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ABSTRACT

Some research has theorized that the student role is a central part of adolescence, and that failure in this role threatens adolescents' self-esteem. Derogative self-esteem may provoke delinquency as a defensive response. To test this theory a longitudinal study was designed to compare the effectiveness of three alternative school programs that attempted to provide students with experiences of success in an atmosphere of social support. Although these schools were not found to be reliably more effective than conventional schools, the theory that implicated poor scholastic experiences as a provocation to delinquency received substantial support. As students' assessments of their schools and themselves became more positive, their scholastic performance and behavior improved. However, respondents' behavior improved without the mediation of elevated self-esteem. The findings suggest that positive scholastic experiences make a difference in the behavior of only those students whose delinquency seems effective in defending against negative affect. (JAC)

ALTERNATIVE SCHOOLS FOR DISRUPTIVE SECONDARY STUDENTS: TESTING A THEORY OF SCHOOL PROCESSES, STUDENTS' RESPONSES, AND OUTCOME BEHAVIORS

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Executive Summary

Introduction

The research summarized here is a longitudinal study of the effectiveness of a particular type of alternative secondary school in improving the behavior of delinquent and disruptive students. The three alternative schools observed were selected by theoretical criteria because this research was intended not only to assess their effectiveness but also to test a theory which identifies scholastic experiences as a major source of provocation to delinquency.

The alternative school programs made special efforts (1) to provide their students, who had had histories of scholastic failure, with experiences of success largely through individualized instruction and evaluation; and (2) to provide social support from warm, accepting teachers. According to the theory, scholastic success and social support were hypothesized to raise the students' self-esteem and strengthen the social bonds that integrate students with their schools. Thus, the provocation to be delinquent would be reduced, the social constraints against delinquency would be strengthened, and consequently disruptive and delinquent behavior would decline.

Theoretical framework

The theory that guided this research assumes that the student role is a central and critical one during American adolescence. Therefore, failure in this role constitutes a substantial threat to adolescents' self-esteem. Derogated self-esteem is psychologically aversive and provokes effects to counteract it. Delinquent behavior is one such defensive response that is particularly well-suited to this purpose. Delinquent behavior, especially disruptive behavior at school, can be an effective defense for several reasons. First, since a major provocation is failure at school, then disrupting school is a counter-attack on the threatening institutions. Second, assuming that delinquent and disruptive behavior is a self-aggrandizing performance, its worth is enhanced by the appreciative peer audience often available at school. Third, delinquent and disruptive behavior at school conveys a declaration of rebellion against the standards of success held by the schools and their personnel.

The theory hypothesizes that delinquent behavior raises adolescents' conscious self-esteem but not unconscious self-esteem. The latter remains low until experiences such as scholastic success make defensive delinquency unnecessary. However, low unconscious self-esteem will not be manifested in delinquency in the presence of high levels of social control residing in adolescents' attachments to others who will disapprove and will withhold affection, acceptance and other resources.

A number of studies supporting this theory are reviewed

The students and the alternative programs

The students at the three alternative schools were on the average quite heavily delinquent. Their self-reported delinquent behavior was markedly more frequent and serious than the national average found in the National Surveys of Youth. The students also had histories of poor performance and disruptive behavior at school. About half of them were referred to the alternative schools and the other half volunteered. But school grades and self-reported delinquent behavior were similar among the referrals and the volunteers.

The three alternative programs were operated by two public school systems in white, working- to middle class suburban areas. The programs served 30 to 60 students at a time in buildings near the junior and senior high schools which the students would ordinarily have attended. The curricula and procedures were more informal than the conventional schools', there were many fewer rules, and the administrators and teachers were more tolerant and flexible than faculty in conventional schools ordinarily are or can be. Teacher-student ratios were higher than is usually the case in high schools. Instances of disruptive behavior at school were rare.

Two of the alternative programs, Alpha and Beta, featured independent study/learning contracts. The students in each also met daily as a group for one and a half to two hours for training in human relations and communication skills. The third program, Ace offerred a more conventional school curriculum and schedule, except that Ace was smaller, more individualized and more warm and personal than a conventional program.

Study Design

Students attending the alternative schools were compared with students at the conventional schools from which they came. The comparison group consisted of students who were named by counselors and vice-principals as students also appropriate for alternative school referral. (The original design called for random assignment of students to the alternative programs from a pool of referrals and volunteers. Agreements on randomization were made at a time when it was believed that the alternative schools would be oversubscribed. But when the time came to make assignments, there was not in fact over subscription, so all referrals and volunteers were enrolled in the alternative schools and comparison students were identified later.) The alternative and conventional students were interviewed once early in the school year, as alternative students entered their programs, again at the end of the school year, and a third time in the following fall. Two hundred forty students were eligible for the study. Response rates were good. Attitudes toward, perceptions of, performance, and behavior in school were assessed, as were states of personal adjustment, disruptive and delinquent behavior, and other variables.

Measurement and data analysis

A key variable in this study is of course whether students attended an alternative school or not (many alternative school students took some conventional school courses concurrently). But since we are also interested in the social psychological processes by which the alternative programs intended to improve the students' performance and behavior, we constructed measures of these mediating processes as well. One is an index to students' perceptions of the flexibility and fairness of their schools' policies and rules. Another is the students' assessment of their academic prospects--their beliefs in their chances of being successful students, together with their feelings of being stigmatized if they attended an alternative school. A third mediating variable is respondents' assessments of how well they were currently performing in the student role--including their most recent course grades, their reports of the effort they were devoting to schoolwork, and their satisfaction with their performance. Fourth, we measured students' global attitude toward school, including participation in school activities and relationships with teachers. Finally among the mediating variables, we measured students' self-esteem at both conscious and unconscious levels.

Disruptive and delinquent behavior in school and in the community was measured by the confidential reports o the students themselves, a widely-used technique tnat has proved to be more sensitive and valid than official school, police, and court records.

All of these variables were measured among both alternative and conventional school students. Measures of change over the course of the study were also created, using a procedure--regression analysis--that corrects for unequal baseline levels.

Our basic strategy was to compare students who had had alternative school experience with those who had had none at each of the three time periods and with respect to changes over time. Comparisons were made of the two groups each taken as a whole and for each of the three programs. We determined whether alternative school experience made a difference in the mediating processes and in delinquent and disruptive behavior at the third time period, by which time most of the alternative school students had returned to the conventional schools. We also explored whether the alternative schools affected different kinds of students differently.

Findings

The alternative school students were, according to their own reports, no less disruptive or delinquent at the third time period than the conventional students were. Both groups' misbehavior

declined over the course of the study, but the kind of school they attended made no statistically reliable difference. This was true of all three alternative programs.

However, almost all of the social psychological processes that were hypothesized to make a difference in the disruptive and delinquent behavior of youth were found indeed to predict to a significantly greater decline. The alternative schools were somewhat more effective in putting these processes in motion.

Alternative school students reported that their schools were more flexible and their rules more fair than the conventional school students reported. Clearly the two kinds of programs were perceived differently by their students, to the advantage of the alternative schools. Those students who rated their school as more flexible and fair tended to believe their own academic prospects were better than other students did; and they also reported a comparatively greater commitment to the role of student. This tendency held in both the alternative and conventional schools; but since the alternative school students perceived their schools to be more flexible and fair, they tended also to regard their academic prospects to be better and made greater commitments to being students.

Brighter academic prospects and greater commitment to being students were reflected in more positive relationships with teachers and better attitudes toward school. These in turn were related to a greater than average decline in delinquent and disruptive behavior. The most marked effects were in misbehavior at school, but a decline in delinquent behavior in the community was related to better behavior at school.

We did not find marked changes in students' self-esteem, and changes in students' behavior did not seem to depend on such changes. In this respect, the theoretical model was not confirmed, a surprising finding in the light of previous research.

Overall, students who were during the course of this study engaged by their schools became better behaved. The Ace program seemed to be more effective at creating the beneficial conditions than Alpha or Beta. One must be cautious in comparing the alternative school programs with one another because they may have enrolled quite different kinds of students. But the social psychological processes were found to be more closely related to one another at Ace and to the ultimate behavior of Ace's students. The reason may be that Ace was more like a conventional school than either Alpha or Beta were. Because of this the experiences of Ace students may have seemed to them more relevant to the problems that they had been having in school and which provoked their disruption and delinquency originally. Alpha and Beta were more novel programs for their students, much different than their previous scholastic experiences had been and were to be. This may

not have been the programs' only relevant difference from Ace; for both Alpha and Beta were undergoing important changes during the study and merged shortly afterward.

We found that positive school experiences did not have the beneficial effects on the behavior of certain students that they had on the behavior of others. The students who failed to respond to the differences that they perceived in their alternative schools or who failed to translate positive school experiences into improved behavior appeared to be more burdened by non-scholastic problems than their classmates. Their measured psychological adjustment was poorer: some were markedly more anxious when they entered the alternative program; some exhibited greater depression at the end of the study when most were back in the conventional schools. The behavior of these students was markedly worse than was expected from their reports of their experiences at school, while the behavior of the more "bouyant" students got much better.

Conclusion

While the three alternative school programs were not found to be reliably more effective than their conventional counterparts, the theory that implicates poor scholastic experiences as a significant provocation to delinquency received substantial support in this study. For as respondents' assessments of their schools and of themselves as students became more positive, their scholastic performance and their behavior improved. That key element of the theory which was not confirmed by these data is that improved behavior would depend on increases in adolescents' self-esteem at unconscious levels; for respondents' behavior improved without the mediation of elevated self-esteem.

As the theory predicted, positive scholastic experiences made a difference in the behavior only of those students whose delinquency seemed effective in defending against negative affect. The more anxious and depressed students' behavior did not improve as much, despite their own reports of favorable relationships with their teachers and improved attitudes toward school. This raises the question of whether school-based programs might better screen out manifestly depressed and anxious students because the programs are less likely to help them. Such screening would be advisable if anxiety and depression could be diagnosed accurately, but this is difficult under the best of circumstances and few school systems have the resources to do this well. It seems wiser to us, therefore, to employ alternative school programs in the diagnostic process: if certain students' behavior does not improve despite their greater satisfaction with the alternative program, then a careful clinical assessment of their affective states and of their living conditions might suggest more critical points for intervention.

There are several lines of action-research suggested by our findings. We hope to be able to follow our respondents for several more years in order to determine whether the effects found at this point will endure; and to see if perhaps the alternative school experience will prove after all to make a marked difference in the future. We also intend to try to replicate this study with other alternative schools, hoping that the present findings will encourage participating educators to strengthen those elements of their programs that these data suggest are the effective ingredients and thereby become reliably more effective than the conventional schools whose programs they supplement.

But of course producing statistically significant differences between "treatments" is only a tool of action-research, not its ultimate aim. The present findings also offer guidance to conventional secondary school administrators that will help to improve the educational process. While the constraints under which conventional junior and senior high schools operate -- large size, low teacher-student ratios, pressures to evaluate students impersonally and to socialize them for a largely impersonal society, etc. -- make it nearly impossible and, arguably, undesirable for them to adopt wholly the procedures of effective alternative schools, they may be able to alter their programs to a degree and on occasion to accomodate the needs of those students who are showing signs of failure and the negative behaviors consequent to failure. It appears that there is much to be gained generally from educational practices that impress students with their fairness and flexibility; from curricula whose level and pace meet students at their current level of academic adjustment and achievement; and from teaching styles that convey a sense of personal caring and support.

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CHAPTER 1

INTRODUCTION: THE GUIDING THEORY

This study was designed to address widespread and growing concerns over the problems our schools -- especially our secondary schools -- are experiencing in maintaining order and imparting knowledge. One consequence of this concern was the establishment of a program within the National Institute of Education to study the conditions that make some schools less safe than others and to suggest ways of improving their safety. The Congressionally mandated Safe Schools Study was the largest example of NIE's response (NIE, 1978). This study was another part of NIE's response to the problems of processes within schools which may impede or facilitate the schools' progress toward their goals.

Our interest in the problem was both practical and theoretical. On the one hand, we wanted to bring social scientific theory and method to bear on the problem. We knew from our own previous research and the work of others that secondary students differ widely in the degree to which they are alienated from school, disruptive, or delinquent. The problems these students present are neither trivial nor ephemeral. Their behavior can be dangerous and often seriously disrupts their classes and schools. Our theoretical interests concerned the causes of delinquent behavior. We had tested parts of the theory with some success. Because elements of the theory implicated the schools directly, the theory was immediately relevant to the practical problem.

Our theory made us especially interested in some innovative programs with which some school systems are addressing the problem, programs that go under the generic name of <u>alternative schools</u>. One learns after only a brief scan of alternative schools that there are many different kinds of alternatives, with different philosophies, purposes and methods. They serve a variety of kinds of students, not all of them by any means problematic. And, while some exist to address problems or deficiencies, others strive to open up new opportunities for their students. Alternative schools have been created for the gifted as well as the poor student, for the well-behaved as well as the disruptive. Some could be described as "permissive", others, as "strict"; some concentrate on basic scholastic skills while others pursue special talents and interests; and so on. About all that alternative schools have in common is that their programs are somehow different from the curriculum followed by the large majority of the communities' students.

We were specifically interested in those alternative schools designed to serve students identified as behavior problems in their conventional schools. These problems included chronic truancy, disruptive behavior, and serious delinquency. Among the many kinds of alternative schools can be found a substantial

proportion with this mission. Accurate figures are not available, but students of alternative education indicate that approximately a third of alternative programs are designed as responses to these problems (see Arnove, 1978). Within these limits, however, there is still a wide variety of approaches: disciplinarian; "back to basics"; detention; behavior modification; and others.

Our immediate interest was even more narrow. It did not include just any alternative school designed for troublesome or troubled students. Our theory directed us only to programs that displayed certain characteristics which according to the theory should make these alternative schools effective in reducing disruptive and delinquent behavior. We identified schools of the requisite type and were fortunate in enlisting the participation of them and their school districts.

In brief then, this study was conducted for both theoretical and practical purposes. These two purposes were closely related. The theoretical purpose was to test a portion of a theory about the school-related causes of delinquent behavior. The practical purpose was to determine whether a particular kind of alternative educational program is effective in reducing delinquent and disruptive behavior among especially delinquent and disruptive secondary school students. The theory and some empirical data supporting it led us to a certain few alternative schools whose programs included features that hypothetically should make them effective.

A Partial Theory Of Delinquent Behavior

To be clear about why we selected certain programs to study and why we asked the questions about them that we did, we now present the theory that guided our research.

It was our hypothesis when we began this study that certain kinds of alternative schools would reduce the delinquent behavior of their students significantly, regardless of other influences in their lives. That hypothesis certainly makes a large claim for the effectiveness of schools, especially when one considers how other influences like families, peer groups and poverty have been theoretically identified as causes of delinquency. But our reading of the literature on delinquency and our own research have led us to formulate a theory that assigns major influence to the schools. We are not alone in this belief. Short and Strodtbeck (1965) made this point in drawing implications from their study of peer processes in delinquent behavior:

> The old message that delinquency begins in the home is more disavowed than reaffirmed by our analysis. Insofar as it is present, it emerges in a new form. We firmly believe that need dispositions which are required by gang membership arise in the interactions between the

lack of preparation for school-type achievement in the home and the absence of access to alternative adaptations to failure in the schools.

We hypothesized that schools may be regarded theoretically and practically as an independent determinant of youths' delinquency. We sought therefore to test our theory of delinquent behavior with this study of certain alternative schools. We present here only that part of the theory that specifically concerns the schools.

Our theory posits that delinquent behavior is a defense against the external realities that threaten a young person's self esteem. Delinquent behavior is defensive in that it provides a way of avoiding, neutralizing, or counteracting situations which endanger self esteem and of engaging in experiences that promise a form of self enhancement. The theory assumes that a derogated self image is naturally aversive and that it will set in motion forces to dispel it. Delinquent behavior is interpreted as a manifestation of these forces.

It is important to note that the theory as stated here primarily addresses the defense against the external threats which can arise from the performance, regulation and evaluation centered atmosphere of the traditional secondary school. Why the emphasis on the student role? No other role incumbent upon young people in our society is so fraught with failure as studenthood (Glasser, 1969). To the extent that any role ent[illegible]'s clear and pressing standards of achievement, it creates the conditions for success and failure. Achievement stands at the core of the student role. Constant testing, grading, and ranking are indicative of the salience of striving and of the built-in necessity of at least relative failure. Experiences of success and failure pervade scholastic life, especially at the secondary school level. In no other setting -- at home, on the job, among friends -- are the standards of achievement so clear and the means to attain them so narrow. The only adolescent role comparable in this respect to being a student is being an athlete; and today, the athlete role during adolescence is so closely tied to the schools as an institution that it may be said to be a role within it (Coleman, 1961).

Note that we have not made a distinction between the sexes. The theory is intended to apply to adolescent boys as well as to adolescent girls. We have used the masculine gender in this report for convenience; it should be considered to be a neutral, general usage.

Provocation and Control

Two terms central to the theory are provocations and controls.

By provocation we mean the experiences that motivate a person to be disruptive and delinquent.

By controls we mean the goals and values that constrain a person from being disruptive and delinquent.

Provocation. The theory of delinquent behavior as a defense is linked to the concept of the schools as an institution through the hypothesis that a major provocation for delinquent behavior is incompetence in the role of student. The youth falls short of his aspirations for scholastic achievement. Furthermore, he is likely to experience few if any other successes in school. He is not particularly popular or well-known among classmates. He is unlikely to have many close friends at school and if he does, he is still isolated from the status structures of the school regardless of his peer relations. He does not excel in any extracurricular activities and he has no special interest or hobby in school at which he can demonstrate particular competence. The consequence of these experiences is a derogated self image, a feeling that one is not worth much and will not ever be. Delinquent behavior, particularly disruptive behavior in school, is a defense against self derogation.

Such disruptive behavior consists of attacks on school property and personnel, including fellow students; theft; dealing in drugs; noisy, distracting and insubordinate behavior; violation of rules, such as smoking and movement within the school; and truancy. Disruptive behavior in school is especially appropriate as a way of coping with low self esteem for several reasons. First, since the derogation is generated by scholastic experiences, the behavior occurs at the time and in the place where the pain is felt. Second, the appreciative audience that enhances its effectiveness as a coping mechanism is more readily found at school than elsewhere. This point deserves some elaboration.

Disruptive, delinquent behavior is conceived to be a public performance -- a mode of self presentation. It is hypothesized that such behavior is motivated by a desire to enhance the self by the approval of others. Disruptive behavior leads fairy easily to self aggrandizement since it is not difficult to accomplish if one "has guts" (that is, if one is sufficiently provoked). In addition, the school creates a ready audience of peers with similar problems, who will not only observe and applaud but will often participate as well. And typically there is an undercurrent of adolescent negativity toward school even among those who would not behave badly themselves. This conjunction of elements at school makes it a likely stage for a disruptive, self aggrandizing performance.

A third reason for coping by means of disruptive and delinquent behavior lies in the message it conveys. While functioning as a performance, the behavior is also a declaration of revolt against the criteria by which the person has come to

regard himself as a failure. It defies the exercise of authority over both deportment and standards for scholastic achievement, devalues the devaluations, and rejects the devaluators (Cohen, 1955).

Control. Not every youth who is failing as a student finds disruptive delinquent behavior an appropriate way to rescue self esteem. The element of control must be taken into account. Some youngsters are closely attached to people who would disapprove of such behavior, so much so that the approbation of disruption by a peer audience is offset. Where there are warm parent-adolescent relationships that might be ruptured, where there is love that might be withdrawn, where there are affectional, material, or other resources that might be withheld, disruptive behavior bears more costs than benefits and therefore is not displayed.

When strong controls effectively counter strong provocations to be disruptive, then delinquency will not be a strong defense against a derogated self image. Unable to cope by engaging in disruptive and delinquent behavior, a youth may feel great anxiety or may take flight from reality, depending on his other coping skills and the other forces in his life. That is, alternatives to disruptive and delinquent behavior may be various forms of mental illness. Thus, the theory generates a hypothesis that the intensity (frequency and seriousness) of delinquent behavior will vary inversely with symptoms of mental illness, particularly pervasive anxiety among youth who experience role inadequacy such as scholastic failure.

Delinquent Behavior and Official Delinquency

The theory is meant to explain delinquent behavior, defined as the deliberate commission by a juvenile of an act known to violate the juvenile code and, if apprehended, result in judicial response. Several implications of this definition should be made explicit. First, it is a psychological definition in the sense that it defines delinquent behavior from the point of view of the behaver. Note that the behavior qualifies as delinquent only if it is "deliberate" -- intended -- and that the individuals "know" that it is in violation of the law. So, accidental and unwitting violations of a juvenile code do not qualify as delinquent behavior. For example, if a youth accidentally breaks a window, he or she is not a vandal. Although legal authorities may regard accidental or unwitting acts differently, our definition is designed to advance our understanding of individual behavior. As such, it may in some lead in directions different from those chosen by the administrators of justice.

The definition is psychological in still another respect. It specifies that the actor not only be aware of the violative nature of his act but also anticipate an institutional -- "judicial" -- response if he is caught. There are juvenile offenses whose commission is almost universally ignored by the authorities. While it is typically against the law throughout the United States

for minors to buy, possess, or use tobacco, minors are almost never detained or even warned about such behavior even when it comes to the attention of the police. Thus a judgment that behavior is delinquent takes into consideration not only the law but also its enforcement.

It should be clear that this definition of delinquent behavior does not ignore the law. It is a social psychological definition in the sense that it takes an individual's understanding of social norms into account. An act is delinquent even if the actor does not think it is wrong, so long as he knows it is against the law. Some young people believe that marijuana ought to be decriminalized. They regard it as unjust that using it makes them liable to legal sanction. But, since they know that they are liable, their smoking is by definition delinquent. It may be that behaviors which violate laws believed to be unjust have different causes than other violations and are committed by different people and under different circumstances. If that were so, then perhaps we would need to change our definition to take this distinction into account. At present however, we do not believe it is necessary to do so: The correlates of marijuana usage, the clearest contemporary instance of controversial law, are pretty much the same as the correlates of consensually delinquent behavior, and they tend to be done by the same youth (Gold & Reimer, 1975).

It is important to recognize the distinction between delinquent behavior, as defined above, and official delinquency. Delinquent behavior refers to the actual incidence of delinquent acts in a given population (subject to the conditions just noted). Official delinquency refers to that small subset of delinquent behaviors whose perpetrators are apprehended by the police and recorded in the juvenile justice system's records. We are reporting a study of how certain kinds of schools might reduce delinquent behavior. Official delinquency reflects not only the behavior of youth but also the behavior of the police and others in the juvenile justice system -- the people who create the records.

Because there is only a small relationship between delinquent behavior and official delinquency, schools might affect the former and not the latter. Indeed, it is altogether possible that schools could have opposite effects on them: an alternative school might reduce its students' delinquent behavior markedly. However, students might be stigmatized for attending "a special school for delinquents" by the police or the juvenile authorities. Because of that, or because of their possible prior records, the youths may more likely be named official delinquents when they are caught at relatively minor offenses. More likely than this is that an alternative school program would affect its students' delinquent behavior and have no noticeable affect on their official delinquency because the official record is an insensitive gauge of delinquent behavior. The chances of getting caught for a chargeable offense are about three times in a hundred. Two out of

three of the most delinquent 20 percent of American adolescents have no official records at all (Williams Gold, 1972). It is not the case that the official records mark the rise and fall of delinquent behavior in a community or for individual youth with any precision.

This distinction between delinquent behavior and official delinquent is important to keep in mind here, because while we collected the official records of the youth who participated in our study, we did not rely on them as a principal index of the effects of the alternative schools on delinquent behavior. We will later describe what we regard as superior ways to measure this. Meanwhile, we will use the terms delinquent behavior and delinquency interchangeably, as we have defined the former, and refer to official delinquency when we mean the records of the juvenile justice system.

A Promising Educational Program

Our theory of the etiology of delinquent behavior prompted our interest in certain alternative schools. We hypothesized that there are two essential ingredients of alternative education that would determine its success at reducing disruptive and delinquent behavior: a significant increase in the proportion of a youth's successful -- versus unsuccessful -- experiences, and a warm accepting relationship with one or more adults. Both of these pointed to the need for an individualized program.

We hypothesized that an effective alternative program tailors the educational process to the student in several ways. First, the educational materials and tasks are appropriate to the student's present level of skills. Second, their content appeals to the student's own interests. Third, the student is allowed to master them at his own pace. And fourth, evaluation is based on individual progress. Comparisons are made with the student's own previous performance, not with norms for age or grade.

Also characteristic of the alternative programs of interest was the suspension of the social norms that typically govern teacher-student role relationships. In their place are more informal, more interpersonal relations. The differences between role relationships and interpersonal relations have to do with their affective components and with the involvement of whole personalities in the relationship. Ordinarily, secondary school teachers are encouraged to assume a routine pleasantness toward their students that, in effect, amounts to affective neutrality. In the interests of fairness, teacher-student relationships are relatively constant from one student to another. Neither teachers nor students are supposed to take one another's peculiarities into account; rather, peculiarities must be submerged in the enactment of formal roles. Interpersonal relations, in contrast, are affectively loaded and participants demonstrate their changing

feelings toward one another. Each takes into account the other's individuality in their interactions, rather than holding the other strictly to the rules of a formal relationship.

We hypothesized that in effective alternative programs, teachers would help create a unique relationship with each student. These relationships would be infused with a genuine liking and acceptance of the student but, on the other hand, would not conceal disapproval for some kinds of behavior.

By providing successful experiences and thus reducing the provocation of school failure, a program can break the etiological chain that is identified in the partial theory of delinquent behavior. The warm, accepting relationship with teachers also enhances the student's self image. Furthermore, this kind of relationship is conducive to the formation of social bonds that strengthen the individual's controls over his behavior.

Such programs have already evolved, independently of any explicit theory. Anderson (1973) has shown that high schools in which students' describe less exercise of bureaucratic authority and more informal, personal relationships with their teachers also create less student alienation from the school. One finds, in descriptions of alternative school programs for delinquent youths, emphasis on individualized curricula, ungraded classrooms, personal evaluation, and warm teacher-student relationships. A recent report on the Woodward Day School in Worcester, Massachusetts, is typical:

> ...other programs [for aggressive and other emotionally disturbed children in the Worcester school system have] adopted many of the Woodward Day School features: a controlled small environment, location outside of public school walls, individualized attention, acceptance of deviant behavior, and an emphasis on improving the students' self image (Kennedy et al., 1976).

Swidler describes two alternative high schools in Berkeley, California, in similar terms:

> Group High and Ethnic High avoided teaching students about achievement, about success and failure. They concentrated instead on teaching students self confidence and self respect. The first element in increasing students' self confidence was reducing the inequality of status between teachers and students. Casual, friendly relations between teachers and students lessened students' fear, and made the teachers seem approachable, nonintimidating friends. Students felt important precisely because, as one student put it, "The teachers were really friends with students." A second way to avoid evaluating students and to build self confidence, is to construct assignments with few possibilities for failure...[At Group High] students

> were praised and rewarded for sharing their ideas with the group; not for having the right answers. Indeed, right or wrong answers, correct or incorrect facts and ideas, were subordinated to psychological and socio-emotional considerations. Students were not judged; they were encouraged to develop their individual potential (Swidler, 1976).

But in these alternative programs, as in other efforts to reduce delinquency, data are rarely collected to test either the effectiveness of the programs or their theoretical assumptions. One has to glean hints from the empirical literature on how separate components of the program might work if they were integrated.

Two studies are relevant here. In one, Massimo provided individualized counseling services to ten disruptive and delinquent boys including the two components hypothesized to be present in an effective alternative school program: an increased ratio of success to failure experiences, and warm relationships with norm-abiding adults (Massimo & Shore, 1969). Massimo made particular efforts to ensure that his clients were adequately prepared for the jobs they took, that they received guidance and assistance in keeping their jobs, and that remedial education was tailored to each boy's needs. Furthermore, personal support was available at all times, day or night, and Massimo maintained a flexible approach in his dealings with the boys. It should be emphasized that while this was not a school program, it suggests elements of effective teacher behavior.

More pertinent perhaps is the Quincy, Illinois, alternative school program described by Bowman (1959). Sixty eighth graders who were performing poorly at their schoolwork were selected for study. Most of them were discipline problems at school and 41 percent had police or court records. Three groups of twenty youngsters each were defined randomly, two of these groups becoming special classes, the third continuing in the conventional junior high school program. The special classes differed in several ways from the traditional program. The students spent a larger share of their school day with one teacher who had volunteered to lead the class, who knew the students well, and who was sympathetic toward them. The children were not pushed to achieve; the pace was slow, tailored to their current levels of functioning.

> The efforts of the teachers were aimed at making school a pleasant experience; helping pupils learn the basic skills of reading, writing, and arithmetic; helping them learn the practical things they would use in their daily lives; and providing experiences in which they could find some success (Bowman, 1959).

Clearly it was the intent of the program to maximize success experiences and provide warm teacher-student relationships.

The effects of the special classes were mixed but promising. The students in the alternative program showed neither more nor less gain in achievement scores than did the randomized controls. But their attitudes toward school improved along with their attendance relative to the controls. About two years after the program began, official delinquency records were checked again; these revealed that the students in the alternative program had had fewer contacts with the police and that the offenses for which they were apprehended had become less serious. The control group was exhibiting the opposite trend. It is not clear from the published reports just what produced the positive changes. It appears not to have been real advances in scholastic abilities, although it seems likely that the students felt that they were making better progress, which psychologically may be more crucial than the objective fact. It also seems likely that social bonds with their teachers grew stronger and were thus able to provide some constraint against antisocial behavior.

The importance of warm interpersonal relations with a socializing adult in the effective treatment of delinquents is underlined in a study by Persons and Pepinsky (1966). Eighty-two boys incarcerated in a state reformatory were selected as appropriate for a combination of group and individual psychotherapy. Half of them were randomly assigned to the treatment group. The authors write that:

> One of the major objectives of every therapist was to encourage in each boy the development of warm, interpersonal relationships, both with the therapist and with the other boys in his group (Persons & Pepinsky, 1966).

One of the more immediate effects of the therapeutic program was to raise the level of participants' scholastic performance in the reformatory school. Significantly more participants than controls made the scholastic honor roll. Another effect was improvement in the participants' behavior so that fewer of them were reported to be disciplinary problems and more were granted passes that permitted greater freedom at the institution (Persons, 1966). Yet one might be skeptical about measures of effectiveness taken within the institution where personnel who make decisions are also aware of who is receiving treatment and who is not. More impressive are the differential records compiled by the randomized groups after they were released. After the same amount of time on the outside, 61 percent of the controls were reinstitutionalized for delinquent behavior compared with 32 percent of those treated.

It is plausible that any special effort would have some beneficial effect -- a phenomenon well known in social science and medicine. One explanation for this effect is that special efforts signal to the recipients that others care about their welfare, and this makes them feel better, work harder, and so on. Actually, this effect does not contradict the theory presented here inasmuch as we hypothesized that a prime ingredient of effective

alternative schools is a demonstration on the part of teachers that they care particularly for their students. It should be noted that we hypothesize a particular sort of caring will be effective -- one that minimizes formal role relationships between teachers and students -- and we propose that at least perceived scholastic improvement is important too.

The literature on delinquency treatment programs shows quite clearly that many special efforts have failed to make noticeable differences. Different kinds of programs have been systematically evaluated -- volunteer probation officers, various forms of group therapy, tutoring and behavior modification to name a few -- and they have not seemed to work (Gold & Petronio, 1980). Especially relevant here is that one carefully researched alternative school program was not demonstrably effective. Reckless and Dinitz (1972) observed a program designed for 7th grade boys who were nominated by their 6th grade teachers as likely or possibly to get into difficulty with the law. Over the course of three successive years, 632 such boys were assigned to self contained classrooms of 25 to 30 boys each, taught by selected and especially trained teachers. The classes met for three consecutive hours each school day and the students attended regular classes the rest of the day. The program differed from the conventional curriculum in several respects. The main thrust consisted of "role model" lessons in which positive behaviors in a wide variety of settings were presented, discussed, and practiced. Other features included: special efforts to improve the students' reading skills; the main disciplinary action was to send a student out of the room but not to the principal's office; the parents of students enrolled in the third year of the project were visited by the teachers; and the classes were composed of boys only.

The effectiveness of this program was assessed mainly by comparing the boys in the alternative program with a set of boys who were also nominated by the teachers as likely or possibly to get into difficulty with the law but were randomly selected to remain entirely in conventional classes instead. Reckless and Dinitz summarize the findings thus:

> On none of the outcome variables were the experimental subjects significantly different from the controls. This was especially and most painfully evident in the school-performance and police-contact data. There were no significant differences in the number of boys who experienced contact with the police, the frequency of such contact, or the seriousness of [self reported delinquent] behavior. In regard to the school data, the dropout rate, attendance, grades, and school-achievement levels...were very much alike (p. 153).

This summary was true both for data collected at the end of the boys' 7th-grade experience and three years later.

Apparently this alternative school program did not work. But, as we observed near the beginning of this introduction, alternative schools are not all the same and one should not expect the same results from them. It does not seem from Reckless and Dinitz's report that the Columbus, Ohio, programs that were observed put into operation the psychological processes that we have hypothesized would make an alternative school program effective. The boys' attitudes toward their teachers deteriorated over the school year, equally so among the alternative and conventional school students. It is notable that the reading skills of the alternative school students improved significantly compared to the controls; and that this improvement was reflected in a marked increase in these boys' confidence in their capacity to learn. But the conventional boys also gained some confidence over the year in their capacity to learn, so that progress on this score did not differentiate the two groups reliably. It seems to us that the emphasis given in the alternative program to a fairly fixed curriculum, frequent examination, and discipline by isolation probably worked against achieving warm, teacher-student relationships or a distinctive advantage over conventional programs in raising the confidence of the students in their scholastic potential.

It remained to be seen whether other alternative school programs that aimed to maximize the strength of certain psychological processes could actually put those processes to work and; if they did, could be effective in raising the self esteem of their students and reducing their delinquent and disruptive behavior. This report reviews literature relevant to the theory, describes the programs that we found; how we went about testing the hypothesis derived from the theory; and whether and under what conditions the programs were effective.

CHAPTER 2

SUPPORT IN THE LITERATURE FOR THE THEORETICAL MODEL

Evidence that gives credence to the theoretical model can be found scattered in the social science literature. No one study provides data on all the hypothetical links. So we must draw upon the literature piecemeal, as it casts some light on one hypothetical link or another or as it demonstrates the effect of one or another component of an alternative school program.

Scholastic Achievement and Self Esteem

Research findings leave little doubt that better students tend to have higher self esteem. Studies using a variety of measures of both scholastic competence and self esteem have demonstrated this relationship.

Bachman (1970) employed a combination of items from batteries developed by Rosenberg (1965) and by Cobb, Brooks, Kasl and Connelly (1966) to measure the self esteem of a representative sample of tenth-grade American boys. The self esteem scale is a transparent measure--almost all respondents would realize its intent--and includes items such as "I take a positive attitude toward myself," "I feel I do not have much to be proud of," and "I am a useful guy to have around." Boys' responses correlated ($r = .23$, $p < .01$) with their reports of recent school grades.

Prendergast and Binder (1975) administered the Tennessee Self Concept Scale and the Rosenberg Self Esteem Scale to 366 urban ninth graders and correlated their scores with measures of scholastic proficiency obtained from the Houghton Mifflin Test of Academic Progress. Self esteem as measured by the Tennessee Self Concept Scale was unusually well correlated with reading proficiency (.98), and it related moderately well (.32) with math proficiency. The Rosenberg Self Esteem score was correlated with reading and math scores at .35 and .57, respectively.

Epps (1969) measured scholastic achievement and self esteem among black students in eight urban high schools. Rosenberg's index of self esteem was correlated with the students' total scores on the School and College Abilities Test (SCAT) in the four northern high schools, on the Otis IQ Test in the four southern high schools, and with their grades in all the schools. The correlation with self esteem was nearly the same for test scores and for grades ($r = .24$ and $r = .25$, respectively).

Studies of upper elementary school pupils, which correlated the California Achievement Test with the Tennessee Self Concept Scale (Williams and Cole, 1968), with Bills' Index of Adjustment, (Bledsoe, 1964), or with an adaptation of the Stephenson Q-sort technique, (Bennett, unpublished) all yielded positive correlations between self esteem and scholastic achievement.

Data from the National Survey of Youth of 1972 demonstrate the relationship between scholastic achievement and self esteem in a way particularly relevant to the present study. The measure of self esteem is a projective one created by Ziller, Henderson and their colleagues (See Wylie, 1974) and was employed to try to assess unconscious facets of adolescents' evaluations of themselves. The measure is described in detail later for we employed it in this study as well. Suffice it to report here that among a representative sample of American boys and girls 15- to 18-years old, there is a low but statistically reliable positive correlation between the youths' projected (unconscious) self esteem and their grade point averages (rhos=.12 to .14, $p < .05$). This was not the case among 11- to 14-year olds.

Scholastic Achievement and Disruptive Behavior

One must be aware of the inadequacy of most of the data on the relationship between scholastic achievement and disruptive, delinquent behavior. Research on delinquency, in the past and, for the most part, today as well, has relied on official records of apprehended, adjudicated and sometimes incarcerated youths for indirect measures of the degree of delinquent behavior. But a relationship of official delinquency to scholastic achievement is built into the data by the process of creating the records, for it is more likely that an apprehended youth will acquire a record if an inquiry determines that he is doing poorly in school. Whether the actual commission of delinquent acts is related to scholastic achievement cannot, therefore, be conclusively demonstrated by official data. For this reason, we will review here studies that measure delinquent behavior by means of unofficial observation and self reports.

Feldhusen, Thurston, and Benning (1971) had third and sixth grade teachers in a semirural Wisconsin county nominate two boys and two girls in their classes who demonstrated exemplary behavior (e.g., "industrious," "productive") and an equal number who characteristically displayed disruptive behavior (e.g., disrupts class," "bullies others," "tardy or absent without excuse"). A sample of 256 boys and girls was then randomly selected from each category for intensive study. The researchers found that disruptive pupils scored significantly lower in the reading and arithmetic sections of the Sequential Tests of Educational Progress (STEP) than did the "good citizens," and that the difference between categories of nominees was greater at the sixth grade than at the third grade level. Follow up studies five and eight years later by the same authors showed that the difference in scholastic achievement persisted through high school.

Weinberg asked seventh and eight grade teachers to identify the boys in their classes who (1) "contributed most to the solidarity of the classroom group by their outstanding efforts, exemplary cooperation, demonstration of leadership abilities, and general all around willingness to help," or (2) "contributed most

to the disunity or conflict present in the classroom through disobedience, lack of effort, and general nonconformity to school and classroom expectations." Teachers' nominations were checked with principals, vice-principals, office staff, and school records to assemble two categories of students who were clearly quite different in their reputations. Then students' STEP scores for reading, writing, and arithmetic were compared, and the disruptive boys' achievement was found to be markedly lower ($p < .001$). This was true among sons of both white-collar and blue-collar workers.

In sum, then, many studies employing different measures have established a correlation between disruptive or delinquent behavior and scholastic achievement. Of course, correlation is not causation; the relationship supports but does not confirm the hypothesis of a causal link between the two.

Phillips and Kelly (1979) have argued however that other data support the hypothesis that scholastic failure leads to delinquency rather than two alternative hypotheses: that delinquency leads to scholastic failure or that both delinquency and scholastic failure are correlated because they are each related to some third factor.

> If school failure is indeed a cause of delinquency" Phillips and Kelly have asserted, "then any reduction in school failure (including leaving school, which would eliminate it) should produce a reduction in delinquent behavior among those individuals who leave. On the other hand, if delinquency somehow produces school failure..., leaving school should not affect delinquency (p. 199).

They then cite studies reported by Elliott (1966) and Elliott and Voss (1974) both of which demonstrate that boys' delinquent behavior declined after they dropped out of school. In some respects, these data are strong support, because we might have expected that school dropouts would become more delinquent. For one thing, social control theory would predict that the severance of bonds to a socializing social institution would weaken social control and increase delinquent behavior. Second, the proverb that "the Devil finds work for idle hands" implies that school dropouts would have lots more time to be delinquent -- and they are also under less adult surveillance. Of course, if school dropouts shortly find jobs and keep them, then these effects of dropping out would be ameliorated. As far as we know, the studies of the relationships between delinquency and dropping out have not taken subsequent employment into account. In any case, Elliott and Voss find, on the basis of their longitudinal study, that scholastic failure precedes delinquency and that its instigation is reduced when youths drop out of school. The researchers conclude that scholastic failure seems to provoke delinquent behavior, not so much because of its long range implications for success in our society but rather because of the current distress

that it arouses. They write, "[W]e view delinquent behavior as a way of coping with social stigma and loss of self esteem associated with failure..." (p. 204).

The idea that scholastic failure causes disruptive and delinquent behavior would be more certainly confirmed by an experiment in which scholastic achievement is raised and disruptive, delinquent behavior subsequently declines.

Self Esteem and Delinquent Behavior

In a previous study, we made a distinction in the concept of self esteem that is especially relevant to the concept of delinquency as a psychological defense (Gold & Mann, 1972). Measures were taken of both conscious and unconscious levels of self esteem. Conscious self esteem was measured by the discrepancy between actual self description versus ideal self discrepancy: Each subject rated fourteen bipolar items (e.g., "slow-quick," "tough-mild," "smooth-rough") on a seven-point scale for both "myself" and "myself as I would like to be now." The discrepancy scores between identical items under the two different headings were summed, without regard to their direction. A high sum and thus a large discrepancy was taken as indicative of low conscious self esteem. To measure self esteem at a relatively unconscious level, each respondent was presented with a vertical array of eight circles and instructed to write "me" in the circle in which he felt he belonged; the respondent's unconscious self esteem was determined by the circle in which he wrote "me," the topmost circle representing the highest self esteem (Gold & Mann, 1972).

Among eighth grade boys from a lower class, rural Michigan junior high school, no significant difference in conscious self esteem was found between highly delinquent high achievers and highly delinquent low achievers, although there was a difference ($p < .10$) between high achievers and low achievers among boys who were not highly delinquent. But the low achievers who were highly delinquent registered the lowest unconscious self esteem, significantly different from that of the high achievers ($p < .002$). These data were interpreted to mean that delinquent behavior served a defensive function, elevating the boys' conscious but not their unconscious level of self esteem.

Mann (In press) has replicated this finding among fifteen- through eighteen-year-old boys representative of all the boys in that age group residing in the contiguous forty-eight states. Fifteen to eighteen-year-old boys whose unconscious self esteem was markedly lower than their conscious self esteem also confessed to significantly more delinquent acts than did other boys. This was not true however among younger adolescent boys. Similar results with the same measures have been obtained by Berman (1976) and by Miller (1980).

The study by Massimo and Shore, previously mentioned, points to the causal relationship between self esteem and delinquent behavior (Massimo & Shore, 1963). Twenty fifteen- to seventeen-year-old boys were identified by their histories of antisocial behavior, repeated truancy, chronic problems of school adjustment, failing grades, aggressive acts, and reputations with attendance officers, courts, or police; and they were at the point of leaving school, voluntarily or involuntarily. Ten boys were selected at random from these twenty and offered the services of a clinician from the Judge Baker Child Guidance Clinic, primarily to help them find employment. They received comprehensive services for ten months, while the other ten boys did not. At the end of that time, only three of the ten boys in treatment had been placed on juvenile probation, compared with seven of the control group ($p < .10$).

To measure self esteem in this study, a clinical psychologist rated pairs of stories elicited by Thematic Apperception Test cards. Five stories were told at the beginning and five at the end of treatment. The ratings were done in a triple-blind design, the rater not knowing which story was the first one of a pair, which boys told which pairs of stories, or which pairs were told by the same person. Improvement in self esteem was observed more frequently among the boys in treatment than among the untreated group ($p < .01$). Its causal relationship to changes in delinquent behavior is suggested by the authors: "The results indicate that the first area of change is in attitude toward self" (Massimo Shore, 1963). It is also notable that the Metropolitan Achievement Test scores of the boys in treatment improved in reading, vocabulary, and arithmetic, while the scores of the control boys declined ($p < .01$). This occurred even though no special attempt was made to get the boys in treatment back into school or to tutor them.

A follow-up study testified to the importance of self esteem in the change process:

> Of great interest is that comparison of the follow-up stories with those given immediately after treatment indicated the same course of change as in the before and after treatment comparisons. That is, self image changed most, control of aggression next, and attitude toward authority least. No boy showed a change in control of aggression who had not first changed in self image, and no changes were shown in attitude toward authority unless there were changes in the other two areas (Shore & Massimo, 1966).

Kaplan has reported a predictive study that also causally links low self esteem to delinquent and disruptive behavior (1975) Over 4,000 junior high school students were asked on a questionnaire about their attitudes toward themselves (e.g, "On the whole, I am satisfied with myself" and "I feel I do not have much to be proud of") and about their deviant behavior in the

previous year (e.g., "Sold narcotic drugs," "Cheated on exams"). These data were collected twice, about a year apart. For each of the twenty-two deviant acts in the questionnaire, Kaplan identified those students who had denied ever doing that act up to the first administration; he divided these students into those who had reported high, medium, and low self esteem. Then he compared their later reports of deviant acts. As hypothesized, for each of the twenty-two acts, more of those who had given evidence of low self esteem at the start of the year reported having committed the act during the ensuing year than did those who had indicated high self esteem.

Rosenberg and Rosenberg (1978) also tested the sequential relationship between self esteem and delinquent behavior, using the longitudinal data collected by Bachman et al. (1972). They found that:

> ...[T]he weight of evidence is in the direction of Kaplan's speculations. For the sample as a whole, and for the lower and higher socioeconomic classes separately, the analysis of cross-lagged panel correlations suggests that self esteem has a stronger effect on delinquency than delinquency has on self esteem. And this is especially true in the lower class where the social support for such activity may be stronger and the social condemnation weaker. For the same reason, delinquency appears to damage the self esteem of the higher SES youngsters more than of the lower SES boys (p. 289).

Finally, with a still different measures and research strategy, Aronson and Mettee demonstrated how low self esteem can generate delinquency (Aronson & Mettee, 1968). The researchers created differential levels of self esteem among women enrolled in an introductory psychology course by giving them randomly predetermined reports of their profiles on a personality test they had just taken. A subject was told either that her profile indicated that she has "a stable personality and is not given to pronounced mood fluctuations of excitement or depression" or that her profile showed that she has "a rather unstable personality and is given to..." Following this experimental induction, the women participated in a blackjack game, during which an apparently malfunctioning card-dealing apparatus gave them what they thought was a covert opportunity to cheat. Significantly more women cheated whose self esteem was threatened ($p < .03$).

Thus, several studies support the hypothesis that low self esteem leads to delinquent behavior.

Scholastic Achievement and Anxiety

Research on the relationship of scholastic achievement to anxiety consistently demonstrates a negative correlation between them, but at least two qualifications of that general finding

should be noted. First, the hypothesis typically tested is that anxiety causes low scholastic achievement, whereas we have posited that the low achievement creates the anxiety. While these hypotheses are converse, they are not contradictory; that is, the relationship between achievement and anxiety may be mutual and cyclical. However, the theoretical approach taken here emphasizes the one direction rather than the other.

Second, the hypothesis that anxiety interferes with scholastic proficiency has led many researchers to focus on anxiety over scholastic matters; specifically on test anxiety. Our own interest in self esteem, provocation, and control as mediators of the effects of academic achievement on the level of anxiety has led us to consider the effects of general anxiety rather than test anxiety specifically.

Feldhusen, Denny, and Condon (1965) measured the anxiety of seventh and eighth graders with the Sarason General Anxiety Scale for Children, a set of items that inquires into fears and worries (e.g., "When you are away from home, do you worry about what might be happening at home?" and "Are you afraid of things like snakes?"). The more anxious pupils scored lower on both SCAT and STEP, and the negative correlations (ranging in the .20's and .30s) were generally stronger among boys than girls.

Hundleby collected scores on the Primary Test of Mental Abilities (PTMA) from 203 adolescents, 117 of them in public schools in a small Illinois town, the rest in institutions in Illinois and Indiana (Hundleby, 1968). He also collected school grades in reading, arithmetic, and conduct from the public school sample. The measure of anxiety was a set of objective tests (Cattel & Warburton, 1967) including such diverse indicators as handwriting pressure, use of rhymes in a word association test, susceptibility to distraction while performing a motoric task, and the number of personal frailties admitted. (It is relevant here to note that the admission of frailties may also be indicative of low self esteem.) Hundleby found negative correlations (in the .40s) between anxiety and PTMA scores and between anxiety and grades in school (in the .20s).

Dudek and Lester also found an association between high anxiety and low academic achievement (Dudek & Lester, unpublished). They identified under- and normal achievers among thirteen- to seventeen-year-old middle class children; the former were two years or more behind their agemates in school despite tested intelligence in the normal range, and the latter were a group of adolescents attending an urban high school where they earned passing but not outstanding grades. The measure of anxiety here was a qualitative analysis of Rorschach responses. The findings are especially interesting for what they observe in connection with anxiety:

> The inference from these findings would be that the underachievers experience a blocking of oral aggressive energy, whereas the normal achievers have no difficulty being aggressive, demanding and orally incorporative...The passivity (of the underachiever) has a quality of resistance and hostility (Dudek & Lester, p. 10).

> The core area of anxiety center around the handling of aggressive impulses, and the characteristic mode of defense appears to be a retreat into passivity, compliance, reaction formation, and depression: the characteristic "good child persona." The proportion using this defense appears to be significantly greater than would be found in a control sample of normal achievers (Dudek & Lester, p. 12).

We note that these researchers attribute defensive maneuvering to scholastic failures, but of a very different kind from delinquent behavior, and that anxiety seems to be a marked component of their experience. According to our theory, a delinquent defense would be more effective for reducing the anxiety of some students.

Disruptive, Delinquent Behavior and Anxiety

We have suggested that because delinquency can often be an effective defense against a derogated self image, it should be negatively related to anxiety. Relevant data are sparse, and it must be admitted that the theory itself is ambiguous on this point. The ambiguity arises over the matter of signal anxiety, that kind or amount of apprehension that emanates from dangerous situations -- in this case, those situations that threaten failure and further derogation of the self image. Is this anxiety felt consciously by a youth or is it barred from awareness? Is it distinguishable from the chronic discomfort of unconscious low self esteem or does it so supplement that chronic condition that the whole complex threatens to break into consciousness? Perhaps if these questions could be answered, then the kinds of measures and data would fall into some order. But the theory is not yet clear on these issues. At this point we have to present what seem to be the relevant data without being sure that they address the hypothesis appropriately.

Davies and Maliphant asked teachers at a boys' boarding school in England to nominate "refractory" students; they then identified thirty whom at least two-thirds of the teachers had named (Davies & Maliphant, 1971). Thirty boys who were never so nominated were matched with the refractory boys for age and form (grade) in school. The researchers relied on base heart rate and changes in heart rate with the introduction of stress conditions to measure anxiety. Recognizing that heart rates depend upon a great many variables -- size, nutrition, age recent activity -- they chose their research site and their subjects to minimize

differences among them. They found that the refractory boys had lower base heart rates ($p < .005$) and that their heart rates were less reactive to the threat of shock for error or overlong delay in a reaction-time task ($p < .005$). Davies and Maliphant replicated the finding of less reactivity ($p \leq .04$) in another sample, comparing seven boys attending a public secondary school whom teachers rated as unresponsive to punishment, hostile to authority, dishonest, aggressive, indifferent to adult approval, and a generally bad, with seven boys whom teachers rated in contrasting terms.

Naar contributes evidence measuring anxiety based on experts' ratings of the House-Tree-Person (H-T-P) drawing test (Narr, 1964). He was prompted to conduct this study by the Gluecks' finding that the Rorschach responses of institutionalized delinquents displayed less anxiety than those of matched "non delinquent" controls (Glueck & Glueck, 1950). Naar wanted to determine whether another, more efficient method would make the same differentiation. His delinquent group was composed of thirty boys fourteen to sixteen years old, incarcerated in a correctional institution in Virginia; thirty nondelinquent boys were selected from an urban public school in an area with a high official delinquency rate, matched with the delinquents in age and tested intelligence. Both of the judges who independentiy and blindly rated anxiety levels from the H-T-P found fewer signs of anxiety (excessive, irrelevant detail; hesitant, faint lines; shading) in the delinquents' drawings ($p < .01$ for one judge and $<.05$ for the other).

One of the series of studies by Shore, Massimo, Mack, and Malasky is informative on the relationship between delinquency and anxiety (Shore et al., 1968) They report that TAT stories told by the boys who received the experimental services contained markedly more signs of guilt at the end of treatment than did those told by the control group ($p < .03$). Furthermore, increases in measured guilt were reliably and positively correlated ($p < .05$) with improvement in Metropolitan Achievement Scores. However, both the level of guilt and its correlation with achievement subsided in the years after treatment was terminated. If one can equate signs of guilt in this study with general anxiety, the results suggest that effective treatment induces both scholastic improvement and by disallowing an established delinquent pattern, higher levels of anxiety. However, as the provocation to delinquency declines -- the effect on self esteem of more successful scholastic performance, steady employment, and so forth -- anxiety declines. The results further suggest that one risk of only partially effective treatment is that anxiety will continue to grow in the absence of an effective delinquent solution, perhaps to a degree that generates pathology. Indeed, one of the ten treated boys had to be hospitalized as a psychotic, while none of the control boys entered a mental institution (Shore & Massimo, 1963)

With delinquency and anxiety measured in different ways in each of these studies, the youths defined as delinquent proved to be in some sense less anxious. We know of no studies with an opposite finding. While this pattern of evidence seems supportive of the theory, we remain cautious on this point because the theory does not make clear which, if any, of these measures of anxiety are the appropriate ones.

CHAPTER 3

THE ALTERNATIVE SCHOOL PROGRAMS

We have presented a partial theory of delinquent behavior that conceptualizes delinquency as a psychological defense against a derogated self image. The theory identifies failure in the role of student as a major threat to the self image. Thus, it implicates the schools as a significant provoker of delinquent behavior. Concomitantly, the schools are recognized as having great potential for reducing delinquency. Elements of a type of educational program have been described that might effectively draw upon the schools' potential.

What we set out to do in this study was to identify several alternative school programs that actualized the theory and to enlist their staffs and students and the staffs and students in their parent conventional schools in a field experiment.

The alternative programs in the study shared the philosophy that the school should provide a supportive, flexible and personal atmosphere and that students' chances for academic success should be enhanced by the approach, structure and procedures of the schools. The alternative school staff members knew that their students were those whose recent school histories showed some combination of poor or failing performance, poor attendance, and discipline problems. They knew they had to do something different from a conventional school program in order to engage their students. This chapter describes what the programs did to put their philosophies into practice.

The Programs' Settings

The alternative school programs were physically different from the conventional schools they served. Two, Alpha and Beta, were located in unused wings of elementary schools. The third, Ace, was housed during the first part of the study in part of the campus of a private residential facility for young children. It was moved to an unused wing of an elementary school between the second and third years of the study. The programs thus had their own areas in which they could establish their own rules, procedures, and ambiences.

Alpha and Beta both had a room set aside as a student lounge, decorated and maintained by the students. Music (provided by student-supplied record players or radios) was available in the lounge areas. Smoking was also permitted in the lounges. At Ace, there was no lounge for students, but there was an area set aside for breaks --at which smoking was permitted -- which occurred at regular times during the day.

All three programs featured students' art as part of the decor -- in fact, it was the only decor. Each of the programs occupied about the same area -- equivalent to three large school

classrooms. They were open in appearance. In Alpha and Beta, the arrangement of the furniture where class was held was a circle -- of chairs in Alpha and of chairs around a large area of tables in Beta. In Ace, the arrangement was closer to that of a conventional classroom, with a teacher's desk at the front of each of the two classrooms. The seating arrangements were flexible, however. Desks were frequently arranged in a circle or clustered for students working together. Students often sat at or used the teacher's desk as a work table. Although the alternative students did not have their own exclusive entrances to the schools, they were the only secondary students in the buildings.

By comparison, the schools which the alternative students had previously attended were large and as such, fairly impersonal settings. The high schools each served student populations of from 2,000 to 2,500. Strictly enforced regulations governed parking and driving, movement within the school, and cigarette smoking. Violation of any could be grounds for disciplinary action, including suspension. (A few students in the study were from two junior high schools. These were also large, traditionally structured programs, though their relatively smaller size, about 700, and younger student population allowed them to be run with somewhat more flexibility than the high schools. Nevertheless, they were still quite large and impersonal compared with the alternative programs).

A major reason for the striking alternative school-conventional school contrast involved a variable whose effects touched virtually all areas of the programs' operations. That variable was size.

Program Size and Staffing

The alternative programs were designed to serve approximately 20 to 30 students at a time. The arrangements differed among the programs. Alpha's total enrollment of 40 was split into two sections. Each section met separately each day. These sessions were called workshops. Analogous sessions at Beta were called seminars. During the year of the study's first and second interviews, Beta had three seminars. Previously, it had had two seminars, a number it returned to during the year of the wave three interviews. Each seminar, regardless of the number of seminars, enrolled 20 students. The Ace program was differently structured from the workshop/seminar format used in Alpha and Beta and also difierent in its enrollment practices. Nevertheless, the program was designed with an enrollment capacity of 30 students at any one time. Thus, Alpha had a capacity of 40, Beta of 40 to 60, and Ace of 30.

Program staffing differed among the alternative schools. The staff at Beta consisted of two teachers/co-directors, both of whom participated in each of the seminars. At Alpha, there were two teachers, both of whom participated in each workshop, and an aide who frequently participated in workshop sessions. Ace was staffed

by two teachers, an aide, an administrator and a part time secretary. Ace's class sessions were not as frequently team taught as in Alpha and Beta, but the students were divided into two groups -- one section for each teacher for each subject. The aide and administrator were available to help in the classrooms when the teachers needed to spend time counseling or working with an individual or small group.

Overall, the teacher/staff-to-student ratio was high and class size low in the alternative schools. Class size in the conventional schools, on the other hand, was approximately 30-32 students per class with one teacher per class.

The teachers in the alternative programs all were seasoned hands with at least eight years' experience. All had backgrounds (and most had advanced degrees) in counseling or special education. Beta's teachers collaborated on the original proposal which initiated the program. Ace's administrator had previously been one of the program's teachers one of Ace's two current teachers was in her seventh year in the program when the first interviews began. Ace's second teacher was in his second year with the program at that time. All had orginally elected to join the program voluntarily, as opposed to being "bumped" in. We have noted elsewhere that both of Alpha's teachers were new by the time the interviews got underway. Both elected to join the program voluntarily, as at Ace.

Declining enrollments in both school districts and the area generally and concomitant shriknage in districts' teaching staffs had two implications of relevance here. There were few if any young teachers in the districts or their alternative programs. The alternative programs' staffs were generally in mid-career.

Secondly, there were few opportunities for mobility for teachers within these shrinking school districts. In general, however, the alternative school teachers had more autonomy than was true for most of their conventional program counterparts. Because of their team teaching arrangements, the alternative school teachers had more professional contact with peers and more variety than conventional school teachers. This seemed to be important to them in how they approached their work. Although most felt they could not easily move, the staff members who had been in the alternative programs for some time showed no signs of professional burnout or of just going through the motions of their jobs. Instead, they remained interested in their programs and in ways of modifying them for improvement.

The School Day

At Alpha and Beta, the school day was structured around the schedule of workshop/seminar meetings. The sessions ran for an hour and a half at Alpha, two hours at Beta. Sessions in each school had a midway break. School began at 8:00 a.m. Students were enrolled in one seminar/workshop (i.e., the first or the

second). Few took advantage of the option at Beta to attend the other workshop or seminar (except in particular circumstances to be discussed below). It was also permissible to spend time in the lounge when not in the seminar/workshop. Some, but not many students did so. When their seminar/workshop was over, that was the extent of the students' formal time commitment to Alpha or Beta for the day. There were, however, other obligations. Most of the Alpha and Beta students eventually enrolled in one or more classes in their previous conventional school (on whose rolls they were still carried). In addition, almost all students had learning contracts which involved independent study according to a plan worked out with a teacher. Successful completion of a learning contract resulted in credit earned toward graduation. Most independent study work took place other than at the schools.

Ace was organized in a different, somewhat more traditional fashion. The school day began at 8:30 a.m. with coffee and cigarettes in the cafeteria, located in the basement of the wing in which Ace was housed. (A comparable facility was not available to Ace in its new location during the third year of the study. Students would arrive between 8:15 and 8:30, often finishing coffee or fast food breakfasts.) The organized session started at 8:45, with the first class sessions starting at 9:00. Classes in English, math, social studies, reading, art, and gym were held each day. Lunch and independent study (study hall) were also scheduled into the day, which ended shortly after 2:00 p.m. Class periods lasted 45 minutes.

Curriculum and Instruction

As suggested by the structure of their school days, Alpha and Beta were similar to one another in curriculum and instruction and different from Ace. Both Alpha and Beta were designed to promote the communications skills of the students and more generally to promote their personal development in areas such as goal setting, problem solving, values clarification, self management, and self confidence. Improvement in these areas was the objective of the curriculum for the workshop/seminar. A wide variety of personal growth and development techniques and exercises were used (see Appendix A for a partial list of sources). Student participation was built into the exercises. The teachers were full participants as well as moderators or leaders, as appropriate to the exercise.

Independent study contracts were an important element in the curriculum in addition to the workshop/seminar. Students in both programs were encouraged to earn high school course credit through independent study contracts. The process involved several steps. Students would choose areas of interest or areas in which they needed credit to graduate, such as English. In Alpha, they would devise a plan detailing what was to be done, how progress was to be counted, and what the final result or product would be. The student would go over the proposed contract with the teacher who would supervise the work. The proposed contract would then be presented to the workshop meeting for its evaluation and

suggestions. Any revisions in the contract would be gone over with the supervising teacher. The teachers made sure the terms of the contracts fulfilled the high school course requirements. They monitored progress and evaluated the outcomes.

In Beta, contracts were negotiated with one of the teachers. Forms were used to state the contract's terms: objective or goal, final product or performance, procedures used to reach the goal, estimate of time to be spent. A space on the form was reserved for the teacher's statement of what the student achieved. Each contract also included a "feedback chart" devised by the student to graphically record progress in the terms set by the contract. (These and other forms played an important role in structuring the teacher-student relationships which will be discussed below.) As in Alpha, the Beta teachers monitored student progress and made sure the work plan satisfied high school curriculum requirements.

In both schools, use of community resources, volunteer work or paid work was encouraged and eligible for independent study contracts and through them, credits.

In summary, Alpha and Beta students could earn credit for attending their workshop or seminar and also by contracting for independent study. In addition, many Alpha and Beta students either remained enrolled in a class or classes in the conventional school from which they came or, in subsequent semesters, signed up for one or more conventional high school classes. Both required and elective classes were among those taken at the high schools. Those requiring special shop, lab, or other equipment or facilities were among the more common ones taken. The alternative students did not feel they were treated any differently by their conventional school teachers than any other students.

Note that in Alpha, very few independent study contracts were done during the final year of the study. A change in high school policies made it uncertain whether Alpha students would be able to get credit for independent study. Credit earned by Alpha students during the followup phase of the study, then, was limited largely to that from the workshop - the equivalent of one course - plus what was earned through regular high school classes.

The curriculum and instruction at Ace was structured along more traditional lines. There was no equivalent of the workshop or seminar in Ace. The areas that received more emphasis were basic academic skills - reading, writing and figuring. Students arrived at Ace in the morning and, with relatively few exceptions, stayed for a full school day.

The group was split in two for most class sessions roughly on the basis of level of skill in the subject. One section of each subject was taught by each teacher. The student groupings for the subjects varied somewhat.

Work was assigned and classes conducted in two ways for the academic subjects (English, reading, math and social studies). Work that could be done by all of those in the section -- typically, oral or blackboard assisted assignments -- were done as a class. Other work, which comprised some 60 percent or more of the total, was done by individualized assignments. Programmed materials were frequently used, as were brief quizzes or worksheets prepared by the teachers. This allowed students to begin work at their level of proficiency, and to work at their own pace. It accommodated the range of grade levels from 7th through 12th in the same program. (We never observed a student being ridiculed by others for the level of work he or she was doing. Students often helped each other irrespective of their relative level of skill.) The individualized instruction also allowed frequent individual teacher-student interaction and feedback on progress and achievement.

The instructional materials used in Ace were a combination of those used in the conventional schools and adapted to Ace plus programmed instruction packages, such as sets of math workbooks, plus films and use of materials of current interest from the contemporary news and entertainment media.

Overall, Ace students were exposed to a variety of teaching methods and materials. Seatwork and individualized instructions and assignments were often used, though group instruction and drill were also used, as were group discussions.

Evaluation and Grading

Each program went about evaluation and grading in its own way. The only clear similarities and differences lay in whether or not actual letter grades were given. Alpha and Beta did not use grades. Credit was earned (and appeared on students' permanent records as "credit") when a contract was completed or, in Alpha, when a workshop was attended for a term. No notation was entered on students' records if they did not complete requirements agreed upon. Neither Alpha nor Beta had quizzes or other assignments as such to be turned in and evaluated. Lack of participation was regarded as a problem to be discussed by the student and teachers. It was not cause for lowering a grade. Students in Ace received traditional letter grades, A through F, based on how hard they tried and on how much progress they had made. In judging progress, performance was measured against individually established goals rather than a normative or group performance standard. According to the Ace teachers, grades in Ace were about one letter higher than in the conventional schools. This was in part because grading was based on improvement instead of absolute level of performance and in part because less work was required in Ace for a given period of time. It was also in part due to generally improved attendance and increased effort on the part of the students.

Formal grading or granting credits was only a small part of the communications about school work and performance which took place between students and teachers. In these interactions, the alternative school students were reminded of how well they were progressing toward their own goals, what they had set out to accomplish, and where they stood. However, the more routine and frequent feedback on the daily tasks, assignments and projects which comprise a large part of the daily experiences of going to school are important for reasons different from those associated with summary formal grades. This is the feedback through which much of the student-teacher relationship is formed and which, in turn, helps to establish the overall ambiance of the school. To properly describe these aspects of evaluation in the alternative schools, the larger topic of student-teacher relationships should be taken up.

Teacher-Student Relationships in Alpha

Teacher-student relationships were established on three bases in Alpha. The first was the workshop. It was a public setting and in that way resembled traditional classes; that which transpired during the workshops contributed to the collective and individual teacher-student relationships. The sessions, though organized around a topic or exercise, were informal. Everyone was addressed by first names all sat in the circle. An explicit goal of the program was to increase "the personal attention [students] receive from teachers," as stated in Alpha's brochure, which goes on to note that the workshop is intended to provide fertile ground for these personal relationships. Personal material -- hopes, disappointments, relationships with parents, boy/girl friends, spouses (in the case of the teachers) -- all were routine topics. Students were encouraged to openly express conflicts they experienced with other members of the group. Expression of positive, or, for that matter, any other sentiment was also encouraged.

The structure of Alpha went beyond the workshop meetings in encouraging personal relationships between teachers and students. Each student kept what was referred to as a journal. The journals, actually steno pads, were supplied by the school and kept there. Each day, students wrote in their journals during the workshop meeting. Reactions to the workshop of that day, or accounts of personal experiences or problems -- anything at all -- was appropriate content. There were no requirements other than that something be recorded. Each journal would be read and responded to by written comment in the journal by one of the two teachers each day. The students were split into two groups for that purpose, so that the same teacher would always read and respond to a given student's journal. This arrangement was, of course, known to the students. The journals were private channels between each student and a teacher, giving teachers the opportunity to demonstrate a personal interest in each student in a unique, private, and consistent fashion. They also gave the students consistent access to the teachers under a set of informal

but clearly communicated guidelines according to which the constraints on personal expression typically associated with the roles of student and teacher were dissolved.

The third element in teacher-student relationships carried the private, personal channel of the journals one step further. Each student in Alpha met at least once each month for half an hour with the teacher with whom the student corresponded via the journal. The teachers scheduled these meetings, which were a regular part of the program. The purpose of the meetings was several-fold, and tended to vary from student to student. One purpose was to monitor students' academic progress, both in Alpha and in the conventional school. (Recall that most Alpha and Beta students were also enrolled in one or two classes in their conventional high schools.) Alpha teachers served as the Alpha students' academic counselors, so planning schedules and keeping track of the school district's distribution and other requirements also occurred during these sessions.

Another purpose of the sessions was to stimulate students' development of skills in self expression, self awareness, and problem solving. Whatever issues were salient for the student would be the ones pursued as the vehicle for development in these areas. As in the journals, topics included relationships at home or with peers, school and school work, trouble with the law or conventional school authorities, plans for the future, work experiences, and so on.

The degree to which students were engaged in these sessions obviously varied, but at a minimum the Alpha students knew that their teachers were interested in and accepting of them as individuals and cared about their welfare and progress. A great deal of personal investment was required by the Alpha teachers. For example, they frequently assumed the role of personal counselor and confidant toward their students, and though infrequently called, were available to students after hours and on weekends. The "delivery" of the Alpha program was largely through the individual teacher-student relationships.

Teacher-Student Relationships in Beta

The Beta program shared some general characteristics with Alpha but was also substantially different. The staff at Beta emphasized the development of skills in self management, communication, and problem solving in about the same proportion as the staff at Alpha emphasized communication skills and openness through self revelation.

As one of Beta's co-directors said while talking about the program: "What really gives me a kick is seeing these kids get control of themselves." Beta's operating procedures were based on principles of self management through setting goals and then monitoring progress toward them. These procedures were concretely reflected in the charts and checklists (blanks of which were

always available to students on open shelves at the school) which students kept in their notebooks (which, like the Alpha journals, stayed in the school). Learning contracts, their feedback or progress charts, weekly tally sheets for recording use of the seven communication skills emphasized in the seminar meetings, weekly plan sheets, progress charts for earned seminar credits, charts for overall progress, and other materials were to be gone over with or countersigned by one of the teachers either on the day they occurred (e.g., use of one of the communication skills in that day's seminar meeting) or weekly (e.g., plan for the coming week, progress on learning contract). These encounters were usually rather brief, occurring between or after seminar meetings. The teachers, however, took advantage of them to encourage or support students as they progressed, inquire about progress being made, note areas which, according to the charts and graphs, were not showing progress, and in general, demonstrate personal interest and involvement with each student.

In cases where problems appeared on the charts and graphs (an advantage of having all of the forms in one notebook and with many in graphic form -- they could be easily flipped through and interpreted), the teacher would suggest a meeting with the student to talk about what the problem might be. During such a meeting, the teacher would help the student to assess the nature of the problem if it was not obvious to the student, and then to explore alternative solutions to it. Students felt free to mention personal problems of the nature discussed at Alpha. Unlike Alpha, however, the teachers did not encourage extended discussion of those problems. Instead, problems tended to be considered as they related to progress in schoolwork. As one of the Beta teachers noted, they were aware of the life situations of their students and were available to them to help in problem solving. But she added that they didn't encourage discussions of personal problems because they felt that doing so simply "reinforced kids for having problems." This is not to say that the Beta teachers were cool or aloof toward their students. To the contrary, they had open, warm, friendly, and supportive relationships with most of their students, and demonstrated a clear and earnest concern for each of the students, including those who did not do well in the program or whose attendance was poor.

The teachers were approached on occasion by students who wanted to discuss personal concerns. The most frequent topics were marriage, abortion, and trouble with the law. In these circumstances, the teachers would talk with the students and would often provide them with information about sources of help. Beta teachers were contacted by their students outside of school hours less frequently than the Alpha teachers.

Overall, the Beta teachers had warm and personal relationships with their students. The relationships tended to center more around process, progress or problems in learning or at school. By design, the relationship lacked the personal counseling overtones present in the Alpha student-teacher

relationships. Individual contact with students was frequent, although except when setting up or closing out a learning contract, the contacts tended to be brief.

Teacher-Student Relationships in Ace

An explicit goal of Ace was to prepare its students for return to their former conventional schools. Many students returned to their conventional schools during the school year in which they were referred to Ace. As a matter of policy, all Ace students returned to conventional schools at the beginning of the school year in the fall, regardless of how long or short a stay they had had in Ace during the preceeding year. (Alpha or Beta students could return to their conventional schools, but were never required by policy to do so.)

Because of the goal of preparing students to return to conventional schools, the Ace teachers and staff felt they had to retain some of the aspects of traditional teacher-student relationships. They gave quizzes and tests, they graded students, they conducted class sessions, they maintained offices open to students only by invitation, and so on. Nevertheless, they felt it was important to know the students and to be known by them. They were on a first name basis with the students, they felt free to discuss aspects of their own lives -- interests, families, vocations -- with students, they participated with the students in the softball, volleyball and other games or activities which comprised the daily gym class at Ace. The Ace teachers also were available to counsel the students and did so on occasion either at the student's request or when it seemed called for by the situation.

The Ace teachers were patient and tolerant with their students, as was also true with the teachers at Alpha and at Beta. Behavior which might result in disciplinary action in conventional school buildings was interpreted by the alternative school teachers as a sign that all was not well with a particular student. The response was to talk with the student to see why he or she was violating a rule or disturbing others, or whatever the case might have been. In other words, the teachers reacted by trying to find out what was bothering or upsetting the student, and then to try to help the student to grasp what was happening or to resolve the problem.

Ace students typically had academic problems which were longstanding sources of frustration. The teachers were careful to note those during group instruction and would usually make a point of approaching the student later to go over the material and work with the student. This tolerance and individual attention was noted and appreciated by the Ace students.

It was also clear that the Ace teachers (and also the Alpha and Beta teachers) would advocate for their students if they felt the student had been treated arbitrarily in the conventional

school (for students taking classes concurrently at the alternative and conventional schools). In general, the alternative teachers sympathized with the students when students got into trouble at the conventional school. The Ace teachers, as with the other alternative teachers, usually approached such incidents from a problem solving point of view. The focus was on learning to handle or to be able to avoid the problem or conflict situation. Their more student centered, as opposed to the more rule- or administration- or teacher- centered point of view was distinctive, a point of view most teachers do not express. This novel experience of having the teachers on one's side -- recall that these were students frequently in trouble at school also had positive effects on teacher -- student relationships.

Overall, the Ace teachers had relationships with their students which differed somewhat from those in the other alternative schools. They had to act more as teachers and had to remind students of their eventual return to conventional schools. They gave grades, albeit leniently, and had to conduct class sessions, however informally and tolerantly. But, they also played with their students, shared personal information with them, supported, tutored, and occasionally counseled them. They played a role which was a hybrid of many and which had more constraints than in the other alternatives.

Rules and Discipline

The alternative schools had far fewer rules than the conventional schools, even though they were formally bound by their districts' codes of student conduct. The alternative programs were also more flexible than the conventional schools in enforcement of the rules they had. As noted, the alternative teachers tended to view infractions as "counseling cues," or manifestations of problems to be found out and, if possible, resolved, or at least dealt with in more constructive ways. The personalistic orientation of the alternative schools also showed in the case by case considerations of problem behavior.

In addition, much of what would be in violation of conventional school rules simply wasn't in the alternative programs. Students could freely move between the class meeting room and the lounge; in Alpha and Beta smoking was allowed in designated areas; outbursts were seen in Alpha and Beta as the expression of a feeling and could easily be incorporated in the curriculum. Any of these could result in suspension from the conventional schools. In addition, the students tended to act in ways which would not hurt the school or bring adverse publicity to it. Vandalism, theft, fighting all were rare, exceptional instances in the alternative programs but more common in the conventional schools although not in epidemic proportions.

Attendance was treated differently by the different schools. The official district policies called for a student to be dropped from a class after 7 to 10 absences, and to be dropped from school

for the remainder of the term after having been dropped from enough classes. The conventional school administrators had some, but not a great deal of discretion in enforcing these rules. Despite their attempts to be flexible, to negotiate with students and families, they frequently had to act under these policies. In some cases they acted with reluctance and in others with the belief that a particular student was better off as somebody else's problem. Students tended to see these policies and their agents as uncaring, unfair, and arbitrary.

Alpha had policies regarding promptness and attendance. After the first 10 minutes of the workshop meeting, latecomers had to wait in the lounge until the workshop's midpoint break to join the session. When this happened, the student lost half a day's workshop credit. Those who failed to attend lost a whole day's credit. These credits could be made up through contracts for community service work or independent study or other arrangements with their teachers, the one with whom they regularly conferred. Students were asked to call in on days they would not be in attendance. This was presented as a consideration to the staff and other members of the group. If a student failed to show and did not call, a call was made to the student's home.

Students who frequently failed to attend were the object of much concern at Alpha. Attempts were made to contact the student, to talk with him or her and often with the parents, to make some sort of arrangement or contract, and so on. Eventually, the student would be dropped from the rolls of the school -- a relatively infrequent occurrence.

Alpha's other rules were of two sorts: those agreed upon by the students and teachers, and those required for harmony with the surrounding environment. The latter involved not smoking outside the school or in the corridor, and parking only in the ample area set aside for Alpha. These rules were seen by the students as in their own interests, as ways to keep the heat off their school (recall, it was housed in an elementary school in a residential neighborhood).

In Beta, there were similarly few rules. Smoking and parking were treated in the same way as at Alpha; Beta's housing was like Alpha's. Attendance was handled differently. Students were not required to attend Beta. In theory, they could make and close out contracts by meeting with teachers before, after, or between seminars. They could not earn Beta seminar credit -- an elective credit -- toward graduation if they did not attend the seminar. They would not be ineligible to earn independent study credits under Beta's auspices for failure to attend seminar.

In actual practice, though, students who did not attend seminar drifted away from Beta in all other ways, too. This happened with an unusually large number of students while the study was in progress. They either did not begin or failed to complete independent study contracts. After repeated futile

attempts to contact or engage these students, via telephone, student grapevine, and letters, the Beta teachers dropped these students, approximately 20 of them, from Beta's rolls near the end of the first term of the 1978-79 school year.

A digression to cover this topic is warranted here. The explanations involve three points: supply and demand; initial expectations; and culture carriers.

Because in past years Beta was oversubscribed by at least 100 percent, and up to 500 percent, many students who wanted to attend Beta had to be denied (see the next section for selection procedures). In retrospect, it was clear that while oversubscribed, Beta was becoming less so over time. Demand equalled approximately twice its available slots in the year prior to the first wave of interview data collection. However, based on the sense of unmet demand, a third seminar was added for 1978-79, increasing the program's capacity by 50%, to 60 students.

But, actual demand in 1978-79 for the program was declining. Slots went begging until mid-October. Previously, students who wanted to attend Beta had to sign up in advance and wait for Beta's public drawing -- a lottery, actually -- to see if they were among the lucky ones who could attend Beta. Those with less interest in Beta tended to fade during the wait, either dropping out of their conventional school or reaching an accommodation with it. In 1978-79, it became clear during the period of recruiting for Beta early in the first month of school that there would be no wait and no lottery. So few students wanted to attend Beta that any who showed an interest and who could obtain the necessary parental signature could enroll in Beta.

Further, the Beta teachers indicated that many of that year's students may have missed or not really understood the crucial early socialization to Beta. There were far fewer than the usual number of carry over students who had been in Beta the previous year; many had graduated. That meant that there were fewer -- only three per seminar -- "native guides" to help explain the initially unfamiliar and rather complex self-monitoring and progress-tracking tasks of Beta. In other words, there were fewer culture carriers around to help, to explain, and to demonstrate how to "do" Beta. And "doing" Beta was far different from getting by in a conventional secondary school. Students in Beta bore a large share of the responsibility for laying out and moving through their educational programs.

Also, the Beta teachers speculated that they might not have been clear enough in establishing expectations for the new students. The Beta teachers felt in retrospect that they might have inadvertently given new students the message that they didn't have to come to school. What they intended to communicate was that although students did not have to attend Beta, as in a formal requirement, they wouldn't be able to succeed at (earning credits if they didn't.

As it was, it took that year's entering Beta students about a semester to get on top of the program's demands. The primary demand was for self discipline. The materials were freely available and clear enough, and help was readily available. The students had to learn, however, with few experienced peers to advise them, that they had to pursue their studies on their own. Nobody was looking over their shoulder or giving them assignments, as had been the case in their earlier experiences in school.

Overall, the rules in Alpha and Beta were few Those that existed were either designed to help the schools retain their acceptance in the school system and community (outside smoking and parking); or for the maintenance of the group (attendance at Alpha). The rules were administered flexibly and were open to discussion. During the course of the study there were no instances of disruption or fighting in the schools and theft and vandalism were almost as rare.

The approach at Ace was generally like that at Alpha and Beta. Attendance was required at Ace. If a student failed to attend, he or she could not complete enough school work to earn passing grades. The teachers and administrators were familiar with students' home situations, some of which interfered with attendance. They worked with parents and the students to try to improve attendance, making various kinds of arrangements. Students' homes were routinely called on days the students failed to attend or call in to inform the school. If all attempts to improve attendance failed, the student would be dropped from the program and returned to their previous conventional school, though this was a rather rare occurrence.

Disruption or fighting was rare in Ace. Students involved would be talked to by the teachers and/or administrator about why the problem occurred, why it was a problem, and how it might be resolved. The students involved would occasionally be asked to go home for the day, or to go home and to have a parent contact the school, depending on the circumstances.

Although Ace maintained more of the attributes of a traditional school program, it did so with few formal rules. It ran, as the other alternatives, on implicit and explicit understandings and norms of mutuality. On occasion, students were reminded that at the alternative school, they didn't have all the rules and structure and attendant hassle of the conventional schools. One of the things that meant, they were told, was that they had to exercise more responsibility for and control over themselves, according the teachers and school the same respect they and it accorded the students. It was on the whole an effective system of governance.

Relationships with Conventional Schools

The alternative schools' relationship with the conventional schools they served varied from excellent to not very good.

Alpha and Beta had mixed relationships with their high schools. Some of the conventional staff members saw the alternative programs as pedagogically worthless charades in which unsupervised, undisciplined and irresponsible teachers provided a front operation in which rubber diplomas were handed out to a bunch of undeserving, lazy, dumb, depraved juvenile delinquents. Obviously, these were extreme views. Some of them may have originated with implied or inferred criticisms of the conventional schools by the alternative programs as the alternative programs were first being formed. Apparently, some conventional teachers felt they were being criticized by implied insidious comparisons in the first of the two alternative school's initial promotions. In those materials and presentations, the alternative school was described as a place where teachers cared about their students and where real learning took place. Both of these programs were started (via intradistrict funding and program proposals) by teachers who represented somewhat deviant, student-centered points of view. Some of their earlier remarks and promotions may have been intemperate in referring to their colleagues.

Other reactions to the alternative programs were simply that students did not learn anything in them, and therefore should be discouraged from attending them, or that they were for dead end students, or that the voluntary aspects (to be described in the next chapter) of the Alpha and Beta programs should be eliminated and more slots made available for disciplinary referrals.

Some teachers and a handful of counselors and administrators basically supported the programs. They felt it offered a legitimate alternative educational process which benefitted some students who did not need, could not tolerate, or were otherwise hindered by conventional school structure and organization.

Alpha and Beta were supported entirely from the school district's budget. Officials in the district administration felt the programs contributed to the school system and should be maintained. So, despite occasional reports via students of unkind remarks about the programs by teachers or counselors in the conventional schools, the alternative programs maintained a relatively stable if somewhat tense relationship with their conventional schools.

By contrast, relations between Ace and the schools it served were strong and positive. Ace was originally established at the suggestion of the high school principal. It was to be and is a resource for the districts' secondary schools. When the secondary schools have exhausted their internal options for problem students, Ace is an option for them. The details of referral appear in the following section, but suffice it to say that the program was appreciated by the secondary administrators and teachers. Its purpose was not to supplant the schools but to assist them in dealing with difficult and troublesome cases. As such, it did not represent a threat or a challenge to the conventional schools. Ace allowed administrators to remove on an

interim basis troublesome students from their buildings without denying students the opportunity to go to school. The districts' assistant principals were strong supporters of the program.

The Ace administrator got along well with his counterparts in the secondary schools and in general, the working relationships and overall relationships between Ace and its conventional schools was positive and stable.

CHAPTER 4

STUDY DESIGN AND STUDENT SELECTION

The design of the study called for identifying a pool of students eligible and appropriate for the alternative schools but larger in number than could be accommodated at the alternative schools. Using comparable procedures for each of the alternative programs, we hoped to randomly assign half of the pool to the alternative programs while the other half remained in their conventional schools. This was slated for the beginning of the 1978-79 school year. At that time, we would interview both groups of students. A second interview was scheduled for the end of that school year, with the third, or followup interview scheduled for the second marking period of the fall semester of the following (1979-80) school year.

This design would allow us to compare processes and outcomes at schools we knew from preliminary work to be different but which were operating with students we knew were comparable with each other at the outset of the study.

This chapter covers the ways students were selected for the alternative school programs, our plans for adapting those procedures for the purposes of the study, and the actual outcomes of the study's selection procedures. The procedures we used to recruit students into the study once they had been identified to us by the schools will be described. The use of incentives to participate in the study will be discussed, followed by presentation of response rates achieved in the study.

Selection into the Alternative Schools

Each of the alternative schools was filled using slightly different procedures. The main nominal distinctions were that Ace was filled entirely by students referred to it by conventional school administrators, Beta was filled entirely by students who volunteered for the program, and Alpha was filled half by volunteers and half by referrals. Details of these procedures are provided below.

The Ace Program

Ace served the two junior high schools and the single high school in its school district. Students were formally referred to Ace by their assistant principal, although in the case of high school students, referrals were usually initiated by the counselors. The referrals were typically for disruptive behavior, repeated or serious violation of school rules, or for chronic truancy.

By the time Ace was presented as an option to a student, few other options remained open. The alternative to Ace was usually a two week disciplinary suspension or being dropped from one or more classes because of more than 15 absences during a semester. Historically as well as during our observations, only about five percent of those offered the option of attending Ace turned it down.

Referrals came through the assistant principals. In the high schools, the student's counselor usually discussed Ace with the student and initiated the referral. In the junior highs, the assistant principals usually initiated the referrals.

We met with the high school counselors and all of the assistant principals involved to work out a procedure for randomly assigning students to the Ace program. Arrangements were agreed upon in the spring and were to be implemented in the fall of the 1978-79 school year, the time when the first set of interviews would take place. It was clear from extensive discussions with the Ace administrator, the principals, assistant principals and counselors that more students could be referred to Ace than Ace could accommodate. The random assignment procedure was to based on this excess of need over service capacity. Each of the counselors and assistant principals agreed to refer two or three more students than they might have in the past. Upon receiving a referral, the assistant principal would contact the Ace administrator, who would contact us. We would then use a random number table to determine if the referral should go ahead or be denied. Those denied the referral would remain in their conventional schools. They were to constitute the control group for their peers referred to Ace.

We resolved the ethical problem of denial of service in the following way. The administrators and counselors agreed that there were more students in need of Ace's services than could be served, as just noted. They also agreed that among this group it was really not possible to definitively rank students on the basis of need for Ace's services. Thus, the students who would be denied services under the study's random assignment procedure would have been no more likely to receive services in the absence of the research project. The reason was that, as has been demonstrated in other connections (Dawes, 1979), any individual's decisions regarding selection from groups whose members have similar attributes tend to be unreliable: that is, the selections or rankings vary from time to time. This describes the situation of not being able to definitively rank order the most difficult students.

These arrangements were settled in good faith by all concerned, but in the abstract. When the time came in the fall of the year to implement the assignment procedures, they failed to hold up. One junior high school simply made no referrals. The other indicated that most of its referrals bypass the assignment

procedure because of the urgency of the cases or because of parental pressure. The high school counselors made many fewer referrals than these same counselors had in years past.

The explanation was the same in all cases. The people involved took seriously their responsibilities for their students. They were reluctant to leave the final disposition of their cases up to chance. Instead, they fashioned other dispositions for their students or insisted on bypassing the assignment procedures. The building principals were aware of our problems. They supported the research project, but felt the first responsibility had to be to their staff members and the needs of the students.

These problems did not become clear until well into the fall. Understandings about the assignment procedures were probed and confirmed, but the rate of Ace referrals remained low. The number of (randomly assigned) control students was even lower. We faced the choice at the end of November of sticking to our original control group design at the cost of vitiating the study, at least at Ace, because of a grossly insufficient number of control students, or modifying the design. We chose the latter. We met with the counselors at the high school and, once again, explained our problems. We then asked each of them to nominate up to five of their students for whom they felt the Ace program would be appropriate. We went over the names with each counselor to be sure the students were legitimate candidates for referral. A few names were deleted and the rest were contacted and interviewed in January and February -- the beginning of the year's second semester. These students constituted the bulk of the "control" group, now a comparison group, for the Ace program.

Part of the modification of our plans for Ace included terminating the random assignment procedures for the Ace program. At that time, with our comparison group lists in hand, we stopped identifying new students to recruit into the study. We told this to the counselors and assistant principals. Ace experienced an unusually large number of referrals around the time of the semester change that year compared to its stable historical patterns. This was no doubt due to the end of the restrictions and uncertainties on the referral process which had been imposed by the study's assignment procedures.

The effect of these problems on the kinds of students in the study in Ace versus their comparison group can be readily summarized. According to the assistant principals and counselors, many of the Ace students were extreme cases whose disruptive behavior could not be tolerated in the school. These cases were too serious for their disposition to be left to chance. On the other hand, most of the comparison students had not been referred to Ace during the first term. Obviously, their high school counselors felt they could be maintained in school or allowed to drop school for part of the semester. One counselor told us that she advised several students with poor grades and attendance to simply stay home for the rest of the term and try again in the

second term. Also, several of the nominated comparison group were sent to Ace during the semester change surge in referrals noted above. Nevertheless, the comparison students were, on the whole, less delinquent and disruptive in the eyes of their counselors.

Another difference between the groups concerned age. Among those we interviewed, there were 40 percent junior high students in Ace but only five percent in the comparison group. The delinquency literature (e.g. Gold & Petronio, 1980) clearly shows an age accelerated pattern in delinquent behavior which peaks at early high school age. Thus, as the study went on, the expected level of delinquency should have been increasing among the younger students and decreasing among the older, high school aged students. Both of these factors, age and selection procedures, made for a conservative test of the effects of Ace. For Ace to show an effect in reducing delinquency, it would have to counteract the effects of an overall younger group seen to have been more extreme in their disruptive behavior.

The Alpha Program

Alpha reserved half of its spaces for students who had been referred for poor attendance and disciplinary problems at the two high schools it served. Referred students typically had been dropped from two or more classes because of poor attendance. (Seven unexcused absences in a term constituted grounds for being dropped from a class.) Most of the referred students were discipline problems while in school and usually had poor academic records. As with Ace, referred students had the option of declining Alpha, although other options were usually limited to being suspended or being dropped from several or all classes for the semester. As with Ace, less than five percent typically refused Alpha, also the case during the course of the study.

Alpha's remaining places were reserved for students who volunteered for the program. The only restriction on volunteers was that they have relatively good records of attendance. Students who had been dropped for poor attendance from more than one class were ineligible to volunteer for Alpha. Most volunteer students were far behind in credits earned, had poor grades, spotty attendance records, and had disciplinary problems at school. They tended to have heard of Alpha from friends or were informally referred to the program by the few counselors positively disposed toward Alpha.

It should be noted that the Alpha teachers were usually unable to remember which students were referrals and which were volunteers, although they had known initially. The students seemed unaware of the distinction, and there were no differences in any of our measures between volunteers and referred students in Alpha. Students could and frequently did remain at Alpha for more than one year. They could go through high school and graduate

through Alpha). Students' original status as volunteer or referral was used to determine how many of a year's open slots were for volunteers and how many were for referrals.

In each of Alpha's preceding six years, there had been two to five times more volunteers than slots for them. Selection from among the volunteers was by lottery. A public drawing was held to choose each fall's complement of new volunteer Alpha students. The lottery was held during the second or third week of school in the fall. Our plan was to use the applicants not chosen in the drawing for the control group for the Alpha volunteers. The selection of control students for the referral students was to be similar to that planned for the Ace program. Each of the two high schools had three assistant principals. Each assistant principal was responsible for seeing to the attendance and discipline problems of his or her students and referrals to Alpha had to go through the student's assistant principal. An agreement was made in which each assistant principal would in the fall of 1978-79 school year select the five most likely and appropriate referrals to Alpha. This would make a pool of about twice the open referral slots. Students from this pool to be referred to Alpha by the assistant principals would be selected at random by study staff. The students not selected would be the controls for those referred.

Neither of these control group selection procedures was successful. Very few students volunteered for Alpha; fewer, in fact, than the number of spaces reserved for volunteers. When it became clear after Alpha's efforts to recruit new students in mid-September that there would not be enough volunteers, these few remaining volunteer spaces were filled by referral students. We thus had no volunteer control group. (Fortunately, as noted elsewhere, volunteers, referral students, and our comparison groups proved to be comparable on virtually all our measures.)

The random assignment procedures for students referred to Alpha met the same fate as those for Ace, and for the same reasons. As with Ace, the assistant principals felt they had to respond to what they saw as urgent needs of students and pressure from parents to do something. So, they insisted on bypassing the random assignment procedures and placing these students in Alpha. By the time we were able to obtain lists from the assistant principals of students from which random assignments could be made, the semester was more than half over and 10 of Alpha's 12 open referral slots were filled. We decided to wait until the beginning of the next semester when a few slots in Alpha were expected to open. In the meantime, we worked toward getting a pool of potential referrals from which the few open slots could be filled. From those remaining, we made random selections to fill out the now mixed control/comparison group for Alpha. (Ideally, we would have included all of the nominated students as comparisons, but their number was greater than the number we could afford to interview.)

The result of all of this was that the composition of Alpha and its "control" group was not what we had expected. Alpha had a large proportion of urgent and severe cases who had bypassed the random assignment procedures. There were no such cases in the comparison group. Also, there were fewer volunteers in the program than anticipated. These two factors combine to make the test of Alpha's effectiveness a more conservative one than planned. In that way, it was like Ace. It would have to be effective with students identified as more problematic than those in the comparison group in order to come out superior to the comparison group. Of course, the absence of any volunteers in the comparison group countered this trend, but only to a limited degree. Had the climate in the high schools been more favorable to Alpha, many of those on the comparison group list could well have been encouraged to apply for Alpha.

There are a number of possible explanations for the failure of the agreed upon and planned for assignment procedures to work out. Alpha did not enjoy good relations with its conventional high schools. Many if not most of the high school counselors and teachers felt it was not a worthwhile program. For students contemplating volunteering for Alpha, there were few sources of positive information about Alpha among the conventional schools' staff, counselors and administrators. Students who might be inclined and eligible to volunteer for Alpha tended to be discouraged from doing so. Some assistant principals felt that all of the slots in Alpha should be reserved for referred students, which might explain some of the reluctance to encourage volunteers. In addition, it appeared that there might have been a continuing decline in the number of students who wanted to go to Alpha. Recall that this was true in the same school district for Beta. Finally, the one remaining original Alpha teacher left for a job outside the school district just after the beginning of the school year. He had always handled relations with the conventional schools as well as liaison with the district administration. It is possible that those in the conventional schools who opposed Alpha felt they could do so more actively after this teacher's departure. Whether or not this actually occurred, the fact remained that Alpha began the year with one new and one experienced staff member. Two weeks into the year, the experienced hand left and was replaced by a teacher/counselor who had bid for the job. He transferred to the Alpha job from his position in one of the high schools which Alpha served. Both of the new staff members were qualified for their new jobs but neither had had experience recruiting students or dealing with an at least somewhat hostile institutional environment.

All of these were factors which may have had an influence on the extremely small member of students who volunteered for Alpha. We cannot weight them as to importance and cannot be sure all of them were important. Nevertheless, we feel we would be remiss in not documenting these circumstances for their value in understanding some of the relationships many alternative schools have with their environments.

The Beta Program

The Beta program was entirely voluntary. As noted in the previous section, students had always signed up for Beta in far greater numbers than could be accommodated. Beta's staff held recruiting meetings in Beta's two conventional high schools during the second week of school. Students could apply to go to Beta until a late September deadline following which a lottery would be held to select the students to fill the open slots at Beta. (As with Alpha, students could continue at Beta from year to year, thus limiting the number of openings.) Our plan was to use those not chosen in the lottery as controls for those who were chosen.

The two co-directors of Beta had earlier pressed for an expansion of the program's capacity to 60 students divided among three seminars, up from 40 students divided between two seminars. The expansion took place for the 1978-79 school year, the beginning of the field work phase of the study. Recall the problems associated with this expansion: integrating a large number of uninitiated students; and having a smaller than expected number of volunteers for the program. The latter is of concern in this discussion.

For the first time in Beta's history, there were no "extra" volunteers. All could be accommodated, so all of those who applied for Beta and had parental permission were signed up for the program in late September. At that time, the program was full. We thought that more students would apply to go to Beta during the fall and could be interviewed as controls. That did not happen and it become clear that we had to modify the design or abandon the site.

Some 14 students had not followed through on their fall applications to Beta. These were students whose parents did not approve their child's application to Beta. We interviewed these students as members of a comparison group for Beta. We waited for the semester change, hoping that a surplus of volunteers would result from applications for the slots expected to open up at the beginning of the new term. This hope was only partially fulfilled. As earlier, most of the students available as "controls" had not gotten parental permission to attend Beta.

We felt the size of our comparison group, even with these second semester additions, was uncomfortably small. Adding to this concern was the fact that by early into the second term, three of our earlier comparison group had transferred to Beta. We thus turned with reluctance to nominees. We asked assistant principals to nominate students who met several criteria. They had to be students the assistant principals felt were appropriate for Beta and could benefit from the program. Secondly, they had to have some academic, discipline and attendance problems, although not especially severe problems. This last condition was

added because it seemed to characterize the students already at Beta. We made a random selection of 12 names from the resulting list to fill out the Beta comparison group.

The effects on the research design of the selection of Beta students and their comparison group are difficult to assess. The comparison group's aggregate characteristics matched those of the Beta students. Moreover, among the comparison students, the characteristics of the volunteers matched those of the nominees. These data will be reported in a subsequent section of the report. As noted, ultimately some half dozen members of the comparison group applied to and were signed up for Beta during the school year. This made for some design problems, but reinforces the use of the comparison group as an appropriate standard against which to assess the effects of Beta.

Recruiting Participants for the Study

As soon as potential respondents were identified to us, we began our attempts to recruit them into the study. The first step was an introductory letter describing the study. We stated in this initial letter that the study was being conducted by The University of Michigan's Institute for Social Research, not by the schools. We also made plain that nobody at the schools or at home would see any individual's answers. Further, the letter stated that we wanted to hear what students had to say and that we were interested in all sides of the story about school, the good and the bad. We emphasized that the study would give our respondents a chance to be heard and to make a difference in how schools were run. The letter mentioned that while we couldn't pay cash money for their help, we would be able to give respondents scrip redeemable at MacDonald's, Inc. restaurants in exchange for participation in the interview. The letter closed with an indication that a phone call from the study would be forthcoming. The purpose of the call was, as stated, to answer any questions and to try to arrange for an interview appointment.

All the calls for each wave of interviews were made by only one person per wave -- that wave's scheduler. This was intended to help rapport in cases where multiple calls had to be made to the same household as well as to preserve information and assure consistent procedures. The study was also explained to parents during these phone calls. The scheduler was persistent in her attempts to contact potential respondents or to schedule an interview appointment for those respondents who in earlier calls had indicated they might be able to schedule an appointment at a later date.

When the scheduler encountered clear signs of resistance or hostility, a second letter was composed and sent. Its object was to assuage fears or address the concerns which had been voiced (usually by the parents). Depending on the case, a followup

telephone call might also have been made. These procedures were uniformly unsuccessful in persuading parents or potential respondents to relent.

The second of wave interviews began in May of 1979 and was largely completed by mid-July. The second interview was introduced by a letter which stressed many of the same points made in the first letter. The letter also noted that even though some respondents might have stopped going to school, we still sought their views. A newspaper story about the study was reproduced and enclosed. The story described the study's potential contribution to the education policy-making process and emphasized the role of students' views in shaping the study's findings. This letter closed as did the first, mentioning the same incentive and telling the respondent to expect a call from the study to make arrangements for the interview.

The first wave of interviews lasted far beyond the original target cut off date. This was because of the problems we encountered in the timely identification of potential respondents. One implication was that in order to maintain our field schedule, many wave two interviews had to take place relatively soon after the first interviews. A primary concern was to maintain the cooperation of our respondents for the third interview, the one to be scheduled for the late fall about one year after the initial interview. For that reason, we felt it would be inadvisable to exhaust all possible avenues of persuasion (followup letters and followup telephone calls) in the attempt to obtain the second interviews. We wanted to avoid inadvertently alienating those whose good will would be more important later. The third wave of interviews began in October, 1979 and was largely completed by mid-December. Its introductory letter stressed the importance of followup information for applying the study's findings. Also mentioned were the reports of the study's results made to state, local and national groups. For reasons to be described below, we had increased the incentive from fastfood chain scrip to five dollars cash. The cash incentive was mentioned in the letter as was the forthcoming call to schedule the interview.

Our recruiting efforts for the third wave were directed at all of the potential respondents originally identified at the study's outset. Letters were sent and phone calls made to reluctant respondents or their parents, again with little success. We sent members of our field staff out to the last known addresses of respondents we had been consistently unable to contact by phone. In a few cases, this resulted in interviews or in information as to the whereabouts of the potential respondent and which ultimately resulted in interviews. This included three interviews conducted by telephone with respondents who had moved out of state.

Respondent Incentives

Our consistent reasoning for the use of incentives was to encourage participation. The choice of MacDonald's scrip was based on experience (Berger et al, 1975) which suggested they were effective when compared to no incentive. Economic considerations also, came into play. Early in the study, based on projections for numbers of respondents, we could not afford a large cash incentive. We used scrip because we felt it would be more distinctive and of greater value than the cash equivalent. We purchased the scrip for face value, $1.50 per respondent. The local MacDonalds organization generously donated coupons which could be redeemed for French fries. These coupons were included in the incentive.

As will be shown, our response rates for wave two were considerably below those for wave one. Conversations with respondents and debriefing sessions with the interviewers suggested that the MacDonalds incentives were losing their appeal during wave two. By this time in the study our actual field costs were clearly going to be lower than projected because we had terminated field operations for a school system scheduled to be in the study but whose alternative program was cut during a budget crisis. We applied some of these funds to increased incentive payments, instituting the five dollar cash incentive for wave three. The change in incentives was associated with and doubtless contributed to a 13 percent increase in the wave two to wave three response rates and a corresponding 34 percent drop in the number of no shows and broken appointments.

Response Rates

The base number for figuring response rates is 240, the total number of potential respondents initially identified to us by the schools at the outset of the study. Of those, 100 (42%) were originally alternative school students. The remaining 140 (58%) were in conventional schools when the study began.

The cross-sectional and compound response rates for the three waves of the study are given in Table 4.1.

Table 4.1

Cross Sectional and Compound Response Rates:
Overall and for Alternative and Conventional Students

	Overall	Alternative	Conventional
Base	240	100	140
Wave 1			
Interviewed	180	83	97
% response	75%	83%	69%
Wave 2			
Interviewed	139	65	75
% response	58%	65%	54%
Wave 3			
Interviewed	161	72	89
% response	67%	72%	64%
Compound rates			
W1xW2xW3	29%	39%	24%
W1xW2	44%	54%	37%
W2xW3	39%	47%	35%
W1xW3	50%	60%	44%

The dip in response rates at wave two and the alternative students' higher response rates are the notable features in the table. Incentives have already been discussed as a factor in the overall pattern of response rates. Competition from warm, sunny spring weather may have also accounted for some of the decrement in response at wave two. The unavoidably brief interval for many respondents between the first and second interviews might also have affected the wave two response rate.

We were able to make personal appeals for participation in the study to most of the alternative students during our visits to their programs. We answered questions and discussed the study (in appropriately general terms) with the alternative students. The comparison students were not similarly accessible to us, dispersed as they were through many classes in many schools. The alternative students were in general probably more committed to the study since they were in general more committed to their schools. The alternative teachers were interested in seeing their programs evaluated by neutral observers and so encouraged their students to participate. All of these factors contributed to the differences in response rates.

Table 4.2 presents the cross sectional response rates for each alternative program and its comparison group.

Table 4.2

Cross Sectional Response Rates:
Alternative Programs and Comparison Groups

	Ace	Comp.*	Alpha	Comp.	Beta	Comp.
Base	21	53	28	41	51	46
Wave 1						
Interviewed	14	37	25	30	44	30
% Response	67%	70%	89%	73%	86%	65%
Wave 2						
Interviewed	11	26	21	23	32	25
% Response	52%	49%	75%	56%	63%	54%
Wave 3						
Interviewed	11	34	22	25	39	30
% Response	52%	64%	79%	61%	76%	65%

*Of the 53 Ace comparison students, 5 were from junior high school. Of these 5, 2 were interviewed in wave 1 and 2. They were in high school at wave 3.

The only notable feature in this table is Ace's lower response rates compared to its comparison group in waves one and three. We can shed little light on this reversal. Ace's response rate was stable between waves two and three. The small number of cases from which to draw, a function of the reluctant referral agents, makes further interpretation difficult.

Overall, the response rates were quite good. The wide variation in date of first interview and the consequently variable interval between waves one and two detract from the usefulness of the wave two data. The wave one to wave three interval was proportionally much less variable. Fortunately, these two time points yielded the best response rates cross sectionally as well as jointly.

CHAPTER 5

INTERVIEWING AND OTHER DATA COLLECTION

The personal interviews with the respondents provided most of the study's data. The timing of the interviewing periods and the interviewing procedures will be described in this section. Several non-interview sources of data were also tapped, and these will be noted. Our procedures for obtaining consent and for protecting the confidentiality of the study's participants will also be noted.

Interview Timing

The study design called for three waves, or administrations of essentially the same interview. All respondents (alternative and conventional) were to be interviewed at each wave. The first was to be in the fall of 1978 as that year's new alternative students were entering the programs. This first interview referred to the respondents' present (for comparison students) or previous (for alternative students) conventional school. It provided baseline measures against which to assess change in attitudes, plans, and behavior.

We expected the first wave of interviews to begin in late September, 1978 and to be completed by the end of November, 1978. As described earlier, this did not work out. It was not until February, 1979 that we received from the schools the full final set of names of comparison students for Alpha and Ace. It was not until March, 1979 that we received the final set of names to use as Beta's comparisons.

The progress of interviewing in waves two and three was under the control of the study instead of dependent on information from the schools. These two waves of interviewing went smoothly and were completed in close to the anticipated eight week period, with 95 percent done within the specified times.

Administering the Interviews

Our interviewing procedures were designed to make the respondents comfortable and relaxed. To this end, we recruited interviewers who were young in appearance and who could relate easily to adolescents. Most of our interviewers were graduate or undergraduate students or others in their early to mid-twenties. They typically had had experience dealing with adolescents. Interviewers and respondents were matched by sex. The interviews themselves were held in "neutral" sites in the community, either a YWCA or library conference room or an unused elementary school classroom. This was done to insure privacy, reinforce our promise of confidentiality, and minimize interruptions or distractions which might result from conducting the interviews in respondents' homes. Some respondents or their parents, about a third in all, preferred to have the interviews held in their homes.

interviewers rarely reported problems or distractions in these circumstances. Interviews usually took place after school, though respondents' schedules often required morning, evening and weekend interviews.

The study's field schedule meant that there was turnover among the interviewers between waves -- more between the second and third. Continuity in training and procedures was aided by at least two interviewers who worked in all three waves. There was no effort to match or avoid matching interviews and respondents across waves.

The interview itself called for varied modes of response. Open and closed questions were used. Some 20 closed questions used a booklet whose pages corresponded to questions and from which respondents chose from among the list of possible responses. Some sections called for respondents to make paper and pencil responses or to sort decks of preprinted cards into stacks indicating true-false or Likert-type response categories.

The interview was carefully constructed to be simple, straightforward and conversational in language, syntax and style. For the self-administered sections, respondents were always offered the choice to have the material read to them by the interviewer or to do the task themselves. This gave poor readers a face-saving out and protected the quality of the data. The interview was cast at about a sixth grade reading level, slightly below the average indicated vocabulary level of our respondents.

The interviews lasted an average of just over 84 and 82 minutes in waves one and three, and 73 minutes in wave two. The range of interview length was from 45 to 170 minutes.

The content of the interviews remained largely unchanged across waves. Some sections were deleted at the second interview to reduce its length and then reinstated in wave three to allow analysis of change. A section detailing work experience was enlarged at wave two and retained for wave three. The vast majority of questions were asked in each interview and were repeated verbatim across interviews.

Consent and Confidentiality

Explicit, written parental consent was not required for respondents to participate in the study. Nevertheless, and perhaps obviously, in the cases when parents did not consent to their child's participation, the child did not participate. We made sure the parents or guardians of all our respondents knew of the study and agreed to participation.

We sought information about our respondents from various of the schools' archives and personnel. In order to obtain this information with respondents' names, we had to have explicit written parental consent. For individuals for whom we did not

have written consent, the information from the schools had to be anonymous. That is, the finest level of identification allowed was by group (for example, girls who had attended alternative schools).

We anticipated that consent would be difficult to obtain considering the population and the necessity of relying on return mail. (We mailed out a request for cooperation, a consent form, and stamped return envelope.) We ultimately received consent to examine records from the parents or guardians of 56 percent of our respondents. This was achieved by separate mailings in the spring and fall of 1979 along with followup letters and telephone calls following the fall mailings.

In addition to standard precautions to protect respondent confidentiality, we obtained a grant of immunity from the U.S. Department of Health, Education and Welfare. This grant protected the study staff and materials from any subpeona or administrative action which might result in revelation of the identities of our respondents. We were thus able to tell our respondents that their answers were protected by law.

Non-Interview Data

Supplementary information was obtained from the schools, local police agencies and the juvenile court in whose jurisdiction the research was conducted. The most extensive non-interview data were provided by the schools.

Dates of enrollment in the alternative schools were obtained for all of the respondents, enabling us to check our information on who attended alternatives and for how long. The schools also provided us with students' official grades for semesters roughly coinciding with waves one and three. Assistant principals tallied their disciplinary contacts with study respondents by type of contact. Finally, we obtained behavior and decorum ratings from previous teachers of study respondents.

Local police agencies provided us with an account of the type and date of occurrence of offenses committed by our respondents which resulted in the respondents' names being entered in the agencies' record systems. We obtained similar information plus disposition information from the juvenile court with jurisdiction over the study's geographic area.

Note that in all of the non-interview procedures we were sensitive to potential harm to our respondents. We were, for example, careful to describe our study to the police as an evaluation of different kinds of school programs and that measures of the programs' effectiveness included the level of the students' troublesome behavior. In seeking discipline information from assistant principals and ratings from teachers, the names of alternative and conventional students were freely mixed on the

lists. We expressed interest in the data as outcome information pertinent to the schools' as well as our own interests in assessing program effectiveness.

CHAPTER 6

CHARACTERISTICS AND COMPARABILITY OF THE RESPONDENT GROUPS

This chapter describes the characteristics of the study's respondents. Three kinds of comparisons will be reported. First, the basic demographic characteristics of our respondents as determined at the wave one interview will be reported -- age, sex distribution, grade in school, and so on.

Second, the study's respondents will be compared with those of normative samples. These comparisons will be made for variables important in the study's guiding theoretical model. These comparisons will help "locate" our respondents on dimensions of attitudes, behavior, and adjustment. These comparisons should help to provide the reader with a context for the study.

The third set of comparisons are internal ones contrasting the alternative school students and their comparison groups. These comparisons are important in assessing how closely we were able to approximate our intended research design. That is, they will indicate how similar the comparison and alternative groups were at the outset of the study, at least according to our measures. Ideally, with perfect random assignment of respondents to the two types of schools, the comparison and alternative groups would be identical at the beginning of the study. Any differences in outcomes could then be attributed to the differences in school experiences over the course of the study. We were unable to achieve random assignment, so need to look to these between group comparisons to determine the quality of our comparison groups.

Demographic Characteristics

The following descriptions are based on respondents' status as of the wave one interview. A total of 170 wave one interviews were done.

Our respondents averaged 16 years of age at wave one. The age range was from 13 to 18 (Table 6.1). There were slightly more girls than boys in the sample (Table 6.2). The average grade level was 10th grade (Table 6.3). The average grade point average reported by our respondents for the semester preceding the wave one interview was D+. Eighty three percent reported having been expelled or suspended from school or sent to the office during the same period (Table 6.4).

Table 6.1

Age Distributions of Respondents in Wave One Schools

School	N	Age in Years					
		13	14	15	16	17	18
Ace	14	7%	43%	29%	21%	--	--
Ace Comparison	35	3%	--	21%	53%	18%	5%
Alpha	26	--	--	23%	27%	46%	4%
Alpha Comparison	28	--	--	11%	46%	36%	7%
Beta	44	--	7%	16%	41%	29%	7%
Beta Comparison	30	--	3%	27%	50%	20%	--

Non-missing data

Table 6.2

Sex Distribution of Respondents in Wave One School

School	N	Male	Female
Ace	14	36%	64%
Ace Comparison	38	68%	32%
Alpha	26	23%	77%
Alpna Comparison	28	36%	64%
Beta	44	57%	43%
Beta Comparison	30	50%	50%

Non-missing data

Table 6.3

Grade Distributions of Respondents in Wave One Schools

School	N	8	9	10	11	12
Ace	14	21%	21%	43%	14%	--
Ace Comparison	38	3%	3%	58%	31%	5%
Alpha	26	--	--	23%	23%	54%
Alpha Comparison	27	--	--	22%	37%	41%
Beta	44	--	--	23%	41%	36%
Beta Comparison	30	--	--	40%	47%	13%

Non-missing data

Table 6.4

Discipline History in Past Year
of Respondents in Wave One Schools

School	N	Disciplined	Not Disciplined
Ace	14	79%	21%
Ace Comparison	38	87%	13%
Alpha	23	78%	22%
Alpha Comparison	28	75%	25%
Beta	40	88%	12%
Beta Comparison	30	90%	10%

Non-missing data

The two school districts participating in the study were virtually all white and all of our respondents identified themselves as white. We relied on respondents' reports of their fathers' education as a rough index of socioeconomic status. (The respondents were unable to provide detailed information on the nature of their parents' work.) The communities themselves were relatively socioeconomically homogeneous. The school attendance

areas tended to be even more homogeneous. There were few if any observable social class differences within the sets of schools which we will consider as groupings -- an alternative school and its feeder conventional schools. Almost two thirds (64%) of our respondents reported that their fathers had a high school education or less. The communities in the study were middle income blue to white collar. Sixty one percent of our respondents reported living with both natural parents.

Normative Comparisons

It is of interest to compare the adjustment and behavior of our respondents with norms from representative national samples, where available, or other appropriate normative groups. We were able to do so with several measures of affective states, attitudes toward school, and delinquent behavior.

The 1972 National Survey of Youth (NSY) (Gold and Reimer, 1975) and 1967 data from the Youth in Transition study (YIT) (Bachman, Kahn, Mednick, Davidson & Johnston, 1967) provided normative data on measures of self esteem, anxiety, attitude toward school, commitment to the student role, and self reported delinquent behavior. Our own feasibility study (Mann et al., 1978), to be described below, provided comparison data on relationships with teachers and perceived chances for scholastic success.

Overall, our respondents were characterized at wave one by normal levels of adjustment and mental health. They were much more negative in their school related attitudes than the norm. Finally, they were much more delinquent by self report than the national norm.

Self Esteem and Adjustment

We included two different measures of conscious self esteem in the interview. The first was Bachman's revision of Rosenberg's original measure (Bachman et al., 1967; Rosenberg, 1965). It is a 12 item index. The response format asks respondents to indicate how often each item is true of them by choosing one of five alternatives ranging from almost always to never. The items appear in Appendix B. YIT was a longitudinal study of boys only, and began with a representative national sample of 10th graders. This of course limits our normative comparisons. The mean self esteem scores for the YIT 10th grade boys and for our sample were exactly the same. Comparisons of our 11th and 12th grade respondents with YIT respondents in their 11th and 12th grade years yielded insignificant differences: our boys were "normal" in their initial self esteem scores on this measure.

Our second measure of self esteem replicated that used in NSY, a cross sectional study whose sample was representative of Americans between the ages of 11 and 18 years. The measure presents respondents with two identical sets of 14 semantic

differential scales. (See Appendix B.) Instructions call for the first to be filled out as a self description, "How I am." The second was to be filled out as a description of one's ideal, "How I would like to be." The ideal-actual differences are summed for all 14 items. The larger the discrepancy between ideal and actual, the lower the self esteem.

We compared boys and girls separately. Once again, we found no significant difference between our respondents and the normative group. Our respondents were "normal" according to this measure of self esteem as well.

We used the Social Self Esteem test (See Mann, 1980; Wylie, 1974) as our measure of unconscious self esteem, replicating its use in NSY. It is a straightforward objectively scored projective measure. A representative item is reproduced in Appendix B. Respondents are instructed to assign positive and negative descriptions of people and "yourself" first in a horizontal, then a vertical array of 6 circles. Scoring proceeds by taking the absolute value of the ordinal distance between "yourself" and "a person who is failing", based on procedures described by Mann (1980) and Wylie (1974). The greater the distance, the higher the level of self esteem.

We compared the scores for boys and girls in our study with appropriate scores in the NSY dataset. On both comparisons, our respondents' scores were significantly higher in unconscious self esteem than the normative groups.

Our interview also included a replicate measure of anxiety used in NSY. It asks for the self reported frequency of the following somatic symptoms: sleep disturbances, nervousness, headache, stomachache, and loss of appetite. Splitting both NSY and our respondents by sex, we compared average anxiety scores in the two datasets. The findings for boys showed no reliable differences between our boys and the NSY boys. On average, however, our girls reported more symptoms of anxiety.

Overall, our respondents should be considered normal in their adjustment and self esteem. Comparisons were made separately for the sexes since these measures typically (and in the present data as well) show sex differences.

School-Related Attitudes

The NSY and YIT data sets provide normative comparison measures of two school related attitudes. The feasibility study dataset provides comparisons for two more.

Three items measuring aspects of commitment to the role of student were replicated from the YIT study. The items asked respondents to indicate how close they were to doing their best work in school, how hard they worked in school compared to others, and how satisfied they were with their performance in school. We

asked our respondents to answer for their previous conventional school if they were in an alternative program when interviewed at wave one. We made separate comparisons for 10th and 11th graders, and compared boys only. (Our boys and girls were insignificantly different on these measures.)

The results showed no differences between our boys and the YIT normative sample's 10th grade respondents in how close they felt they were to doing their best work. Our 11th graders, however, felt they were not working as close to their ability as did the YIT respondents. Our 10th and 11th grade respondents felt they did not work as hard in school as others to a greater extent than the YIT respondents. Similarly, our 10th and 11th grade respondents were less satisfied with their performance in school than were the YIT respondents.

The NSY interview included a measure of global attitude toward school which we replicated in our interview. Two questions were used, asking how much the respondent liked school in absolute terms and compared with other students. There were no reliable sex differences in either data set. Our respondents were markedly more negative toward school.

Our feasibility study (FS) included a measure of relationships with teachers and a measure of the student's view of his or her chances to be successful in school. These measures were also included in our interview.

The feasibility study's sampling procedures were not designed to yield a representative sample of the schools originally considered for inclusion in the present study. FS data were collected from one class each of teachers who taught required subjects to 9th graders in the two junior highs and to 10th and 11th graders in the eight high schools. The five alternative programs originally considered were also included.

The result was a large dataset (n=2449) which provides very stable estimates from a comprehensive cross section of students of about the same age and grade level and in the same or similar communities and schools considered in the present study.

We compared our respondents to the FS data on the measure of teacher support. This measure was derived largely from Moos' (1974) Classroom Environment Scale, Teacher Support subscale. Our respondents were far more negative in their perceptions of support from teachers than the FS sample.

Interestingly, this difference did not hold up in the measure of perceived chances for success in school. This measure combined three original items asking about chances for success, whether one could "win" in school, and whether one could learn in the school. When we compared our respondents with the FS sample, we found no

reliable difference between the groups. The only reliable between-dataset comparison found our girls to be more negative about their chances than the FS girls.

Summing up these data, the overwhelming impression is that our respondents were extremely and consistently negative in their attitudes toward school, commitment to the role of student, and their relationships with teachers. They fit the description of the disaffected student. The next data to be reported shows them to fit the description of delinquent student as well.

Delinquent behavior

How delinquent were the respondents in our study? Were the problems they represented troublesome only in relation to otherwise tranquil schools and communities, or could they be considered more generally and genuinely difficult adolescents? Our interview replicated 10 delinquency items used in the YIT study. We compared our boys' data with those of YIT. We found more of our respondents had: run away from home (30% versus 15%); used alcohol illegally (92% versus 50%); been involved in fighting (62% versus 35%); stolen a car, even if later returned (36% versus 12%); been in trouble with the police (69% versus 34%); purposely damaged school property (48% versus 28%); violated school smoking rules (73% versus 21%); and been truant (98% versus 43%). Our respondents also reported more instances of doing serious injury to another and extorting property with threats of injury, but only slightly more frequently than in the YIT data. It should also be noted that except for car theft and fighting, our girls reported more delinquency than did the YIT's boys!

These data indicate that our respondents were consistently and substantially more involved in delinquent behavior than a representative national sample. As such, they can be considered adolescents whose behavior would be seen as generally troublesome and cause for some kind of preventive or ameliorative action.

Comparisons Among Alternative and Conventional Students

The final set of comparisons examines the similarity of the groups of students in the study. The kinds of questions these analyses were designed to answer were these: Were the comparison students initially comparable to the alternative students so that comparisons of outcomes could be made? How about these comparisons for specific alternative schools? And, were students who were referred to the alternative schools similar to those who volunteered?

The reader should bear in mind that all of the analyses to be reported in this section employ wave one data, collected when the alternative school students had only recently entered the programs. That is, they indicate characteristics of respondents at the outset of the study. Because we sought baseline data, we

told alternative school students to answer for the conventional school they recently attended. This allowed us to make sensible baseline comparisons of attitudes toward and experiences in school at wave one for respondents who were attending either alternative or conventional schools.

We tested for demographic differences among the various groups, looking at age and sex. We also looked for possible differences involving school, including grade point average, and attitudes toward school. Tests of comparability in self esteem, adjustment and delinquency completed the variables used in these group comparison analysis.

Alternative Versus Comparison Students

The first set of comparisons considers respondents in or about to be in alternative schools at wave one as one group and compares them to all the comparison students considered as another group.

The demographic comparisons are shown in Table 6.5. The alternative students were, on average, younger than the comparison students. This difference is attributable almost entirely to the younger students in Ace, those who came from the district's two junior high schools. Nevertheless, the alternative and conventional students were still similar in practical terms, averaging about 16 years of age. The sex ratio in the two groups was not statistically different. There was a slightly greater proportion of girls among the alternative students, but overall both groups had about equal numbers of boys and girls.

Table 6.5

Demographic Characteristics of Alternative and Comparison Respondents at Wave 1

Characteristics	Alternative Respondents	Comparison Respondents
Age		
mean	15.94	16.07
S.D.	1.11	0.86
n	84	96
t value t =2.74, p<.01		
Sex[1]		
mean	1.57	1.47
S.D.	0.50	0.50
n	84	99
t value t =1.65, p=NS		
Discipline History[2]		
mean	1.67	1.62
S.D.	1.51	1.46
n	77	96
t value t =0.41 p=NS		
Grade Point Average[3]		
mean	28.54 (D+)	28.86 (D+)
S.D.	9.43	8.47
n	81	96
t value t =1.69, p=NS		

[1] coded 1=male, 2=female
[2] coded 1=sent to office, suspended, expelled; 5=never disciplined
[3] coded 10=F,...,50=A

As to two important indicators of their recent experiences in school, the two groups did not differ. Most respondents in each group had been subject to disciplinary action at school. (Recall that respondents attending alternative schools at wave one reported their previous experiences in conventional schools.) The grade point average of the two groups of respondents was not different, either. Their averages were poor, at about the D+ level. Again, alternative school respondents reported their previous, conventional school grades.

The next step was to test for differences in the average personal admustment and self esteem of the two groups because these characteristics were especially important in the study's guiding theoretical framework. (Measures mentioned here for the

first time will be briefly described. Refer to Appendix B for complete information on all measures discussed in this report.) Four of these measures have already been described -- the three measures of self esteem and the measure of somatic symptoms of anxiety. In addition, five items from the State-Trait Anxiety Inventory (STAI) (Spielberger et al., 1970) and six items from the Center for Epidemiological Studies Depression scale (CES-D) (Radloff, 1977) were used. The items making up these two measures were administered together along with those of the Rosenberg-Bachman measure of self esteem. They used the same response format described earlier in connection with the self esteem measure. The measures ask about frequency of feelings such as tensions, jumpiness, feeling down, and feeling lonely.

None of these six measures of affective states showed a statistically significant difference between the mean scores of the alternative respondents compared with the conventional respondents at the beginning of the study.

The final set of variables used to compare the aggregated alternative and conventional school respondents were measures of school-related attitudes. Four of these five measures -- perception of chances for success in school, attitude toward school, teacher support, and commitment to the student role -- have already been described. Additional items produced for the study were added to the core item sets of the success and school attitude measures. The measure of stigma was produced for the study to measure the extent to which students felt they were seen as unwanted, incapable, or unworthy in the eyes of their schools. Its three items were administered along with the items that measured teacher support in the same way already described for that measure.

There were no reliable differences between alternative and conventional students on the measures of attitude toward school and commitment to the student role. As noted earlier, we found our respondents to be more negative toward school than normative samples.

On the measures of chances for success, stigma, and teacher support, the alternative students were even more negative than the comparison students. They saw less chance for success, felt more stigmatized, and reported less supportive relationships with their previous teachers. Recall that these questions were answered in reference to the alternative students' previous conventional schools.

We suspect that the differences in the school related measures are an artifact. That is, virtually all of the alternative students were interviewed after their arrival at the alternative school. In many cases the interviews took place several weeks or more after a student began at the alternative schools. The delays were due to problems we experienced in initial identification, recruiting or scheduling of respondents.)

So, even though we asked alternative school respondents to respond to these items in terms of their previous conventional school, they could not ignore that they had already in fact been removed or removed themselves from their old schools and had some idea of what their new schools were like. Consider the conventional school histories of these students now in alternative schools and the organization, philosophy and operation of the alternatives. By comparison, the conventional schools must have sunk even lower in their estimation. On the other hand, the respondents who remained in their conventional schools had no other kind of school to use as a standard of comparison. The possibility of a context effect is reinforced by the nature of the questions which show an alternative-comparison difference, for example: I almost never expect to do well in the classes the school makes me take; The teachers and principals don't want me in their school; and, Teachers go out of their way to help students. These items tend to be specific, referring to personalities or practices in school. As such, they could easily be affected by a contrasting context. By comparison, the attitudes toward school and the student role measures are more durable and general and less tied to the specifics of any given school. For example, consider: How satisfied are you with the way you're actually doing in school? And, How much do you like school in general? These items are less likely to be affected by relatively brief exposure to a new educational context -- brief in comparison with from 8 to 11 years of previous schooling.

But, what if the more negative attitudes of the alternative school respondents are "real"? To the extent (if any) that they reflect actual preexisting differences between the groups, such a difference would make for a more stringent, conservative test of the effectiveness of the alternative programs. Although findings of complete comparability would have been ideal, differences which might tilt the findings in a more conservative direction are preferable to those that might compete with or exaggerate explanations of program effectiveness.

The final comparisons in this series contrasted the delinquent behavior of the two groups. Respondents were given a ck of cards, each of which bore a description of an act, like moked marijuana" or "damaged or messed up property on purpose." the wave one interview, they sorted the cards into piles icating the frequency with which they had done each since Christmas of 1977 (See Appendix B for the list of acts.) Eight of the acts were related to or took place in school. The remaining 17 were not related to or took place away from school. We computed the average number of confessions by totaling the number of confessions and dividing by the total number of acts. We did this separately for the school related and the non-school related acts.

As shown in Table 6.6, the alternative and comparison students were not reliably different in their involvement in delinquent behavior up to the time of the first interview. The

difference between the size of the averages for school and non-school delinquencies reflects two things. First, relatively minor or non-serious behaviors, such as smoking or talking in class constitute disruptive behaviors in most schools. In that sense, it is easier to get in trouble in school compared with, say, fighting with somebody, stealing from a store or taking a car. Second, a youngster would have to be quite busy to run up a high number of occurrences of each of the 18 general delinquent behaviors, but could still be heavily delinquent by engaging in a relatively small average number of acts.

Comparability of Individual Programs

The next analyses involved the same demographic, affective state, and school related variables as those used to make aggregate comparisons between alternative and conventional schools. Respondents were grouped according to their school program at wave one and compared with each other.

Considering the demographic variables first -- age, sex, discipline, and grade point average -- two findings stand out. First, the Acers were younger on average than the respondents in the other programs (Table 6.7). Second, there was a school district difference (whether the result of district policy or actual student performance) in grade point average (Table 6.8). Sex ratio differences were few and scattered, and there were no differences in school discipline history (Tables 6.9 and 6.10).

Table 6.6

Mean Number of School Related and General Delinquent Acts of Alternative and Comparison Respondents at Wave One

Delinquent Behavior	Alternative Respondents	Comparison Respondents
School Related		
Mean	4.49	3.95
S.D.	2.30	1.98
N	83	92
t value t =1.50, p=NS		
General		
Mean	1.79	1.58
S.D.	0.92	0.79
N	83	92
t value t =1.51, p=NS		

Computed as total occurrences over all acts divided by number of potential acts presented to respondent. Mean is of act occurrences.

Table 6.7

Mean Age of Respondents by Program at Wave One

Program		N	S D	Mean	Significance of Difference[1]				
1	Ace	14	0.93	14.64					
2	Ace Comparison	38	0.93	16.00	2	**			
3.	Alpha	26	0 88	16 31	3.	**	--		
4.	Alpha Comparison	28	0.78	16.39	4	**	--	--	
5	Beta	44	1 00	16 14	5.	**	--	--	--
6	Beta Comparison	30	0.78	15 67	6	**	--	--	*
						1	2.	3.	4

[1] *=p< 05
**=p<.01,
--=not significant

Table 6 8

Previous Grade Point Average of Respondents by Programs at Wave One

Program		N	S D	Mean[1]	Significance of Difference[2]				
1	Ace	13	9 11	20 77					
2	Ace Comparison	38	7 93	24 47	2	--			
3	Alpha	25	9 49	30.76	3	**	**		
4	Alpha Comparison	28	7 32	31 68	4	**	**	--	
5	Beta	43	8 46	29 61	5	**	**	--	--
6	Beta Comparison	30	7 92	31 80	6	**	**	--	--	--
						1	2	3	4	5

[1]coded F=10. . . A=50

[2]**=p< 05
**=p< 01
--=not significant

Table 6 9

Sex Ratios of Respondents by Programs at Wave One

Program	N	S.D	Mean[1]		Significance of Difference[2]				
1. Ace	14	0 50	1 64						
2. Ace Comparison	38	0 47	1 32	2	*				
3 Alpha	26	0 43	1 77	3	--	**			
4 Alpha Comparison	30	0 49	1 63	4	--	**	--		
5 Beta	44	0 50	1 43	5	--	--	**	--	
6. Beta Comparison	31	0 51	1 52	6	--	--	--	--	--
					1	2	3	4	5.

[1]1=male, 2=female
[2]*=p< 05
**=p< 01
--=not significant

Table 6.10

School Discipline Histories of Respondents by Program at Wave One

Program		N	S.D.	Mean[1]	Significance of Difference[2]				
1	Ace	14	1.70	1.86					
2	Ace Comparison	38	1.37	1.53	2	--			
3	Alpha	23	1.69	1.87	3	--	--		
4	Alpha Comparison	28	1.76	2.00	4	--	--	--	
5	Beta	40	1.34	1.50	5	--	--	--	--
6	Beta Comparison	30	1.22	1.40	6	--	--	--	--	--
						1	2	3	4	5

[1]1=sent to office, suspended or expelled;
5=never disciplined

[2]*=p< .05
**=p<.01
--=not significant

Differences between programs on the affective states measures were scattered and generally inconsistent across the programs. These data are tabled in Appendix C.

The only salient feature of the between group comparisons on the school related attitudes involves Ace. The Acers, perhaps due to their age, were on average more negative about their chances for success than any other group of respondents. Beyond that, there was no consistent pattern of differences involving any of the programs. These data are also tabled in Appendix C.

Referrals Versus Volunteers.

We also checked to be sure that respondents who volunteered for the alternative programs, respondents who were referred to alternatives, and comparison respondents were not systematically different. We used procedures analagous to those reported above to test for possible volunteer-referral effects.

We found few differences between the volunteer and referral alternative school students. Those we did find were largely attributable to differences already reported. For example, all Acers were referred to Ace. They represented about one half of the study's referred students. Thus, the relative youth of the Acers and grading policy differences between Ace's district and the Alpha-Beta district resulted in age and grade point average differences between volunteers and referrals. In addition, there was a slightly higher proportion of girls among the referrals compared to the volunteers.

Altogether, there is little to suggest non-compatibility between the volunteer and referral groups. Our analyses will ignore the distinction.

CHAPTER 7

ANALYSIS STRATEGIES

Introduction

The approach we used in analyzing the data follows from the purpose of the study as laid out in the theoretical model outlined in the introductory section.

The study was designed to investigate the effectiveness of a type of alternative secondary school and to test a theory that explains why such a school should be effective.

Of course, there are many kinds of effectiveness. We wanted to see how effective the alternative programs were in reducing the delinquent and disruptive behavior of the students who attended them. That was the primary interest. We were also interested in the effect the programs had on certain attitudes and states of adjustment. We were less interested in the effects of the alternative schools on actual academic performance - grades, test scores, and the like. The primary interest of the study was the school-related social psychological motivation for delinquent and disruptive behavior. For that reason, we chose to focus on the social psychological nature of school performance. In this case, that meant focussing primarily on students' beliefs or perceptions about how well or poorly they were doing in school. So, we were interested in the alternative schools' effectiveness at reducing the delinquent and disruptive behavior of their students and the social, psychological factors that determined whatever effectiveness the schools might have.

Who were the students? We were interested in students who had generally been formally or informally identified by their conventional schools or who had identified themselves as having trouble and being trouble in school. We knew from previous research that these students would as a group be more delinquent than average. This makes the full statement of purpose of the study: to test the effectiveness and the social psychological correlates of the effectiveness of a type of alternative secondary school program designed to reduce the delinquent and disruptive behavior of academically troubled students.

How did we think the alternative schools would make this happen? We theorized that several conditions would have to be met by the alternative programs for them to be effective. The conditions were:

1. The alternative schools would have to provide an environment which students felt was not stacked against them. Remember, these were students who by and large had continually run afoul of the rules and procedures of the conventional schools.

2. The alternative schools would have to use pedagogical policies, techniques and materials which quickly enabled students to experience academic success.

3. The alternative programs would have to establish a social climate which acknowledged, supported and rewarded students. They would also have to have the flexibility to tolerate occasional lapses of discipline and performance.

4. The alternative schools would have to foster the allegiance of their students. That is, the students would have to come to like school more, or at least to like the alternative school more.

An important part of the reasoning in this theoretical statement concerns psychological changes occurring within individual students. These changes result from students' experiences in the alternative schools and in turn affect their motivation to be delinquent and disruptive. Here, of course, we refer to improvements in their self image (particularly unconscious self esteem) and adjustment. According to the theory, these internal, psychological changes are the links which bind the altered school environment and experiences in school to the decrease in delinquent and disruptive behavior.

Our analysis strategy began by determining whether the alternative schools met the conditions we hypothesized in our model as necessary for the programs to be effective. We then looked to see whether those conditions resulted in the predicted effects -- the improvements in behavior. Finally, we checked whether the changes such as occurred happened in the presence of the social psychological links just mentioned. In this step, we checked whether respondents whose behavior improved as predicted also experienced changes in unconscious or conscious self esteem, anxiety and depression.

We also did two other kinds of analyses. The first was concerned with whether we could identify respondents who seemed to be especially promising or risky prospects for this kind of alternative program. That is, were there some identifiable youth who either did very well or very poorly in the alternative programs. This information should be of value to those responsible for selection or referral decisions.

The second analyses looked at the processes and outcomes at each of the three alternative school programs.

Measuring the Model

The first task dealt with in the data analysis involved constructing the measures required to test our theoretical model. Our aim was one of efficiency -- to develop the smallest set of measures required to cover the concepts we needed.

Our measures of self esteem and adjustment had already been developed in previous research. The same was true of our measures of delinquent behavior, both school related and general. (All of these are described in Appendix B.) Several of the measures of perceptions of and attitudes about school and students' roles needed to be constructed for this study.

We turn first to the concept of perceived flexibility and fairness of the school environment. We were specifically interested in whether the alternative schools struck the students as places where they were less likely to be in trouble and hassled about the rules than in the conventional schools. In our interviews and visits to the schools, our respondents told us that the number, fairness, appropriateness, and equitable enforcement of the rules were important to them. Many reported feeling picked on or set up by the rules in the conventional schools; or that the rules themselves were fair enough but they were administered in a mean, arbitrary or inflexible manner. Indeed, an assistant principal in one of the conventional high schools told us that he would like to be more flexible in applying or selectively ignoring the rules and sanctions in the school's code of student conduct. He went on to say that he couldn't, however, because the school's faculty would not stand for it. Other high school assistant principals indicated that they did not feel so constrained, but neither were they completely free to handle each case as they saw fit. As noted earlier, the alternative school staffers also felt rules were important; symbolic of how the school regarded the student. They kept formal rules to a minimum and adopted a flexible approach to infractions or problematic behavior.

We measured students' perceptions of fairness and flexibility in the schools with a series of five questions. They assessed students' satisfaction with the relative involvement of administrators, teachers and students in making the rules, and their view of the fairness, number, appropriateness, and even-handedness of enforcement of the rules. There was no difference between the alternative and comparison students' views of the rules at wave one, when both groups were describing their current or previous conventional schools. We made a similar comparison at wave three. We started with the descriptions of the rules in the conventional schools given by the comparison students in the final interview. We contrasted that with the descriptions of the same conventional schools given by the current alternative students concurrently enrolled in conventional school classes or previous alternative students who had returned to their conventional schools. There was no alternative-comparison difference in the description of the rules at the conventional schools at the final interview.

Other measures were constructed to assess different facets of the student role

One measure combined the measure of feeling stigmatized in school, described earlier, and the measure of perceived chances for success in school. The success measure used here added two items about grades and required classes. They appear in Appendix B along with the core set of three items. The measures of success and stigma were strongly associated with each other, both statistically and conceptually. We combined them into a single measure reflecting the students' sense of their academic prospects. We called this measure "academic prospects".

A related measure was constructed by combining the measure of commitment to the academic role of student described earlier and the students' self report of their most recent grade point average. These two measures were also strongly associated with each other statistically and conceptually. We called this measure "student role". Academic prospects covers expectations for success or failure and acceptance as a member of the school. Student role measures the seriousness of engagement as a student; how much effort is being put out, the level of performance and satisfaction with it.

The final school-related measure tapped the nonacademic side of the school experience. As might be expected, aspects of the academic and nonacademic roles were related to each other. Nevertheless, we felt there was conceptual and statistical merit in separate treatment for the measures of the nonacademic role.

There were two primary components of the nonacademic role. The first was the general attitude toward or liking for school. The second was the measure of teacher support. The attitude measure combined the items about attitude toward school described earlier with two items assessing interest and feelings at the end of the school day. These are noted in Appendix B along with the core items. A question asking how many teachers the respondent liked was added to the measure of teacher support and appears with it in Appendix B.

Four additional items completed the measure of nonacademic student role. The first two supplemented the measure of teacher support. They assessed attachment to teachers -- the importance respondents ascribed to teachers' views of them. The second two items asked about the attractiveness of activities at school. These items helped fill in the nonacademic, social role of student.

The resulting measure broadly reflects students' attitudes about school. Its content ranges from how a day in school leaves them feeling about themselves to how frequently they engage in the school's activities. It emphasizes the personal side of relationships with teachers and also includes more general attitudes toward school. We have called this measure "school attitude". We consider it to be a summary of the effects of the social and academic experiences in school on the students' attraction to the institution.

Overview of Analysis Procedures

As indicated earlier in this section, we pursued three kinds of analyses. The first tested the validity of the theoretical model with the data produced at each of the three waves of interviews. The second tested whether the model predicted changes in performance, attitudes, and behavior over the course of the study. The third asked what kinds of respondents and which of the programs stood out as successful or problematic.

The first set of tests attempted to confirm the model's accuracy in predicting delinquent behavior at the separate time periods. Consistent findings at the three points in time would provide confidence in the stability of our measures. It would also lend credence to the model's description of the dynamics of delinquent and disruptive behavior.

These analyses were done as multiple regressions. This procedure enabled us to examine the explanatory contribution of each measure relative to the other measures used to predict or account for delinquent and disruptive behavior. It also allowed us to examine how well all the measures used together predicted or accounted for the outcome measures of delinquency and disruption.

Measuring Change

The second set of analyses were in many ways the ones most central to the project. They assess the change in delinquent and disruptive behavior which occurred between the first and third interviews and determine what social psychological changes accounted for it. The procedures we used took into account and solved several problems of measurement. These problems primarily involved "maturational reform" and statistical regression to the mean. Also involved were unequal scores on the measures of school-related performance and attitudes as well as on the measures of delinquent and disruptive behavior among the respondents at wave one.

As to the issues of maturational reform and regression, the occurrence of either or both would have the same influence on our data. Maturational reform refers to the widely replicated finding that after reaching a peak at around age 15 or 16, disruptive behavior begins to decline rather sharply. (Adolescents "reform" their behavior as they become more mature.) At wave one, we asked our respondents, whose average age was 16, to report their delinquent behavior for approximately the previous year. That is, we asked for self reports of delinquent behavior at a time in our respondents' lives when, on an average, their delinquency should be at its all time high. Obviously, any comparison with a later period, when the respondents were older, would be expected to show a decline in the average amount of delinquent behavior regardless of school programs or other factors.

Regression to the mean refers to the often observed phenomenon which follows selection decisions based on extreme standing or behavior. In our case, it is possible to consider the comparison and alternative school students as having been identified as candidates for or encouraged to go to the alternative programs on the basis of their extreme misbehavior in or maladjustment to school, their poor performance, and negative attitudes at the time of the first interviews. The reasoning goes that since extreme behavior is unusual and unusual states seldom endure, there should be a general return to a more usual or average state over a period of time. In other words, the unusually poor performance, negativism, and high level of involvement in delinquent and disruptive behavior should moderate over the course of the study. The reason was simply that our respondents were selected because of their extremely negative standing at the outset of t the study. Because regression would be expected to affect equally alternative and comparison students, the decline would not indicate program effectiveness.

Any simple measure of change on any of these variables -- say, subtracting the wave three score from the wave one score -- would be expected to hopelessly confuse change from different sources. Change attributable to any specific experience, like a different school program, would be lumped in with change attributable to maturation and to some students' assumption of more usual or average attitudes and behaviors. Nevertheless, the problem of uneven baseline scores on the school related measures and the measures of delinquent and disruptive behavior made some kind of measure of change necessary. The problem existed even though there were no statistically reliable differences among the various groups of interest. The facts, for example, were that at wave one, the alternative school respondents were on average consistently slightly, although statistically insignificantly higher in delinquent and disruptive behavior than the comparison respondents. Consider the implications of simply comparing the groups at wave three and finding no reliable difference in levels of delinquent and disruptive behavior for alternative and comparison respondents. It is easily conceivable that potential real differences in program effectiveness could be masked in the following way. The alternative school respondents could have changed significantly more than the comparison group. But, having started "behind" the comparison students, their greater rate and absolute amount of change could be masked by having to "catch up" to the comparison group. Or, conversely, the greater change of the alternative school students could have simply been a consequence of their initially extreme scores.

We solved both sets of problems -- regression/reform and uneven baselines -- with one procedure. In this procedure, the affected wave three measures were treated as composites. The composite of any measure (consider as an example wave three delinquency), consisted of two parts. One part was the delinquency of any respondent at wave three which one would expect from knowing his or her delinquency at ve one. Other things

being equal, one would expect higher wave three delinquency among those higher at wave one, and so on. The second part of the composite of the measures was that which was left over, so to speak, after removing the part which was expected on the basis of wave one. Continuing with the example, if a respondent had been exactly as delinquent at wave three as would have been statistically predicted from his or her wave one score, there would be nothing left over, no "residual". But, if a respondent was less delinquent at wave three than predicted from his delinquency at wave one, a deficit would remain once wave one's score was removed. This would be a residual with a negative sign. Similarly, if a respondent had a higher wave three delinquency score than would have been predicted from wave one, there would be something left over. This would be a residual with a positive sign. By examining the residuals, we were able to tell who was more, less, or about as delinquent at wave three as would have been predicted from their wave one delinquency level.

This procedure, called analyses of residuals or baseline-free measurement of change, works on straightforward logic. It solves the problem of measuring relative change in a changing population by calculating (via regression procedures) the actual average rate of change for the entire group. This allows identification of those whose rate of change was more or less than the average rate. The problem of uneven initial levels on the measures is solved in the same way. A respondent who was initially low in delinquency and decreased at the average rate would have the same standing as a respondent who was initially high in delinquency and decreased at the same average rate. Again, that's because the emphasis is on how much more or less change occurred compared to the average. Of course, the average rate of change is that which is due to the effects of regression or maturation. One or the other or both would be expected to happen in about the same way and in the same degree to members of a relatively homogeneous group such as our respondents. One doesn't need an alternative school program to bring about that kind of change. It happens on its own. What's interesting, problematic, or important are those who change more or less than would be expected. Our residual analysis procedures identify exactly those individuals.

We used the residual techniques just described to test the model's hypotheses regarding the processes underlying delinquent and disruptive behavior. Thus, change scores were created for the measures of school related attitudes -- academic prospects, commitment to the student role, and attitudes toward school -- and for the measures of delinquency and disruption in school and for delinquent behavior in the community. These variables were used in the test of the model as a description of the processes causing changes in delinquent and disruptive behavior.

Note that the measure of program flexibility used in this analysis was not a change measure. We considered it to be a description of the stable organizational climate in the schools, of the kinds of places the schools actually were and remained.

As described earlier, there was broad agreement in the perception of the schools' governance policies among the various groups of respondents. There was similar agreement in the descriptions of the climates of the alternative schools. Students who had been in the alternative schools only briefly agreed about the difference in the schools' rules and procedures with those who had attended them for long periods of time. There was similar agreement also among those who, by the end of the study had stayed in school, dropped out, or graduated. And there was agreement between those with high levels and low levels of delinquent behavior.

The consistent answers given by our respondents corresponded with our own observations and with the descriptions given by the conventional building administrators, teachers and counselors with whom we spoke during the course of the study. All of this evidence supported our regarding program flexibility as a consistent state. So, the measure of program flexibility taken at wave three was used in the change analysis and corresponding measures were used in the test of the model with wave one, two and three data.

Specific Effects

The third set of analyses had two objects. The first was to focus more closely on those respondents for whom the theoretical model relating school processes to disruptive behavior proved inaccurate. The second was to focus on each individual school program in an assessment of program effectiveness.

Investigating these effects proceeded in straightforward fashion. We looked at critical points in the model, such as commitment to the student role, attitude toward school, and school disruption. Our purpose was to identify the respondents who were lower or higher on these measures than the model's predictions. Having identified them, we asked: who are these kids? What was their state of adjustment early in the study; how was their family life; how delinquent were their friends, and so on.

In short, these analyses were designed to address questions about which students might be more likely to profit from which kind of educational program.

The second part of this set of analyses applied the full model to each alternative school program and its comparison group. The aim here was to assess the extent to which each program was effective in putting into practice the processes which had been theorized to be important in reducing delinquent and disruptive behavior of its students.

The following sections will present the results of these three sets of analyses.

CHAPTER 8

FINDINGS: TESTING THE MODEL

A summary of what we found includes two points. One concerns differences between programs and one concerns the presence of the processes spelled out in the theoretical model. As to the first point, we found no differences between alternative and conventional programs in the average levels of disruptive and delinquent behaviors of their students after the twelve to fourteen months of the study. As to the second point, we found that the theoretically predicted school-related processes did occur in the alternative schools to a reliably greater degree than in the conventional schools. Moreover, those who were engaged by the school-related processes did show a reliable decline in their disruptive behavior in school and an associated decline in their delinquent behavior in the community. The alternative programs were not uniformly effective, however, in engaging their students.

In short, had the study been conducted as a summative program evaluation, we would have concluded that the alternative programs were ineffective. However, because we focussed on the school-related processes, we are able to reach further conclusions. Namely, the school-related processes we set abut to study were important in producing changes in disruptive behaviors, and the processes were most evident in the alternative schools.

In this chapter, we will show how alternative schoolers responded to their school experiences differently from the way conventional school students did; we will point to some differences in the three programs that modified these responses; and we will identify some students whose psychological condition dampened the effects of the alternative school programs on them.

First of all, some findings about the trends in disruptive and delinquent behavior among all the youth in the study. There was a general decline in problematic behavior over the twelve to fourteen months of the study. Alternative and conventional school students showed similar reductions, and this was true for all three alternative programs. This general decline is not surprising for two reasons. First, other studies have shown that some "maturational reform" is to be expected in a group of highly disruptive youngsters, simply with the passage of time. Second, any group of youth observed first at such a high level of disruptive behavior that they had to be removed from their schools will on the average settle down somewhat in the normal course of events. The mission of a special program is to maximize and accelerate this benign trend so that problematic students will come even more closely to resemble well-behaved citizens, and sooner.

We earlier proposed a theoretical model of the kinds of psychological effects that schools should have on students in order to accomplish this mission. We turn now to the question of whether the alternative programs had these effects.

We report first the separate datasets, one for each wave, in order to document stability of the theoretical model over time. We found encouraging stability and consistent development of relationships between waves. The first material in this chapter summarizes the patterns and developments in the data. Having established a consistent base, we then report a test of the theoretical model as a predictor of change. That report comes second. Following the discussion of the model of change are the detailed presentations of the individual waves' datasets.

As we approached analysis of the model, we bore in mind an important fact. The school-related measures were in most cases moderately strongly related to one another (see Appendix C). As an example, students who believed that they had higher levels of academic prospects also tended to have more positive school attitudes. We carried out the analyses of the model in a way which provided two kinds of information. One kind took advantage of the relationships among these measures and added them together for the strongest explanations. The other examined the independent contribution of each of the measures (and the concepts they represented) to the explanation of misbehavior and change in misbehavior. Technical details of the analytic procedures will be found in Appendix C.

Modelling School Processes

We represented enrollment in the alternative or conventional programs by a categorization scheme we called alternative experience. One category was for comparison students, those who never attended an alternative program. The remaining three categories identified respondents who over the course of the study had had low, medium or high "exposure" to the alternative programs. On average, these three levels of exposure were about 6, 27, and 41 weeks' enrollment in one of the alternative schools. In general, the longer the time spent in the alternative schools, the more powerful were their effects. In some cases, those with the briefest exposure to the alternative programs -- those the programs failed to hold -- were the most negative of any group, even more negative than the comparison students. There were no differences among any of the four exposure categories at the beginning of the study; none of our data from wave one identified students who would fail to stay at the alternative programs.

We found that attending an alternative schools had two immediate effects. One was a very strong tendency to see the alternative program as flexible compared to the way conventional students saw their schools. The second was a tendency for

alternative schoolers to develop commitment to the student role to a greater extent than was true for students who had not attended an alternative school. Figure 8.1 diagrams those relationships.

Going to the alternative school and perceiving the ways in which it differed from the conventional schools represented exposure to the intervention program. A clear effect of the intervention was increased commitment to the student role and a belief in one's improved performance. This effect, and others to come, can be thought of as a result of the school processes.

The second step, diagrammed in Figure 8.2 shows that the recognition of the alternative school's flexibility affected another of the school processes, students' view of their academic prospects. Also shown is the unsurprising finding that academic prospects and commitment to the student role were related. If students saw their academic prospects as good, they also tended to see their academic performance as good; and if one was seen as bad, the other tended to be seen as bad, too.

The dashed line between school flexibility and student role represents an eventual result of attending an alternative program. That is, in the first two waves, when most of the alternative schoolers were attending the alternative programs, what respondents thought about their school's flexibility was not strongly related to their commitment to the student role. By wave three, the fall term of the following school year when most students were in or back in the conventional schools, a direct relationship was seen between the alternative schools' flexibility and commitment to the student role. In the meantime, there was a consistent indirect effect of school flexibility on student role. This occurred through the mutual relationship that student role and school flexibility had with students' perceived academic prospects.

Figure 8.3 diagrams the rest of the school processes and connects them with the outcome measures.

In looking at Figure 8.3, first consider the additional link between the intervention and the school processes. The connection between the schools' apparent flexibility and students' attitudes toward school completes the set of links between this aspect of school structure and students' school-related beliefs and perceptions. The importance of a school structure which students see as fair and flexible is underscored by this complete set of links.

Next note the unsurprising connection between academic prospects and school attitude. The better students thought of their academic prospects, the more positive their relationships with their teachers and their general evaluation of school.

Figure 8.1

Initial Effects of the Alternative Programs

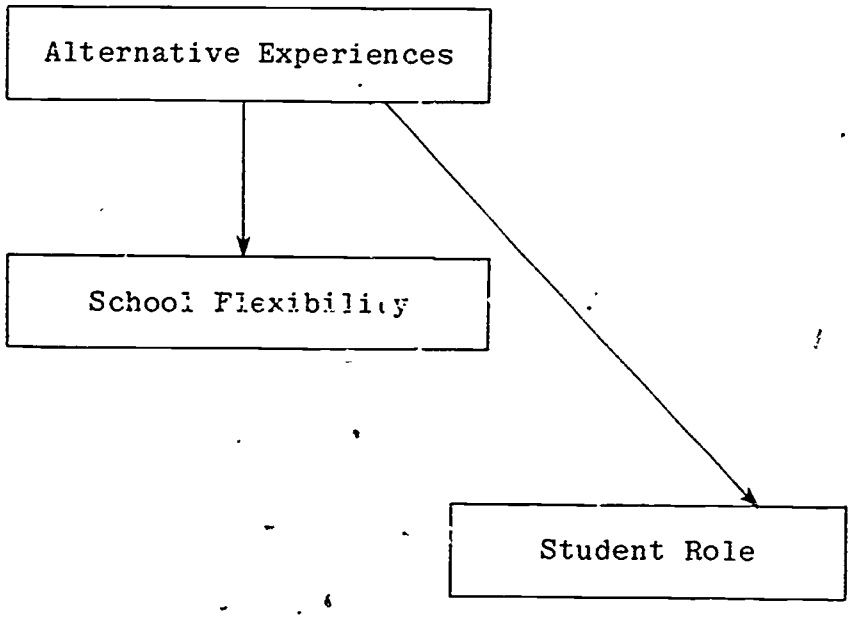


Figure 8.2

Intermediate Effects on School Processes

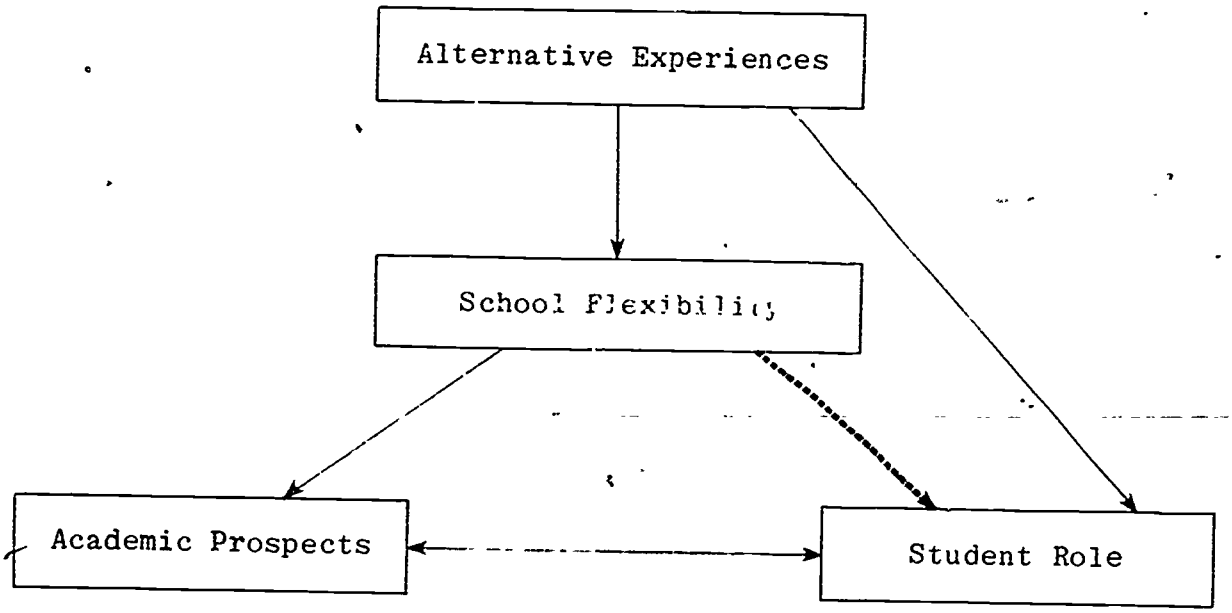
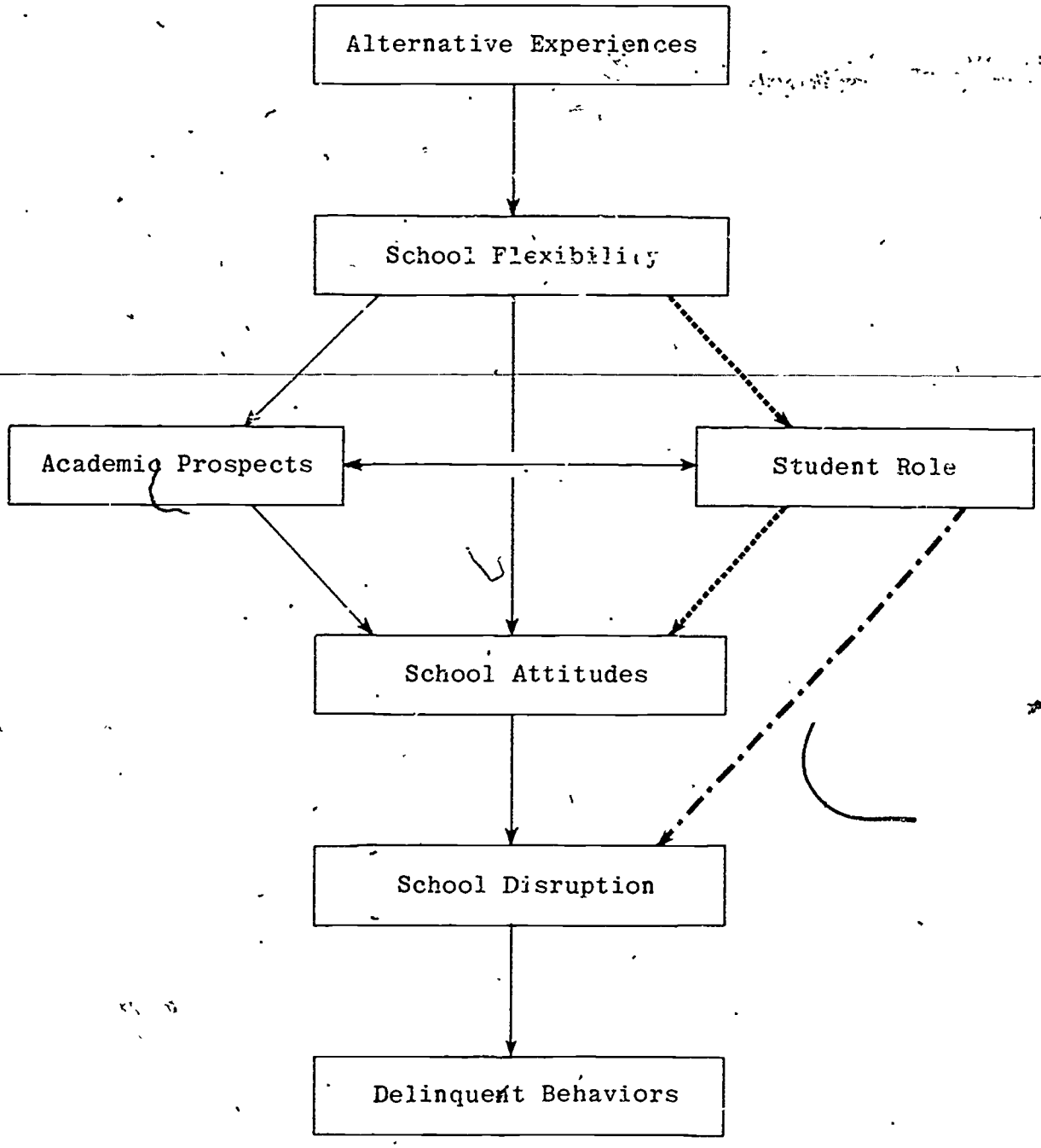


Figure 8.3

The Relationship of School Processes to Outcomes



Two broken lines lead from student role. Consider first the dashed line leading to school attitude. As before, the dashed line represents an eventual, or delayed effect. In this case, it reflects the lag between students' increased commitment to the student role and improved attitude toward school. Stronger commitment to the student role had begun to occur by wave two but more positive attitudes toward school didn't result until wave three. This kind of attitude change following behavior change has been reported by others working with troubled students (e.g., Massimo & Shore, 1966). It seems that the bad experiences and reflexively negative attitudes of these students take time to fade even when current performance has improved.

The second broken line leading from student role also represents a trend over time. In this case, however, the trend diminished over time. This was the increasingly weak direct connection between commitment to the student role and school disruption. More commitment to the student role led to less self reported school disruption. As the other school processes established themselves during the course of three terms, they eroded the independent direct impact of degree of commitment to the student role on disruptive behavior in school.

Students' attitude toward school established itself as a summary or generalization of the effects of the intervention programs and their processes. It had a consistent and strong effect on the degree to which students disrupted their schools. The more positive the students' attitude, the less disruptive their behavior in school. In statistical terms, once the impact of students' attitude on their disruptive behavior had been accounted for, neither measures of other school processes nor of exposure to the alternative programs added reliably to the explanation or prediction of school disruption. The measure of students' attitude toward school thus provided an empirical as well as conceptual summary of the effects of the intervention programs -- the alternative schools -- and their processes.

The final feature to note in Figure 8.3 is the very strong link between school disruption and general delinquent behavior. This link was expected since, in some respects school disruption is a subset of delinquent behavior. The effects of the school programs were strongest on students' behavior in school. The further one moves from school, the more diluted the effects of a school-based program. This is seen here by the lack of direct connections between school processes and delinquent behavior. Note however that the model accounts to a small but reliable degree for delinquent behavior when delinquent behavior was the only variable representing negative behavior in the analysis. The findings suggest that a decline in school disruption presages a change in delinquent behavior in the community.

To this point, our findings were consistent with our model of school processes and their effects on disruptive and delinquent behavior. Our analyses showed that students who went to schools

seen as flexible tended to feel their prospects for academic success and acceptance were brighter and they tended to work harder and feel more committed to their scholastic role. They also tended to develop favorable attitudes toward school and toward their teachers. In turn, their behavior in school improved and their delinquent involvement in the community lessened.

These processes were set in motion in the alternative schools to a much greater extent than in the conventional schools, but we hasten to add a qualification. Going to the alternative schools made this favorable sequence more likely to happen, but it did not make the sequence certain. One might ask "more likely than what?" The answer is: more likely than resulted from attending the conventional schools.

The Model of Change

We were confident from the preceding that the theoretical model was a valid one. The relationships among variables were largely as predicted. The next step was to see if the stability of the model would hold using the baseline-free measures of change in the school process measures and the measures of school disruption and delinquent behavior.

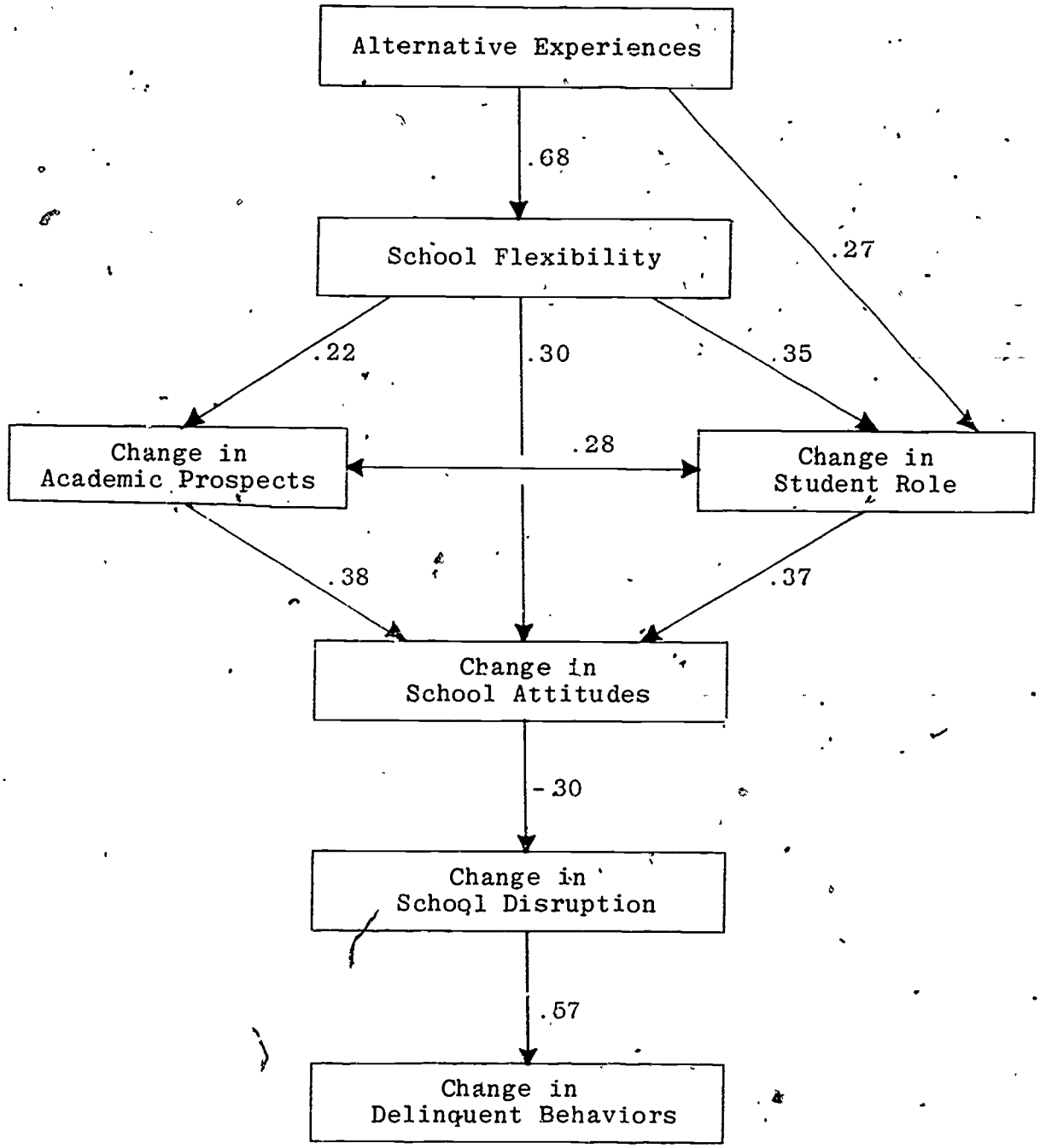
The findings were strongly similar to those from the wave by wave analyses (Figure 8.4). The alternative experience and school flexibility measures were the same as those used in wave three so their relationship in the change analysis was not different. Having the alternative school experiences contributed substantially to a change in youngsters' commitment to the student role. Alternative schoolers increased their commitment. Their perceptions of their school flexibility and their increased commitment to the student role also contributed to perceived improvement in their academic prospects. Perceiving their school's flexibility also made an independent contribution to the positive change in their attitude toward school. Their belief in their improved academic prospects also resulted in an improvement in their school attitude, as would be expected.

Of all the school-related variables, only students' attitude toward school contributed to a reduction in their disruptive, rule-violating behaviors in school. Again, this measure of general attitudes and relationships with teachers serves as a summary of the school processes and their impact on behavior in school. Also as seen in the wave by wave analyses of the model, improved behavior in school is strongly associated with reduced levels of general delinquent behavior.

The implications of this analysis echo those of the wave by wave analyses. Their significance is enhanced because of the consistency of the findings and the relationships with measures of change. The most important implication concerns the processes within the alternative schools. Simply sending troubled or troublesome students to an alternative school did not have an

Figure 8.4

The Model of Change Between the First and Third Interviews



effect on their behavior in the absence of a set of processes in or by which the student had to be engaged. Indeed, when we simply compared alternative and comparison students' change in delinquent and disruptive behavior over the course of the study, we found no differences between the groups. And, as seen in Figure 8.4, when the effects of the school process measures are taken into account, there again is no independent effect of the type of school attended. What makes the difference? What enables us to see effects of the school programs?

The answer is both simple and complex. First, the simple part: to the extent we are able to explain change in delinquent and disruptive behavior at school, the change follows from a changed relationship of the student to the school. (Note that we were able to explain a statistically robust and reliable degree of change.) That changed relationship, reflected best by more positive attitudes toward school, is predicated on changes in commitment to and anticipation of success in school on the part of these formerly dismal students. These processes are set in motion by the structure and atmosphere of the alternative schools to a much greater degree than by the structure and atmosphere of the conventional schools. We hasten again to underscore an important qualifier in the above. The qualifier is, of course, the phrase: "...to the extent..." The alternative schools seemed to work most effectively when they could engage students in their internal process and thereby effect change in students' beliefs, attitudes, and scholastic behaviors. Not all alternative students, as we shall see, were engaged by these processes, however. And, some comparison students experienced the changes just discussed while in their conventional schools. Lastly, some of the respondents who experienced, say, a more flexible school, or whose attitudes toward school improved nevertheless did not move on to the next step in the model. That is, some of those students did not come to feel that their academic prospects improved, or did not behave notably better in school.

In other words, the model is a probabilistic one: the chances were that step A would lead to step B, and the chances were that step B would then lead to step C, and so on down through the stages of the model. This is a common, although rarely explicit, feature of a whole range of intervention programs. The following example is designed to illustrate the point.

Consider referral to and the operation of a special education program. A precise diagnosis of a student's condition is not obvious nor easily developed in many cases. It is more or less clear that the student has a condition which makes him or her appropriate for a special ed program. Nevertheless, the diagnosis is typically stated as a certainty: "Johnny has such and such a condition," although the diagnosis is actually more or less probable, not certain. The referral is made and a course of treatment or intervention prescribed. Yet, there is no certainty that it will be effective or successful, however measured. After all, what program ever is 100 percent successful? A model

predicting success is implicit in any program. The difference between good and bad programs is that their models are more or less successful in describing links between the intervention actions, intermediate processes, and outcomes. The more successful the program or diagnosis, the better its chances for success, or the higher the proportion of successes versus failures.

The heart of the reasoning behind the statistical tests used to judge the reliability of programs' effectiveness has precisely to do with chance. If a relationship or outcome is said to be reliable, it means you have better than a pure chance or luck of the draw shot at success. Much better, in fact. Our model is probabilistic in that it only states what processes improve on chance in enabling the schools to effect the desired outcomes. It does not guarantee 100 percent success. Indeed, the overall impact of the alternative schools on their students' disruptive and delinquent behavior was not reliably greater than that of conventional schools. The alternative schools had set effective processes into motion to a greater degree than the conventional schools did, but not with a sufficient number of their students to show an overall effect.

The interested reader may want to look at the diagrammed analyses for each wave's data. They follow, with notes. The numbers associated with the connecting lines represent the relative strength of relationships.

At wave one, students had little or no experience with the alternative schools, and thus no opportunity to perceive the alternative schools as more flexible. As discussed in an earlier section, the alternative students actually were more negative about school at the outset of the study.

The fact of no other differences between the alternative and conventional students at this initial stage is significant for the research design. It reflects the similarity between those who would spend varying amounts of time in the alternative programs and those who would remain in the conventional programs.

At wave two, after most of the alternative schoolers had spent at least some time there, the connection between perceived school flexibility and the alternative school experience is established. The link between alternative experiences and commitment to the student role also appeared by wave two.

At wave three, when most alternative students had returned to the conventional schools, the previous pattern is maintained with one slight exception. That was the weakening of the link between commitment to the student role and school disruption and its shift from school disruption to delinquent behavior generally.

Figure 8.5

The Model's Operation at the First Interview

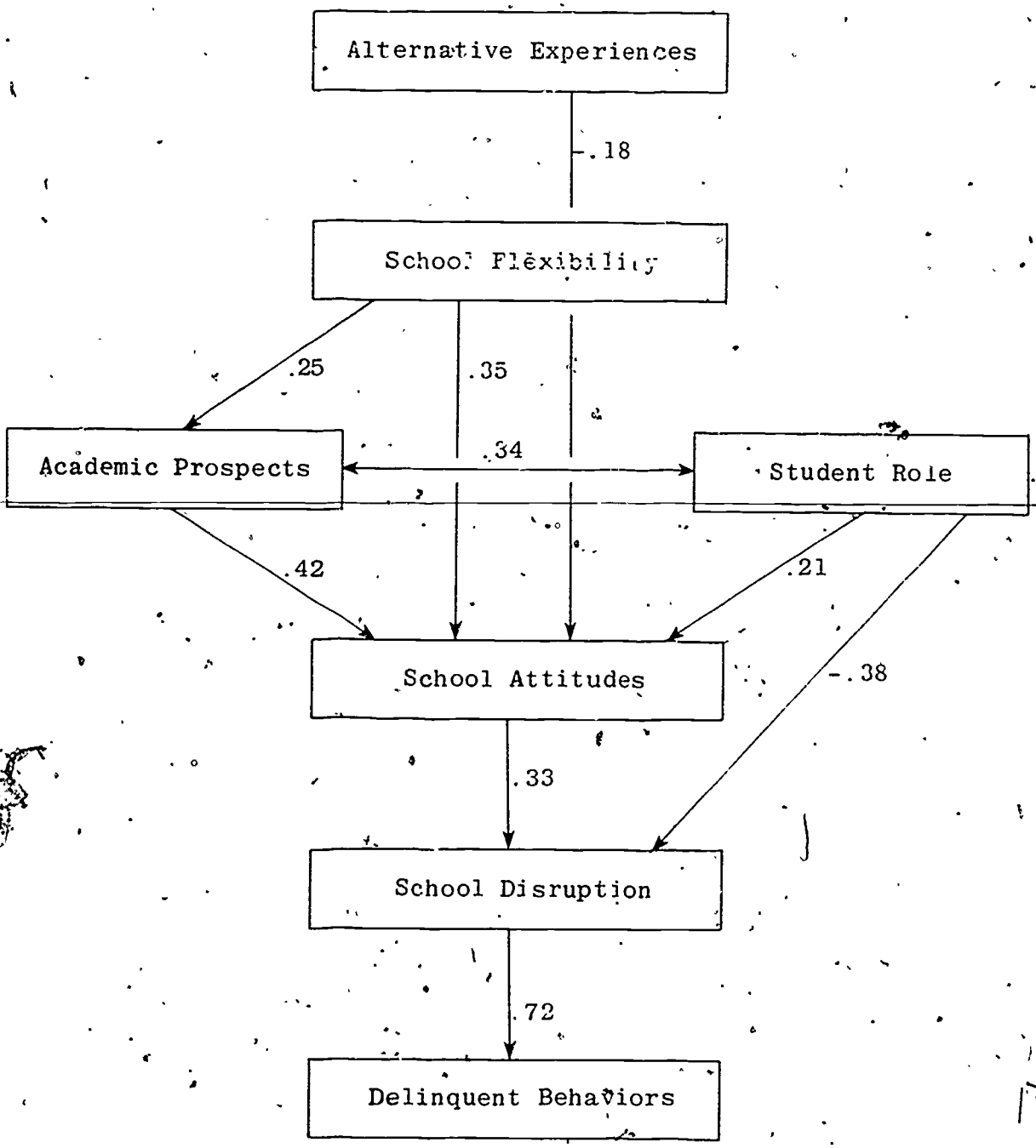


Figure 8.6

The Model's Operation at the Second Interview

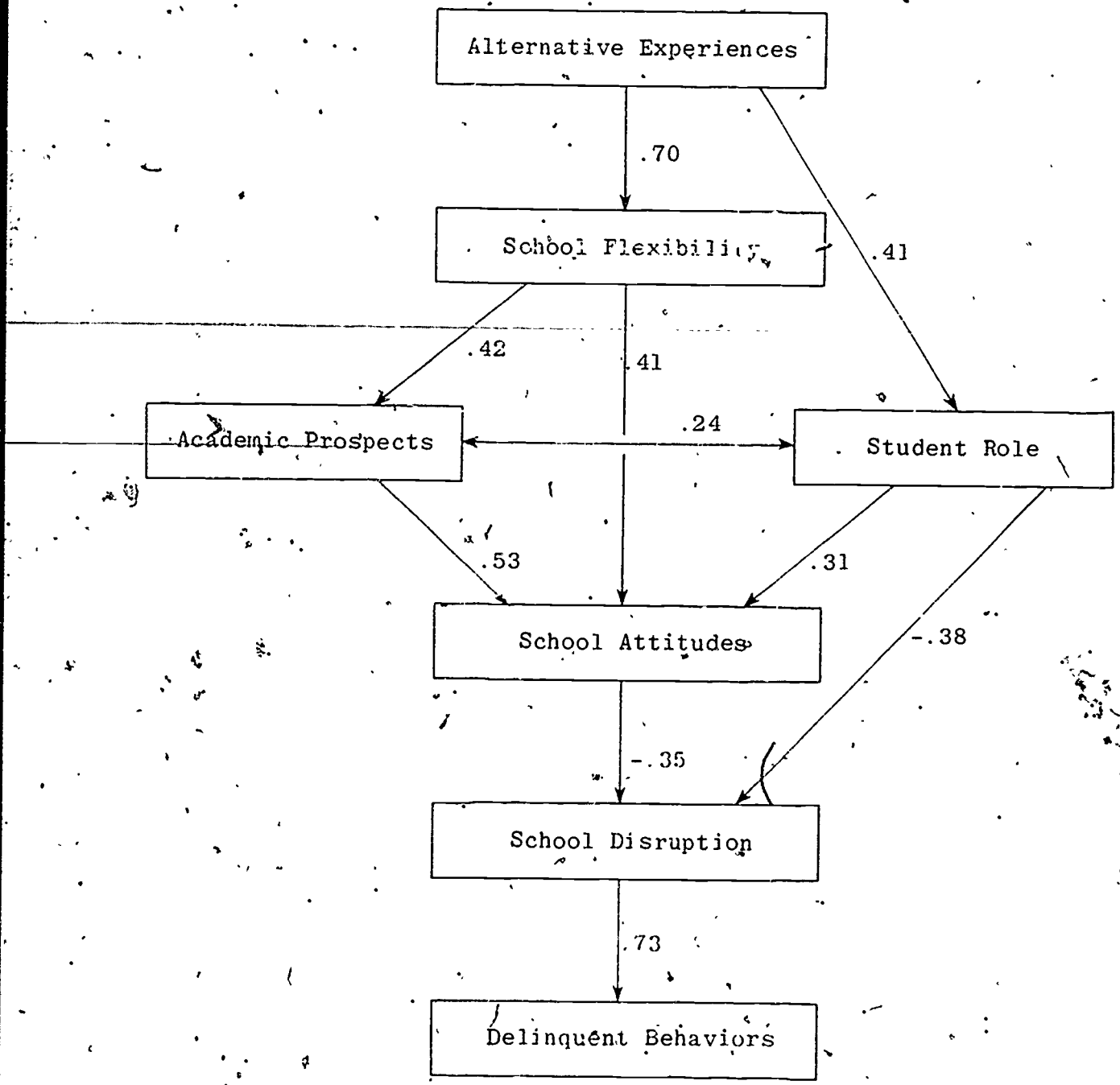
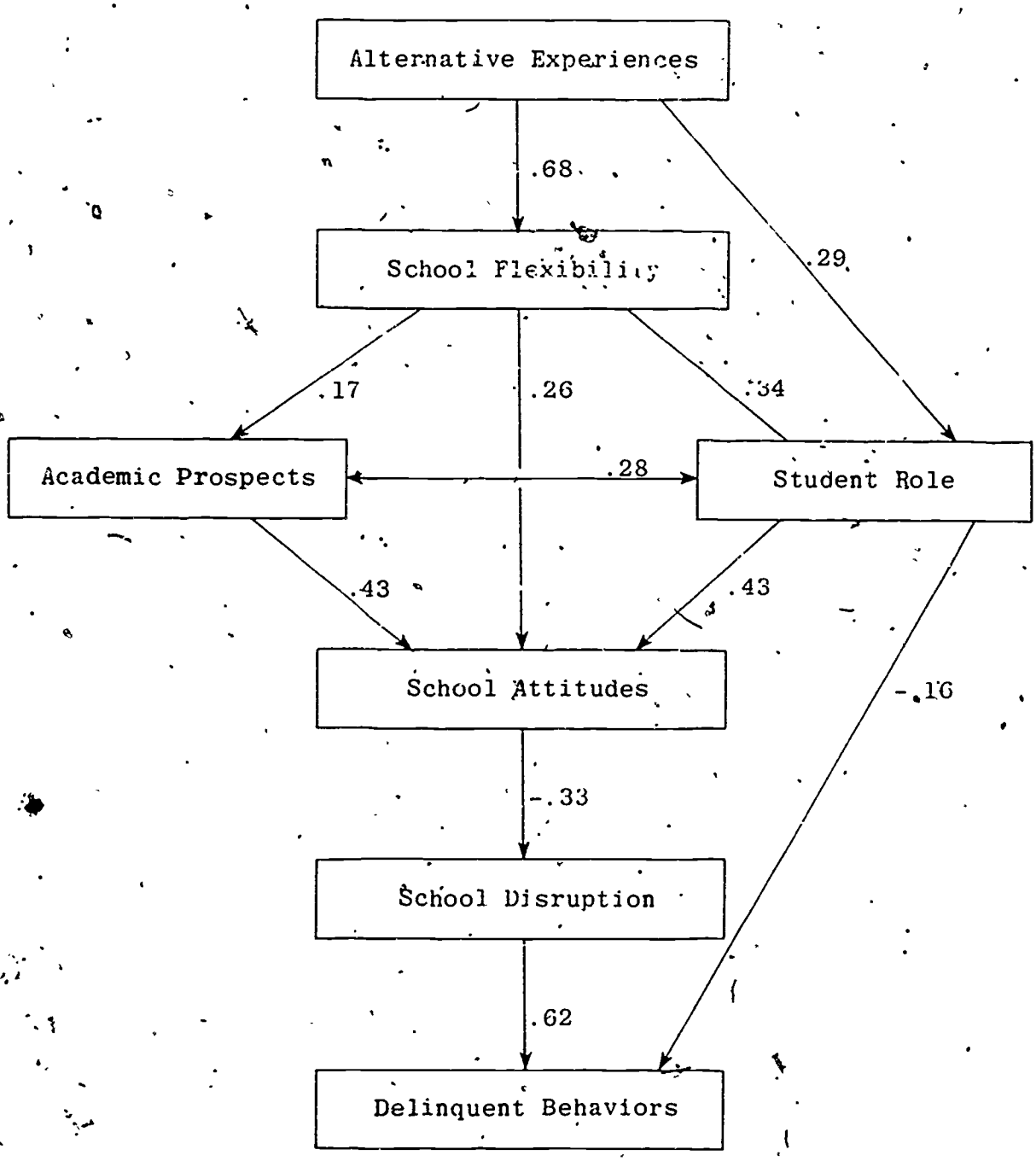


Figure 8.7

The Model's Operation at the Third Interview



The next steps in the data analysis were designed to improve the odds, so to speak. Up to this point, we have treated the programs as similar and students as equivalent. The questions now become: were some programs more effective than others at engaging their students in the constructive school processes and in producing the desired outcomes? And, were some of the alternative students better suited to their alternative programs than others?

The Model in Individual Programs

Separate analyses parallel with those just reported were performed for each alternative school program and its comparison group. Each of the wave by wave datasets was used, as was the wave one to wave three change data.

The Ace Program. The findings for the Ace program show a pattern of increasing integration of the school processes. The strongest effects of the program, seen in the diagram of the change model in Ace (Figure 8.11), were on the measure of commitment to the student role. Unlike the findings from the other alternative programs and from the aggregate analyses, commitment to the student role was consistently associated with students' attitudes toward school while they were in or shortly after they had been in Ace (at wave two). This is another reflection of the more integrated pattern of attitude and performance measures which held in Ace. All in all, the Ace program's operation conformed most closely to the theoretical model of school processes and outcomes. This may well have been due to two facts about Ace. First, it most closely resembled a traditional school program. Second, it served troubled or troublesome students exclusively -- those for whom a school-based intervention might be expected to make the most difference.

The Alpha program. In contrast to the Ace students, improved attitude toward school among Alpha students did not reduce their disruptive behavior. Instead, it was their increased commitment to the student role that reduced disruption (Figure 8.15). What is particularly interesting about this finding is that students' commitment to the student role after they had spent substantial time in Alpha was no greater than the commitment of their conventional school counterparts. That is, none of the school-related variables predicted degree of commitment at wave two. By wave three, however, substantial integration of these measures had occurred. This indicates a rather marked lag in the effect of the Alpha program. This lag suggests that being students in Alpha -- which mostly meant engaging in the human relations workshop -- did not seem to them like playing a student role. The effect of the Alpha program on their scholastic orientation was not apparent until the students re-entered the recognizable role of student at the conventional school.

The wave three effects of the program (see Figure 8.14) raise some interesting points. First, while there is integration among the school-related measures, none of them relates directly to

Figure 8.8

The Model's Operation at the First Interview for Ace and its Comparisons

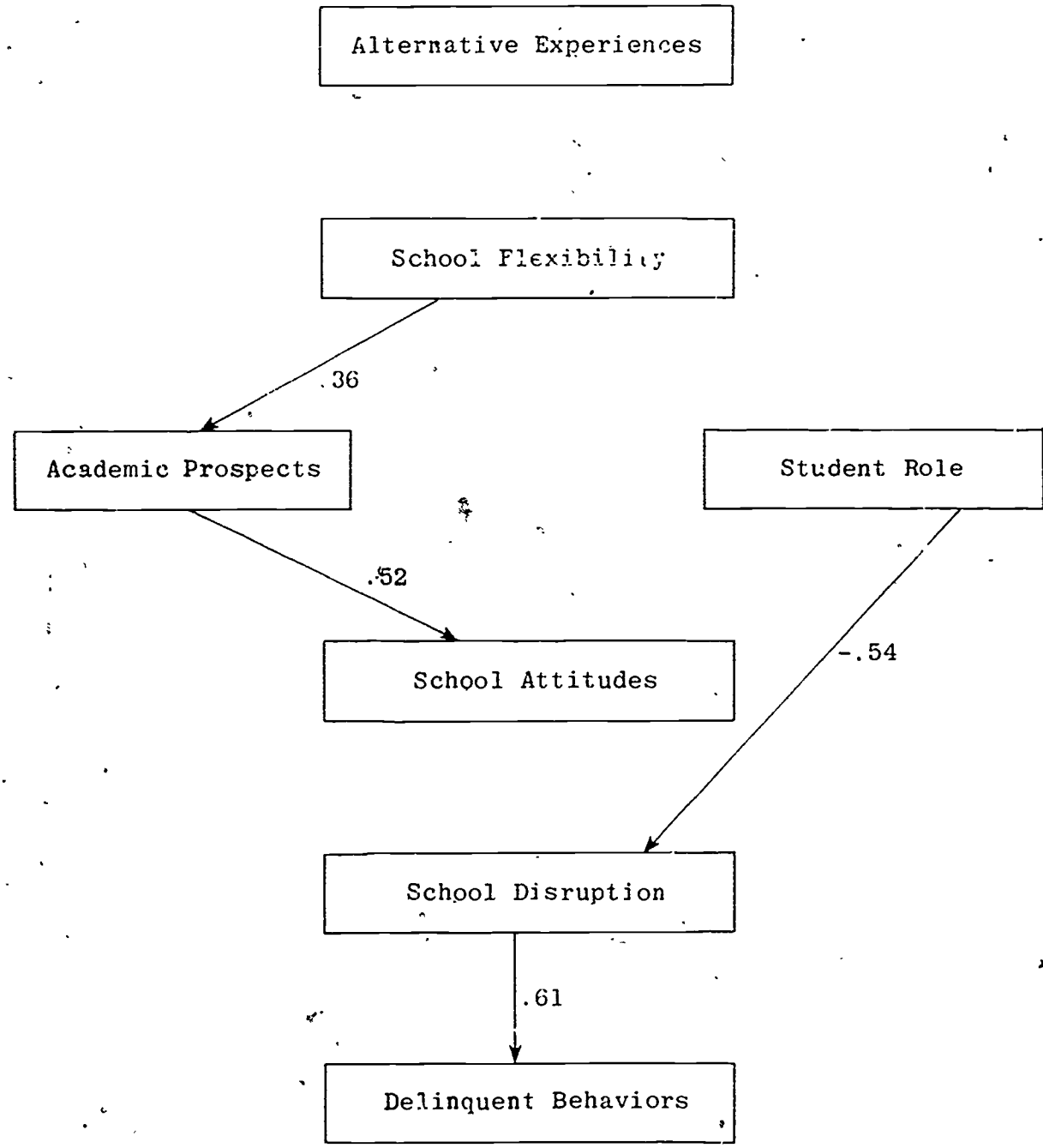


Figure 8.9

The Model's Operation at the Second Interview for Ace and its Comparisons

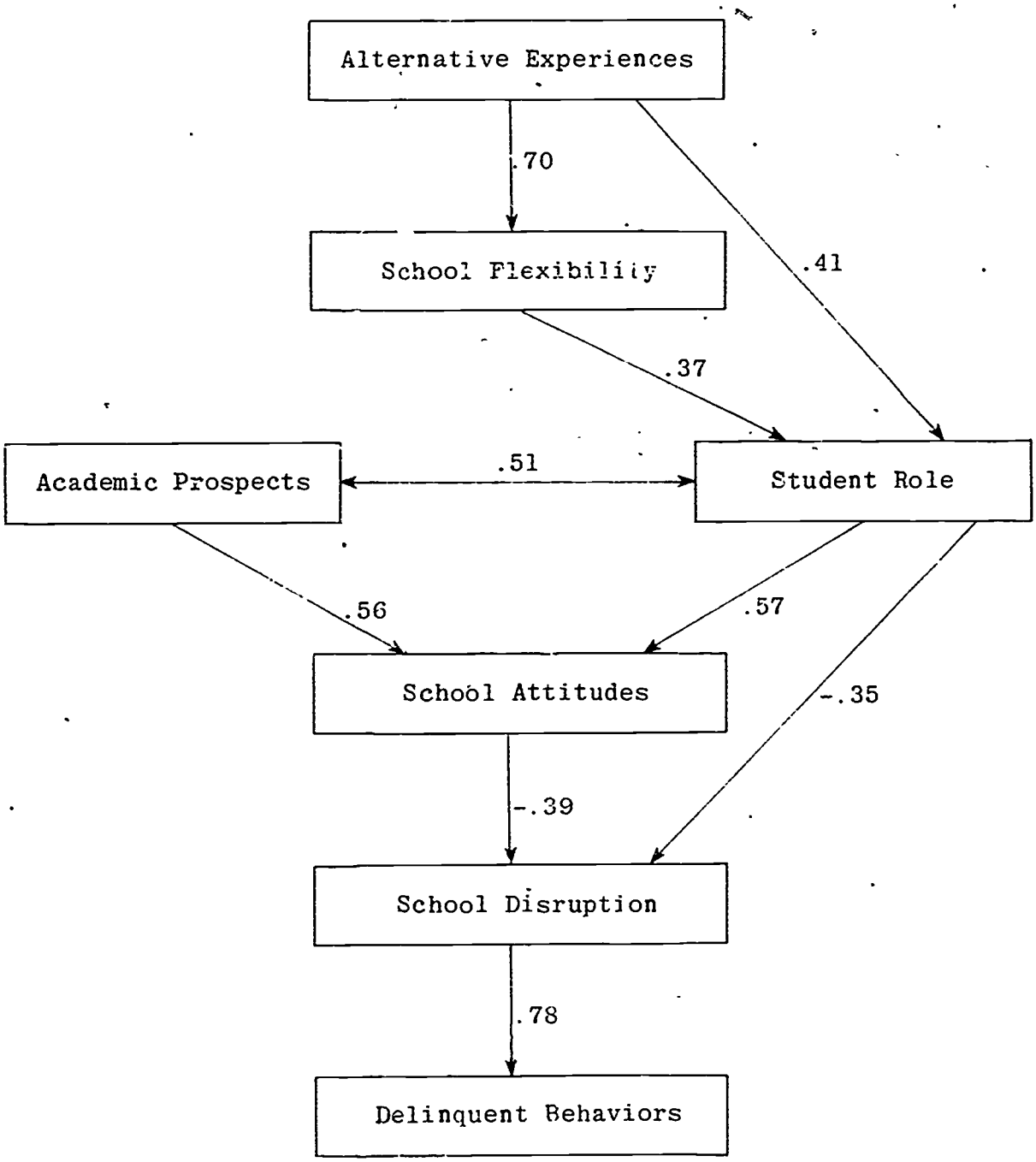
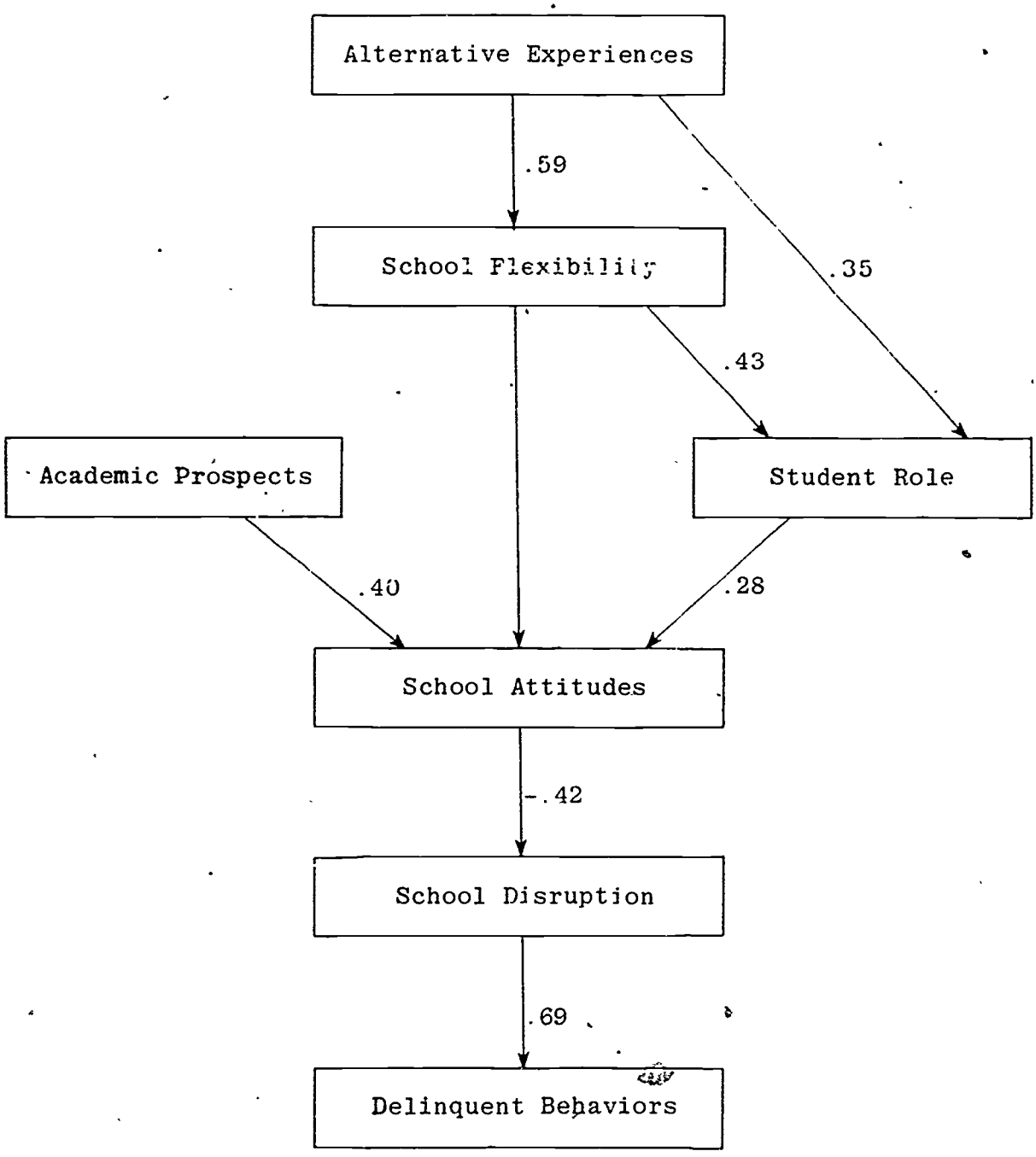


Figure 8.10

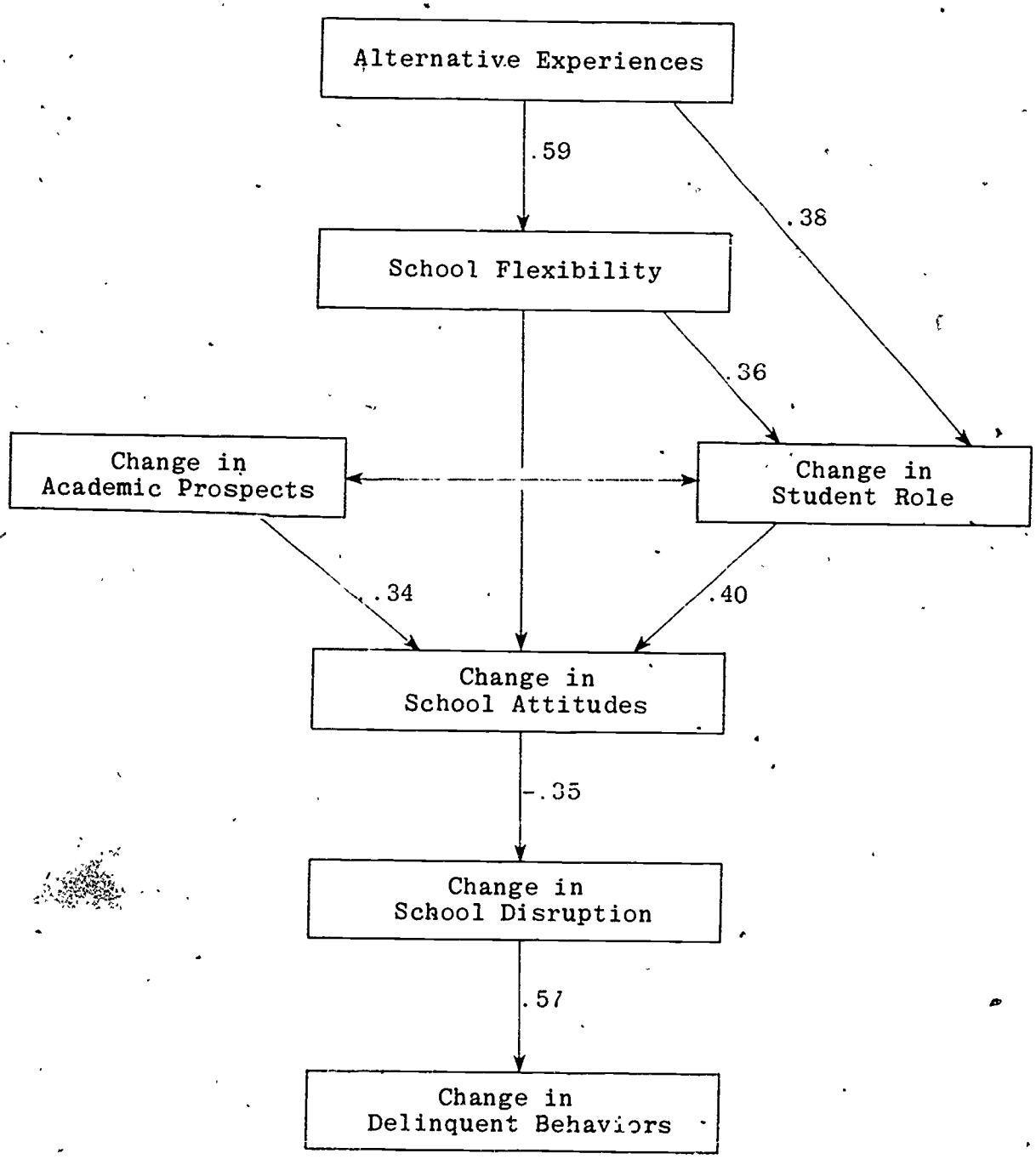
The Model's Operation at the Third Interview for Ace and its Comparisons



Note: Because of small sample size, nonparametric estimates of bivariate relations were used to supplement information on partial relationships. Significant ($p < .05$) nonparametric relationships are represented by arrows only with no associated numbers.

Figure 8.11

The Model of Change Between the First and Third Interviews for Ace and its Comparisons



Note: Because of small sample size, nonparametric estimates of bivariate relations were used to supplement information on partial realtionships. Significant ($p < .05$) nonparametric relationships are represented by arrows only with no associated numbers.

reduced school disruption, although Alpha's level of school disruption had fallen to about the same degree as in all the programs, conventional and alternative. Second, note that there is a rather strong positive relationship (the more of one, the more of the other) between the school's flexibility and delinquent behavior. Alpha's flexibility seems to have had two kinds of effects. For some students, it promoted commitment to the student role and, through that commitment, improvement in behavior in school. But, for other students, Alpha's flexibility seems to have meant only going through the motions of schooling, not establishing a new relationship or commitment to school. This two-fold pattern may also be attributable to the almost non-academic nature of the Alpha program during the course of the study. Its structure offered plenty of support for students, but it may have offered less in the way of concrete scholastic experiences than some of its students may have needed to counteract past experiences of failure and frustration. Note, for example, that the Alpha students' perceptions of their school's flexibility and their attitudes toward school made no difference in their beliefs about their academic prospects. Thus, Alpha students came to like their school and teachers simply by virtue of having attended Alpha, as seen in Figure 8.15. Yet, it was primarily those whose scholastic performance improved who demonstrated any of the program's effects on disruptive behavior.

The Beta Program. The findings for the Beta program are consistent with the kinds of problem discussed earlier, which the program experienced during the study. The school process measures in Beta were the least integrated of the three alternative programs. This may well have been due to Beta's difficulties in socializing its new students to its systematic and structured but novel scholastic program. As Figure 8.17 shows, being in Beta was directly associated with stronger commitment to the student role and its associated better performance. But, being in Beta was also associated with diminished academic prospects. The positive effects of Beta at wave two appear to have resulted from its supportive and flexible atmosphere. By wave three, when most Beta students had returned to their conventional schools (Figures 8.18-8.19), having been at Beta tended to increase commitment to the student role and thereby reduce disruptive and delinquent behavior. As in Alpha, there seems to have been a lagged effect on commitment to and performance in the student role from having been in Beta.

School flexibility played a dual role in Beta to a greater degree than in Alpha. It made positive contributions to commitment to the student role and through it to school attitude and the resulting reduction in school disruption. But, school flexibility also had a negative effect. As previously noted, Beta failed to successfully engage some of its students in its alternative scholastic processes. This is likely reflected in the increased delinquent behavior which tended to flow from students' recognition of the flexibility of Beta.

Figure 8.12

The Model's Operation at the First Interview

for Alpha and its Comparisons

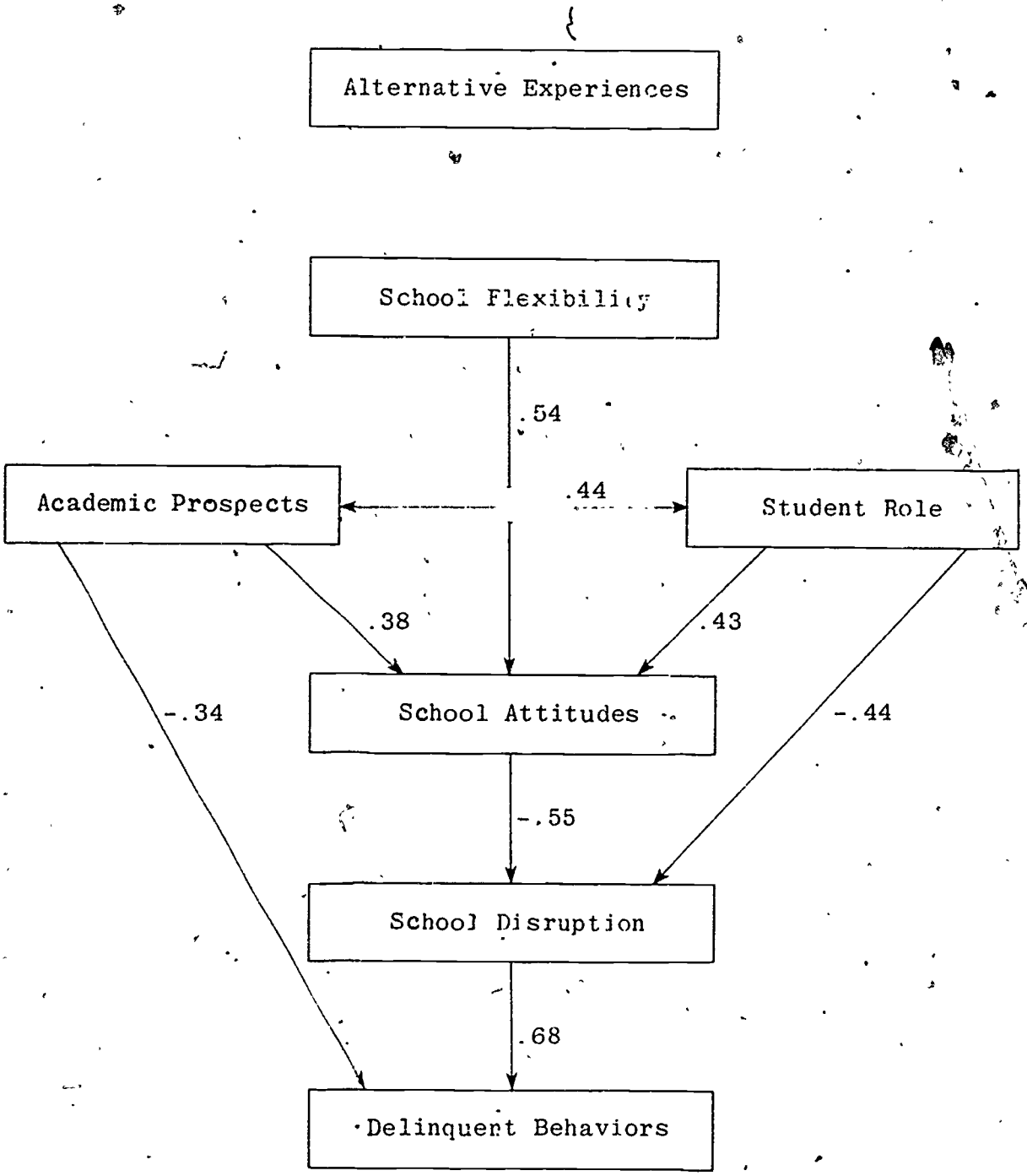


Figure 8.13

The Model's Operation at the Second Interview

for Alpha and its Comparisons

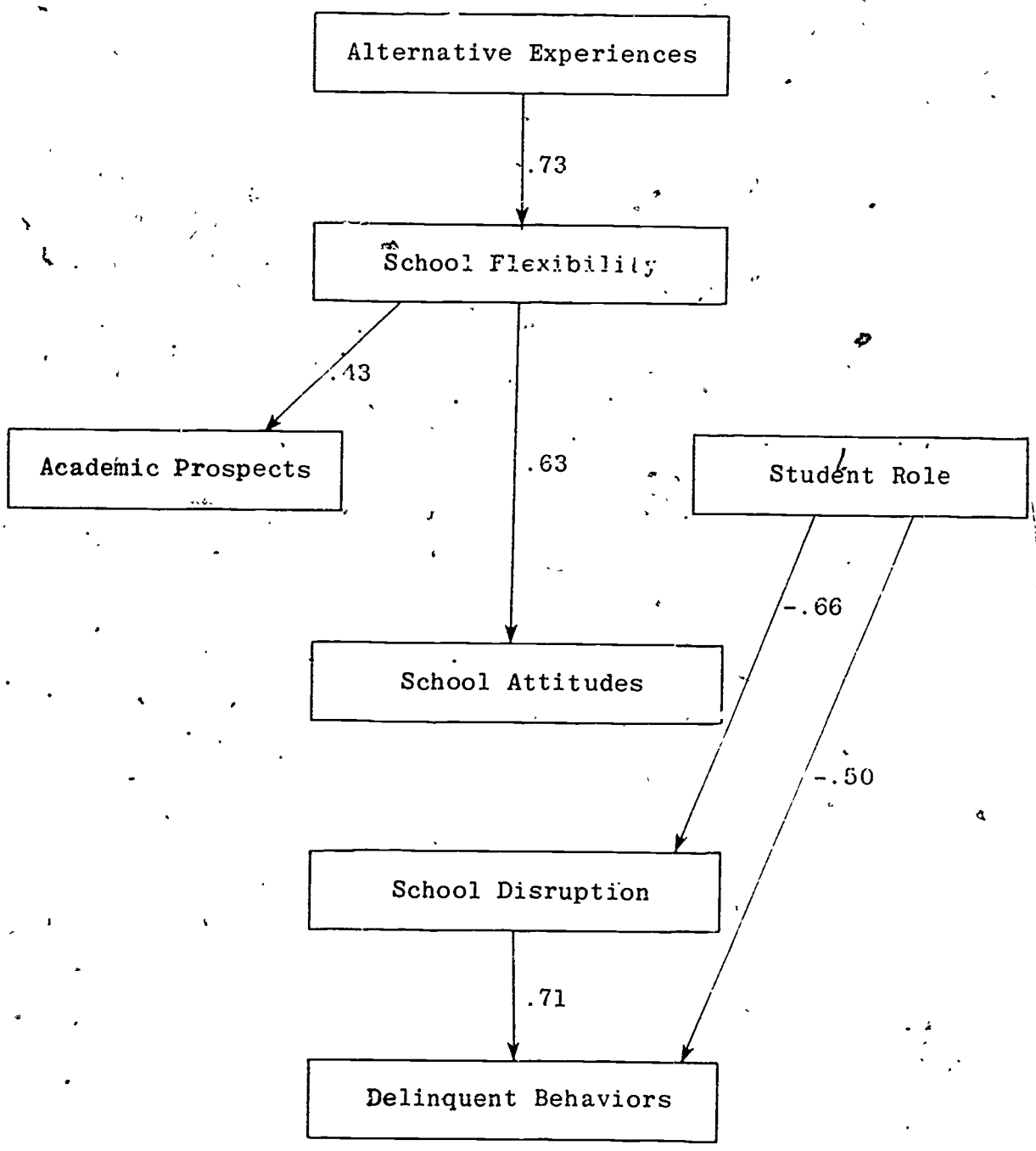


Figure 8.14

The Model's Operation at the Third Interview

for Alpha and its Comparisons

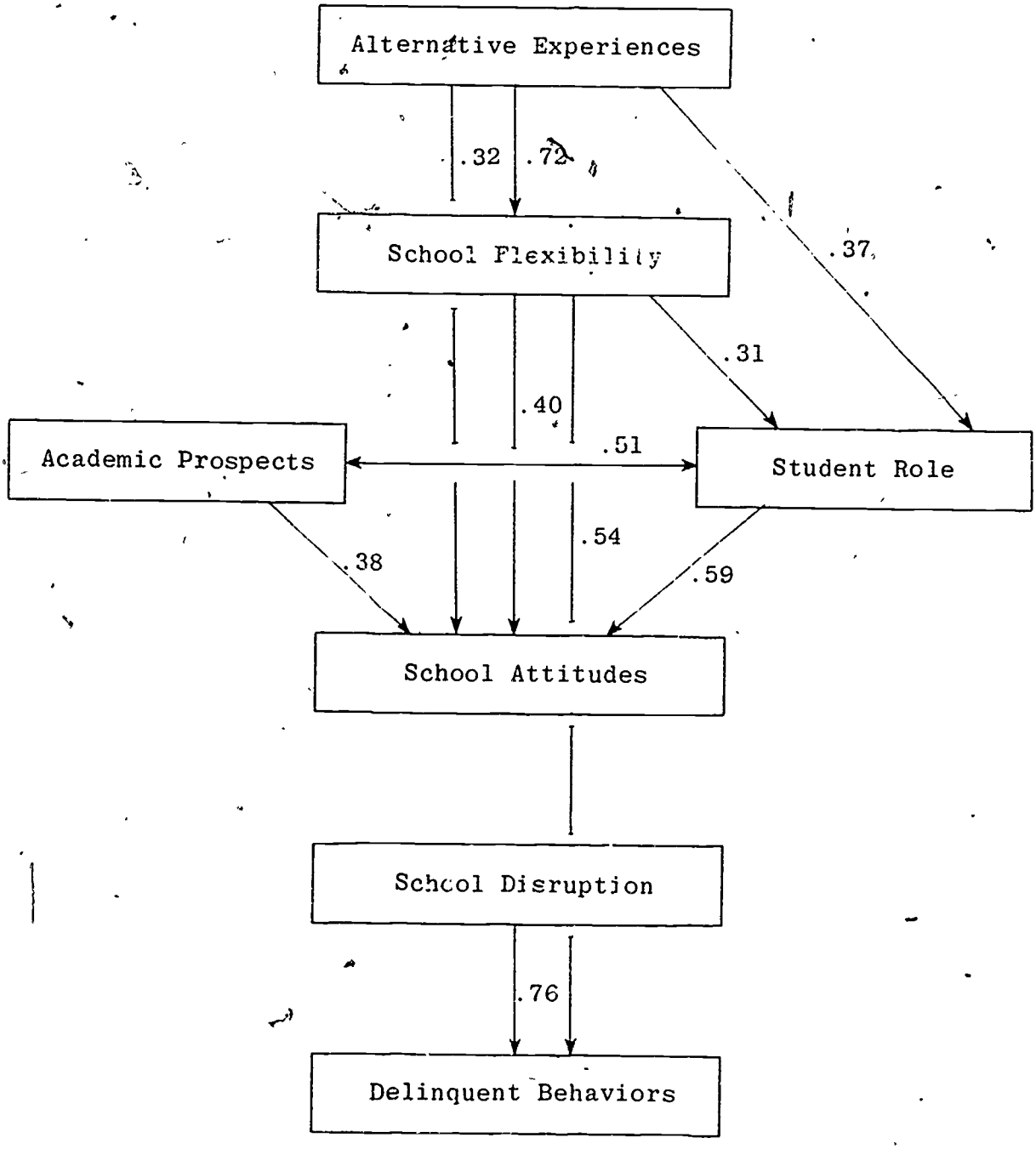
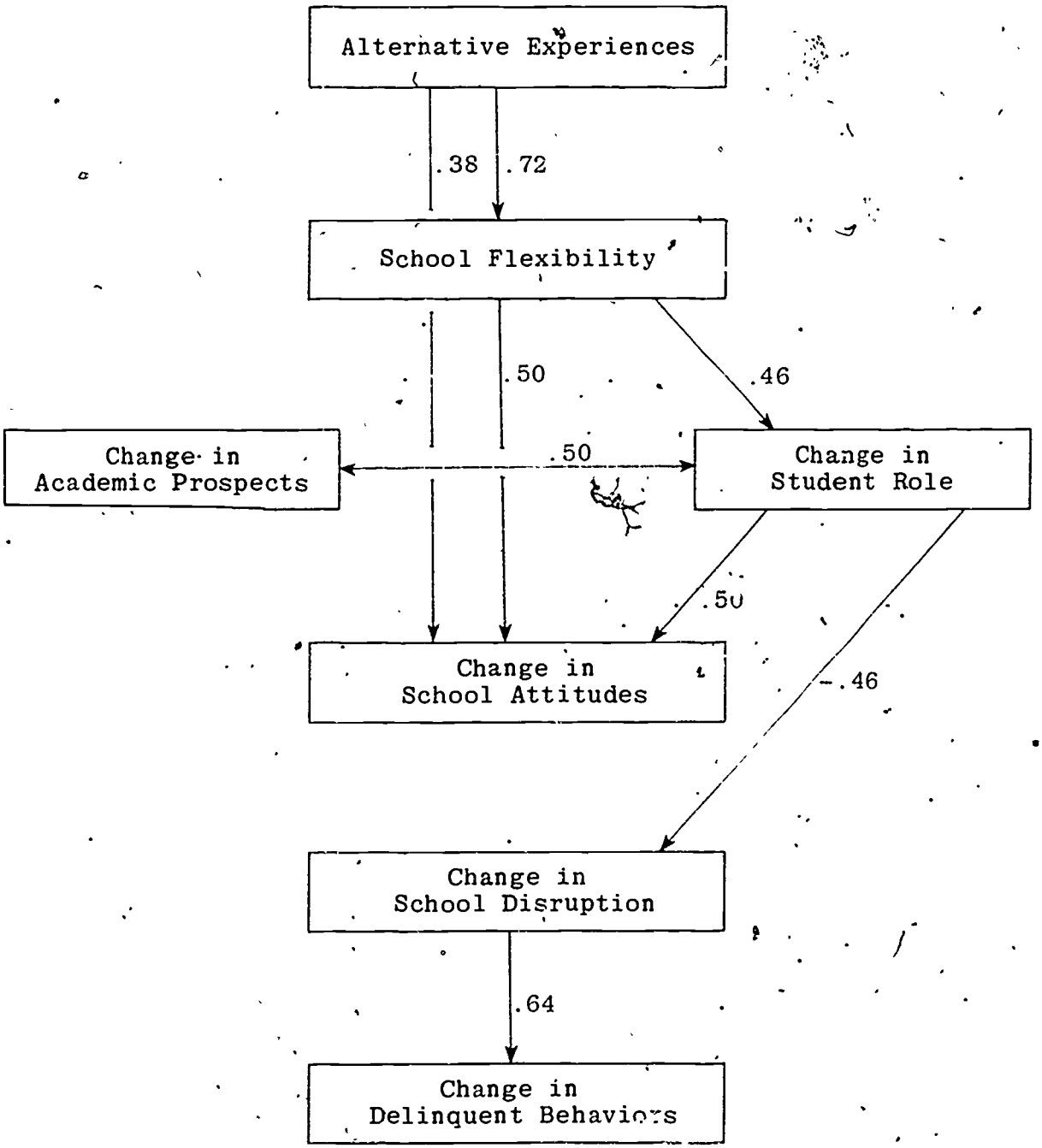


Figure 8.15

The Model of Change Between the First and Third Interviews for Alpha and its Comparisons



Another striking feature of the dynamics of Beta concerned the relationship of experience in Beta with the other school processes and outcomes. As seen in the path leading from alternative experience through school flexibility, student role, school attitude, and school disruption, experience in Beta did result to a degree in engagement in the school processes described by the model. The direct relationship of alternative experiences to reduced school disruption suggests that the beneficial effects of Beta also acted in a manner independent of the school processes, at least as we measured them. The problem solving or self monitoring or other features of Beta may have been effective in improving behavior in ways unrelated, or only tangentially related to its scholastic effects.

Final Refinements

Our last set of analyses was intended to identify kinds of students for whom the alternative programs had been more successful or less successful than average. Among the factors we considered were influences from beyond the school setting; that is, the respondents' family lives and their peer relationships as well as their individual states of adjustment. The last are the psychological links mentioned earlier in connection with the operation of the study's overall theoretical model of delinquent behavior.

Retention

The first of these issues to be addressed bridges the discussion of the individual programs and that of the individual students. It concerns rates of retention and drop out.

We found only one program difference in retention, but it was substantial. Beta had uniformly poorer retention than any other group, alternative or comparison. Of all the respondents who eventually dropped out of school and did not resume school during the course of the study, 44 percent had been Beta students. Indeed, almost half of our Beta respondents (49 percent) dropped out and then remained out of school during the remainder of the course of the study. In the other groups, a low of about 14 percent of Ace students and Ace comparisons eventually dropped, and about 25 percent of the Alpha students and the Alpha and Beta comparisons dropped out.

When we compared drop outs with those who stayed in school, we found only one reliable difference. The dropouts were unsurprisingly lower in their commitment to the student role at wave two. They were not reliably different in misbehavior at any wave, nor in any of their change scores for misbehavior or school processes, and they were not different in their perception of the flexibility of their schools. When we looked specifically at dropouts versus stay ins in Beta and its comparison group, the pattern of results was the same as for the aggregate analyses.

Figure 8.16

The Model's Operation at the First Interview
for Beta and its Comparisons

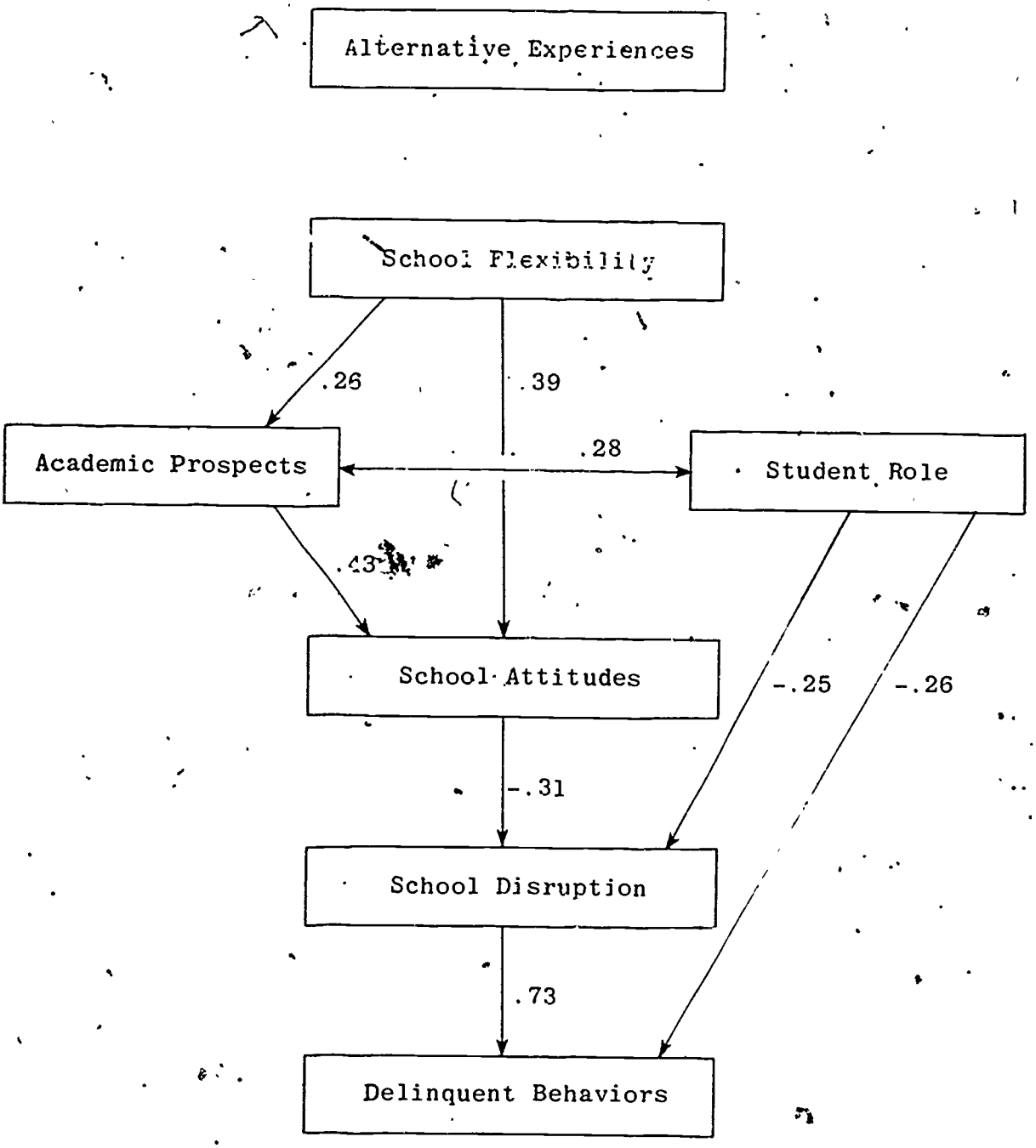


Figure 8.17

The Model's Operation at the Second Interview

for Beta and its Comparisons

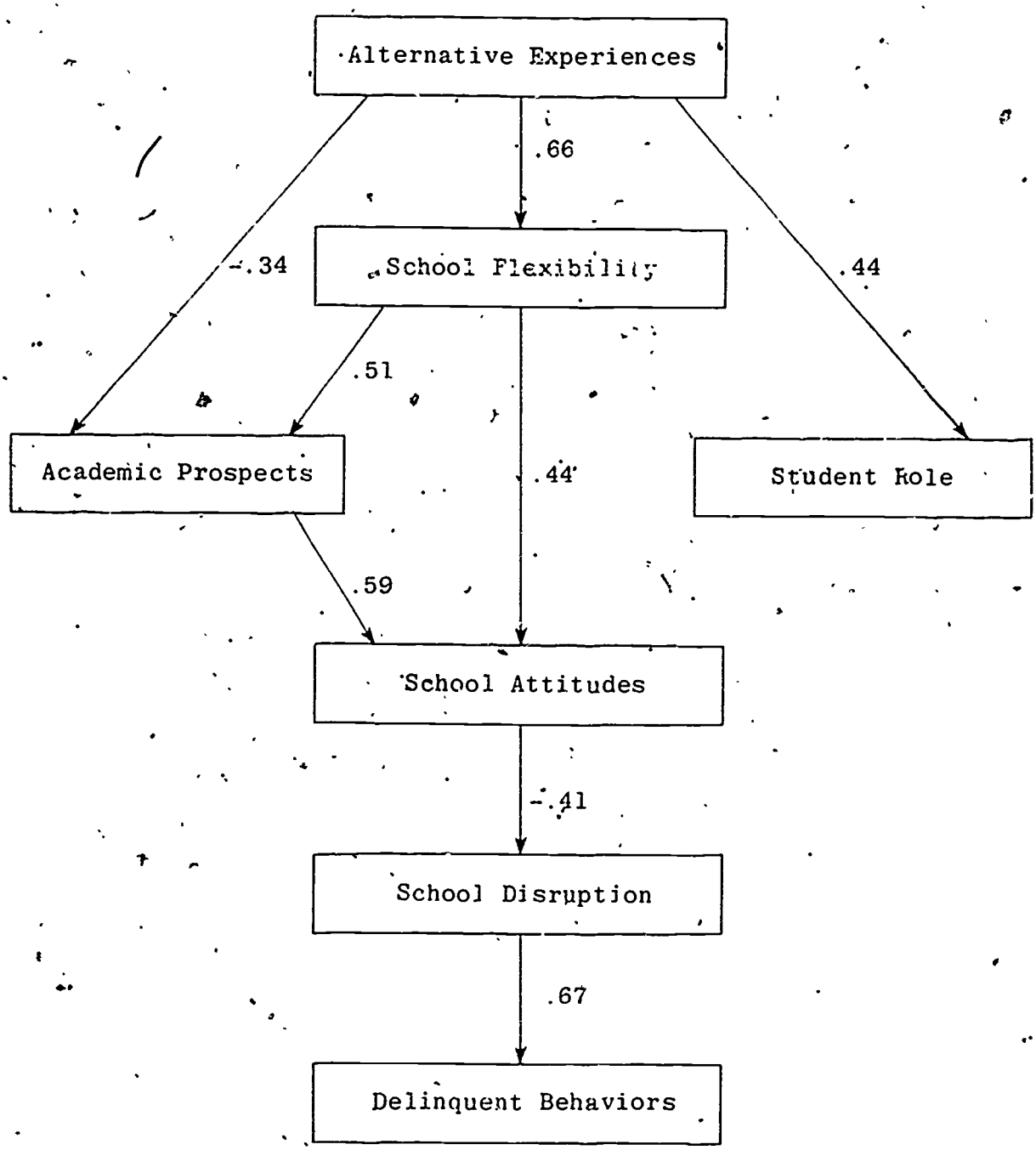


Figure 8.18

The Model's Operation at the Third Interview for Beta and its Comparisons

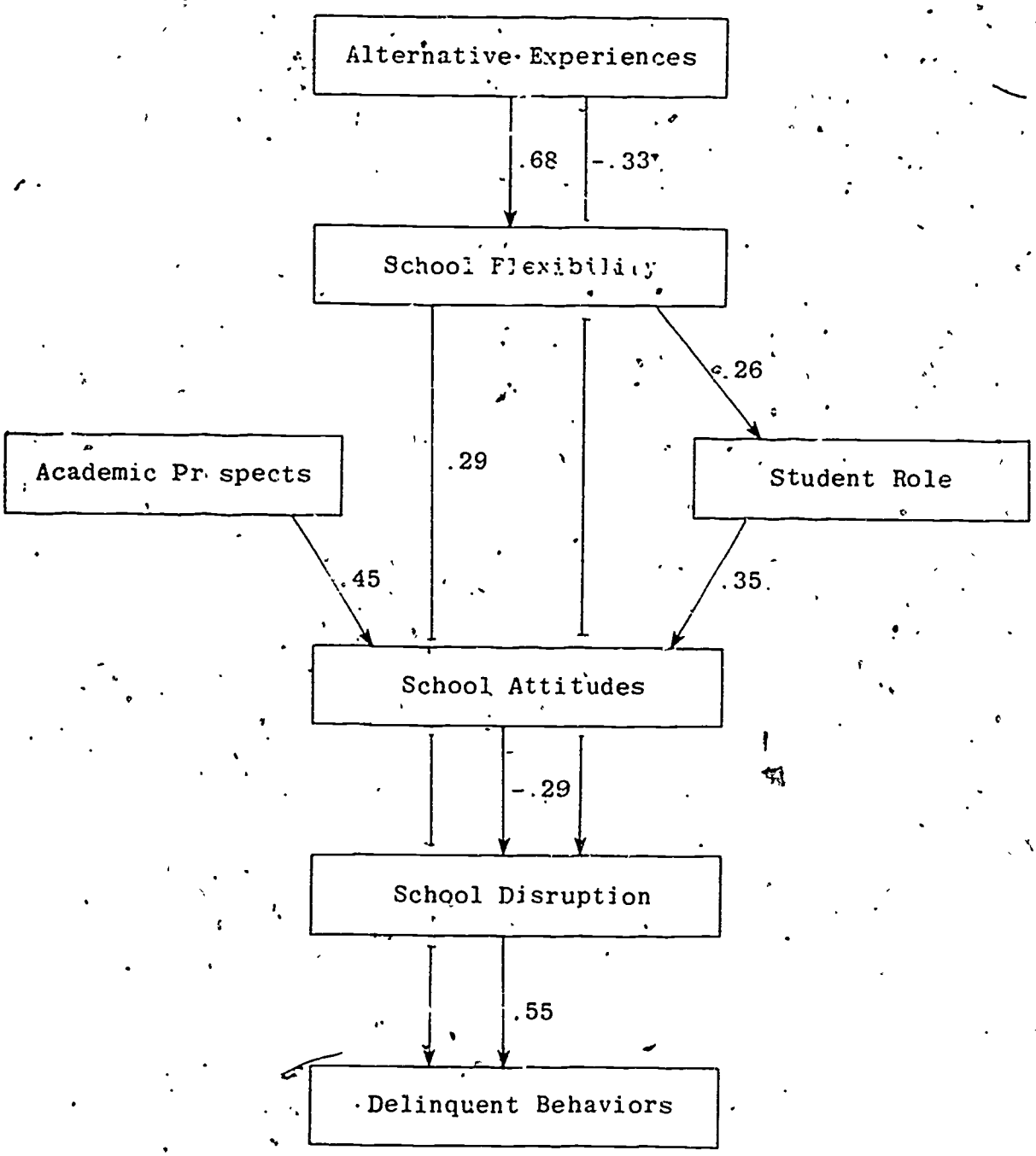
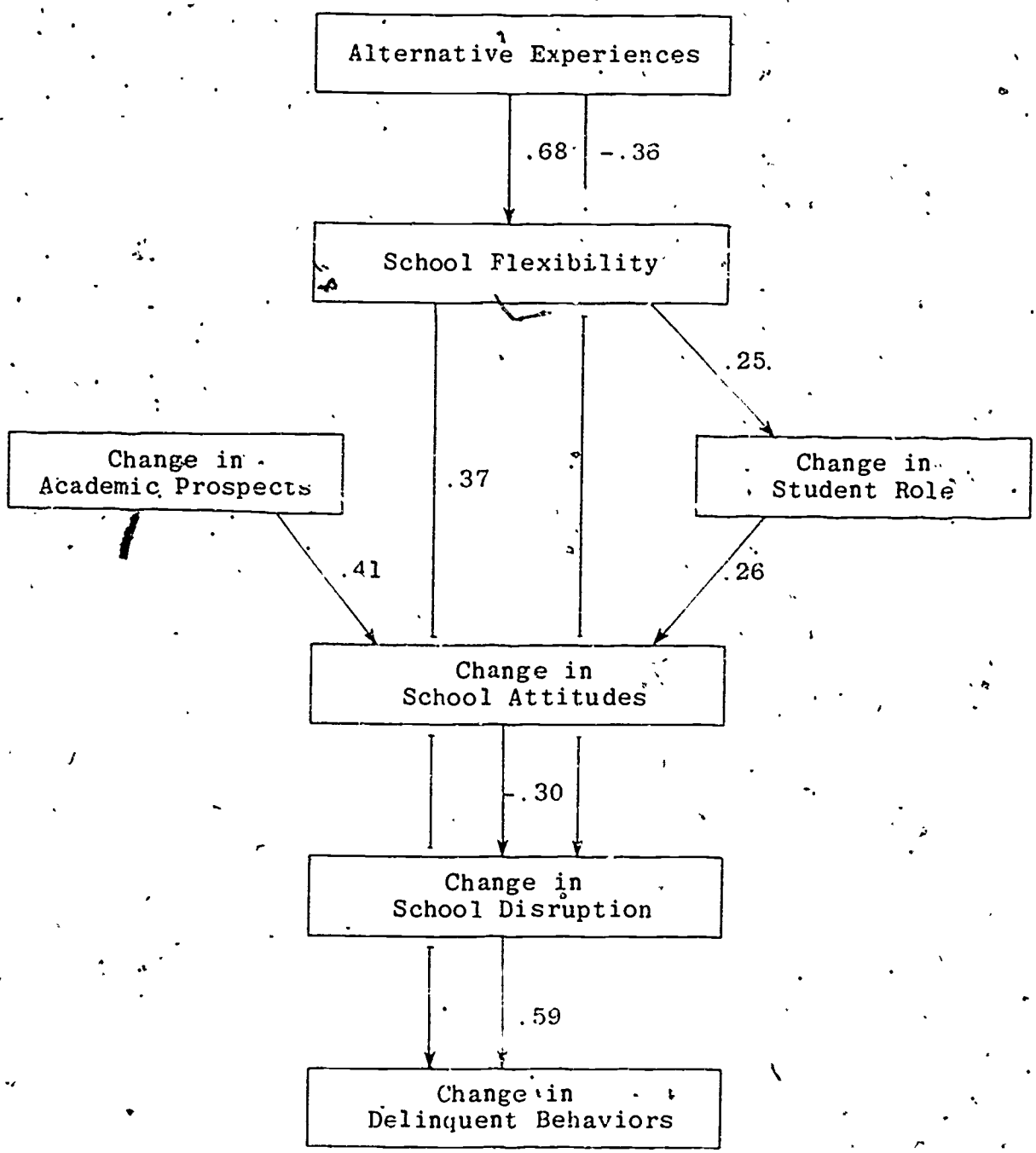


Figure 8.19

The Model of Change Between the First and Third Interviews for Beta and its Comparisons



That the dropouts were low in commitment to studenthood at wave two is neither surprising nor illuminating. Indeed, it is more a tautology than an explanation.

The patterns of retention reflect the stability and change in the alternative programs. Ace was stable and its school system tended to be more flexible than that of Alpha and Beta. Alpha and Beta were in transition states. For its part, Beta chose the wrong time to expand and could not be selective. Its drop out rate was unprecedentedly high. Alpha was adapting to new staff and a new approach to the program, but this seems to have had little relative effect on its retention rate. Alpha and Beta's school system tended to be less flexible than that of Ace, which may be reflected in the higher drop out rates reported above from that district's alternative and conventional school programs.

Successes and Failures

Were there characteristics of the respondents which affected the degree to which they were able to profit from their experiences in the alternative programs? Put another way, were there students for whom scholastic performance or behavior in school was not the result of their experiences in school. Instead, could problems in these areas actually be symptomatic of difficulties or circumstances in other spheres of the youngsters' lives? If that were true and we could identify these respondents, two results would follow. First, we would better understand the operation of the alternative programs through understanding more about the circumstances under which they were not successful as well as those in which they were successful. Second, we would be able to make more accurate statements about what kinds of problems alternative programs were best suited to solve. The first step was to pick out those students who, given their experiences in school, profitted more or less than would have been expected.

We reasoned that there might be two ways in which the alternative school programs -- or any school program -- might fail to achieve the goal of reducing delinquent and disruptive behaviors among their students. In the first instance, the problem might be failure to engage the students in the school's processes. Here we refer, for example, to alternative students whose commitment to the student role was low despite their recognition of their school's greater flexibility, enhancement of their academic prospects and other experiences in the alternative school. In the second instance, the problem might be the appropriateness of a school-based intervention for the reduction of problem behavior. In these cases, the student would have been engaged by the school processes, with school flexibility, academic prospects, and student role commitment all leading to a positive attitude toward school. The link between attitudes toward school and disruptive behavior in school, however, would be missing for these students. The result would be that their school disruption would be greater than predicted by their attitudes toward school.

We tested these two possibilities in the following fashion. We selected student role and school attitude as important indicators of successful school processes as well as important predictors of school disruption. We also selected school disruption as a critical outcome measure. We used the model's predictions for these measures to create residual measures in a way similar to the procedures we used to create the measures of change. In brief, we calculated the predicted values separately for each of these measures, that is, for student role, school attitude and school disruption. We did so by making the predictions on the basis of individuals' scores on the variables which preceded each of these three measures in the model. "Precede" here means came above or parallel to the measure as diagrammed earlier in this chapter. For example, we used alternative experience, school flexibility, and academic prospects to predict the value of student role for each respondent. We removed the predicted value of student role from the actual, obtained student role score for each respondent. This left a residual score. These residual scores consisted primarily of that part of student role not predicted by or accounted for by the model. We did the analogous things to create the residual, unaccounted-for-by-the-model scores for school attitude and for school disruption. So, in this example, we were left with that aspect of any individual's commitment to the student role that couldn't be explained in terms of his or her exposure to (or lack thereof) the alternative school, recognition of school flexibility or inflexibility, and sense of academic prospects.

We used wave three data for this set of analyses. We were interested in the absolute levels the school processes and diruptions. The change measures would not show the contemporary level or degree of, say, school disruption. (In any event, the wave three and the change measures were strongly related.)

After building the residual measures and checking to be sure their statistical properties were appropriate, we divided each into thirds. We thus could group all our respondents according to the same standard as higher or lower than predicted on their residual student role, school attitudes and school disruption scores, or as approximately on the predicted value. We used these groupings to examine how non-school influences might have impeded or supplemented the school processes or their effects.

The non-school influences were of three kinds: home, peers, and personal characteristics. Our measures of home influences were two composites of seven questions about the respondent's relationship with s or her father and seven questions about the relationship with his or her mother. (These questions appear in Appendix B.) We used the higher of the two scores because many respondents lived with only one parent or in volatile situations and could answer for only a natural, step, or surrogate mother or father, but not both. We also used a base-free measure of change in parental relationship between wave one and wave three. Our measures of peer influences were respondents' reports of the

degree of involvement of their friends in various misdeeds. We used the same set of delinquent and disruptive behaviors to ask about friends' delinquency as was used to assess the respondents' own delinquencies. The measures we actually used were the wave three reports of the friends' delinquent or disruptive behaviors in school and the wave one to wave three base-free measure of change in friends' school disruption. Our measures of personal characteristics were the anxiety, depression and self esteem measures introduced in earlier chapters.

Our strategy was to look at the average value of, say, depression or friends' school disruption for those lower or higher than or right where they "should" have been given the predictions of the model's other variables. For example, we could ask: was it true that those whose student role measure was lower than would have been predicted from their alternative experience and associated level of school flexibility and academic prospects were more depressed than those whose student role scores were at or above the predicted value? Assume for a moment that the answer to this question turned out to be yes. It would suggest that the personal characteristic of depression might have interfered with the school's attempt to meet one of its primary objectives, one which was an important influence on the production of disruptive behavior in school. We suspected that non-school influences might affect alternative schoolers differently than conventional students. We performed the analyses taking this possibility into account.

School processes. Concerning non-school influences on commitment and attitudes toward school, we found no peer effects, a moderate effect of parent relationship, and suggestive self esteem and depression effects. The self esteem and depression effects occurred largely or only among the alternative schoolers. We turn first to the findings for self esteem and depression in the school process data.

We found a difference at wave three in affective states between those whose commitment to the student role was higher than and lower than the model predicted. Those whose wave three student role scores were higher than predicted had higher conscious self esteem at wave three and lower depression at wave three compared to those whose student role scores were lower than the model predicted. We found similar results for increased conscious self esteem between waves one and three; greater increases were associated with higher residual wave three student role scores.

For both of the self esteem findings -- the wave three and the change measure -- the effect held among alternative students and conventional students. The depression finding held only among those who had attended an alternative school.

The findings for the residual wave three measure of attitude toward school were similar, except those higher than predicted were more affectively positive at wave one. And, the effects for both self esteem and depression were only observed among the respondents who had attended an alternative school.

What do these findings mean? One factor which must be recalled is the strong relationship between the student role measure and the self esteem measure. The primary reason that conscious self esteem was not included in the analysis of the school process model was that its effects were overwhelmed by the school process measures. For this reason, the appearance of the self esteem effects associated with the student role measure may be partially attributable to the ties between self esteem and student role for alternative and comparison respondents alike.

The wave three depression differences among the alternative students at the three levels of residual student role cannot be so easily dismissed. Even though the measures of depression and conscious self esteem were related to each other, the differences in wave three depression among the levels of residual student role were seen only among respondents who had attended an alternative school. We know that the overall averagedepression scores of the alternative and comparison students were comparable. The question is: why did depression affect the alternative students commitment to the student role and attitude toward school? The answer may lie in the emphasis on self responsibility in the alternative school programs.

The alternative schoolers had been exposed to programs which stressed individuals assuming control over and responsibility for their fortunes, especially their scholastic fortunes. From the analysis of the model of change, we know the alternative schoolers said they were working harder at school, performing closer to their level of ability, and that they were more satisfied with their work. We also knew that their grades had improved. In short, the alternative schoolers appeared to have accepted a greater measure of responsibility for their own success or failure. Under those circumstances, their performance would be vulnerable to problems or traumatic experiences in the parts of their lives not related to school. These problems could easily result in generally depressed or maladaptive modes of functioning, one of which could be otherwise unexlainably poor performance in school. Among the conventional students, however, performance and exertion as a student may seemed to have depended to a much greater degree on factors outside of the individual -- chance combinations of circumstances, events, teachers, encounters with authority. Thus, presence or absence of personal problems among the comparison students would have a less clear and distinctive effect on scholastic commitment and performance, since performance and commitment were believed to be more controlled by forces beyond the individual.

This interpretation fits the finding of lower self esteem and higher depression at wave one for those alternative students who at wave three were more negative in their attitude toward school than would have been predicted. The alternative programs required a minimum level of personal, psychological resources. These included an ability to believe in oneself and an ability to act on one's own behalf. Without these basic psychological resources, a student was less likely to be engaged by the processes of the alternative schools. Consider the alternative students who in the end were less positive toward school and their teachers than the school process and climate variables would have predicted. These were the students who at the outset of the study were less equipped with the personal, psychological resources required to profit from the alternative programs. Those who at the end were as positive as or more positive than the model predicted in their attitudes toward school were those who at the outset were more equipped with the psychological resources required to profit from the alternative programs. Again, the structures and processes in the conventional schools and the comparison students' beliefs were such that whatever variations occurred in these students' personal measures did not have a distinct effect on their eventual attitudes toward school.

These findings are suggestive, not conclusive. Nevertheless, the data do lend support to the notions of student-school fit currently gaining currency in the professional and scholarly literature (e.g., Arnove, 1978; Kulka, Mann & Klingel, 1980). They suggest that the alternative schools are a better bet for some students than for others. We quickly make two additional points however. First the alternative schools had a positive effect on their students' affective states and adjustment. Students low in these areas benefitted by exposure to the alternative schools. Second, the reader is reminded of the probabalistic nature of the findings. There was a tendency for the more depressed students to fall short in their the levels of commitment to the student role and attitude toward school. That does not constitute a prescriptive statement barring depressed students from the opportunity to attend an alternative school. It does suggest an explanation for the differential engagement of students in the processes of alternative schools.

Disruptive behavior. We turn now to consider characteristics of respondents whose levels of disruptive behavior in school were greater or less than the model predicted. Those whose school disruption scores differed from predicted values were differentiated by their affective states, largely at wave three, and their reports of their friends' disruptive behavior in school, also at wave three. The most consistent findings were that differences in the affective state variables were found only for the alternative students while the friends' school disruption effects were found for alternative and comparison students alike.

Alternative students who at wave three were more disruptive in school than predicted by their engagement with school had described themselves at wave one as more tense and nervous -- more overtly anxious -- than those whose wave three disruptive behavior was at the level predicted. Those whose disruptive behavior was less than predicted at wave three were less anxious than either of the other two groups -- those whose disruption was as or greater than predicted.

These findings suggest that the relatively less anxious students were better able to take advantage of the opportunities and to meet the demands presented by the alternative school programs. Among conventional school students, the initial level of anxiety had no effect on later levels of disruptive behavior. Once the school's perceived flexibility and one's academic prospects, commitment to the student role and attitudes toward school were accounted for among the comparison students, initial individual differences in anxiety had little impact on the eventual level of disruption in school. The effects of the initial individual difference in anxiety were felt only among the alternative schoolers.

Thus, despite the alternative programs' effects on school-related attitudes and behaviors, the problems causing disruptive behavior in school remained. These problems are perhaps indexed by the higher levels of anxiety at wave one, the anxieties the students brought with them to the alternative school programs. However, the bulk of the affective state differences between those higher, lower, or about as disruptive at wave three as the model predicted were seen in the wave three data. These differences involved conscious and unconscious self-esteem, depression, and somatic symptoms of anxiety. The differences occurred between those higher or lower in school disruption than predicted by the model. In all cases, those lower in disruptiveness than predicted were more positive in their affective states than those whose disruptiveness was greater than predicted. Or, those who were more disruptive than predicted were more negative in their affective states with more somatic symptoms of anxiety, more reports of depression, and lower conscious and unconscious self esteem. Note again that these differences were seen only among those who had attended an alternative school. The theoretical model's predictions of school disruption were not improved upon by taking into account the conventional school students' personal affective states.

What might explain the effects among the alternative students?

It is implausible that one's failure to reduce one's disruptive behavior (in spite of the effects spelled out in the theoretical model) would cause these negative affective states. What is more likely is that some factor or factors other than those related to school, or related to school but beyond the purview of our theoretical model influenced both the affective

states and the level of disruptive behavior in school. Our data are consistent with the view that non-school forces were responsible for these students' misbehavior. These forces would be beyond the influence of a school program designed to respond to problems arising from school, not simply manifesting themselves in school. In other words, despite the positive effects of the alternative schools, some students did not respond with appropriately reduced levels of delinquent and disruptive behavior in school (and, no doubt, in the community). These students were systematically low in their states of personal adjustment. It seems likely that varied phenomena occurred in the lives of these teenagers to provoke more disruptive and delinquent behavior than could be accounted for by their experiences in school. The provocative factor, in goading the youngsters to more disruption and delinquency, also would seem to have negatively affected their adjustment.

On the positive side, a different explanation is possible. That is, it may be unnecessary to call upon unmeasured factors to account for the high levels of self esteem and low levels of anxiety and depression among the alternative students who were less disruptive than predicted. Instead, for some, the alternative schools may have provided a base for personal development and satisfaction which extended far beyond improved behavior in school. This explanation is compatible with the emphasis on personal responsibility seen in varying degrees in the alternative school programs.

As to the outside factors counteracting the effects of the alternative schools, we have few hints as to what they might be. We found a weak association between poorer relations with parents and greater than predicted disruption. This finding did not provide an exhaustive account of possible outside factors. It does suggest that students with problematic home lives or poor relationships with their parents might continue to be disruptive in school (and elsewhere) despite the beneficial effects of school-based intervention programs.

For alternative and comparison students alike, those more disruptive in school than predicted reported at wave three higher levels of friends' disruptiveness in school than those whose disruptiveness was lower than predicted. At first glance, this might suggest that association with more disruptive and delinquent peers blocked the effect of the school processes on school disruptiveness. Thus, hanging out with delinquent peers might be a powerful outside factor in determining the effectiveness of school processes in reducing disruptive behavior. That it is a powerful factor is no doubt true. That it is a powerful outside factor is probably not.

Reports of own and of friends' delinquency are generally strongly related; if the level or extent of one is known, the level or extent of the other is also known. Without going into the decades-old controversy over the role of peers in the etiology

of delinquency, it is true in our data that if one is higher in delinquency or disruption, one's friends will be higher, too. However, there was no systematic relationship between friends' delinquency or disruption at wave one and the subsequent failure of the theoretical model to account for (wave three) disruptiveness in school. Rather, it simply seems that if one is delinquent or disruptive, one associates with those who have like inclinations and who are likely to provide an appreciative audience.

There is no evidence in our data that a history of associating with more disruptive peers impedes the development of either commitment to the student role or positive attitudes toward school. Nor is there evidence that previous associations with disruptive peers impedes the reduction of one's own disruptiveness in school. In the absence of any causal links we reject the notion that friends' disruptiveness is an outside factor in explaining our respondents' disruptiveness. Instead, the level of friends' disruptiveness appears to be simply another way of describing, not of explaining, one's own level of disruptiveness.

CHAPTER 9

CONCLUSIONS

The study leads to conclusions in three areas: the field research process, the theoretical model, and the effectiveness and appropriateness of alternative school programs for reducing disruptive and delinquent behavior.

Field Research in Alternative Education

Field research in alternative education is essential in order to learn what is being done and with what effects. There is some question, however, as to what constitutes appropriate methods for studying and evaluating such programs. This is especially true where a purpose of the study is to determine whether a program model should be more widely implemented. Two areas of concern can be articulated: what should be assessed or evaluated; and how should the research be designed?

We feel that it is extremely important to study the underlying process by which programs seek to achieve their goals rather than focussing solely on outcomes. Whether programs are successful will vary from student to student, teacher to teacher, program to program. In order to decide what to do about less than satisfactory results, one needs to know why they occurred. It could happen for several reasons. The program may have been quite effective in its implementation of prescribed methods and processes, but these methods may have been irrelevant to the desired outcomes. The methods and processes might have been altogether appropriate, but the program fell short of implementing them. Or, the program might have implemented the appropriate methods for its goals, but for the wrong students.

Consider the present study. Simple assessment of the outcomes of the three programs would have come to the conclusion that all three were ineffective in reducing the disruptive and delinquent behavior of their students in comparison to the conventional schools. (Note that if there had been no comparison groups, all three programs would have appeared quite successful.) At this point, all one could say would be, try something else. But what else? The idea of a kind of alternative school that raises students' levels of scholastic success and encourages supportive relationships with their teachers may well have been abandoned. Exploration of the underlying processes has shown that those programs did indeed change the attitudes and perceptions of students in a way conducive to better behavior and greater scholastic achievement. The study has also shown that these processes are more appropriate to some students than others. A summative evaluation could not have produced these findings.

Conceptual frameworks or theoretical models are invaluable for the identification of underlying processes. With a theory, it is possible to recognize different practices as instances of the

same process. The three alternative programs we studied were in many ways quite different from one another. Some of those differences made a difference in the way their students responded to them, yet despite their apparent differences, the programs also implemented common practices. Our theory helped us to focus on those practices and to observe the common processes which were set in motion as a result. Conceptualizing underlying processes also makes possible the dissemination of successful program elements without having to rely on exact replications of a particular set of conditions, staff, and resources. That is because conceptually guided evaluations not only tell which programs work, but also identify the essential features and tell for whom, under what circumstances, and why the program is likely to work.

The matter of research designs is more controversial. Some hold that only through randomized designs built into programs can evaluation research provide valid and useful information. Yet, as we discovered, random selection of students is hard to arrange, even with a well defined and appropriate pool of eligible recipients in the context of a mutually agreed-upon research design. When it is possible to arrange for random assignment, the researcher must be careful to account for both the formal as well as the informal criteria which in actual practice are used to form the pool and make the assignments. The research process will objectify and make public what had been unspoken or problematic in selection criteria or other program elements. The result can be, among other things, unwitting or unintended interference by the research procedures with the program's operation. If the interference is serious enough, it may well alter the program to the degree that generalization of whatever is found is called into question.

We saw this happen with a program which was initially to be included in our study but which eventually was dropped for logistical reasons. Its district's population was about 16 to 18 percent black, and blacks were the only sizeable ethnic minority. Students were referred to the program by the same criteria as in the other alternative programs in the study. Prior to implementing the random selection procedures for participation in the study, the program's student population was 50 to 60 percent black. Under the study's random assignment procedures, students with poor grades, attendance and behavior were listed by the high school assistant principals. Students were then randomly chosen from the list by the study's staff and assigned to the program by the school's staff. Under these assignment procedures, the program's student population was 16 to 18 percent black. It would appear that one of the actual, although informal referral criteria had been omitted from the research procedures. The issues the program had to deal with may well have been altered as a consequence. For one thing, the relatively few black students, especially the boys, seemed to feel alienated and isolated compared with black students' experiences in the program in previous years.

We were unable to implement our planned randomized research design. Does this vitiate the study under the doctrine that unless the design is a randomized one, the outcomes cannot be trusted? A corollary to the doctrine is that unless random-design research can be done, none should be done. We are in agreement with the desirability of randomized designs. We also are in agreement with the principle that intervention programs should be assessed and evaluated. When the first principle precludes the second, we feel that carefully conducted quasi-experimental or other suitable methods of research and evaluation are to be preferred to none at all. We are confident of the validity of the findings we have presented in this report. Whatever contribution they represent would not have been made had we insisted either on randomized research or no research at all.

Reflections on the Partial Theory of Delinquency

The findings we have reported provide strong support for the study's guiding theoretical model. Eliminating school as a provocative force and instead establishing it as a controlling influence in a positive, even liberating sense markedly changed students' attitudes toward school in ways conducive to better behavior. When those changes occurred, behavior in school improved. We hope to do continuing followup studies of our present respondents to determine the long-term effects of the alternative programs' processes. Earlier, we used the term "leading indicator" to refer to the relationship of disruptive behavior in school to community delinquency. Implicit in that was a desire to see whether levels of delinquent and criminal behavior in the community eventually decline following declines in disruptiveness in school. We want to determine whether and under what conditions the alternative schools' positive effects persist.

The theory proved to be less accurate in some other respects, however. That was especially true regarding the relationship between self esteem and delinquency. We had thought that an improvement in unconscious levels of self esteem would be crucial for reductions in delinquent and disruptive behavior. We predicted that students' beliefs in their enhanced academic prospects and performance would raise their unconscious self esteem. We did find that improved unconscious self esteem was associated with some reduction in disruptive behavior over and above other changes. Nonetheless, it was not nearly so pivotal as the theory proposes. The consistent support this aspect of the model has received from other research suggests that factors peculiar to this study might amount for this difference from other studies' findings. The initially very high levels of our respondents' unconscious self esteem was the most striking feature in this connection.

We speculate, supported by our impressions from conversations with respondents, that these youngsters were keenly aware of their position in the scholastic hierarchy. Our interviews, obviously and plainly centered on their experiences in school, were

straightforward and to the point with really only one exception. That was in the Social Self Esteem test -- our measure of unconscious self esteem. It is entirely possible that the odd-appearing and seemingly opaque nature of this measure struck a sensitive spot in our respondents. They had histories of being put down in school and may well have seen the measure as a veiled attempt at another put down, as a secret probing of themselves. Were that true, they may have responded to the measure defensively, a response which could easily have distorted the scores of a sufficient number of them to influence the overall average score.

It is also conceivable that had unconscious esteem been affected among those students who were engaged in the positive school processes, their disruptive, delinquent behavior might have declined even further. Two other possibilities regarding the findings for unconscious self esteem also present themselves. One it that because unconscious self esteem was not affected, the changes we observed in disruptive behavior will be short lived. The other possibility is that unconscious self esteem actually does not change prior to or simultaneously with changes in delinquent, disruptive behavior. Instead, unconscious self esteem would be a "sleeper" variable, one in which change would not be observed until later, after other changes had already occurred. If that does prove to be the case, the role in the theory of unconscious self esteem will have to be reexamined.

Conditions for Effective Alternative School Programs

Our theoretical model addressed delinquent and disruptive behavior arising from provocative experiences in school. The alternative school programs represented by those in our study sought to present students with a different version of the school experience. Primary among the schools' objectives was to reduce the level of discomfort and failure associated with school and thereby reduce the level of rebellious, disruptive and delinquent behaviors in school. Compared with the conventional schools, the alternative programs were successful in helping students establish or reestablish positive relationships with school, their teachers, their own scholastic prospects, and their commitment to the student role. We found that these processes were conducive to improvement in students' behavior in school.

Despite the beneficial results for some, the alternative programs were not effective with all of their students. Thus, averaging the alternatives' students' outcomes and comparing them with those for the comparison conventional school students resulted in no overall differences in school disruption. That does not say that the alternative programs were ineffective, but neither does it say that they were an unqualified or consistent success. The alternative programs worked best when the schools' structures and processes and the social psychological reactions of the students were most closely linked. When the alternative programs' flexibility and perceived fairness <u>resulted in</u> the

changes in commitment, effort, prospects and attitudes, that was when their effects were strongest. By those criteria, Ace was foremost among the programs. We must be cautious here in comparing the effectiveness of the alternative programs because they may have served somewhat different kinds of students. This could be true even though such differences do not appear in our wave one data. With that caution in mind, it is worthwhile to consider why this may have happened.

Program differences. The program that seemed to be the most effective was Ace, the most obviously school-like of the three alternative programs in the study. As described earlier, Ace resembled a traditional classroom in many ways, although it was smaller in size and more personal and informal in its approach. It was clear to students in Ace that their success or failure could not be pinned on the school's unwillingness or inability to accommodate itself to their needs. Yet, at the same time, Ace provided more of an academic structure than Alpha, and a more obvious academic structure than Beta. Further, Ace's academic structure required little introduction to its students and little in the way of adaptation of them. Students in all the alternative programs generally knew whether they were doing well or poorly in the program. In Ace, though, "well" and "poorly" were defined in more familiar terms. Making A's or B's, D's or F's provided feedback which was both easy to understand and difficult to ignore or let slide. These things were especially evident in comparison with the feedback systems about progress in credits earned in Alpha and Beta.

We hasten to add that many Alpha and Beta students learned how their new school's system operated. It appeared that the problems, especially in Beta, were due to the initially foreign nature of the feedback and progress charting systems. Many Beta students in our sample seemed never to have become engaged in Beta. For these students, the program was too difficult to understand without substantial initial help. Because of Beta's circumstances during the study, not enough help was available.

It may have been precisely because Ace was more like a traditional school that it was more successful at putting in motion the ameliorative academic processes. For students whose problems originated with school, a more school-like setting seemed best. There, they could overcome their difficulties and receive feedback in terms directly comparable to those in which their problems had been stated. It perhaps took Alpha and Beta students longer to make the same kind of connections.

Implicit in the above is the issue of the appropriateness of school-based intervention programs for all problems which manifest themselves in school.

Appropriate methods. If we limit consideration to programs which are basically scholastic, as opposed to therapeutic in their mission, we must also limit the assessment of their effectiveness

to their success in solving problems which originate in schools. Consider the students whose behavior failed to respond to these school-based interventions even though their commitment to, prospects for success in, and attitudes toward school all improved. These students described themselves in terms strongly suggesting problems of personal adjustment. Yet, on the whole, they did not appear to have had these problems earlier, or at least not nearly so large a number of these problems. As we noted, we suspect problems in areas of their lives unrelated or only tangentially related to school account both for the apparent problems of adjustment and for the failure of the programs in their cases.

Can these individuals be identified in advance and steered to more appropriate intervention or treatment programs? Our data suggest that non-school forces may be at work in the lives of these students. The data do not clearly or consistently identify these forces or their initial symptoms. Thus, while it might be potentially possible to identify these individuals, our data provide only a suggestion of an area in which to proceed. It must be noted that the measures of affective states used in the study are not reliable or sensitive enough to use for making important decisions about individuals' lives. One possibility would be to try a school-based intervention program and let the effects of that indicate whether scholastic experiences were the source of the problem or whether the original troubles in school may have been due to other kinds of problems. In cases where a school based intervention program has not proven to be the answer, it may turn out that upon investigation, a school problem was not the question. Instead, the original problems in school or the eventual failure of the student to respond may be due to problems, longstanding or recent, stemming from other spheres of life.

Next Steps

We recommend three next steps in the research stream of which this study is a part. One already mentioned is continued analysis of the current data and followup data collection. One can argue that the true merit of a school program is its eventual influence on its students' adult lives; thus, our interest in and the value of further followup.

Another step entails testing our results through replication. Other similar studies in other alternative schools should be done and compared with this one. We looked in on these few programs for only a limited time. We think what we found will prove generalizable, but the generalizability must be demonstrated, not assumed.

Finally, our theoretical model and our study were focussed on troublesome students and certain nontraditional schools. Nevertheless, the principles described in the theory and put into practice in the alternative schools could certainly be applied (in appropriate form) in conventional schools as well. We cannot make

blanket recommendations for practice. Neither would it be useful to join the debate about the purposes served by and the value of large, traditional, impersonal, school programs versus alternative programs like the ones described here. Nevertheless, educators will probably always encounter troublesome students such as many of those in this study. The psychological and educational principles that have been demonstrated in the preceding pages could surely be applied, modified to suit the circumstances of school and student, for those students and their schools. We hope that they will be and that data will be collected and examined to find out what happens, with whom, and why.

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APPENDIX A

Partial List of Sources for Alpha and Beta Workshop/Seminar Exercises

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APPENDIX B

ITEM SETS OF MEASURES REFERRED TO IN TEXT

Table B.1

Rosenberg-Bachman Measure of Concious Self Esteem

Response Format: Almost always, often, sometimes, seldom, never

Item	Item-total correlation & Coefficent alpha Wave One	Wave Two	Wave Three
1. I am a useful person to have around.	.34	.39	.36
2. When I do a job, I do it well.	.39	.39	.33
3. I feel that my life is not very useful.	.54	.54	.49
4. I feel I do a good job as a student.	.30	.40	.32
5. Sometimes I think I am no good at all.	.62	.55	.63
6. I take a positive attitude toward myself.	.53	.62	.54
7. I feel I do not have much to be proud of.	.35	.48	.42
8. I am able to do things as well as most other people.	.31	.51	.53
9. I feel that I can't do anything right.	.34	.48	.44
10. As a person I do a good job these days.	.56	.64	.58
11. I feel that I have a number of good qualities.	.45	.56	.65
12. I feel that I'm a person of worth, at least on an equal plane with others.	.46	.61	.64
Coefficient Alpha	.79	.85	.83

Table B.2

Ideal-Actual Measure of Concious Self Esteem

Response format: Check space for each pair on two identical lists; one headed How I am; the other headed How I would like to be. Reported scores are of absolute value of ideal-actual differences.

Item	Item-Total Correlation & Coefficient Alpha		
	Wave One	Wave Two	Wave Three
Tall-Short	.26	.22	.28
Sturdy-Easily Injured	.38	.47	.36
Delicate-Rugged	.23	.24	.29
Smart-Not Smart	.41	.49	.49
Slow-Quick	.46	.44	.49
Not Good Looking-Good Looking	.40	.58	.46
Tough-Mild	.38	.43	.38
Depends on Others-Independent	.36	.26	.17
Strong-Weak	.54	.48	.48
Brave-Timid	.32	.54	.41
Helpless-Powerful	.47	.56	.44
Gentle-Harsh	.13	.29	.19
Smooth-Rough	.31	.45	.23
Rich-Poor	.42	.50	.54
Coefficient Alpha	.75	.80	.76

Table B.3

Social Self Esteem Measure of Unconscious Self Esteem

Response Format: Respondent follows directions as below. Two lists of labels are used, one repeated with a horizontal and a vertical array of circles. Scores reported are of absolute difference of yourself minus failing or afraid.

Item	Item-Total Correlation & Coefficient Alpha		
	Wave One	Wave Two	Wave Three
Horizontal failing	.54	.61	.59
Vertical failing	.41	.49	.62
Horizontal afraid	.63	.63	.67
Coefficient Alpha	.70	.75	.78

Labels: Yourself, someone who is happy, someone who is popular, someone who is successful, someone who is unhappy, someone who is failing; Yourself, someone who is funny, someone with money, someone good looking, someone who is afraid; someone who is respected.

Directions: After you look the list over, write the letter from beside each description in a circle. There's no trick to it -- you just put them where you think they should go.

Table B.4

Somatic Symptoms of Anxiety

Response format: In the last month, what frequency: several times a week, about once a week, a few times, just once, never.

Item	Item-Total Correlation & Coefficient Alpha Wave One	Wave Two	Wave Three
1. In the last month or so, how often have you had headaches or pains in your head?	.36	.48	.49
2. In the last month or so, how often have you had trouble getting to sleep or staying asleep?	.27	.32	.28
3. How often have you been bothered by a stomachache or upset stomach in the last month or so?	.38	.43	.50
4. How often have you felt tense or nervous in the last month or so?	.44	.47	.58
5. How about your appetite? How often have you had a poor appetite or not felt like eating in the last month or so?	.35	.37	.45
Coefficient Alpha	.60	.66	.70

Table B.5

State Trait Anxiety Inventory Trait Anxiety Subset

Response format: Almost always, often, sometimes, seldom, never.

Item	Item-Total Correlation & Coefficient Alpha Wave One	Wave Two	Wave Three
1. I get in a state of tension or turmoil as I think over my recent concerns and interests.	.33	.48	.48
2. I am a steady person.	.28	.33	.45
3. I feel that difficulties are piling up so that I cannot overcome them.	.47	.55	.64
4. I am "cool, calm and collected."	.38	.50	.61
5. I feel nervous and restless.	.39	.50	.62
Coefficient Alpha	.62	.71	.78

Table B.6

CES-D Depression Scale Subset

Response format: Almost always, often, sometimes, seldom, never

Item	Item-Total Correlation & Coefficient Alpha		
	Wave One	Wave Two	Wave Three
1. I think my life has been a failure.	.54	.54	.66
2. I enjoy life.	.55	.51	.66
3. I feel hopeful about the future	.47	.39	.43
4. I feel depressed.	.60	.57	.68
5. I feel that I can't shake off the blues even with help from my family or friends.	.52	.52	.53
6. I can't get "going."	.60	.51	.71
Coefficient Alpha	.79	.76	.83

Table B.7

Student Role

Response formats, respectively: very, quite, somewhat, not very, and not at all close; much harder, harder, about average, less hard, much less hard; very, quite, somewhat, not very, and not at all satisfied.

Item	Item-Total Correlation & Coefficient Alpha		
	Wave One	Wave Two	Wave Three
1. How close do you come to doing the best work you are able to do in school?	.39	.62	.48
2. How hard do you think you work in school compared to the other students in your grade?	.46	.60	.58
3. How satisfied are you with the way you're actually doing in school?	.42	.59	.58
Coefficient Alpha	.60	.77	.72

Table B.8

Attitude Toward School

Response format: varied -- see below. NSY items are 1 and 2.

Item	Item-Total Correlation & Coefficient Alpha Wave One	Wave Two	Wave Three
1. Compared to other students would you say you like school less than most, more than most, or about the same as most?	.41	.50	.61
2. How much do you like school -- choose: a lot, pretty well, somewhat, not much, not at all.	.57	.56	.60
3. How interested are you in most of your subjects at school? Interested most of the time, more interested than bored, more bored than interested, bored most of the time.	.43	.44	.65
4. Think about these two boys/girls your age: Terry leaves school in the afternoon feeling fine. Whether from schoolwork or being with the people there, time at school makes him/her feel good about him/herself. Sandy leaves school in the afternoon feeling bad. Whether from schoolwork or being with the people there, time at school makes him/her feel bad about him/herself. Use a choice...to tell me which of these people is most like you: I'm a lot like Terry, I'm more like Terry than Sandy, I'm more like Sandy than Terry, I'm a lot like Sandy.	.48	.37	.30
Coefficient Alpha	.68	.68	.73

Table B.9

Teacher Support

Response format: True or mostly true, false or mostly false; other as noted. Feasibility Study items inlcude 1-8.

Item	Item-Total Correlation & Coefficient Alpha Wave One	Wave Two	Wave Three
1. I could call a teacher after school if had to or needed to.	.26	.51	.66
2. If students want to talk about something, some teachers find the time to do it.	.28	.25	.36
3. Teachers "talk down" to students	.42	.65	.67
4. Teachers go out of their way to help students.	.44	.69	.72
5. I can talk to teachers about things that matter to me.	.50	.57	.60
6. Teachers do not trust students	.46	.43	.50
7. Teachers are more like friends than authorities	.51	.66	.63
8. Teachers embarrass students for not knowing the right answer.	.26	.72	.78
9. Teachers don't hassle me	.27	.58	.55
Coefficient Alpha	.71	.85	.87

10. How many of your teachers do you like? None, one or two, half, most, all.

11. Now, let's say you overheard a teacher say you were a good student. Which choice...tells how you'd feel? Really good, good, neither good nor bad, bad, really bad.

12. I wouldn't care if I did something I knew would disappoint a teacher.

13. Are the activities--sports, clubs, like those a reason for going to school?

14. How about participating in school activities--sports, clubs, things like that? Answer this one for your average week of school days. Every day, most days, few days/week, maybe once/week, hardly ever/never.

Table B.10

Academic Prospects: Chance for Success and Stigma in School

Response format: True or mostly true, false or mostly false. Feasibility Study items include 1-3 in Success.

Item	Item-Total Correlation & Coefficient Alpha Wave One	Wave Two	Wave Three
Success			
1. I can learn things at school.	.39	.39	.45
2. You just can't win in school.	.40	.18	.45
3. I can't be successful in school.	.37	.33	.45
4. I don't have much chance of getting passing grades in school.	.46	.54	.54
5. I almost never expect to do well in the classes the school makes me take.	.31	.35	.46
Coefficient Alpha	.63	.60	.71
Stigma			
1. The teachers and principals don't want me in their school.	.39	.60	.42
2. I get the feeling that the school thinks I'm no good.	.54	.66	.55
3. This school treats me like I'm dumb.	.46	.60	.47
Coefficient Alpha	.65	.78	.66

Table B.11

School Disruption

Response format: Since Christmas, 1977 (Wave One) or since the last interview: Never, once, twice, three or four times, five times or more. Summary of discrete acts; item analysis was inappropriate.

Item

1. Did something on purpose that you know would make a teacher angry or annoyed or interrupt a class.
2. Smoked in or around school when you weren't supposed to or in a place where smoking wasn't allowed.
3. Cheated on a test.
4. Left the school grounds without permission when your weren't supposed to.
5. Cut class without permission.
6. Got into a serious fight with a student at school.
7. Skipped a day of school without a real excuse.
8. Damaged or messed up school property.

Table B.12

Delinquent Behavior

Response format: since Christmas, 1977 (Wave One) or since the last interview: never, once, twice, three or four times, five times or more. Summary of discrete acts; item analysis was inappropriate.

Item

1. Ran away from home.
2. Hit one of your parents.
3. Purposely damaged or messed up something that didn't belong to you -- other than school property.
4. Tried to get something by lying about who you were or what your age was.
5. Got something by telling a person something bad would happen to him or her if you didn't get what you wanted.
6. Took something other than a car that didn't belong to you without permission, even if you returned it.
7. Hurt or injured someone away from school on purpose so that they needed bandages or a doctor.
8. Threatened to hurt or injure someone.
9. Went onto somebody's property when you know you were not supposed to.
10. Went into a house or building when you knew you were not supposed to.
11. Drank beer, wine, or liquor without your parents' permission.
12. Smoked marijuana or hash.
13. Other than marijuana, used any drugs or chemicals to get high or for kicks.
14. Took part in a fight where a bunch of your friends were against another bunch.
15. Carried a gun or knife other than a regular pocketknife.
16. Took a car without the owner's permission -- even if the car was returned.
17. Got into trouble with the police because of something you did.

Table B.13

School Flexibility

Response format: Varied -- see below. Constructed on rational basis; itemetric correlations in .40s.

Item

1. In some schools, rules are made by teachers and administrators. In other schools, students and others are involved in making the rules. Who makes the rules and decisions in your school? Administrators, teachers, students, teachers and administrators, teachers and students, students and administrators, all together -- teachers, administrators and students.

   Okay -- you've told me how you think things are in school. Now, using the same choices, tell me which people you think should be involved in making the rules at school.

2. When a student is sent to the office or sent home from school for breaking a rule, do you think the school is usually right in doing that? Yes, no.

3. Would you say there were too many rules, about enough, or not enough rules in your school?

4. How fair are the rules in school? Would you say they are mostly fair, somewhat fair, or mostly unfair.

5. Does everybody have to follow the rules, or can some students break the rules and get away with it?

Table B-14

Relationship with Mother, Father

Response format: Almost always true, often true, sometimes true, never true. Administered at waves one and three.

Item	Item-Total Correlation & Coefficent Alpha Wave One	Wave Three
Father		
1. My father gives me the right amount of affection.	.72	.74
2. My father accepts and understands me as a person.	.70	.66
3. My father and I do things together that we both enjoy doing.	.60	.72
4. I agree with my father's ideas and opinions about things.	.67	.53
5. I want to be like my father.	.63	.54
6. My father makes it easy for me to confide in him.	.76	.73
7. I feel close to my father.	.78	.79
Coefficient Alpha	.89	.88
Mother		
1. As I was growing up, my mother tried to help me when I was scared or upset.	.58	.55
2. My mother and I do things together we both enjoy doing.	.66	.63
3. My mother makes it easy to confide in her.	.73	.72
4. My mother gives me the right amount of affection.	.70	.72
5. I want to be like my mother.	.47	.57
6. I agree with my mother's ideas and opinions about things.	.56	.57
7. I feel close to my mother.	.72	.76
Coefficient Alpha	.86	.87

APPENDIX C

Program by Program Affective State and School-Related Measures; Correlations Across Waves of Model Measures; Stepwise Regression Statistics for Stages of Analysis in Wave by Wave and Change Models

Table C.1

State Trait Anxiety Inventory Scores by Program at Wave One

Program	N	S.D.	Mean	Significance of Difference[1]				
1. Ace	14	0.65	2.99					
2. Ace Comparison	38	0.70	2.82	2. --				
3. Alpha	26	0.65	2.83	3. --	--			
4. Alpha Comparison	28	0.65	2.45	4. **	*	*		
5. Beta	44	0.65	2.76	5. --	--	--	--	
6. Beta Comparison	30	0.65	2.84	6. --	--	--	*	--
				1.	2.	3.	4.	5.

[1] *p=<.05
**=p<.01
--=not significant

Table C.2

Anxiety (Somatic Symptoms) by Program at Wave One

Program	N	S.D.	Mean	Significance of Difference[1]				
1. Ace	14	0.79	2.88					
2. Ace comparison	38	0.81	2.73	2. --				
3. Alpha	26	0.88	3.22	3. --	*			
4. Alpha Comparison	28	0.87	2.70	4. --	--	*		
5. Beta	44	0.70	2.68	5. --	--	**	--	
6. Beta Comparison	30	0.92	2.89	6. --	--	--	--	--
				1.	2.	3.	4.	5.

[1] *=p<.05
**=p<.01
--=not significant

Table C.3

Depresssion (CES-D) by Program at Wave One

Program	N	S.D.	Mean	Significance of Difference[1]				
					1.	2.	3.	4.	5.
1. Ace	14	0.92	2.26						
2. Ace Comparison	38	0.67	2.18	2.	--				
3. Alpha	26	0.62	1.97	3.	--	--			
4. Alpha Comparison	28	0.63	1.91	4.	--	--	--		
5. Beta	44	0.70	2.07	5.	--	--	--	--	
6. Beta Comparison	30	0.70	2.24	6.	--	--	--	--	--

[1] *=p<.05
**=p<.01
--=not significant

Table C.4

Self-Esteem (Rosenberg-Bachman) by Program at Wave One

Program	N	S.D.	Mean	Significance of Difference[1]				
1. Ace	14	0.64	3.69					
2. Ace Comparison	38	0.58	3.59	2.	--			
3. Alpha	26	0.49	3.75	3.	--	--		
4. Alpha Comparison	28	0.47	3.97	4.	--	**	--	
5. Beta	44	0.52	3.91	5.	--	**	--	--
6. Beta Comparison	30	0.49	3.70	6.	--	--	--	*	--
					1.	2.	3.	4.	5.

[1] *=p<.05
**=p<.01
--=not significant

Table C.5

Self Esteem (Ideal-Actual Self) by Program at Wave One

Program	N	S.D.	Mean	Significance of Difference[1]				
1. Ace	14	0.96	5.26					
2. Ace Comparison	38	0.48	5.50	2.	--			
3. Alpha	26	0.45	5.54	3.	--	--		
4. Alpha Comparison	28	0.54	5.75	4.	*	--	--	
5. Beta	44	0.59	5.68	5.	*	--	--	--
6. Beta Comparison	30	0.63	5.46	6.	--	--	--	--	--

[1] *=p<.05
**=p<.01
--=not significant

Table C.6

Self Esteem (Unconscious Self Esteem)
by Program at Wave One

Program	N	S.D.	Mean	Significance of Difference[1]				
1. Ace	14	0.78	2.33					
2. Ace Comparison	36	1.07	3.05	2. *				
3. Alpha	25	0.91	2.76	3. --	--			
4. Alpha Comparison	25	1.32	3.01	4. --	--	--		
5. Beta	43	1.13	2.98	5. *	--	--	--	
6. Beta Comparison	30	0.95	2.56	6. --	--	--	--	--
				1.	2.	3.	4.	5. 6.

[1] *=p<.05
**=p<.01
--=not significant

Table C.7

Perceived Chance to be Successful in School by Program at Wave One

Program	N	S.D.	Mean	Significance of Difference[1]				
1. Ace	14	0.97	2.89					
2. Ace comparison	38	1.11	3.82	2. **				
3. Alpha	26	1.17	3.92	3. **	--			
4. Alpha Comparison	28	0.78	4.14	4. **	--	--		
5. Beta	44	0.96	3.94	5. **	--	--	--	
6. Beta Comparison	30	1.29	4.01	6. **	--	--	--	--
				1.	2.	3.	4.	5.

[1] *=p<.05
**=p<.01
--=not significant

Table C.8

Stigmatization by Program at Wave One

Program	N	S.D.	Mean	Significance of Difference[1]				
1. Ace	14	1.63	3.00					
2. Ace Comparison	38	1.52	3.74	2. --				
3. Alpha	26	1.36	3.56	3. --	--			
4. Alpha Comparison	28	1.40	4.05	4. *	--	--		
5. Beta	44	1.28	3.73	5. --	--	--	--	
6. Beta Comparison	30	1.39	4.24	6. **	--	--	--	--
				1.	2.	3.	4.	5.

[1] *=p<.05
**=p<.01
--=not significant

Table C.9

Attitude Toward School by Program at Wave One

Program	N	S.D.	Mean	Significance of Difference[1]				
1. Ace	13	0.89	2.98					
2. Ace Comparison	38	1.02	2.99	2. --				
3. Alpha	26	0.99	2.92	3. --	--			
4. Alpha Comparison	28	0.93	3.05	4. --	--	--		
5. Beta	44	0.86	2.72	5. --	--	--	--	
6. Beta Comparison	29	0.74	3.18	6. --	--	--	--	*
				1.	2.	3.	4.	5.

[1] *=p<.05
**=p<.01
--=not significant

Table C.10

Commitment to Student Role by Program at Wave One

Program	N	S.D.	Mean	Significance of Difference[1]				
1. Ace	13	0.76	2.64					
2. Ace Comparison	38	0.55	2.67	2. --				
3. Alpha	26	0.74	2.87	3. --	--			
4. Alpha Comparison	28	0.81	3.00	4. --	--	--		
5. Beta	44	0.72	2.93	5. --	--	--	--	
6. Beta Comparison	30	0.55	2.98	6. --	--	--	--	--
				1.	2.	3.	4.	5.

[1] *=p<.05
**=p<.01
--=not significant

Table C.11

Teacher Support by Program at Wave One

Program	N	S.D.	Mean	Significance of Difference[1]				
1. Ace	14	0.98	2.25					
2. Ace Comparison	38	0.89	2.68	2.	--			
3. Alpha	26	1.00	2.13	3.	--	*		
4. Alpha Comparison	28	0.96	2.56	4.	--	--	--	
5. Beta	42	0.94	2.61	5.	--	--	--	--
6. Beta Comparison	30	1.22	3.07	6.	*	--	**	*	--
					1.	2.	3.	4.	5.

[1] *p=<.05
**=p<.01
--=not significant

Table C.12

Mean Number of School Related Delinquent Acts by Program at Wave One

Program	N	S.D.	Mean[1]	Significance of Difference[2]				
1. Ace	14	2.46	4.54					
2. Ace Comparison	36	2.15	4.16	2.	--			
3. Alpha	26	1.75	4.14	3.	--	--		
4. Alpha Comparison	28	1.64	3.29	4.	--	--	--	
5. Beta	43	2.55	4.68	5.	--	--	--	**
6. Beta Comparison	28	1.97	4.35	6.	--	--	--	--
					1.	2.	3.	4.

[1]Computed as total occurrences over all acts divided by number of potential acts presented to respondent. Mean is of act occurences

[2]*=p<.05
**=p<.02
--=not significant

Table C.13

Mean Number of General Delinquent Acts by Program at Wave One

Program	N	S.D.	Mean[1]	Significance of Difference[2]				
1. Ace	14	0.98	1.81					
2. Ace Comparison	36	0.86	1.66	2.	--			
3. Alpha	26	0.70	1.65	3.	--	--		
4. Alpha Comparison	28	0.66	1.31	4.	--	--	--	
5. Beta	43	1.02	1.87	5.	--	--	--	**
6. Beta Comparison	28	0.79	1.74	6.	--	--	--	--
					1.	2.	3.	4.

[1] Computed as total occurrences over all acts divided by number of potential acts presented to respondent. Mean is of act occurrences.

[2] *=p<.05
**=p<.01
--=not significant

Table C.14

Correlation Matrix of Measures Used in the Model*

	1.AcProsp	1.StuRole	1.SchAtt	1.SchFlex	1.SchDisr	1.DelBeh	2.AcProsp	2.StuRole	2.SchAtt	2.SchFlex	2.SchDisr	2.DelBeh	3.AcProsp	3.StuRole	3.SchAtt	3.SchFlex	3.SchDisr	3.DelBeh	4.AcProsp	4.StuRole	4.SchAtt	3.SchFlex	4.SchDisr	4.DelBeh
1. Ac Prospect	1.00																							
1. Stu Role	.35	1.00																						
1. Sch Attitude	.49	.27	1.00																					
1. Sch Flex	.27	.04	.45	1.00																				
1. Sch Disrupt	-.25	-.39	-.37	-.24	1.00																			
1. Del Behav	-.28	-.36	-.29	-.14	.71	1.00																		
2. Ac Prospect	.35	.13	.21	.05	.01	-.08	1.00																	
2. Stu Role	.03	.48	.07	-.09	-.23	-.26	.28	1.00																
2. Sch Attitude	.15	.13	.22	.16	-.20	-.24	.54	.30	1.00															
2. Sch Flex	-.01	-.08	-.05	.28	.01	.03	.42	.16	.54	1.00														
2. Sch Disrupt	-.18	-.19	-.13	-.11	.49	.46	-.26	-.40	-.38	-.24	1.00													
2. Del Behav	-.30	-.29	-.16	-.14	.47	.68	-.16	-.31	-.25	-.02	.70	1.00												
3. Ac Prospect	.38	.26	.12	.02	-.04	-.14	.48	.21	.28	.19	-.07	-.10	1.00											
3. Stu Role	.03	.42	-.01	-.09	-.16	-.21	.31	.76	.35	.26	-.32	-.22	.28	1.00										
3. Sch Attitude	.26	.28	.17	.14	-.16	-.19	.34	.33	.51	.35	-.19	-.17	.49	.42	1.00									
3. Sch Flex	.02	.01	-.03	.20	-.02	-.04	.31	.18	.42	.70	-.13	-.01	.26	.39	.42	1.00								
3. Sch Disrupt	-.09	-.07	.00	-.05	.37	.37	-.22	-.13	-.35	-.20	.48	.51	-.19	-.20	-.33	-.09	1.00							
3. Del Behav	-.19	-.20	-.10	-.10	.43	.65	-.21	-.28	-.26	-.05	.55	.81	-.07	-.22	-.24	.05	.62	1.00						
4. Ac Prospect	.00	.14	-.07	-.08	.04	-.05	.36	.20	.22	.18	-.00	.01	.92	.31	.40	.30	-.16	-.01	1.00					
4. Stu Role	-.12	.00	-.10	-.07	-.01	-.07	.24	.58	.30	.33	-.24	-.12	.21	.91	.34	.41	-.20	-.11	.28	1.00				
4. Sch Attitude	.18	.25	-.00	.07	-.11	-.14	.30	.34	.46	.35	-.18	-.15	.46	.43	.99	.45	-.32	-.21	.42	.36	1.00			
3. Sch Flex	.02	.01	-.03	.20	-.02	-.04	.31	.18	.42	.70	-.13	-.01	.26	.39	.42	1.00	-.09	.05	.30	.41	.45	1.00		
4. Sch Disrupt	-.01	.11	.13	.04	-.00	.10	-.25	-.01	-.27	-.19	.32	.33	-.16	-.15	-.23	-.08	.93	.48	-.17	-.21	-.26	-.08	1.00	
4. Del Behav	-.03	.08	.10	-.02	-.06	.00	-.24	-.13	-.16	-.06	.36	.50	.03	-.09	-.13	.10	.51	.76	.05	-.09	-.15	.10	.55	1.00
Alt'ive Exper	-.09	.06	-.18	-.02	-.02	-.03	.28	.38	.43	.70	-.30	-.10	.19	.45	.38	.68	-.20	-.01	.24	.45	.41	.68	-.20	.04	1.00

* Number preceding variable name indicates wave number; number 4 indicates Wave One-Wave Three residual measure. Selection of cases was pairwise to minimize missing data. Ns therefore vary in the range of 87 to 180.

Stepwise Regression Statistics By Stage By Wave

The dataset for each wave of interviews plus the analysis of change between wave one and wave three were analyzed in the same fashion. The University of Michigan's Statistical Research Laboratory's MIDAS stepwise multiple regression procedure was used (Fox & Guire, 1976).

The model was analyzed by starting with the first two variables as diagrammed in the figures in Chapter 8. Thus, alternative experience was used as the predictor for school flexibility. Variables were added one at a time in separate analyses, each of which was a stepwise analysis, until the full model was tested for each dataset. The results for each step in the sequence are reproduced in the following tables.

Note the following in interpreting the tables. The analysis of variance table is given for the completed regression equation, that produced at the final step of the stepwise procedure at the given stage in the sequential test of the model. The line following the analyses of variance table gives the R, R^2, and standard error for the regression. The next tabled data, headed Variable, Partial, Coefficient, Std Error, T-Stat, and Signif provides information about the contribution of and values associated with each variable at the step in the analysis in which it was entered. Thus, the significance level of, say, the third variable is the significance of the t test of the difference from zero of the variable's regression coefficient. The standard error of the coefficient is also given. The partial correlation of the variable with the dependent measure, partialled on the other variables in the regression at that step is also presented. The final set of data for each analysis is headed Variable R-Sqr, Std Error, Partial, Signif. It summarizes for each step the R^2 and standard error of the regression at that step. It also presents for each variable its attained significance level in the final regression and the variable's partial correlation with the dependent variable, partialled on all other predictor variables in the table.

The tables are presented in sets for each wave and for the change analysis. Change variables are indicated by the prefix "Res.", for the residual of wave three given wave one. The MIDAS output tabled here was produced using double precision calculations; depending on the statistic reported, up to five decimal places are reported. Numbers following the fifth decimal place are exponential notations. Thus, from Table C.15.1/1: Sum of Sqrs = .37701 -1 should be read: Sum of Sqrs = 0.037701.

Table C.15.1/1

First Stage Analysis of the Model at Wave One, Prediction of: School Flexibility

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	1	.37701 -1	.37701 -1	.38991 -1	.8437
Error	146	141.17	.96693		
Total	147	141.21			

Multiple R= .01634 R-SQR=.00027 SE= .98333

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		2.1783	.17065	12.765	.0000
Alt. Exper	-.01634	-.14307 -1	.72456 -1	-.19746	.8437

Variable	R-Sqr	Std Error	Partial	Significance
Alt. Exper	.00027	.98333	-.01634	.8437

Table C.15.1/2

Second Stage Analysis of the Model at Wave One, Prediction of: Academic Prospects

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	3	20.048	6.6825	10.712	.0000
Error	141	87.964	.62386		
Total	144	108.01			

Multiple R= .43082 R-SQR= .18561 SE= .78985

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-.26689	.20102	-1.3277	.1864
Stu. Role	.36124	.37175	.80812 -1	4.6002	.0000
Schl. Flex	.25358	.21094	.67764 -1	3.1129	.0022
Alt. Exper	-.11844	-.82797 -1	.58458 -1	-1.4164	.1589

Variable	R-Sqr	Std Error	Partial	Significance
Stu. Role	.11745	.81646	.34272	.0000
Schl. Flex	.17402	.79264	.25317	.0022
Alt. Exper	.18561	.78985	-.11844	.1589

Table C.15. 1/3

Third Stage Analysis of the Model at Wave One, Prediction of: Student Role

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	3	12.847	4.2823	7.2693	.0001
Error	141	83.062	.58909		
Total	144	95.909			

Multiple R= .36599 R-SQR= .13395 SE= .76752

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		.75376 -1	.19646	.38368	.7018
Prospects	.36124	.35103	.76309 -1	4.6002	.0000
Schl. Flex	-.09399	-.75974 -1	.67773 -1	-1.1210	.2642
Alt. Exper	.10104	.68637 -1	.56915 -1	1.2060	.2299

Variable	R-Sqr	Std Error	Partial	Significance
Ac. Prospects	.11745	.76936	.34272	.0000
Schl. Flex	.12502	.76875	-.09256	.2698
Alt. Exper	.13395	.76752	.10104	.2299

Table C.15.1/4

Fourth Stage Analysis of the Model at Wave One, Prediction of: School Attitude

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	4	16.812	4.2031	17.966	.0000
Error	140	32.752	.23394		
Total	144	49.565			

Multiple R= .58241 R-SQR= .33920 SE= .48368

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-.25598	.12387	-2.0666	.0406
Stu. Role	.12641	.80021 -1	.53071 -1	1.5078	.1339
Ac. Prospect	.34760	.22621	.51571 -1	4.3864	.0000
Schl. Flex	.36234	.19733	.42809 -1	4.5999	.0000
Alt. Exper	-.18394	-.79825 -1	.36051 -1	-2.2142	.0284

Variable	R-Sqr	Std Error	Partial	Significance
Stu. Role	.04622	.57497	.21499	.0094
Ac. Prospect	.21797	.52246	.42435	.0000
Schl. Flex	.31606	.49033	.35416	.0000
Alt. Exper	.33920	.48368	-.18394	.0284

Table C.15.1/5

Fifth Stage Analysis of the Model at Wave One, Prediction of: School Disruption

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	5	2472.6	494.51	8.9834	.0000
Error	135	7431.4	55.048		
Total	140	9904.0			

Multiple R= .49965 R-SQR= .24965 SE= 7.4194

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		25.186	1.9299	13.050	.0000
Attitude Schl.	-.22920	-3.6199	1.3231	-2.7359	.0071
Stu. Role	-.38591	-4.0547	.83424	-4.8603	.0000
Ac. Prospect	.07095	.70863	.85740	.82649	.4100
Schl. Flex	-.06897	-.57034	.71002	-.80328	.4232
Alt. Exper	-.03579	-.23781	.57149	-.41613	.6780

Variable	R-Sqr	Std Error	Partial	Significance
Attitude Schl.	.10993	7.9636	-.33156	.0001
Stu. Role	.24135	7.3788	-.38425	.0000
Ac. Prospect	.24469	7.3894	.06634	.4378
Schl. Flex	.24869	7.3968	-.07280	.3961
Alt. Exper	.24965	7.4194	-.03579	.6780

Table C.15.1/6

Sixth Stage Analysis of the Model at Wave One, Prediction of: Delinquent Behavior

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	6	22410	3735.0	25.759	.0000
Error	134	19430	145.00		
Total	140	41840			

Multiple R= .73186 R-SQR= .53562 SE= 12.042

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		2.004	4.7103	.42553	.6711
Schl. Disrupt	.65070	1.3856	.13968	9.9197	.0000
Attitude Schl.	.02372	.60591	2.2061	.27466	.7840
Stu. Role	-.09481	-1.6181	1.4676	-1.1025	.2722
Ac. Prospect	-.11661	-1.8960	1.3951	-1.3591	.1764
Schl. Flex	-.01414	-.18912	1.1551	-.16372	.8702
Alt. Exper	-.03477	-.37373	.92810	-.40269	.6878

Variable	R-Sqr	Std Error	Partial	Significance
Schl. Disrupt	.51917	12.030	.72153	.0000
Attitude Schl.	.51996	12.064	-.04054	.6344
Stu. Role	.52845	21.000	-.13302	.1185
Ac. Prospect	.53491	11.962	-.11701	.1717
Schl. Flex	.53505	12.004	-.01756	.8385
Alt. Exper	.53562	12.042	-.03477	.6878

Table C.16.2/1

First Stage Analysis of the Model at Wave Two, Prediction of: School Flexibility

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNLFICANCE
Regression	1	103.25	103.25	115.48	.0000
Error	120	107.29	.89411		
Total	121	210.54			

Multiple R= .70029 R-SQR= .49040 SE= .94558

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
.Constant		1.6868	.17921	9.4122	.0000
Alt. Exper	.70029	.80630	.75032 -1	10.746	.0000

Variable	R-Sqr	Std Error	Partial	Significance
.Alt. Exper.	.49040	.94558	.70029	.0000

Table C.16.2/2

Second Stage Analysis of the Model at Wave Two, Prediction of: Academic Prospects

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	3	13.059	4.3531	9.1251	.0000
Error	98	46.751	.47705		
Total	101	59.811			

Multiple R= .46728 R-SQR= .21835 SE= .69069

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-.11015	.19810	-.55601	.5795
Ac. Prospects	.23541	.20142	.84001 -1	2.3978	.0184
Schl. Flex	-.21542	-.16679	.76475 -1	-2.1838	.0314
Alt. Exper	.40632	.37567	.85339 -1	4.4021	.0000

Variable	R-Sqr	Std Error	Partial	Significance
Ac. Prospects	.05673	.75112	.23818	.0159
Schl. Flex	.06378	.75207	.08647	.3899
Alt. Exper	.21835	.69069	.40632	.0000

Table C.16.2/3

Third Stage Analysis of the Model at Wave Two, Prediction of: Student Role

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	3	20.227	6.7422	10.346	.0000
Error	98	63.862	.65165		
Total	101	84.089			

Multiple R= .49045 R-SQR= .24054 SE= .80725

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-.88392	.21402	-4.1300	.0001
Stu. Role	.23541	.27514	.11474	2.3978	.0184
Schl. Flex	.41878	.37895	.83008 -1	4.5653	.0000
Alt. Exper	-.17903	-.19346	.10739	-1.8014	.0747

Variable	R-Sqr	Std Error	Partial	Significance
Stu. Role	.05673	.89061	.23818	.0159
Schl. Flex	.21539	.81635	.41013	.0000
Alt. Exper	.24054	.80725	-.17903	.0747

Table C.16.2/4

Fourth Stage Analysis of the Model at Wave 2, Prediction of: School Attitude

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	4	16.624	4.1561	20.625	.0000
Error	97	19.547	.20151		
Total	101	36.171			

Multiple R= .67794 R-SQR= .45960 SE= .44890

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-.50709	.12896	-3.9323	.0002
Stu. Role	.18337	.12061	.65653 -1	1.8372	.0692
Ac. Prospect	.39930	.24095	.56173 -1	4.2895	.0000
Schl Flex	.32198	.17026	.50832 -1	3.3495	.0012
Alt. Exper	-.01166	-.69729 -2	.60701 -1	-.11487	.9088

Variable	R-Sqr	Std Error	Partial	Significance
Stu. Role	.09307	.57275	.30507	.0018
Ac. Prospect	.35028	.48722	.53255	.0000
Schl. Flex	.45953	.44663	.41007	.0000
Alt. Exper	.45960	.44890	-.01166	.9088

Table C.16.2/5

Fifth Stage Analysis of the Model at Wave Two, Prediction of: School Disruption

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	5	1670.7	334.14	6.2115	.0001
Error	92	4949.0	53.793		
Total	97	6619.7			

Multiple R= .50238 R-SQR=.25238 SE= 7.3344

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		20.107	2.3464	8.5692	.0000
Attitude Schl.	-.16928	-2.8231	1.7137	-1.6474	.1029
Stu. Role	-.35969	-4.0760	1.1024	-3.6975	.0004
Ac. Prospect	-.06350	-.61273	1.0040	-.61026	.5432
Schl. Flex	-.03084	-.26316	.88936	-.29590	.7680
Alt. Exper	.04315	.42015	1.0143	.41424	.6797

Variable	R-Sqr	Std Error	Partial	Significance
Attitude Schl.	.12328	7.7752	-.35111	.0004
Stu. Role	.24690	7.2441	-.37551	.0002
Ac. Prospect	.25097	7.2628	-.07351	.4766
Schl. Flex	.25099	7.3017	-.00495	.9620
Alt. Exper	.25238	7.3344	.04315	.6797

Table C.16.2/6

Sixth Stage Analysis of the Model at Wave Two, Prediction of: Delinquent Behavior

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	6	12955	2159.2	18.483	.0000
Error	90	10514	116.82		
Total	96	23470			

Multiple R= .74297 R-SQR= .55201 SE= 10.809

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-5.2399	4.6437	-1.1284	.2622
Schl. Disrupt	.68490	1.3801	.15476	8.9175	.0000
Attitude Schl	-.01500	-.36523	2.5660	-.14233	.8871
Stu. Role	-.11270	-1.8762	1.7437	-1.0760	.2848
Ac. Prospect	.00020	.28083 -2	1.4836	.18930 -2	.9985
Schl. Flex	.05131	.63917	1.3113	.48743	.6271
Alt. Exper	.12111	1.7394	1.5028	1.1575	.2501

Variable	R-Sqr	Std Error	Partial	Significance
Schl. Disrupt	.52890	10.788	.72725	.0000
Attitude Schl	.53092	10.822	.06548	.5262
Stu. Role	.53341	10.851	-.07286	.4829
Ac. Prospect	.53345	10.910	.00889	.9322
Schl. Flex	.54534	10.829	.15967	.1263
Alt. Exper	.55201	10.809	.12111	.2501

Table C.17.3/1

First Stage Analysis of the Model at Wave Three, Prediction of: School Flexibility

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	1	126.34	126.34	136.13	.0000
Error	158	146.64	.92809		
Total	159	272.98			

Multiple R= .68031 R-SQR= .46282 SE= .96337

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Gonstant		1.9605	.15883	12.343	.0000
Alt. Exper	.68031	.80306	.68830 -1	11.667	.0000

Variable	R-Sqr	Std Error	Partial	Significance
Alt. Exper	.46282	.96337	.68031	.0000

Table C.17.3/2

Second Stage Analysis of the Model at Wave Three, Prediction of: Academic Prospects

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	3	12.722	4.2407	6.3421	.0004
Error	156	104.31	.66865		
Total	159	117.03			

Multiple R= .32971 R-SQR= .10871 SE= .81771

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-.41182	.20397	-2.0190	.0452
Stu. Role	.20752	.21964	.82893 -1	2.6497	.0089
Schl. Flex	.16539	.14247	.68015 -1	2.0946	.0378
Alt. Exper	-.04759	-.49441 -1	.83082 -1	-.59509	.5526

Variable	R-Sqr	Std Error	Partial	Significance
Stu. Role	.07925	.82583	.28151	.0003
Schl. Flex	.10668	.81602	.17261	.0296
Alt. Exper	.10871	.81771	-.04759	.5526

Table C.17.3/3

Third Stage Analysis of the Model at Wave Three, Prediction of: Student Role

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	3	31.195	10.398	17.420	.0000
Error	156	93.119	.59692		
Total	159	124.31			

Multiple R= .50094 R-SQR= .25094 SE= .77260

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-.80621	.18424	-4.3758	.0000
Ac. Prospects	.20752	.19608	.74001 -1	2.6497	.0089
Schl. Flex	.08113	.66027 -1	.64946 -1	1.0166	.3109
Alt. Exper	.28536	.28010	.75320 -1	3.7188	.0003

Variable	R-Sqr	Std Error	Partial	Significance
Ac. Prospects	.07925	.85114	.28151	.0003
Schl. Flex	.18453	.80355	.33815	.0000
Alt. Exper	.25094	.77260	.28536	.0003

Table C.17.3/4

Fourth Stage Analysis of the Model at Wave Three, Prediction of: School Attitude

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	4	19.651	4.9127	24.265	.0000
Error	155	31.382	.20246		
Total	159	51.032			

Multiple R= .62054 R-SQR= .38506 SE= .44996

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
.Constant		-.38201	.11370	-3.3599	.0010
Stu. Role	.22649	.13499	.46629 -1	2.8950	.0043
Ac. Prospect	.40736	.24466	.44057 -1	5.5532	.0000
Schl. Flex	.16269	.77903 -1	.37949 -1	2.0528	.0418
Alt. Exper	.08372	.47871 -1	.45769 -1	1.0459	.2972

Variable	R-Sqr	Std Error	Partial	Significance
.Stu. Role	.18253	.51384	.42723	.0000
Ac. Prospect	.33460	.46501	.43131	.0000
Schl. Flex	.38072	.45009	.26329	.0008
Alt. Exper	.38506	.44996	.08372	.2972

Table C.17.3/5

Fifth Stage Analysis of the Model at Wave Three, Prediction of: School Disruption

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	5	1486.1	297.22	4.0762	.0019
Error	123	8968.8	72.917		
Total	128	10455			

Multiple R= .37702 R-SQR= .14214 SE= 8.5392

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		16.014	2.4864	6.4407	.0000
Attitude Schl.	-.25336	-4.8520	1.6704	-2.9047	.0044
Stu. Role	-.03763	-.41963	1.0049	-.41759	.6770
Ac. Prospect	-.05505	-.61138	.99988	-.61145	.5420
Schl. Flex	.14159	1.2687	.79982	1.5862	.1153
Alt. Exper	-.15966	-1.7213	.95959	-1.7938	.0753

Variable	R-Sqr	Std Error	Partial	Significance
Attitude Schl.	.10999	8.5597	-.33165	.0001
Stu. Role	.11543	8.5673	-.07818	.3804
Ac. Prospect	.11674	8.5951	-.03853	.6671
Schl. Flex	.11970	8.6152	.05790	.5196
Alt. Exper	.14214	8.5392	-.15966	.0753

Table C.17.3/6

Sixth Stage Analysis of the Model at Wave Three, Predication of: Delinquent Behavior

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	6	15769	2628.2	15.088	.0000
Error	122	21251	174.19		
Total	128	37020			

Multiple R= .65266 R-SQR= .42597 SE= 13.198

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-.86990	4.4439	-.19575	.8451
Schl. Disrupt	.59594	1.1423	.13936	8.1970	.0000
Attitude Schl	-.08363	-2.4739	2.6688	-.92697	.3558
Stu. Role	-.18085	-3.1567	1.5542	-2.0311	.0444
Ac. Prospect	.06920	1.1858	1.5477	.76615	.4451
Schl. Flex	.08403	1.1631	1.2488	.93140	.3535
Alt. Exper	.13682	2.2920	1.5024	1.5256	.1297

Variable	R-Sqr	Std Error	Partial	Significance
Schl. Disrupt	.38132	13.429	.61751	.0000
Attitude Schl.	.38316	13.462	-.05456	.5407
Stu. Role	.38764	13.467	-.08521	.3409
Ac. Prospect	.38989	13.496	.06067	.4998
Schl. Flex	.41501	13.269	.20291	.0232
Alt. Exper	.42597	13.198	.13682	.1297

Table C.18.4/1

First Stage Analysis of the Model of Wave One-Wave Three Change, Prediction of: School Flexibility

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	1	126.34	126.34	136.13	.0000
Error	158	146.64	.92809		
Total	159	272.98			

Multiple R= .68031 R-SQR= .46282 SE= .96337

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		1.9605	.15883	12.343	.0000
Alt. Exper	.68031	.80306	.68830 -1	11.667	.0000

Variable	R sqr	Std Error	Partial	Significance
Alt. Exper	.46282	.96337	.68031	.0000

Table C.18.4/2

Second Stage Analysis of the Model of Wave One-Wave Three Change, Prediction of: Academic Prospects

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	3	11.146	3.7154	6.5255	.0004
Error	140	79.711	.56937		
Total	143	90.857			

Multiple R=.35025 R-SQR=.12268 SE= .75456

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-.52938	.20528	-2.5789	.0109
Res. Stu. Role	.16967	.18149	.89097 -1	2.0370	.0435
Schl. Flex	.17697	.14159	.66552 -1	2.1275	.0351
Alt. Exper	.00276	.25504 -2	.78168 -1	.32627 -1	.9740

Variable	R-Sqr	Std Error	Partial	Significance
Res. Stu. Role	.07775	.76818	.27883	.0007
Schl. Flex	.12267	.75189	.22071	.0081
Alt. Exper	.12268	.75456	.00276	.9740

Table C.18.4/3

Third Stage Analysis of the Model of Wave One-Wave Three Change, Prediction of: Student Role

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	3	23.207	7.7355	15.547	.0000
Error	140	69.660	.49757		
Total	143	92.866			

Multiple R= .49989 R-SQR= .24989 SE= .70539

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-.79651	.18451	-4.3170	.0000
Res. Ac. Prospects	.16967	.15861	.77862 -1	2.0370	.0435
Schl. Flex	.11723	.87683 -1	.62776 -1	1.3968	.1647
Alt. Exper	.26760	.23137	.70409 -1	3.2861	.0013

Variable	R-Sqr	Std Error	Partial	Significance
Res. Ac. Prospects	.07775	.77662	.27883	.0007
Schl. Flex	.19204	.72948	.35203	.0000
Alt. Exper	.24989	.70539	.26760	.0013

Table C.18.4/4

Fourth Stage Analysis of the Model of Wave One-Wave Three Change, Prediction of: School Attitude

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	4	14.840	3.7101	17.586	.0000
Error	139	29.325	.21097		
Total	143	44.165			

Multiple R= .57967 R-SQR= .33602 SE= .45931

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-.46205	.12789	-3.6129	.0004
Res. Stu. Role	.13672	.89549 -1	.55032 -1	1.6272	.1060
Res. Ac. Prospect	.33364	.21466	.51446 -1	4.1726	.0001
Schl. Flex	.17294	.85207 -1	.41161 -1	2.0701	.0403
Alt. Exper	.13160	.74471 -1	.47582 -1	1.5651	.1198

Variable	R-Sqr	Std Error	Partial	Significance
Res. Stu. Role	.13396	.51900	.36600	.0000
Res. Ac. Prospect	.25911	.48173	.38015	.0000
Schl. Flex	.32432	.46168	.29667	.0003
Alt. Exper	.33602	.45931	.13160	.1198

Table C.18.4/5

Fifth Stage Analysis of the Model of Wave One-Wave Three Change, Prediction of: School Disruption

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	5	1017.4	203.47	3.0270	.0135
Error	107	7192.5	67.219		
Total	112	8209.8			

Multiple R= .35202 R-SQR= .12392 SE= 8.1987

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-1.5726	2.6621	-.59073	.5559
Res. Attitude Schl.	-.24439	-4.4057	1.6899	-2.6071	.0104
Res. Stu. Role	-.08734	-1.0311	1.1370	-.90693	.3665
Res. Ac. Prospect	-.00473	-.57616 -1	1.1771	-.48946 -1	.9611
Schl. Flex	.13492	1.1706	.83111	1.4085	.1619
Alt. Exper	-.13004	-1.2926	.95275	-1.3567	.1777

Variable	R-Sqr	Std Error	Partial	Significance
Res. Attitude Schl.	.09092	8.1999	-.30153	.0012
Res. Stu. Role	.10367	8.1791	-.11843	.2136
Res. Ac. Prospect	.10381	8.2159	.01227	.8983
Schl. Flex	.10885	8.2306	.07501	.4361
Alt. Exper	.12392	8.1987	-.13004	.1777

Table C.18.4/6

Sixth Stage Analysis of the Model of Wave One-Wave Three Change, Prediction of: Delinquent Behavior

Source	DF	SUM OF SQRS	MEAN SQUARE	F-STAT	SIGNIFICANCE
Regression	6	6522.0	1087.0	11.172	.0000
Error	106	10313	97.294		
Total	112	16835			

Multiple R= .62242 R-SQR= .38740 SE= 9.8638

Variable	Partial	Coefficient	Std Error	T-Stat	Significance
Constant		-7.3387	3.2080	-2.2877	.0241
Res. Schl. Disrupt	.57198	.83498	.11631	7.1792	.0000
Res. Attitude Schl.	-.07450	-1.6128	2.0967	-.76920	.4435
Res. Stu. Role	-.09779	-1.3891	1.3731	-1.0117	.3140
Res. Ac. Prospect	.11010	1.6151	1.4162	1.1405	.2567
Schl. Flex	.13725	1.4396	1.0091	1.4266	.1566
Alt. Exper	.12022	1.4414	1.1561	1.2468	.2152

Variable	R-Sqr	Std Error	Partial	Significance
Res. Schl. Disrupt	.32584	10.112	.57082	.0000
Res. Attitude Schl.	.32746	10.145	.04915	.6068
Res. Stu. Role	.32818	10.186	.03272	.7332
Res. Ac. Prospect	.33975	10.145	.13120	.1719
Schl. Flex	.37842	9.8893	.24201	.0112
Alt. Exper	.38740	9.8638	.12022	.2152