However, perception of Competence did not seem to have a large impact upon any of the labeling or outcome variables. The path from it to delinquency was included for illustrative purposes.

Diversion exhibited a negative relationship with Other's Awareness (coefficient = -0.19) but, exhibited a positive relationship with Expected Delinquency (coefficient = $+0.15$). Awareness, Expected Delinquency, Perceived Negative Reputation, and Negative Self-Perceptions all exhibited positive direct relationships (β s of 0.64 , 0.44 , and 0.58 , respectively). However, the data implied that the

direct effect of Awareness was to decrease a negative reputation ($\beta = -.20$) while its indirect effect through expectancies was to increase a negative reputation ($\beta = .28$).

Expected Delinquency and Perceived Negative Reputation had the largest path coefficients with Official Delinquency (.20 and .27 respectively). Based on these coefficients one would deduce that other's negative expectancies and perceptions result in increased court contacts for the youth.

In summary, the program evaluation variable, Group, was related to labeling and Perception of Competence. Perception of Competence did not evidence notable effects. Diversion was found to exhibit an enigmatic effect of decreasing awareness but increasing negative expectancies. A model of labeling was evident here with labeling from others increasing negative self-labeling. The exception being that awareness of youth's activities had an indirect relationship with youth reporting more negative perceptions from others but a direct effect of youth reporting fewer negative perceptions. Other's negative expectancies and perceptions were related to increased adolescent delinquency.

Table 12

Rural Raw and Corrected Matrices

	DIV	GRP	PCOM	LOAW	LEXP	PNLO	PNLS	TCRT
DIV	1.00							
GRP	0.01	1.00						
PCOM	0.00	0.12	1.00					
LOAW	-0.12	-0.13	-0.04	1.00				
LEXP	0.02	-0.07	-0.04	0.26	1.00			
PNLO	-0.00	0.03	-0.06	0.04	0.19	1.00		
PNLS	-0.07	-0.02	-0.09	0.07	0.14	0.47	1.00	
TCRT	-0.02	-0.02	-0.00	0.02	0.15	0.29	0.19	1.00

$p < .01$ for $r > .15$

Corrected Correlation Matrix

	DIV	GRP	PCOM	LOAW	LEXP	PNLO	PNLS	TCRT
DIV	1.00							
GRP	0.01	1.00						
PCOM	0.00	0.13	1.00					
LOAW	-0.19	-0.20	-0.07	1.00				
LEXP	0.03	-0.10	-0.06	0.61	1.00			
PNLO	0.00	-0.04	-0.07	0.07	0.32	1.00		
PNLS	-0.07	-0.02	-0.11	0.12	0.24	0.58	1.00	
TCRT	-0.02	-0.02	0.00	0.03	0.22	0.33	0.22	1.00

Table 13
Rural Initial Path Coefficients

	DIV	GRP	PCOM	LOAW	LEXP	PNLO	PNLS	TCRT
DIV								
GRP								
PCOM		0.13						
LOAW	-0.19	-0.20	-0.04					
LEXP	0.16	0.03	-0.02	0.64				
PNLO	-0.06	-0.03	-0.06	-0.22	0.45			
PNLS	-0.06	0.02	-0.07	0.05	0.04	0.56		
TCRT	-0.05	-0.02	0.03	-0.13	0.21	0.25	0.04	

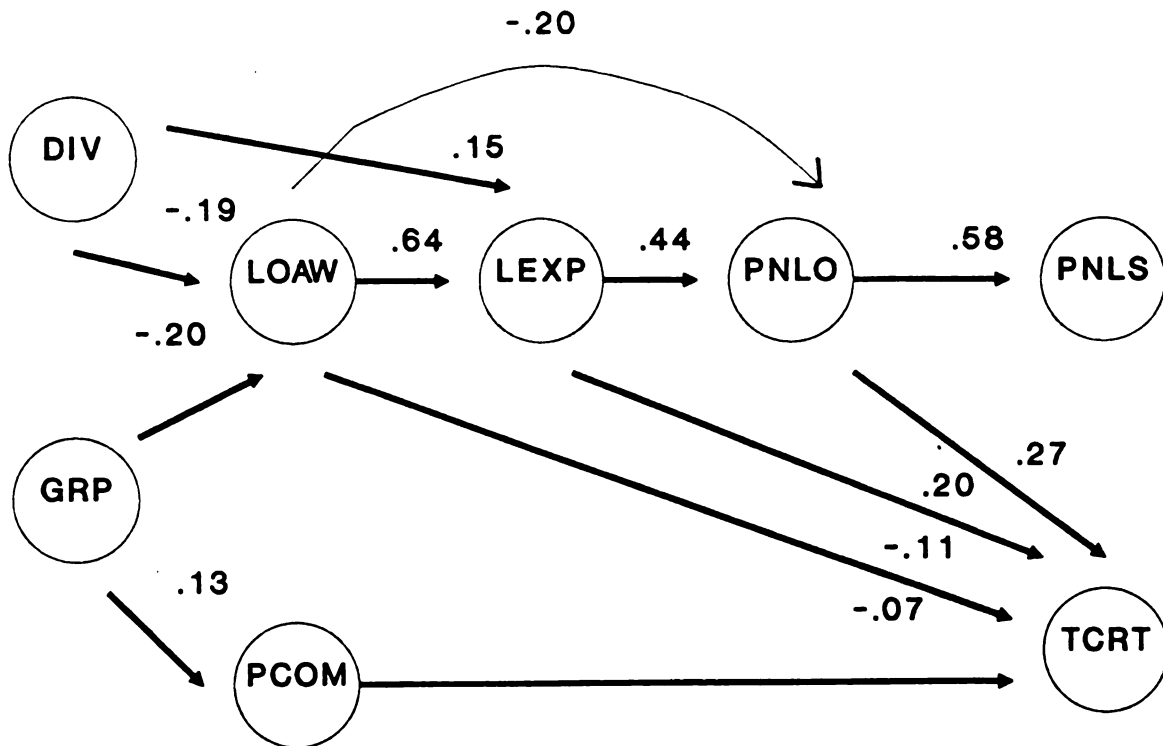
Chi-square = 0, df = 1

KEY

DIV - Level of Diversion	LOAW - Other's Awareness of Delinquency
GRP - Experimental Group	LEXP - Expectation of Future Delinquency
FAMR - Family Relationship *	PNLO - Other's Perception of Neg. Reputation
PROS - Prosocial Attitudes **	PNLS - Negative Self-Perception
PCOM - Perception of Competence ***	TCRT - Time 2 Official Delinquency (Post & Followup Court Contacts)

* Measured only in Metro Site
 ** Measured only in Southwest Site
 *** Measured only in Rural Site

Figure 9
Rural Revised Path Model



X-square=3.03, df=15

KEY

DIV - Level of Diversion	LOAW - Other's Awareness of Delinquency
GRP - Experimental Group	LEXP - Expectation of Future Delinquency
FAMR - Family Relationship *	PNLO - Other's Perception of Neg. Reputation
PROS - Prosocial Attitudes **	PNLS - Negative Self-Perception
PCOM - Perception of Competence ***	TCRT - Time 2 Official Delinquency
	(Post & Followup Court Contacts)

* Measured only in Metro Site
 ** Measured only in Southwest Site
 *** Measured only in Rural Site

CHAPTER 5 - SUMMARY AND CONCLUSIONS

This study was undertaken to provide more information about a highly controversial topic, self-fulfilling prophecy. It was conducted under the rubric of labeling theory, where the author has attempted to document not only the outcomes and effects of self-fulfilling prophecy, but also the process via which it operates.

Labeling was thought to be a sequential process, with the assignment of labels being the first step. Labeling theory has suggested that labels are often given as a result of one's personal characteristics and not as a result of actual behavior. It should be noted that this data did not facilitate comparing social characteristics to past delinquent behavior to see which was a better predictor of subsequent delinquency. Labels assigned based more on demographic characteristics than actual behavior would be considered biased or inaccurate categorizations. In the classic model of self-fulfilling prophecy, one is categorized falsely. Subsequently, because of the initial categorization, behavior is brought into

accordance with the "prophecy" (Merton, 1948). Cooper & Good (1983) describe another model which they refer to as the "sustaining effects" model. In this model of self-fulfilling prophecy, the initial categorization may be accurate, yet, it may be impervious to new information. This case could be exemplified by an adolescent who initially committed a criminal offense but evidenced changes in behavior. This youth would be affected by people in authority who refused to revise their initial impressions. This is a variation on the theme but is similar to the classic model in that a categorization, often a stereotype is attributed. In the sustaining-effects model, the classification, though true, "sustains" negative behavior instead of making allowances for change. It is another variety of self-fulfilling prophecy. With both models in tow, it becomes less important as to whether labels were assigned accurately or not. The influence of negative labeling upon adolescent behavior becomes the focus of examination.

Before turning to the influence of labeling upon behavior, some attention will be given to examining the effects of the experimental innovation upon labeling and behavior. The degree to which the intervention programs impacted labeling, and importantly, delinquency was investigated. In Metro, being in the

intervention group did not substantially impact the interim outcome of improving family relationships though Group did decrease delinquent behaviour. Additionally, among those who reported better family relationships, decreased expectations for future delinquency were reported. In Southwest being in the intervention group did not substantially impact the interim outcome of creating more prosocial attitudes. Notwithstanding, prosocial attitudes was related to fewer people knowing about delinquency and fewer people expecting future delinquency. In Rural, the intervention program was more effective in achieving its interim outcome of giving the youth a feeling of competence, but the perception of competence did not have notable effects upon labeling and behavior.

The tests of the effects of the intervention upon the interim and ultimate outcomes was done in the context of a very rigorous experiment. Random assignment was used in a naturalistic experiment and analyses were conducted to ascertain that random assignment had resulted in equivalent groups of young people. Additionally, analyses were performed to ensure that the young people actually received the program (Davidson & Johnson, 1984). With these analyses, one could be more confident in testing the effectiveness of the interventions. It seemed that the

targeted objectives of improving family relationships and creating prosocial attitudes had an impact. Family Relationships and Prosocial Attitudes were directly related to labeling. A similar relationship was not detected for Perceptions of Competence. It should be noted that the program which had the statistically significant effect in the original study, Family Support and Education, accomplished this with a sample that most others would have dismissed. The sample in Metro was predominantly African American, mostly male, the majority of whom lived in single-parent families. Single-parent African American families have been severely maligned in the social science literature. This program demonstrated that an empowering family intervention has can be effective. As a matter of fact, all of the youth in each of the programs were of the lower social classes. Yet, each program was operating in the direction of decreasing delinquency.

The interim objectives of increasing Family Relationships, Prosocial Attitudes, and Perceptions of Competence were not as strongly associated with the outcome and with being in the intervention program as expected. In the future, to accomplish the interim objectives, perhaps the duration and intensity of the program might be increased. On the other hand, a program that facilitated more frequent contact for a

longer period of time might be insufficient. It is possible that some changes may be needed in the type of program used to achieve more substantial results. For example, the skills taught in Rural included how to communicate with others, how to use the bus, banks, and other such community resources. Perhaps these skills were too general to have a great impact upon youth's perception of competence. It would be very interesting to see if the intervention program could increase Perceptions of Competence by facilitating more concrete skills, via opportunities such as: an apprenticeship with plumbers, electricians, or engineers; or an academic tutorial which could enable more students to be more successful in school and possibly go to college. More concrete skills of the type enumerated above might really create a sense of competence in a young person so that delinquent perceptions are abated and other means of goal attainment besides delinquency, are utilized.

According to labeling theory, level of diversion should have been another variable which should have impacted labeling and subsequently, behavior. Neither Metro nor Southwest evidenced effects of diversion. In Rural, Diversion was negatively related to other's awareness of acts but surprisingly was positively related to other's expectancies for future delinquency.

In this study, mixed characterizations of the role of diversion in the labeling process were found.

A number of researchers have asserted that diversion was an important factor in decreasing labeling and subsequent delinquency. Yet, some past studies of diversion omitted measures of the amount of labeling that occurred in the various research conditions.

(Klein, 1974; Rausch, 1983). Therefore, they had to make an "inferential leap" to conclude that diversion decreased delinquency because it prevented labeling from other sources. In this study, a relationship between diversion and labeling was evident in only one site. This meant that the diversion without service condition (outright release) and/or the diversion with services condition were not consistently lower than traditional court-processing in the amount of labeling occurring. In the one site where the expected effect was found, a contradictory effect also surfaced. Yet, in this same site, Group, (which is the same variable as Diversion coded so that the court processing and outright release conditions are Group 1 and the intervention program is Group 2) evidenced the effect expected, that fewer people knew about delinquency.

The conclusions that can be made from this evidence are two-fold. Firstly, perhaps release is not really the highest level of diversion from negative labeling.

Or, perhaps people form negative expectancies when a youth is released without any services or judicial intervention. The lowest amount of labeling may occur when the youth is diverted from justice personnel but receives intervention elsewhere. This alternative explanation was based upon the finding that Group was negatively related or unrelated to labeling whereas Diversion was unrelated, negatively related, and positively related to labeling. This leads us to the second conclusion. The amount of labeling in a given condition, can vary, as it did across site in this study. The implications are that it is tantamount that the amount of labeling in a condition be measured and not presumed. Klein (1986) has advocated and exemplified this strategy in his later research.

In examining the sequence of labeling, the variables seemed to correspond very well to what was initially hypothesized. Other's knowing about delinquency was related to expectancies for future delinquency, which was related to attributing a negative reputation to the youth which was related to the youth then attributing a negative reputation to self. The correlations between these variables and the path coefficients supported this ordering of the variables in all of the sites. The negative impact upon adolescent self-perception was clear. Some might

perceive the shortcoming of this data as being that it was all reported by the youth. It might be concluded that because of the method used to collect the data, it was all a measure or "meta-construct" of youth self-perception. In fact, the author concedes that Other's Awareness of Delinquency and Expected Delinquency were similar measures in that both asked about numbers of people knowing about or expecting delinquency. Likewise, Perceived Negative Reputation and Self-Perception were similar measures in that both were semantic differential items which asked for ratings. Similarities in measurement would account for the consistently higher correlation between variables that were measured similarly and were next to each other in the sequence of labeling. However, this explanation would not account for Expected Delinquency consistently having a stronger relationship with Perceived Negative Reputation than with Self-Perception. Because Perceived Negative Reputation and Self-Perception were measured alike and measured unlike Expected Delinquency, if only method bias were driving the correlations, at times Expected Delinquency would be more closely related to Perceived Negative Reputation and at other times related more closely to Self-Perception. This was not the case. Consistently, Expected Delinquency had a greater direct effect upon

Perceived Negative Reputation and a greater indirect effect upon Self-Perception.

An interesting finding was detected in reference to others being aware of delinquency. In two out of three sites, though awareness was related to negative expectancies, it seemed to be a distinct construct. Awareness had a positive, indirect relationship with negative perceptions and an inverse, direct relationship with negative perceptions. This suggested that awareness with negative expectancies resulted in a delinquent reputation being attributed to the youth. On the other hand, awareness without negative expectancies seemed to moderate the attribution of a negative reputation. Future replications would be helpful in determining if this was a statistical artifact or an actual statistical suppressor effect.

The important question, which tests the existence of self-fulfilling prophecy, is: did negative labeling lead to negative behavior, namely delinquency? First, it is important to recall that labeling from others did not always work through self-perceptions as expected. In all of the site models except one, self-perception had a smaller impact upon delinquent behavior. It is worth reiterating that this is a unique finding. So much research has been dedicated to looking at the impact of self-perceptions, self-concept, self-esteem,

"self-everything," and the effects upon adolescent behavior. What this research revealed was that relative to the perceptions of others around the youth, self-perception was not the greatest influence upon adolescent behavior. It was the perceptions of parents, other family members, neighbors and teachers that had the greatest impact on the adolescent's behavior. Earlier, the possible importance of self-labeling, or label acceptance on the part of the youth was discussed. Rotenberg's idea (1974) that self-labeling is an important but missing piece in the labeling sequence has not been entirely substantiated. So often it was the perceptions of people close to the child, that elicited certain types of behavior from the child.

This finding is actually consistent with self-fulfilling prophecy. What one thinks about a child affects how one treats the child. It is plausible that labeling a child will affect whether family, neighbors, or teachers call the police. It is also plausible that labeling from police will effect whether they refer them to a service organization or petition them to court. These actions are probably reflective of only a portion of the adolescent's behavior. Yet, these actions may communicate to the youth that she/he is thought of as a delinquent and

they may behave accordingly. Raudenbush (1990) has pointed out that labeling which progresses to the point of affecting self-perceptions may be operating more "insidiously." Labeling can operate via self-perceptions but also it can have a substantial effect through other's perceptions alone. The perceptions of others remains a potent factor. The questions remains what types of perceptions help or hinder negative behavior from the youth.

In two of the three sites, the number of people simply being aware of illegal acts was inversely related to delinquency. In one site the effect was larger. Contrastingly, in the same two of the three sites, the number of people expecting future illegal acts was positively related to delinquency. The results are slightly less straightforward when examining the attribution of a negative reputation to the youth. In one site this variable was positively related to criminal behavior while in the other it was negatively related. Yet, in the site where negative perceptions seemed to decrease delinquency, multicollinearity in the data was an issue. In only one site did self-perceptions seem to have an impact. Again, it seemed that the perceptions of others was very influential. One could conclude that other's being aware of the youth's actions can decrease

negative behavior when negative expectancies are held at bay. However, negative expectancies, perceptions and self-perceptions all seem to facilitate delinquent behavior.

Implications for Future Research and Action

This study has shown that some labeling variables, namely negative expectancies and negative perceived reputations, have adverse effects upon adolescent self-perceptions and behavior. One labeling variable, other's awareness of youth's delinquent acts can have the opposite effect, once expectations for future delinquency are controlled. A replication of this study with more reliable measures, particularly of awareness and expectancies, could confirm these findings. Additionally, unlike the study of self-fulfilling prophecy in the educational field, uncertainty remains about the behaviors of other people which communicated their thoughts and feeling to the young people who participated in this study. Future research in the context of labeling would do well to include behavioral measures in the sequence of labeling. Measures of labeling from other sources, besides just the youth, would also strengthen the validity of the findings. As always, though path analysis is considered to be a type of causal analysis,

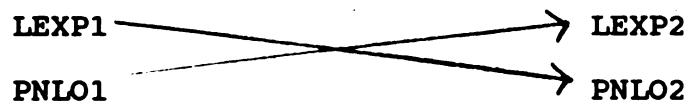
one cannot always conclude with confidence that one variable "caused" the other. There are some exceptions to dictum in this study because of its experimental nature. The paths from intervention group to the other variables can be called "causal" because this variable was experimentally manipulated. Experimentally manipulated variables would be a feature to retain as well as the many analyses conducted to verify the implementation of the program. The longitudinal nature of the study was helpful in adding strength to the inferences though we know that temporal precedence is not a sufficient condition to make causal inferences.

This research did not completely avail itself of the temporal asymmetry of the data. This was somewhat confounded because the outcome measures of delinquency combined post and followup measures and the labeling variables were also measured at the post interval. Therefore, labeling in these models did not entirely precede the delinquency outcome measures in time. However, it is difficult in the social sciences to determine how much time lag should exist between measurement intervals. There are not naturally occurring intervals parallel to fiscal years in economics (Asher, 1983). However, for purposes of this model it seemed logical to combine measures of delinquency after the youth entered the program because

the time between the intervals was a short four months. It usually takes an average of twelve months for adolescent offenders to recidivate (Davidson, 1989).

There are ways to determine if the variables in the model preceded each other. For example, to ascertain that Expected Delinquency preceded Perceived Negative Reputation and not vice versa, one could compare the path between Expected Delinquency measured at Time 1 (LEXP1) and Perceived Negative Reputation at Time 2 (PNLO2), to the path between Perceived Negative Reputation at Time 1 (PNLO1) and Expected Delinquency at Time 2 (LEXP2). A diagram of this potential test of the direction is presented in Figure 10. The path with the larger coefficient would indicate which path is stronger and more likely to be true in reality. There are numerous such possibilities for research.

Figure 10
Tests of Temporal Precedence



It is this author's opinion that discussing the implications for research is not enough. It is hoped that salient research of this sort could also have implications for action, the types of action undertaken

by families, teachers, and other personnel who have contact with youth. It seems apparent that their awareness, expectancies, and perceptions are important. Attributing negative expectancies and reputations never seems to be helpful, though the evidence on the perceptions of a negative reputation is mixed in this particular study. More awareness of adolescent activities is recommended, as long as negative expectancies do not accompany this awareness. In light of this study, along with the other evidence being amassed in the social sciences, there seems to be no benefit to negative expectations while other studies attribute much importance to positive expectations. Parents, teachers, social service personnel should all bear this in mind. Research in more than just the educational setting can assist us in determining the specific behaviors that come from positive expectations that could help in structuring our interactions with young people so that they are beneficial.

In conclusion, this research has shown some support for the self-fulfilling prophecy. It has been demonstrated to some extent that negative expectancies and perceptions can produce adverse behavior. The results were not totally consistent nor overwhelming. However, it does seem to indicate that the environment and the people with which young people interact are

important to their development.

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