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RELATIONSHIP OF INTERNAL, POWERFUL OTHERS, AND CHANGE LOCUS OF CONTROL TO RACE, SOCIOECONOMIC CLASS, SEX AND PERCEIVED TEACHER BEHAVIOR

DISSERTATION

Presented in Partial Fulfillment for the Requirements for the Degree Doctor of Philosophy in the Graduate School of the Ohio State University

By

Garry W. Royer, B.A., M.S.

* * * * *

The Ohio State University

1975

Reading Committee:

Charles B. Huelsman, Jr.
John O. Cooper
John J. Kennedy

Approved By

Advisor

Department of Education
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<td>March 8, 1947</td>
<td>Born--Dayton, Ohio</td>
<td></td>
</tr>
<tr>
<td>1969</td>
<td>B.A., Wright State University, Dayton, Ohio</td>
<td></td>
</tr>
<tr>
<td>1969-1970</td>
<td>M.S., Miami University, Oxford, Ohio</td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>Intern School Psychologist, Butler County Schools, Hamilton, Ohio</td>
<td></td>
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<tr>
<td>1971-1972</td>
<td>Psychology Instructor, U.S. Army Ft. Sam Houston, Texas</td>
<td></td>
</tr>
<tr>
<td>1972-1973</td>
<td>EPDA Fellowship, The Ohio State University, Columbus, Ohio</td>
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</tr>
<tr>
<td>1973-1974</td>
<td>Intern School Psychologist, South-Western City Schools, Grove City, Ohio</td>
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<tr>
<td>1974-1975</td>
<td>School Psychologist, Springfield City Schools, Springfield, Ohio</td>
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CHAPTER I

INTRODUCTION

The concept of Internal versus External (I-E) control of reinforcement, introduced by Rotter (1954) and Rotter, Seeman, and Liverant (1962) within their Social Learning theory, refers to the degree of control the person judges that he has over his environment. The person at the "internal" end of the continuum perceives outcomes to be a consequence of his own actions. The person at the "external" pole believes that outcomes are caused by fate, luck and powerful others, and therefore, are beyond his personal control.

A major finding of the Coleman Report (1966) was that among disadvantaged students, there is a high correlation between achievement and sense of personal control over the environment. Coleman found that sense of control over the environment was the best single predictor of Negro students' academic achievement--better than school facilities, teacher to student ratios, teacher qualifications and all such "school" variables combined. Of all the variables measured in the survey, sense of control over the environment,

is more strongly related than any other variable to the achievement... The special importance for achievement of minority group children and perhaps
for disadvantaged whites as well, suggests a different set of predispositional factors operating to create low or high achievement for children from advantaged groups. Achievement or lack of achievement appears closely related to what they believe about their environment: whether they believe the environment will respond to reasonable efforts, or whether they believe it is instead merely random or immovable [pp. 320-321].

Social learning theory (Rotter, 1954) provides the general theoretical background for the conception of the nature and effect of reinforcement. In social learning theory, a reinforcer acts to strengthen an expectancy that a particular behavior or event will be followed by that reinforcer in the future. As an infant develops and gains experience he differentiates events which are causally related to preceding events and the events which are not. The infant and the young child begin to receive an overall pattern, an expectancy, of whether reinforcement comes as a consequence of his behavior or regardless of his behavior. An internal person has an expectancy that the environment is open to personal manipulation and that a relationship exists between his actions and his reinforcements. An external person, on the other hand, expects that effort will not necessarily result in reward. An internal person, because he has come to expect that action and outcomes are correlated, reacts adaptively to reinforcement; however, an external person's reactions are not adaptable. A good example is given by Chance (1972).
A child receiving a good grade on a test may regard the good grade as a function of an especially easy test, a favor of the teacher, luck, and so on, rather than his own activities and efforts. The influence of the grade on his future behavior [amount of study for future tests, aspiration level, and so on] will differ with the degree of internality or externality of his attitude [p. 169].

A person's locus of control is a consequence of his reinforcement history. If a person has learned that a relationship exists between his actions and reinforcement, he will develop an internal locus of control. If a person has learned, however, that no relationship exists between his actions and reinforcement, then he will develop an external locus of control.

The value in a student having an internal locus of control is in his actions which occur because of the expectancy of reinforcement. An internal person is more curious about the situation in which he finds himself than are persons with more external control expectancies (Phares, 1965; Seeman, 1963; Seeman and Evans, 1962). Internals are more cautious and calculating about their choices, involvements, and personal entanglements than persons maintaining external control expectancies (Lefcourt, 1972). Selectivity enables internals to perceive opportunities for success experiences and to avoid inevitable defeats, which, in turn, would diminish the degree to which they perceive themselves as responsible for reinforcements.

Several studies in addition to the Coleman Study (1966) have focused on the relationship between race, ethnicity,
socioeconomic status and the locus of control. Lefcourt (1972), Joe (1971), and Rotter (1966) have reviewed most of the studies. The results have suggested that groups whose social position is one of minimal power, either as a result of class or ethnicity, tend to score higher on the external control dimension. Such results have implications for the teaching of disadvantaged students. A major goal of the sixties and early seventies in education has been the idea of compensatory education for disadvantaged students. Preschool programs have been designed to start disadvantaged students on the Head Start Programs. Funds have been given to the program so that there are qualified teachers, there is a low teacher-student ratio, and there is an abundance of materials. These factors may result in greater achievement for disadvantaged students but what is noticeably lacking is the emphasis on developing the student's internal locus of control. In reviewing the compensatory programs for disadvantaged students, Stephens and Delys (1973) found that few, if any, of the programs with the possible exception of Project Follow Through expressly aimed at enhancing the development of internal control expectancies.

Not all studies, however, have found that disadvantaged groups are significantly more external. When locus of control has been measured by using the Intellectual Achievement Responsibility Scale (Crandall, Katkovsky, and Crandall, 1965) there has
been no significant difference reported between different races (Katz, 1967; Soloman, Houlihan, and Parelius, 1969) and different socioeconomic classes (Crandall, 1965; Lesiak, 1970).

The Intellectual Achievement Responsibility (IAR) Scale is a multidimensional measure of locus of control rather than unidimensional. In all the studies which found disadvantaged groups to be external, a unidimensional locus of control measure was used. The IAR yields separate subscores for belief in internal responsibilities for successes (I+) and for failures (I-). Also the IAR is viewed as the most specific of the locus of control measures, concerned primarily with the sense of personal control over reinforcements in the intellectual achievement area.

Statement of the Problem

The present study was designed to discover more about the locus of control construct. Specifically, the present study investigates the relationship between race and locus of control and socioeconomic class and locus of control. Locus of control was measured as multidimensional rather than unidimensional, but using a different multidimensional measure than the IAR. In addition the present study investigates the relationship between a student's locus of control and the student's perception of his/her teacher's behavior.
Rationale for the Study
Race, Socioeconomic Class and Locus of Control

Proponents of a multidimensional approach to locus of control (Gurin, Gurin, Beattie, and Lao, 1969; Lao, 1970; Mirels, 1970; Reid and Ware, 1973; Levenson, 1973) have found that through factor analysis of Rotter's IE Scale, the scale is composed of at least two factors. Although the investigators use variant names for the factors, they can generally be classified as Personal Control--how much control one believes he personally possessed and Society Control--how much control one believes most people in society possess. Correlations between these two factors have resulted in nonsignificant correlations, \( r = .187 \) (Lao, 1970), \( r = .17 \) (Reid and Ware, 1973).

A multidimensional approach seems most appropriate for measuring the locus of control of black and low socioeconomic people—one's whose social position is that of minimal power. Their low social position frequently limits the effect of their effort because they are discriminated against or ignored. Feelings of powerlessness and irrelevance of effort are a reflection of the social reality under which the black man lived in American society (Guterman, 1972).

An internal person takes responsibility for both positive and negative consequences. Thus a disadvantaged person who is internal would feel responsible for failures which were not
caused by his behavior but because of his position in the society. It is healthier for a black to be external on forces over which he has no control [Society Control] (Gurin, et.al., 1969). It is a black’s control over what he personally possesses (Personal Control) that correlates to Achievement (Lao, 1970). The rationale for using multidimensional measure will be discussed at greater length in Chapter II.

From their findings Gurin and Lao suggest that Blacks are not significantly different than whites responding to questions which measure Society Control such as "If people are not successful, it is their own fault." In contrast, race differences would appear in questions which measure Personal Control such as "Every time I try to get ahead, something or somebody stops me."

Gurin and Lao's hypothesis about Personal Control and Society Control for different races of classes has not been researched. Studies have used factor analysis to learn more about the construct of locus of control; yet, no studies have used the two factors to compare groups either for race or class differences. Gurin and Lao used their multidimensional measure to determine what internality-externality on Personal Control and Society Control meant in terms of a black's personality and achievement. No comparison was made between low and high class blacks or between blacks and whites. The present study will compare groups on Personal Control and Society Control.
The finding that there is no difference in locus of control between races and classes when the IAR locus of control scale is used is contrary to Gurin and Lao's hypothesis. As defined the IAR is a measure of personal control in the intellectual achievement area. The present study collected evidence to determine (1) whether blacks and low class students are more external on Personal Control as Gurin and Lao have suggested or (2) whether there is no difference in Personal Control as the findings of the IAR suggest.

**Perceived Teacher Behavior and Locus of Control**

Because of the relationship between locus of control and achievement factors, an objective of education probably should be to promote an internal locus of control in students. Research has not provided the knowledge necessary to promote internality in the classroom, however. Experimenters have suggested that counseling (Smith, 1970; Dua, 1970; Lesyk, 1969; Masters, 1970), a structured camp experience (Nowicki and Barnes, 1973), an open classroom (Stephens and Delys, 1973) and a "behavior modification" program (Stephens and Delys, 1973) can lead to an internal locus of control. From the above mentioned studies the Stephens and Delys' study is the only one which took place in the classroom. And although the results indicated that an open classroom and a classroom using behavior modification techniques versus a traditional classroom produced
internality in students, significance was only achieved in one of the two locus of control measures used.

One area of locus of control that has recently been studied is that of the antecedents of locus of control (MacDonald, 1971; Katkovsky, 1967; Levenson, 1973). The studies have shown that there is a relationship between certain perceived parent behaviors and a child's locus of control. A warm accepting home with predictable standards is more commonly reported by internal children and adolescents than their external counterparts. By the time a child is five and enters kindergarten, he already has a certain locus of control. Differences in locus of control with disadvantaged children being more external precede their school attendance (Stephens and Delys, 1973).

A study is needed to investigate whether perceived teacher behavior correlates with a student's locus of control. When a child has been in a classroom for six hours every day, he learns a reinforcement expectancy from his teacher. There are individual differences in locus of control before children enter school, but their behavior can be different every year because of the behavior and expectancies of the teacher. A student can be a behavior problem in one teacher's class and well-behaved in another class. A student can be well-behaved with the regular class teacher, but when there is a substitute teacher, he may be a problem. On the dimension of reflectivity-impulsivity, the cognitive style of the teacher changes the
reflectivity-impulsivity of her students (Yando, 1966). Thus it is assumed that in each teacher's class a student's locus of control is influenced by the actions of the teacher. Certain teacher behavior will influence certain student behavior expectancies.

**Significance of the Study**

Locus of control has become an important construct in dealing with the achievement of children, especially black and low socioeconomic class students. Internal children are more efficient learners. Measurement of locus of control is often used in determining "learned helplessness," a concept used to attribute much of the motivation problem in poverty research (Seligman, 1968). Children who give up in the face of achievement situations may reflect their perception of independence between what they do and what happens to them; even though failure may indeed be contingent on their response, they may not see it as such (Dweck and Reppucci, 1973).

How often teachers have said, "I know he can perform the work, but he just will not try." If blacks and low socioeconomic children are more external before they begin school, then school needs to provide a change in locus of control towards internality if effort and achievement are going to be maximized.
But what are the factors which influence race and socioeconomic class differences in locus of control? All we know is that there is a generalized difference as measured by locus of control tests in responsibility for reinforcements between groups. The present study, by using a multidimensional measure of locus of control, provides evidence as whether there are group differences in Personal Control and two measures of Society Control--powerful others and chance. It is possible that disadvantaged groups are external on just one or two of the factors and that means for producing internality can be accomplished by changing expectancies related to that factor.

Although teachers may not be purposely trying to provide internality in their classroom, they may be influencing the locus of control of their students by the manner in which they respond to student behavior. For example, if students perceive their teacher to be nurturant and protective, will such teacher behavior foster internality? On the other hand, will an unpredictability of standard type of teacher behavior or excessive use of punishment foster externality?

Locus of control is but one dimension of a person's cognitive style. The other cognitive styles have also been investigated as to their relationship to school success. The present study investigates the construct of locus of control, however, because of its importance to achievement and disadvantaged groups. If teachers' behaviors can influence the locus of
control of students, then perhaps more emphasis could be placed on internality-producing behaviors of teachers both at the university level and in the classroom. If black and low socioeconomic students are more external on some locus of control scales than others, then classroom situations can be provided to enhance a more internal orientation for students.

Definition of Terms

Locus of Control: The degree to which a person views positive and negative events to be a consequence of one's behavior or occurring because of luck, chance, or forces over which he has no control. Locus of control will be measured by Levenson's three scales, Internal, Powerful Others, and Chance.

Internal Control: The perception that outcomes are a consequence of one's actions.

External Control: The perception that outcomes are not a consequence of one's actions; outcomes are beyond one's personal control.

Low Socioeconomic Class Students: Low socioeconomic level based on family income and residence area.

High Socioeconomic Class Students: Middle-High socioeconomic level based on family income and residence area.

Personal Control: How much control one believes he personally possesses.
Society Control: How much control one believes most people in society possesses.

Organization of the Remainder of the Dissertation

Chapter I has included an introduction to the study, a statement of the problem, rationale for the study, the significance of the study, and a listing of the defined terms. Chapter II contains a review of the literature relevant to the present study and hypotheses. Chapter III describes the methodology used in conducting the study, the population included, the instruments used, the collection of the data, and analysis of the data. Chapter IV represents the results of the study and discussion of the results. Chapter V is comprised of a summary of the study, conclusions derived from the findings of the study, the educational implications drawn from those conclusions, and recommendations for further research.

Summary

There is general acceptance among locus of control researchers that black and low socioeconomic groups are more external on the locus of control continuum. Overlooked, however, are four studies which indicated no differences between groups. In order to understand better the nature of the locus of control construct and its relationship to black and low socioeconomic groups, the present study uses a multidimensional measure to compare group differences on three measures of locus
of control.

There has been a paucity of research in the area of changing locus of control, especially studies which are carried out in the classroom. The present study investigates whether there is a relationship between perceived teacher behavior and a student's locus of control. If such a relationship exists then internality-producing behaviors can be utilized in the classrooms.
CHAPTER II

REVIEW OF THE LITERATURE

The purpose of the present study was to investigate the relationship between the locus of control construct and race, class, sex and perceived teacher behavior. To review all of the studies which have used locus of control as a factor is beyond the scope of this chapter. There exists a bibliography containing 339 separate entries of immediate relevance to the locus of control construct appearing through 1969 (Throop and MacDonald, 1971). Therefore, only areas which are most pertinent to the purpose of the present study on locus of control are reviewed. The present review is organized into five sections dealing with research on locus of control: 1) achievement behavior, 2) measurement as multidimensional, 3) social factors, 4) antecedents, and 5) change.

Achievement Behavior and Locus of Control

Research has generally supported the finding of the Coleman Report (1966) that there is a relationship between internal control and achievement (Chance, 1965; Gurin, et.al., 1969; Lao, 1970; Lessing, 1969). The idea that internality relates to achievement is one measure used by researchers to measure the
validity of a new locus of control test (Nowicki and Duke, 1974; Nowicki and Strickland, 1973; Gruen, Korte, and Baum, 1974). The strength of the association between internal control and achievement is exemplified by Harrison (1968), who employed his "View of The Environment Test" and found that a sense of internal control characterized successful students regardless of the socioeconomic status of the home. That is, an internal orientation predicted academic success among both advantaged and disadvantaged children. Such a result reflects a rather fine discriminative position in view of the fact that less advantaged children are usually found at the more external end of the IE continuum and at the low end of the achievement spectrum.

A child from an advantaged family most often has had all his needs satisfied, has lived in a responsive environment, and hence can assume that the environment will continue to be responsive if only he acts appropriately. A child from a disadvantaged family has had few of his needs satisfied, has lived in an unresponsive environment, both within the family (where other demands pressed upon his mother) and outside the family, in an outside and often unfriendly world. Thus he cannot assume that the environment will respond to his actions. Such a state of affairs could be expected to lead to passivity, with a general belief in luck, a belief that the world is hostile, and also a belief that nothing he could ever do would change things. He has not yet come to see that he can affect his environment, for it has never been so in his previous experience (Guterman, 1972, p. 285-286).
Sex differences in locus of control and achievement have been found in many studies. In studies which used a locus of control test other than the Intellectual Achievement Responsibility (IAR) Scale (Crandall, 1965), a relationship between male internality and achievement is more often reported than between female internality and achievement (Nowicki and Roundtree, 1971; Nowicki and Strickland, 1973; Nowicki and Segal, 1974). One study, however, reported a significant relationship between female internality and achievement (Nowicki and Duke, 1974).

One possible reason that the results might not be significant for females is because some females may score as internal on the locus of control test because of the social desirability of doing so. Internal females scoring low in social desirability attained achievement scores higher than any other group (Nowicki and Walker, 1973).

Positive correlations between achievement and responsibility for success (I+), responsibility for failure (I-) and total responsibility (I tot.) have been obtained using the Intellectual Achievement Responsibility (IAR) Scale (Crandall, Katkovsky, and Crandall, 1965). Studies have reported differences, however, as to which locus of control measure, I+, I-, or I tot. best predicts achievement for girls and which one for boys. In two studies (Crandall, et.al., 1965, McGhee and Crandall, 1968) responsibility for success and total responsibility subscores predicted achievement for the girls, but only the
responsibility for failure was predictive for the boys. In a third study (Lesiak, 1970) it was found on the responsibility for success and responsibility for failure scales that high internal subjects, of both sexes, had higher reading achievement scores than low internal subjects. But high internal subjects of both sexes did not have higher arithmetic achievement scores. A fourth study revealed responsibility for success subscores better predicted grades and achievement test scores boys. The responsibility for failure subscores better predicted grades and achievement test scores for girls (Katz, 1967).

Research studies have supported the Coleman Report finding that locus of control is related to achievement. Of the 21 studies that have measured the relationship between locus of control and achievement, only three have not reported a significant finding (Eisemann and Platt, 1968; Hjelle, 1970; Katz, 1967). Although sex differences appear in the literature as to which sex is more related to achievement and locus of control, results are mixed, with slightly more studies indicating a relationship between an internal male and achievement than to an internal female and achievement.

Measurement of Locus of Control as Multidimensional

The most popular measure of internal and external control is Rotter's IE Scale (Rotter, 1966). The test is considered to be a measure of generalized expectancy. That is, the items
are meant to cover many different situations which question how reinforcement is controlled. The test is a forced-choice 29 item scale including 6 filler items. The items deal exclusively with the subject's belief about the nature of the world. An example from the scale is "Many of the unhappy things in peoples' lives are partly due to bad luck." Results of the test give one score; the lower the score, the more internal a person is on the internal-external continuum. Other examples of popular locus of control tests yielding one score are the Bialer Test (1961), the Nowicki-Strickland Test (1971) and the Stephens and Delys Test (1973).

Locus of control, can be viewed, however, as having more than one dimension. A person's locus of control is determined by his reinforcement history; therefore, one can view himself as responsible for two outcomes: 1) responsible for positive events (success) and 2) responsible for negative events (failures). The Intellectual Achievement Responsibility (IAR) Scale (Crandall, et al., 1965) yields separate scores for belief in internal responsibility for successes (I+) and for failures (I-). The two I scores can also be summed (I tot.) to provide a general measure of internal beliefs regarding intellectual and academic reinforcement. The IAR test is considered the narrowest of locus of control tests because it deals with school situations rather than the many different situations in which reinforcements occur.
Factor analytic studies of Rotter's IE Scale have resulted in two factors for a number of experiments. The two factors can generally be called personal control and society control. Gurin, Lao, and Beattie (1969) and Lao (1970) call the two factors Control Ideology—how much control one believes most people in society possess and Personal Control—how much control one believes he personally possesses. Mirels (1970) found almost the same factors: Factor I is the amount of control one personally possesses and Factor II is the extent to which one believes a citizen can exert over political and world affairs. The third experimenters who divided locus of control into two factors, Reid and Ware (1973), call the first factor Fatalism, which is the belief that luck, fate or fortune versus hard work, ability and personal responsibility determine one's outcome. The second factor, Social System Control, measures the extent to which people believe they can or cannot effect change within the socio-political realms of their society.

Although the above investigators use various names, the two factors are much the same, one dealing with personal control and one dealing with forces outside of one's control. However, the two factor theoretical formulation may be too simplistic because of the diversity in the meaning of external control (Hersch and Scheibe, 1967). The definition of external
control as an expectancy that fate, chance, powerful others control reinforcements is too broad. Consequently, locus of control has been divided into three factors by Levenson (1972, 1973). One factor, Internal Scale, is similar to the idea of the Personal Control concept mentioned above. However, Levenson divides the idea of forces outside of one's control into two factors, Powerful Others and Chance. The rationale behind this tripartite differentiation came from the reasoning that people who believe the world is unordered (chance) behave and think differently than people who believe that the world is ordered but that powerful others are in control.

An example of an item from the Internal Scale is "Whether or not I get to be a leader depends mostly on my ability." An example from the chance scale is "Whether or not I get to be a leader depends upon whether I'm lucky enough to be in the right place at the right time." And an example from the Powerful Others scales is "Even if I were a good leader, I would not be made a leader unless I play up to those in positions of power."

In a study using Levenson's Internal, Powerful Others and Chance Scales with college students, internal control was related positively to effective study habits and attitudes and to college success, while the opposite was true for powerful others and chance control. Moreover, externals who believed that their reinforcements were due to chance, luck, or fate reported less
effective study habits than those who believed in powerful others control (Prociak and Breen, 1974).

Levenson's separation of locus of control into three parts seems related to the three items that the Coleman Report used to measure a student's sense of control of his environment. The first item, Agree or Disagree: "Good luck is more important than hard work for success" is a Society Control item, relating to Chance. The second item, "Every time I try to get ahead, something or somebody stops me," is also a Society Control item, but related to Powerful Others. The third item, "People like me don't have much of a chance to be successful in life," is really a Personal Control item.

There is another reason why locus of control might best be viewed as multidimensional. Three different locus of control tests have been shown to have essentially zero correlation between each other (Stephens, 1973). In two studies, one with second graders and one with third graders, there were quite low correlations among the Nowicki-Strickland test (Nowicki and Strickland, 1973), the Stephens-Delys Reinforcement Contingency Interview IE Measure for Preschool Children, (Stephens and Delys, 1973) and the Grandid (1965). Two measures of intelligence such as the WISC and Stanford-Binet have quite high correlations between each other. Conversely, these three measures of locus of control are not even significantly correlated.
The tests are parallel in terms of antecedents (socioeconomic, status, age, parent behavior) and their functional properties (impact on achievement, competence behavior, etc.), but are apparently measuring something different.

Factor analytic studies and the finding that three tests of locus of control have zero correlation with each other would seem to indicate that locus of control is multidimensional. By viewing locus of control as multidimensional more can be learned about its properties and its influence on behavior.

Social Factors and Locus of Control

Two of the main findings of the Coleman Report were 1) that sense of control over the environment was the best predictor of school achievement for minorities and disadvantaged and 2) that minorities and the disadvantaged were more external on the internal-external continuum. A majority of the studies also support the finding that minorities and the disadvantaged were more external on the internal-external continuum. A majority of the studies also support the finding that minorities and the disadvantaged are more external; groups whose social position is one of minimal power either by class or race tend to score higher in the external-controlled direction (Battle and Rotter, 1963; Graves, 1961; Gruen and Ottinger, 1969; Jesser, et.al., 1968; Davis and Lesiak, 1967; Lefcourt and Ladwig, 1965; Rotter, 1966; Nowicki, 1971; Strickland, 1971; Gruen, Korte,
The locus of control test used in the above studies were the Bialer, Rotter, Nowicki-Strickland, Stephens-Delys Reinforcement Contingency Interview, and Gruen, Korte, and Baum Internal-External Scale Tests. It is interesting that the four studies in which the IAR test was used, no significant difference was found between advantaged and disadvantaged (Crandall, et al., 1965; Lesiak, 1970) and between blacks and whites (Katz, 1967; Soloman, Houlihan, and Parelius, 1969). As was mentioned earlier, the IAR is viewed as the most specific of the locus of control measures, concerned primarily with the sense of personal control over reinforcements in the intellectual achievement area. In contrast, the Bialer, Rotter, and the Nowicki-Strickland measure concern over a more generalized sense of control, pertaining to several areas of reinforcement, which may be seen less potentially controllable to blacks and disadvantaged students than academic achievement.

From the above research it appears that disadvantaged and black students are not external when the IAR test is used but are external when unidimensional tests are used. The IAR test is similar in concept to the Personal Control factor discussed previously. Personal Control was defined as how much
control one feels he personally possesses. If locus of control tests like the Rotter or Bialer contain two factors as Gurin, Lao, and Mirels suggest, then it is possible that a black or disadvantaged student would appear to be external even if they felt they were internal in personal control. Since they have less objective access to reinforcement in the present culture, they will realistically be external on society control (or Control Ideology as called by Gurin and Lao).

In some ways the Black external is like the white internals and vice versa. For example, black externals and white internals are more politically active and have better self-concepts. In this society it may be functional for disadvantaged groups to be external, at least in society control. Blacks, external on Control Ideology, choose non-traditional Negro careers (Gurin, et.al., 1969). Likewise, blacks, external on Control Ideology joined with others for social actions. In contrast to previous experiments, then, externality in the sense of blaming the system for one's failures was associated with more aspiring ambitions, and a concern with social action. Internality creates support for the status quo among groups that are subject to social injustice, shielding them from the perception of obstacles than can only be overcome through group action. Personal control allows prediction of academic achievement-related behavior and control ideology predicts civil rights activities, and the preferred mode of social action (participation
in collective movements in a preference to concern with individual improvement) [Lao, 1970]. Thus it may be healthier for a black or a disadvantaged student to be external on society control in the present society. As blacks gain power in this culture, however, then internality for society control may be more beneficial.

Although all of the above studies used school age children as the population, it is likely that the external control expectancies among disadvantaged students precedes their school attendance. Stephens and Delys (1973) compared the expectancies of disadvantaged preschool children in Head Start, one white group and one black group, with those of middle-class children in one Montessori and two parent cooperative nursery schools using the Stephen-Delys Reinforcement Contingency Interview (SDRCI, 1973). The middle-class groups had significantly higher internal control scores than did the Head Start groups but did not significantly differ from each other, and the Black and White Head Start groups did not differ significantly from one another. From this they concluded that the external control expectancies of both black and white children do precede their school attendance.

Studies using any locus of control measure except the IAR have supported Coleman’s finding that minorities and disadvantaged students are more external on the internal-external continuum. Studies using the IAR which deals with the area of school reinforcement, have not shown significant differences.
The reason may be because minorities and the disadvantaged are groups whose social position is one of minimal power. By answering locus of control tests like the Bialer or Rotter tests honestly, the groups indicate that they have little control over their environment. If, instead, they are responding to a test which measures what goes on in the school classroom, the groups may have more of a chance like white middle-class students to observe that their behavior has a consequence. It seems likely that the external control expectancies of preschool black and disadvantaged children precede their school attendance.

**Antecedents of Locus of Control**

As studies have shown the importance of locus of control to learning and achievement, experimenters have become interested in exploring what factors in the home environment produce an internal versus external control. That is, what paternal behaviors and what maternal behaviors result in an internal or external child. Since children's locus of control is related less to parental attitudes than to children's or observers' perceptions of parental behavior (Lefcourt, 1972), a majority of studies have compared a child's locus of control to his perceived behavior of his parents.

Most of the studies on parental antecedents of locus of control have followed along Rotter's reasoning that internal control should be related to nurturance and parental consistancy.
In this regard, it has generally been found that in childhood a "positive parent" cluster (that is, parent-child relationships that are primarily warm, protective positive, and less critical) is associated with internality (Chance, 1965; Davis and Phares, 1969; Shore, 1968; Scheck, 1973; Baron and Ganz, 1972; Nowicki and Segal, 1974).

Not all data, however, is consistent with the above findings. For example, some degree of mild hostility and stress (related opposite to nurturance) on the parents' part is related to female internality (Katkovsky, Grandaal, and Good, 1967; Reimanis, 1971; Soloman, Houlihan, and Parelis, 1971; Levenson, 1973). Externality is associated with protective parents (MacDonald, 1971).

As part of the Coleman Report the pattern of relationships between background variables and locus of control was investigated. The background variables were 1) structural integrity of the home, 2) number of brothers and sisters, 3) length of residence in an urban area, 4) parents' education, 5) economic level of the home environment, 6) reading material in the home, 7) parents' interest in child's schooling, and 8) parents' desire for child's further education. Results indicated that for all groups, the parents desire for the child's further education have the largest unique contribution to positive self-concept and a sense of control of environment (locus of control).
From the research on parental antecedents of locus of control Levenson (1973) examined five hypotheses. In using her three new scales (Internal, Powerful Others, and Chance) the study supported three of the hypotheses: 1) Parental supporting-type behaviors (e.g. nurturance, instrumental companionship) are related positively to internal orientations for males but related negatively for females. 2) Parental demanding, punishing, and controlling-type behaviors are related positively to expectations that powerful others are in control. 3) Consistant parental behaviors (e.g. predictability of standards) are related negatively to expectancies that chance forces are in control—that the world is largely unpredictable.

Two of the hypotheses were not supported: 1) Perceived maternal behaviors were predicted to play a more central role than those of the fathers in their children's expectations of internal control. 2) Perceived paternal behaviors were predicted to play a more central role than those of mothers in their children's expectations of control by powerful others.

The data regarding antecedents of locus of control indicates that a warm, accepting home with predictable consistant standards is more commonly reported by internal children and adolescents than their external counterparts. The data also indicates that there are sex differences in antecedents of locus of control. Parental supporting-type behaviors are related positively to internal orientations for males, but related
negatively for females. By using a multidimensional measure of locus of control such as Levenson's three scales, additional relationships to perceived parental behaviors and each of the three scales can be found.

Changes in Locus of Control

Overall, there seems to be a small, but significant relationship between internality and development. Studies have found that internality increases between the grades kindergarten through fourth (Davis and Lesiak, 1967; Litzinger, 1968; Bialer, 1961; Nowicki and Duke, 1974; Gruen, et al., 1969; Nowicki and Strickland, 1973). When mental age is partialled out, however, the relationship is minimal (r=.02). With chronological age partialled out, however, mental age and locus of control are strongly related (r=.47). As a child develops in mental age, he can understand better the causal relationship between actions and consequences.

Studies using counseling have indicated that one's locus of control can be changed (Smith, 1970; Lesyk, 1969; Masters, 1970). Most of the counseling situations consisted of five weeks of counseling in which coping behaviors were taught. Emphasis was placed on reducing helplessness and alternatives to different problem situations.

Two studies outside of the counseling situation suggest that the proper setting will produce a change of locus of control.
Nowicki and Barnes (1973) employed effectiveness training during a summer camp experience in an attempt to effect locus of control scores of deprived inner-city adolescents. The camp was described as being highly structured, with emphasis placed on contingent reinforcement for good and poor performance. All groups but one increased in internality, the one exception exhibiting no noticeable change at all ($t=5.94$, $p < .022$).

The other study (Stephens and Delys, 1973) has investigated the impact on IE of two different Project Follow Through programs: The Educational Development Center (EDC)—sponsored "open classroom" model and the Engelmann-Becker "behavior modification" type of program. A total of 575 children, in 27 classrooms were tested, including two different Engelmann-Becker programs (one each with predominantly white and one each with predominantly black children). Both Engelmann-Becker programs produced higher SDRCI scores than found in a non-Follow Through comparison group of black-disadvantaged children, and EDC programs produced higher scores than Engelmann-Becker programs, with a middle-class white "open classroom" (non-Follow Through) group showing highest scores of all.

It is interesting in the two studies in which IE was significantly changed that what was emphasized was the consistancy setting of Nowicki and Barnes study and the "Open Classroom" setting of the Stephens and Delys' study.
If one was to view locus of control as multidimensional, it can be seen that the consistency setting is measured by the chance orientation locus of control. By providing consistency, the experimenters provided the subjects a non-chance locus of control. By using an "open classroom" setting the experimenters provided the subjects choices and responsibility for their learning. In such a setting the subjects were not receiving a "powerful others" locus of control. The value of students seeing themselves as having power in the classroom was found in a study by Nabler and Huffnung (1971). They found that children in "high powerful" classes were viewed more favorably by teachers, had higher achievement scores and were fewer behavior problems. All three studies (Stephens and Delys; Nowicki and Strickland; Nagler and Huffnung) used a unidimensional locus of control test, but the result was still significant. Using Levenson's multidimensional approach, the experimenters would have been able to observe if the children were significant on all three scales or just on one scale.

From the limited number of studies which have measured change of locus of control, it appears likely that a student's locus of control can change from external to more internal on the locus of control continuum. Development in mental age relates to internality. Situations which provide a student with consistency and reduced helplessness fosters internality.
Summary

Chapter II reviews the literature considering the importance of locus of control to achievement, the measure of locus of control, the relationship of it to social factors, antecedents of locus of control, and changes in locus of control. Although the studies presented reveal a great deal about which groups have internal control and to what internal control is related, more research is needed to explain why certain groups are external, and how internal control can be fostered by the teacher in the classroom.

One way to discover why and in what ways certain groups are external is to use a multidimensional measure of locus of control.

Although several investigators have advocated using a multidimensional measure of locus of control because two or more measures of locus of control are unrelated, no studies have investigated group differences using a multidimensional locus of control measure, despite the fact that some investigators have suggested that measuring locus of control as multidimensional is particularly important for disadvantaged groups. Using a multidimensional test to measure the locus of control of different groups can provide evidence as to what way disadvantaged groups are external. Disadvantaged groups may be external because of being external on questions of Personal Control, Society Control, or both. Based on the finding that blacks and low socioeconomic groups are no different than whites and high
socioeconomic groups when the IAR locus of control is used, it seems likely that disadvantaged groups are external on Society Control, since the IAR Scale is a good measure of Personal Control. Consideration of these conclusions leads to the following hypotheses:

1) Black students are significantly more external than white students on the Powerful Others Scale and the Chance Scale (Society Control), but there is no difference between groups on the Internal Scale (Personal Control).

2) Low socioeconomic class students are significantly more external than high socioeconomic class students on the Powerful Others Scale and the Chance Scale (Society Control), but there is no difference between groups on the Internal Scale (Personal Control).

Certain perceived parent behaviors are related to a child's locus of control. Situations which provide a student with consistency and reduced helplessness foster internality. Therefore, it seems quite possible that perceived teacher behaviors are related to a student's locus of control. These conclusions lead to the following hypotheses:

3) There is a significant relationship between the scores of students who perceive their teacher as being nurturant, consistent in discipline and
standards, protective, and exerting achievement pressure and an internal score on Levenson's Internal Scale.

4) There is a significant relationship between the score of students who perceive their teacher as being inconsistent in discipline and standards and an external score on Levenson's Chance Scale.

5) There is a significant relationship between the scores of students who perceive their teacher as being punishing and an external score on the Powerful Others Scale.

Research Question

Are there differences in perceived teacher behavior between black and white students, between low and high socio-economic students, and between male and female students? For example, is there a difference between black and white students in conjunction with whether or not they perceive their teacher as being nurturant?

The research question is important because if there is a difference between the way groups perceive the behavior of their teacher, then some answers are evident as to whether teachers are providing conditions which will promote a change. If nurturance relates to an internal score, then one can suggest that a teacher be nurturant to promote an internal locus of control. Part of
the reason why disadvantaged groups are external may be because they have teachers whose behavior they perceive as opposite to those behaviors which are positively related to internal control. If, for example, black students perceive the behavior of their teacher to be low on nurturance and nurturance is related to internal control, then some part of why blacks are external may be related to the students perception of their teacher as low on nurturance.

Of course the effect of promoting internality by providing a student with nurturance is only as strong as the relationship between the two variables. Obviously if the r value is small, the effect will be small if not negligible. Still, without knowing exactly what factors produce an internal locus of control, providing teacher behaviors which are related to internal control, if such relationships exists, is a start in fostering internality.
CHAPTER III

METHODOLOGY

The general design and procedures of the study are presented in Chapter III. The study was conducted to determine if there are race and class differences on both Personal Control and two measures of Society Control. In addition, the study examined the relationship between a student's locus of control on both Personal Control and two measures of Society Control and the student's rating of his teacher's behavior. The chapter is divided into four sections: 1) definition of the sample population, 2) the instruments used, 3) the collection of the data, and 4) the analysis of the data.

Definition of the Population Sample

Four different populations needed to be included in the present study, black/low socioeconomic class, black/high socioeconomic class, white/low socioeconomic class, and white/high socioeconomic class. Subjects for each of these groups were measured on a multidimensional test of locus of control and were asked to rate his or her teacher's behavior.

The subjects were 60 boys and 60 girls selected from sixth grade classes in the Springfield City School District during
the school year 1974-1975. The district has approximately 16,000 children and has twenty elementary schools, six junior highs and two high schools.

The dimensional of low/high socioeconomic class was determined by family income and residence area. Residence area was determined by the priority status of the school within the system. High and low priority schools were indicated by the percentage of deprived children within a school area (Lesiak, 1970). The larger the percentage of deprived children in a school, the higher was the priority status. From the list of twenty elementary schools, the three elementary schools with the highest percentage of deprived children were designated as the schools from which the low socioeconomic class students were selected and the four schools with the lowest percentage of deprived students were designated as the schools from which the high socioeconomic class students were selected.

Sixth grade students in the seven schools were considered as potential subjects. Thirty subjects were needed for each of the groups, black/low socioeconomic class, black/high socioeconomic class, white/low socioeconomic class, and white/high socioeconomic class. To obtain the sixth grade students for the low socioeconomic groups, a list was obtained from the principal and sixth grade teachers in the high priority schools of the students receiving free lunches. In order to be eligible for a free lunch, a student's family must have a very low family
income and must be receiving some sort of welfare assistance. To obtain the sixth grade students for the high socioeconomic groups, a list was obtained from the principal and sixth grade teachers in the low priority schools of the students whose families incomes were high or high average. From the students selected, the sample was determined by drawing a random sample. The eligible sixth grade students were arbitrarily numbered and a table of random numbers was used to determine the children selected from each school. An equal number of males (15) and females (15) were assigned to each of the four groups, thus totaling 60 males and 60 females.

A letter of explanation about the research study was sent to the parents of each of the 120 students. The parents were asked to send back the bottom portion of the letter in which they indicated whether they approved or disapproved of their child's participation in the research study. Only three students returned letters which indicated that they could not participate in the study. The three students who were next on the list of the eligible students from the same school of the students whose parents disapproved were selected. The parents of these three new students sent back approved forms.

The Instruments Used

The self-report measure for assessing locus of control was the Internal, Powerful Others, and Chance Scales (Levenson, 1972) each of which is comprised of eight items in a Likert format.
For each item a student rated one of seven categories from strongly agree to strongly disagree (possible range on each scale = from 0 to 48). The items attempt to measure the degree to which a subject perceives events in his life as being a consequence of his own acts, under the control of powerful others, or determined by chance. Giving an example from each scale, "Whether or not I get to be a leader depends mostly on my ability" is an item from the internal scale. "Even if I were a good leader, I would not be made a leader unless I play up to those in positions of power" is an item from the powerful others scale. And "Whether or not I get to be a leader depends upon whether I'm lucky enough to be in the right place at the right time" is an item from the chance scale.

Various estimates of reliability are comparable to those obtained by Rotter (1966) for the I-E Scale. For a student group Kuder-Richardson reliabilities are in the mid 60's and high 70's. Split-half reliabilities (Spearman-Brown) for an adult sample are all in the mid 60's and 70's (Levenson, 1973).

Each child also was administered the Perceived Teacher Behavior Questionnaire, taken from the Perceived Parenting Questionnaire (Devereux, Bronfenbrenner, and Rodgers, 1969) as modified by MacDonald (1971). The Questionnaire contains 21 items considered to measure nine general child-rearing behaviors:
nurturance, instrumental companionship, principled discipline, predictability of standards, protectiveness, physical punishment, achievement pressure, deprivation of privileges, and affective punishment. For each of the items, subjects chose one of five responses indicating the frequency with which a particular behavior appeared.

Although the Perceived Parenting Questionnaire was constructed to have children rate the behavior of their parents, the questionnaire is also appropriate to use with teachers. The test contains blanks on each question for the administrator to fill in the word "father" or "mother." In the present study the words "my teacher" were placed in every blank. An example from the questionnaire illustrates this: "When I did something_________________________ didn't like, I knew exactly what to expect of__________________________." Instead of mother or father being put in the blanks, the words "my teacher" were used.

Estimates of reliability are comparable to the reliability coefficients of the internal, powerful others and chance scales. Split-half reliabilities (Spearman-Brown) ranged from .50 to .82, most of the coefficients in the 60's and 70's.

The two test instruments were shown to three sixth grade teachers to find out if they felt that sixth grade students could comprehend the questions. In addition, the instruments were pretested by two male and two female sixth grade students in a school not used in the study. The students were asked to read
each of the items aloud and to ask for clarification if they could not understand a question. There were no questions about the Perceived Teacher Behavior Questionnaire, but a few words were not understood in the Internal, Powerful Others, and Chance Scales. "Personal interests," "accidental happenings," and "powerful others" all had to be defined. Subsequently, the above words were defined when each of the 120 subjects took the test.

Collection of the Data

All 120 students responded to the locus of control measure and the modified version of the Perceived Parenting Questionnaire. The tests were administered during the month of May in the schools in which the sixth grade students attended. The administration was conducted in May because that allowed the maximum amount of time for a student to know the behavior of the teacher and maximum amount of time for a student's locus of control to change, based on the behavior of the teacher.

Students were tested in groups of three and four by the investigator. Each subject was presented a copy of the measurement to read and record his/her answers. Items were read orally by the examiner so that the subjects could hear each item as well as read (see) it.
Analysis of the Data

Responses to each of the items of the Internal, Powerful Others and Chance Scales were summed for each subject. A score from 0 - 6 was assigned to each of the categories, from Strongly Agree to Strongly Disagree. The higher the score the higher the subject on the Internal, Powerful Others and Chance Scales. A higher score on the Internal Scale indicates that one is internal on a measure Personal Control. A high score on Powerful Others or Chance indicates that a person is external on a measure of Society Control. Conversely, a low score on the Internal Scale indicates that one is external on Personal Control and a low score on Powerful Others or Chance Scales indicates that a person is internal on that measure of Society Control.

The design arrangement used to measure race and socioeconomic class differences on the three locus of control scales was the two-factor multivariate analysis of variance (MANOVA). The independent variables were race which consisted of two levels, black and white students and socioeconomic class which consisted of two levels, low and high socioeconomic class students. The dependent variables were the three locus of control scales, Internal, Powerful Others, and Chance Scales.

A multivariant analysis of variance (MANOVA) was conducted to measure race and class differences on the three locus of control scales. When significance was achieved for the overall
MANOVA test \((p < .05)\), the univariate F's, the discriminant analysis and the structure matrix were computed to determine in which measure(s) group differences existed.

To determine a subject's perceived teacher behavior of his teacher, a student rated his teacher on nine general behaviors, choosing one of five responses to indicate the frequency of that behavior. Scores on the nine perceived teacher behaviors were correlated with the three locus of control measures by performing a canonical correlation. The canonical correlation measures the overall relationship between two sets of variables, which is simply a Pearson \(r\) calculated on two numbers for each subject: \(W_j \cdot W_j X_j\) and \(V_j = \{v: Y_j\}\), where the \(X\)'s are the predictor variables and the \(Y\)'s are outcome measures.

Heuristically, the \(W_j\) and \(V_j\), which are called canonical coefficients for the predictor and outcome measures, respectively, are obtained by trying out different sets of weights until the pair of sets of weights which produces the maximum possible value of canonical \(R(Rc)\) has been obtained. A second pair of sets of weights can be sought which will produce the maximum possible Pearson \(r\) between the two combined variables, subject to the constraint that those two new combined variables be uncorrelated with the first two combined variables.

When significance was achieved by performing a canonical correlation \((p < .05)\), a stepwise regression analysis was performed on the three locus of control scales in relation to each
of the perceived teacher behavior variables which were large weights (> .40) on the factor structure of the significant canonical correlation. The regression analysis provided a clearer picture of the relationship of each locus of control scale to each of the significant perceived teacher behaviors.

A MANOVA was also conducted to measure race, class, and sex differences on the nine perceived teacher behaviors. When significance was achieved for the overall MANOVA test (p < .05), the univariate F's, the discriminant analysis and the structure matrix were computed to determine on which measure(s) group differences existed.
CHAPTER IV

FINDINGS

The present study investigated whether there are race and socioeconomic class differences on measure of Society Locus of Control and Personal Locus of Control. Society Control and Personal Control were measured by using Levenson's Internal, Powerful Others, and Chance Locus of Control Scales. The present study also investigated whether there is a relationship between a student's perception of his teacher's behavior and his locus of control on the Internal, Powerful Others, and Chance Scales. A research question was asked, "Is there a significant difference between black/white, low/high socioeconomic class, and male/female students in the way they perceive their teacher on the nine perceived teacher behavior scales?"

The sample consisted of 120 sixth grade students in seven elementary schools. Thirty subjects were needed for each of the groups, black/low socioeconomic class, black/high socioeconomic class, white/low socioeconomic class, and white/high socioeconomic class. The dimension of low/high socioeconomic class was determined by family income and residence area.

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Each group of thirty subjects contained fifteen males and fifteen females. Subjects in groups of three or four were presented two self-report measures, one the Internal, Powerful Others, and Chance Scales, and the other, the Perceived Teacher Behavior Questionnaire. All of the items on both measures were read orally by the investigator as the subjects read the items to themselves and then marked the appropriate answer. Discussion of the statistical analysis of the data is presented sequentially according to the hypothesis under consideration.

Race and Socioeconomic Class and Locus of Control

The Internal, Powerful Others, and Chance Scales were administered to measure the Society Control and Personal Control of the subjects in investigation of the first two hypotheses of the present study.

Hypothesis 1. Black students are significantly more external than white students on the Powerful Others Scale and Chance Scale (Society Control), but there is no difference between groups on the Internal Scale (Personal Control).

The means and standard deviations of black and white students by the Internal, Powerful Others and Chance locus of control scales is presented in Table 1. To compare scores on the three locus of control scales for black and white students, a multivariate analysis of variance (MANOVA) was performed. The results of the MANOVA indicated a significant difference between black and white students on the three locus of control measures
(F = 6.1179; df = 3/114; p < .0007).

TABLE 1

GROUP MEANS AND STANDARD DEVIATIONS OF THE INTERNAL, POWERFUL OTHERS AND CHANCE SCALES BY RACE

<table>
<thead>
<tr>
<th>Subject Group</th>
<th>Internal Scale</th>
<th>Powerful Others Scale</th>
<th>Chance Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black students</td>
<td>34.97</td>
<td>33.10</td>
<td>32.22</td>
</tr>
<tr>
<td></td>
<td>5.26</td>
<td>7.23</td>
<td>5.06</td>
</tr>
<tr>
<td>White students</td>
<td>34.02</td>
<td>34.25</td>
<td>28.77</td>
</tr>
<tr>
<td></td>
<td>4.94</td>
<td>6.48</td>
<td>5.52</td>
</tr>
</tbody>
</table>

Upper number is mean, lower number is standard deviation

To determine the nature of group differences relative to the three locus of control scales, 1) univariate ANOVA's were conducted on each of the locus of control scales, 2) a discriminant analysis was performed, and 3) a structured matrix was computed. These analyses are presented in Table 2. The weights are standardized weights, and thus may be used in attempts to determine the relative contribution made by each locus of control variable to the function. The structure matrix is the correlation between resultant discriminant scores and the three sets of factor scores which are presented in Table 2.
TABLE 2
DISCRIMINANT ANALYSIS, STRUCTURE MATRIX AND
ANOVA'S OF INTERNAL, POWERFUL OTHERS AND
CHANCE SCALES BY RACE

<table>
<thead>
<tr>
<th>Standardized Discriminant Analysis Weights</th>
<th>Structure Matrix</th>
<th>Univariate F Tests (df=3/144)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Scale</td>
<td>0.22</td>
<td>.27</td>
</tr>
<tr>
<td>Powerful Others Scale</td>
<td>-0.62</td>
<td>-.21</td>
</tr>
<tr>
<td>Chance Scale</td>
<td>1.01</td>
<td>.82</td>
</tr>
</tbody>
</table>

***p < .0001

According to the statistical analysis there was no significant difference between black and white students in Personal Control as measured by the Internal Scale. This finding supports Hypothesis 1 that there is no group difference between black and white students in Personal Control. The findings on the analysis of group differences on measures of Society Control only partially supported Hypothesis 1 that blacks are more external on both measures of Society Control, Powerful Others and Chance. Black students were significantly more external than white students on the Chance Scale as hypothesized, but there was no significant difference between groups on the Powerful
Others Scale. Thus, two parts of Hypothesis 1 were supported: There is no significant difference between black and white students on a measure Personal Control and there is a significant difference between black and white students on one measure of Society Control, Chance. The other part of Hypothesis 1 was not supported: There is no significant difference between black and white students on another measure of Society Control, Powerful Others.

The evidence suggests that race differences in locus of control between black and white students are because of differences in responses to questions which measured luck as an important factor in determining what happens to a person. A black student is more likely than a white student to feel that being successful or having friends is due to how lucky a person is. No difference is evident, however, between groups regarding whether powerful others are a factor in determining what happens to a person or whether the student, himself, is a factor in determining what happens to him.

Hypothesis 2. Low socioeconomic class students are significantly more external than high socioeconomic class students on the Powerful Others Scale and the Chance Scale (Society Control), but there is no difference between groups on the Internal Scale (Personal Control).

The means and standard deviations of socioeconomic class by the three locus of control scales is presented in Table 3.
A MANOVA was performed to compare the three locus of control scales for low and high class students. The results of the MANOVA indicated a significant difference between low and high class students on the three locus of control measures \( f=2.6173; \text{df}=3/114; p \leq 0.0544 \).

**Table 3**

GROUP MEANS AND STANDARD DEVIATIONS OF THE INTERNAL, POWERFUL OTHERS AND CHANCE SCALES BY SOCIOECONOMIC CLASS

<table>
<thead>
<tr>
<th>Subject Group</th>
<th>Internal Scale</th>
<th>Powerful Others Scale</th>
<th>Chance Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Socioeconomic Class Students</td>
<td>35.08</td>
<td>35.45</td>
<td>31.13</td>
</tr>
<tr>
<td></td>
<td>4.84</td>
<td>6.98</td>
<td>5.46</td>
</tr>
<tr>
<td>High Socioeconomic Class Students</td>
<td>33.90</td>
<td>31.90</td>
<td>29.85</td>
</tr>
<tr>
<td></td>
<td>5.10</td>
<td>6.71</td>
<td>5.37</td>
</tr>
</tbody>
</table>

Upper number is mean, lower number is standard deviation

Although the value of \( p \leq 0.0544 \) is a borderline result for indicating a significant difference between groups, and could technically be considered not significant, the value was considered to be significant if the difference between groups were found to be the same as what was hypothesized. The \( p \leq 0.0544 \)
value was considered to be significant if further analysis indicated that low socioeconomic class students were more external on a measure of Society Control, Powerful Others, or Chance.

To determine the nature of group differences relative to the three locus of control scales, univariate ANOVA's, a discriminant analysis, and a structure matrix were performed. These statistical analyses are presented in Table 4. The results indicated that there is no significant difference between low and high class students in Personal Control of measured by the Internal Scale. This finding supports Hypothesis 2 that there is no group difference between low socioeconomic class and high socioeconomic class students in Personal Control. The findings of the analysis of group differences on measures of Society Control only partially supported Hypothesis 2 that low socioeconomic class students are more external on both measures of Society Control. Low socioeconomic class students were significantly more external than high socioeconomic class students on the Powerful Others scale, but there was no significant difference between groups on the Chance Scale. Thus two parts of Hypothesis 2 were supported: There is no significant difference between low and high socioeconomic class students on a measure of Personal Control and there is a significant difference between low and high socioeconomic class students on one measure of Society Control, Powerful Others. The other part of
Hypothesis 2 was not supported: There is no significant difference between low and high socioeconomic class students on another measure of Society Control, Chance.

The evidence suggests that differences in locus of control between low and high socioeconomic class students are because of differences in responses to questions which measure powerful others as important factors in determining what happens to a person. Low socioeconomic students are more likely than high socioeconomic students to feel that being successful or having friends is due to one playing up to those who are in positions of power. No difference is evident, however, between groups regarding whether chance is a factor in determining what happens to him.

### TABLE 4

**DISCRIMINANT ANALYSIS, STRUCTURE MATRIX AND ANOVAS OF INTERNAL, POWERFUL OTHERS, AND CHANCE SCALES BY SOCIOECONOMIC CLASS**

<table>
<thead>
<tr>
<th></th>
<th>Standardized Discriminant Analysis Weights</th>
<th>Structure Matrix</th>
<th>Univariate F Tests (df=3/114)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Scale</td>
<td>-0.29</td>
<td>-0.46</td>
<td>1.64</td>
</tr>
<tr>
<td>Powerful Others Scale</td>
<td>-0.87</td>
<td>-0.95</td>
<td>7.25**</td>
</tr>
<tr>
<td>Chance Scale</td>
<td>-0.09</td>
<td>-0.47</td>
<td>1.69</td>
</tr>
</tbody>
</table>

**P < .01**
A MANOVA was performed to measure interaction, race X class, on the three locus of control scales. The result was not significant ($F=1.818; \, df=3/114; \, p<.1479$). Table 5 displays factor score means and standard deviations of the three locus of control scales by the four groups, black/low socioeconomic class, black/high socioeconomic class, white/low socioeconomic class, and white/high socioeconomic class.

**TABLE 5**

GROUP MEANS AND STANDARD DEVIATIONS OF THE INTERNAL, POWERFUL OTHERS AND CHANCE SCALES BY RACE AND SOCIOECONOMIC CLASS

<table>
<thead>
<tr>
<th>Subject Group</th>
<th>Internal Scale</th>
<th>Powerful Others Scale</th>
<th>Chance Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black/low socioeconomic class</td>
<td>36.37</td>
<td>24.70</td>
<td>33.53</td>
</tr>
<tr>
<td></td>
<td>5.85</td>
<td>9.03</td>
<td>5.47</td>
</tr>
<tr>
<td>Black/high socioeconomic class</td>
<td>33.57</td>
<td>31.50</td>
<td>30.90</td>
</tr>
<tr>
<td></td>
<td>4.55</td>
<td>6.68</td>
<td>4.75</td>
</tr>
<tr>
<td>White/low socioeconomic class</td>
<td>33.80</td>
<td>26.20</td>
<td>28.73</td>
</tr>
<tr>
<td></td>
<td>5.25</td>
<td>5.59</td>
<td>4.65</td>
</tr>
<tr>
<td>White/high socioeconomic class</td>
<td>34.23</td>
<td>32.30</td>
<td>28.80</td>
</tr>
<tr>
<td></td>
<td>4.45</td>
<td>7.14</td>
<td>6.56</td>
</tr>
</tbody>
</table>

Upper number is mean, lower number is standard deviation.
Sex and Perceived Teacher Behavior and Locus of Control

The Perceived Teacher Behavior Questionnaire was administered to measure the student's perception of his/her teacher in nine categories, Nurturance, Instrumental Companionship, Principled Discipline, Predictability of Standards, Protectiveness, Physical Punishment, Achievement Pressure, Deprivation of Privileges, and Affective Punishment. The relationship of these nine factors to the scores of each student on Levenson's three scales was analyzed in investigation of the third, fourth, and fifth hypotheses of the present study.

Hypothesis 3. There is a significant relationship between the scores of students who perceive their teacher as being nurturant, consistent in discipline and standards, protective, exerting achievement pressure, and Levenson's Internal Scale.

Because studies have indicated sex differences as to which perceived parent behavior related to an internal locus of control, sex was used as one of the variables along with the nine perceived teacher behaviors. These ten factors were the predictor variables and the three locus of control measures were the outcome measures. To determine the overall relationship between the two sets of variables a canonical correlation was performed. One significant pair of sets of weights was produced (Chi Square = 45.82; df = 30; P < .04).
To determine what factors were important ones in relating the predictor variables to the outcome variables, the weights of the factor structure for the left and right side were examined. Table 6 contains the factor structure for the left and right set. Scores of higher than .40 are deemed as important. The results of the factors structure indicate that a student who perceives his/her teacher as being protective, exerting achievement pressure and consistent in discipline is related to a student with an internal score on the Internal Scale and an external score on Powerful Others and Chance. The scores of the three locus of control scales and two of the perceived teacher behaviors, protective and exerting achievement pressure were all between .65 and .74.
<table>
<thead>
<tr>
<th>LEFT SET</th>
<th>Canonical Weight</th>
<th>Factor Structure</th>
<th>RIGHT SET</th>
<th>Canonical Weights</th>
<th>Factor Structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived Behavior</td>
<td></td>
<td></td>
<td>Locus of Control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td>-.014</td>
<td>.007</td>
<td>Internal</td>
<td>.560</td>
<td>.717</td>
</tr>
<tr>
<td>Nurturance</td>
<td>-.285</td>
<td>.149</td>
<td>Powerful Others</td>
<td>.475</td>
<td>.713</td>
</tr>
<tr>
<td>Instrumental Companionship</td>
<td>.236</td>
<td>.089</td>
<td>Chance</td>
<td>.394</td>
<td>.658</td>
</tr>
<tr>
<td>Principled Discipline</td>
<td>.377</td>
<td>.438</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Predictability of Standards</td>
<td>.009</td>
<td>.237</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protectiveness</td>
<td>.608</td>
<td>.748</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical Punishment</td>
<td>.281</td>
<td>.247</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Achievement Pressure</td>
<td>.516</td>
<td>.650</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deprivation of Privileges</td>
<td>.055</td>
<td>.124</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Affective Punishment</td>
<td>-.415</td>
<td>-.071</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The second and third pair of sets of weights were computed along with the first pairs. Neither pair, however, were significant (Chi Square = 9.10; df = 18; p < .92; Chi Square = 1.58; df = 8; p < .96; respectfully).

The result of the canonical correlation seems contradictory. Three of the perceived teacher behaviors that were hypothesized to relate to the Internal Scale did, in fact, correlate. The apparent contradiction is in the fact that these same behaviors related to external scores on the Powerful Others and Chance Scale. The same three perceived teacher behavior factors that related to an internal score on the Internal scale were also related to an external score on the Powerful Others and Chance scales. The results may not be so surprising, however, if one examines the correlations between Personal Control and society Control. As was mentioned in Chapter I, the correlation between these two factors is not significant, around .18 in two studies (Reid and Ware, 1973; Lao, 1970) and by Levenson (1973) when she measured the correlations between the Internal and Powerful Others Scales (r = .04) and between the Internal and Chance Scales (r = .03). The fact that the two measures do not correlate was one of the rationales for a multidimensional measure for locus of control. The correlations obtained in the present study between the Internal Scale (Personal Control) and the two measures of Society Control, Powerful Others and Chance were also very low, r = .183 between the Internal Scale and the
Powerful Others Scale and $r=0.178$ between the Internal Scale and the Chance Scale. The relationship between the Powerful Others Scale and the Chance Scale was moderately higher, $r=0.345$. The very low to moderately low correlations between the three locus of control scales supports the idea that they are measuring different factors within the locus of control construct and thus support the viewing of locus of control as best measured as being multidimensional, rather than unidimensional.

Remembering that in using Levenson's scale, a high score on the Internal Scale indicates an internal locus of control and a high score on either the Powerful Others Scale or the Chance Scale indicates an external locus of control, the correlations between the measure of Personal Control and the two measures of Society Control must be viewed as $-0.183$ and $-0.178$. If these correlations were significant, the results would imply that a student who feels that "Whether or not I get to be a leader depends mostly upon my ability" might also be a student who would feel, "Even if I were a good leader, I would not be made a leader unless I play up to those in positions of power." The results are not significant between the locus of control measures, but as was mentioned, the canonical correlation was significant between three teacher behaviors and an internal score on the Internal Scale and an external score on the Powerful Others and Chance Scales. A discussion of this finding will be offered in Chapter V.
A stepwise multiple regression analysis was performed to compare the pattern of the results from this analysis with the results of the canonical correlation. In using the multiple regression analysis each of the perceived teacher behaviors were the dependent variables and the three locus of control scales were the independent variables. An analysis was performed with all nine perceived teacher behaviors as the dependent variable, but only the three significant perceived teacher behaviors from the canonical correlation, protectiveness, achievement pressure, and principled discipline, were closely examined. The profile of scores was similar to that obtained when the canonical correlation was performed. The results of the stepwise multiple regression are displayed in Table 7.
TABLE 7

STANDARDIZED REGRESSION WEIGHTS OF THE STEPWISE MULTIPLE REGRESSION
OF INTERNAL, POWERFUL OTHERS, AND CHANCE SCALES BY
PERCEIVED TEACHER BEHAVIOR

<table>
<thead>
<tr>
<th>Perceived Teacher Behavior</th>
<th>Step 1 Variable Entered</th>
<th>Step 2 Variable Entered</th>
<th>Step 3 Variable Entered</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Protection</td>
<td>Protection</td>
<td>Protection</td>
</tr>
<tr>
<td></td>
<td>Internal Scale</td>
<td>Powerful Others</td>
<td>Chance</td>
</tr>
<tr>
<td></td>
<td>Weight = .22</td>
<td>Weight = .17</td>
<td>Weight = .14</td>
</tr>
<tr>
<td></td>
<td>RSQ = .0783</td>
<td>RSQ = .1255</td>
<td>RSQ = .1423</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Achievement Pressure</td>
<td>Protection</td>
<td>Protection</td>
</tr>
<tr>
<td></td>
<td>Powerful Others</td>
<td>Internal</td>
<td>Chance</td>
</tr>
<tr>
<td></td>
<td>Weight = .18</td>
<td>Weight = .17</td>
<td>Weight = .11</td>
</tr>
<tr>
<td></td>
<td>RSQ = .0655</td>
<td>RSQ = .973</td>
<td>RSQ = .1080</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Principled Discipline</td>
<td>Protection</td>
<td>Protection</td>
</tr>
<tr>
<td></td>
<td>Powerful Others</td>
<td>Internal</td>
<td>Chance</td>
</tr>
<tr>
<td></td>
<td>Weight = .17</td>
<td>Weight = .08</td>
<td>Weight = .06</td>
</tr>
<tr>
<td></td>
<td>RSQ = .0443</td>
<td>RSQ = .0514</td>
<td>RSQ = .0545</td>
</tr>
</tbody>
</table>

Scores are standardized weights which is the raw score times the standard deviation of the corresponding locus of control scales divided by the standard deviation of the applicable teacher behavior.
The results of the statistical analysis comparing the students' scores on the Teacher Behavior Questionnaire and his score on the Internal Scale partially supported Hypothesis 3. There is a relationship between students who perceive their teacher as being protective, exerting achievement pressure and consistent in discipline and an Internal Score on Levenson's Internal Scale. The other hypothesized teacher behaviors, nurturance, and consistency in standards, were not significant.

Hypothesis 4. There is a significant relationship between the scores of students who perceive their teacher as being inconsistent in discipline and standards and an external score on Levenson's Chance Scale.

As was mentioned earlier, the analysis of the data using the canonical correlation produced only one significant set of variables. The factor consistent in standards was not a large weight in the set of significant variables. Therefore, the data does not support Hypothesis 4 that the perceived teacher behavior, inconsistency in standards, is related to Levenson's Chance Scale. The factor consistent in discipline was a large weight in the set of significant variables. The data indicated, however, that consistency in discipline, not inconsistency in discipline, was related to the Chance Scale. Therefore, the data does not support either part of Hypothesis 4.

Hypothesis 5. There is a significant relationship between the scores of students who perceive their teacher as being punishing and an external score on the Powerful Others Scale.
Neither the perceived teacher behavior of physical punishment or affective punishment were large weights on the set of variables in the significant canonical correlation. High positive scores on the perceived teacher behaviors of protectiveness, achievement pressure and consistency in discipline were related to an external score on the Powerful Others Scales. The results indicate that Hypothesis 5 should be rejected. There is no significant relationship between the scores of students who perceive their teacher as being punishing and an external score on the Powerful Others Scale.

Race, Socioeconomic Class, and Sex and Perceived Teacher Behavior

The results of the Perceived Teacher Behavior Questionnaire were used to measure race, socioeconomic class and six differences on the nine teacher behaviors in investigation of the research question.

Research question. Are there differences in perceived teacher behaviors between black and white students, between low and high socioeconomic class students, and between male and female students?

Related Studies

Very few studies have explored the possibility of different teacher behaviors for different races or socioeconomic classes. A comprehensive review of studies focusing upon educational opportunities does not include a single study which has
assessed educational opportunities arising from the classroom teaching process (Guthrie, 1971). Using the Flanders Interaction Analysis to measure teacher-student interaction, Jackson and Cosca (1974) found that teachers praised or encouraged Anglos 35% more than they did Chicanos, accepted or used Anglos' ideas 40% more than they did those of Chicanos, and directed 21% more questions to Anglos than to Chicanos. The investigators concluded by stating that the above finding raises an important question of whether similar inequalities in the classroom instruction process exist for other minority group children throughout the nation's schools.

The present study used students to measure the behavior of the teacher rather than an outside observer, and the instrument used to measure behavior was the Perceived Teacher Behavior Questionnaire, rather than the Flanders Interaction Analysis. Thus, comparisons with Jackson and Cosco's study cannot directly be made. Nevertheless, a MANOVA was performed to determine if there were group differences in race, class or sex in the way that each of these groups perceived their teacher's behavior. The results of the MANOVA indicated a significant difference in perceived teacher behavior between black and white students ($F=2.6997; \hat{df} = 9/104; p < .0073$), low and high socioeconomic class students ($F=6.9546; \hat{df} = 9/104; p < .0001$) and between male and female students ($F=2.7208; \hat{df} = 9/104; p < .0069$).
To determine the nature of the differences for race, class and sex relative to the nine perceived teacher behaviors, univariate ANOVAs were conducted on each of the nine behaviors, a discriminate analysis was performed, and a structure matrix was computed. These analyses for race differences are presented in Table 8. The results indicated Black students perceived their teacher as being more protective and using affective punishment.

The same three analysis procedures were used to examine socioeconomic class differences for each of the teacher behaviors. The analyses are presented in Table 9. The data indicated significant differences on three perceived teacher behaviors. Low socioeconomic class students perceived their teacher as being more protective, exerting achievement pressure, and showing instrumental companionship.
TABLE 8
DISCRIMINANT ANALYSIS, STRUCTURE MATRIX AND ANOVAs
OF PERCEIVED TEACHER BEHAVIORS BY RACE

<table>
<thead>
<tr>
<th></th>
<th>Standardized Discriminant Analysis Weights</th>
<th>Structure Matrix</th>
<th>Univariate F Tests (df =9/104)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurturance</td>
<td>-.33</td>
<td>-.01</td>
<td>0.16</td>
</tr>
<tr>
<td>Instrumental Companionship</td>
<td>-.18</td>
<td>-.03</td>
<td>0.51</td>
</tr>
<tr>
<td>Principled Discipline</td>
<td>.78</td>
<td>.38</td>
<td>3.15</td>
</tr>
<tr>
<td>Predictability of Standards</td>
<td>-.45</td>
<td>-.18</td>
<td>0.99</td>
</tr>
<tr>
<td>Protectiveness</td>
<td>.43</td>
<td>.51</td>
<td>5.09*</td>
</tr>
<tr>
<td>Physical Punishment</td>
<td>.43</td>
<td>.42</td>
<td>3.20</td>
</tr>
<tr>
<td>Achievement Pressure</td>
<td>.23</td>
<td>.42</td>
<td>2.73</td>
</tr>
<tr>
<td>Deprivation of Privileges</td>
<td>-.43</td>
<td>.01</td>
<td>0.07</td>
</tr>
<tr>
<td>Affective Punishment</td>
<td>.51</td>
<td>.46</td>
<td>3.92*</td>
</tr>
</tbody>
</table>

*P < .05
### TABLE 9
DISCRIMINANT ANALYSIS, STRUCTURE MATRIX AND ANOVAS OF PERCEIVED TEACHER BEHAVIOR BY SOCIOECONOMIC CLASS

<table>
<thead>
<tr>
<th></th>
<th>Standardized Discriminant Analysis Weights</th>
<th>Structure Matrix</th>
<th>Univariate F Tests (df =9/10^4)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurturance</td>
<td>.03</td>
<td>.29</td>
<td>4.37</td>
</tr>
<tr>
<td>Instrumental</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Companionship</td>
<td>.51</td>
<td>.44</td>
<td>9.99**</td>
</tr>
<tr>
<td>Principled</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discipline</td>
<td>-.23</td>
<td>.18</td>
<td>1.49</td>
</tr>
<tr>
<td>Predictability of</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standards</td>
<td>-.26</td>
<td>.08</td>
<td>0.35</td>
</tr>
<tr>
<td>Protectiveness</td>
<td>.58</td>
<td>.60</td>
<td>17.06****</td>
</tr>
<tr>
<td>Physical Punishment</td>
<td>.10</td>
<td>.09</td>
<td>0.04</td>
</tr>
<tr>
<td>Achievement Pressure</td>
<td>.58</td>
<td>.69</td>
<td>23.78****</td>
</tr>
<tr>
<td>Deprivation of Privileges</td>
<td>-.67</td>
<td>-.32</td>
<td>4.82</td>
</tr>
<tr>
<td>Affective Punishment</td>
<td>.30</td>
<td>.18</td>
<td>0.75</td>
</tr>
</tbody>
</table>

**p < .01

****p < .0001
Analyses of sex differences for each of the teacher behaviors revealed a significant difference on the behaviors of physical punishment and affective punishment. Males perceived their teachers as using more physical punishment and affective punishment than females. The analyses are presented in Table 10.

**TABLE 10**

**DISCRIMINANT ANALYSIS, STRUCTURE MATRIX AND ANOVAS OF PERCEIVED TEACHER BEHAVIORS BY SEX**

<table>
<thead>
<tr>
<th>Standardized Discriminant Analysis Weights</th>
<th>Structure Matrix</th>
<th>Univariate F Tests (df =9/104)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nurturance</td>
<td>.06</td>
<td>-.15</td>
</tr>
<tr>
<td>Instrumental Companionship</td>
<td>-.22</td>
<td>-.21</td>
</tr>
<tr>
<td>Principled Discipline</td>
<td>-.65</td>
<td>-.36</td>
</tr>
<tr>
<td>Predictability of Standards</td>
<td>.31</td>
<td>.14</td>
</tr>
<tr>
<td>Protectiveness</td>
<td>.17</td>
<td>.01</td>
</tr>
<tr>
<td>Physical Punishment</td>
<td>-.60</td>
<td>-.63</td>
</tr>
<tr>
<td>Achievement Pressure</td>
<td>.20</td>
<td>-.06</td>
</tr>
<tr>
<td>Deprivation of Privileges</td>
<td>.17</td>
<td>-.14</td>
</tr>
<tr>
<td>Affective Punishment</td>
<td>-.77</td>
<td>-.53</td>
</tr>
</tbody>
</table>

*P < .05
**P < .01
The research question in the present study asked whether there were race, class, or sex differences in the way these groups perceived their teacher's behavior. Results of the analysis indicated that there were group differences for all three groups. Male students perceived their teacher as being more punishing. Black students perceived their teacher as being more protective, exerting achievement pressure and showing instrumental companionship.

These results indicate that, through the perception of the students, teacher behaviors are different for different races, socioeconomic classes, and sexes. The Jackson and Cosca study suggested that Chicanos received different teacher behaviors than Anglos. Differences were in favor of the Anglos receiving student-teacher interaction behaviors which related to higher achievement. Therefore, Chicanos were not receiving equal educational opportunities.

The findings of the present study are hard to interpret in terms of relating them to the above study. There were differences between races and socioeconomic classes, but it is unclear whether the differences favored one group or another. If one looks at the perceived teacher behaviors of protective-ness, exerting achievement pressure and consistency in discipline which related to an internal score on Personal Control, it appears as if blacks and low socioeconomic class students are receiving beneficial teacher behaviors. Because these
perceived teacher behaviors are also related to an external score on the Powerful Others and Chance Scale, however, it is difficult to say if these behaviors are beneficial and are contributing to educational opportunity.

Summary of the Findings

In Chapter IV an analysis was made of the results of the two instruments, the Internal, Powerful Others and Chance Scales and the Perceived Teacher Behavior Questionnaire. Findings included:

1) No significant differences were found between black and white students on the measure Personal Control, Internal Scale, or on one measure of Society Control, the Powerful Others Scale. Black students scored significantly more external on a second measure of Society Control, the Chance Scale.

2) No significant differences were found between low and high socioeconomic class students on the measure of Personal Control, the Internal Scale, or on one measure of Society Control, the Chance Scale. Low socioeconomic class students scored significantly more external on a second measure of Society Control, the Powerful Others Scale.

3) There is a significant relationship between the scores of students who perceive their teacher as being
protective, exerting achievement pressure and consistency in discipline and an internal score on the Internal Scale. There is also a significant relationship between the scores of students who perceive their teacher with the above behaviors and an external score on the Powerful Others Scale and an external score on the Chance Scale.

4) No significant relationships were found between the scores of students who perceived their teacher as being inconsistent in discipline and standards and an external score on the Chance Scale; or between the scores of students who perceived their teacher as being punishing and an external score on the Powerful Others Scale.

5) There are significant differences between black/white, low/high socioeconomic class, and male/female students in the way that they perceive their teacher. Black students perceived their teacher as being more protective and using affective punishment. Low socioeconomic class students perceived their teacher as being more protective, exerting achievement pressure, and showing instrumental companionship. Male students perceived their teacher as using more physical and affective punishment.
CHAPTER V

SUMMARY AND CONCLUSIONS

Summary of the Study

It was the purpose of the present study to investigate the relationship of the locus of control construct to race, socioeconomic class, sex and perceived teacher behavior. Locus of control was measured as being multidimensional rather than unidimensional, based on factor analyses of tests of locus of control and low correlations between two or more measures of locus of control. Locus of control was measured by using Levenson's Internal, Powerful Others, and Chance Scales. The Internal Scale is a measure of one's Personal Control, how much control one feels he personally possesses. The Powerful Others and Chance Scales are measures of one's Society Control, how much control one believes most people in society possess. Perceived teacher behavior was measured by asking students to complete the Perceived Teacher Behavior Questionnaire, a modified version of the Perceived Parents Questionnaire. In this instrument the students rated the behavior of their teacher on nine behaviors, nurturance, instrumental companionship, principled discipline, predictability of standards, protectiveness,
physical punishment, achievement pressure, deprivation of privileges, and affective punishment.

A review of the literature suggested that groups whose social positions is one of minimal power are more external on the locus of control continuum. Blacks are more external than Whites. People from a low socioeconomic level are more external than people from a high socioeconomic level and disadvantaged groups are external even before they begin school. The locus of control construct is important because of its relationship to student achievement. In the Coleman Report (1966) locus of control related higher to achievement for disadvantaged students than some 100 other school-related variables. If a student feels that there is no connection between his effort and consequences (external control) he may refuse to try, believing that the results of what happens to him are not different whether he tries or not.

Although viewing locus of control as multidimensional has been advocated by many investigators, no studies have compared group differences on multiple measures of locus of control. Disadvantaged groups may be external on Society Control, external on Personal Control, or both. Gurin (1969 and Lao (1970) have suggested that blacks are external on Personal Control, but the findings of studies that there is no group difference when the IAR (Personal Control) locus of control test is used have influenced the present study to hypothesize race and class
differences on just Society Control.

Because of the relationship between locus of control and achievement factors, an objective of education probably should be to promote an internal locus of control in students. From the few studies performed it appears that certain factors in a counseling setting or in a classroom may enhance an internal locus of control. Studies have shown that there is a relationship between certain perceived parent behaviors and a child's locus of control. A student learns a reinforcement expectancy from his teacher. He learns whether there are positive or negative events which occur as a consequence to his behavior. Therefore it seems likely that certain teacher behaviors will be related to a student's locus of control.

The population sample of 120 sixth grade students was drawn from seven elementary schools in the Springfield City School System. Thirty students were selected for each of four groups, black/low socioeconomic class, black/high socioeconomic class, white/low socioeconomic class, and white/high socioeconomic class. The dimension of low/high socioeconomic class was determined by family income and residence area. From the list of twenty elementary schools in the Springfield system, the three elementary schools with the highest percentage of deprived children were designated as the schools from which the low socioeconomic students were selected and the four schools with the lowest percentage of deprived children were designated as the
schools from which the low socioeconomic students were selected and the four schools with the lowest percentage of deprived children were designated as the schools from which the high socioeconomic students were selected. For each of the four groups, fifteen boys and fifteen girls were selected.

Students were tested in groups of three or four by the investigator. The measures of locus of control and perceived teacher behavior were administered towards the end of the school year to allow the maximum amount of time for a student to know the behavior of the teacher and to be influenced by it. Responses were analyzed for group differences on locus of control and on perceived teacher behavior by a multivariate analysis of variance. When significance was achieved for the overall MANOVA test ($p < .05$), the univariate $F$'s, the discriminant analysis and the structure matrix were computed to determine what factors within the MANOVA were significant. The relationship between perceived teacher behavior and locus of control was analyzed by a canonical correlation. A stepwise multiple regression was performed on significant perceived teacher behaviors and their relationship to the three locus of control measures.

Conclusions and Discussion

Hypothesis 1. Black students are significantly more external than white students on the Powerful Others Scale and Chance Scales
(Society Control), but there is no difference between groups on the Internal Scale (Personal Control).

Hypothesis 2. Low socioeconomic class students are significantly more external than high socioeconomic class students on the Powerful Others Scale and the Chance Scale (Society Control), but there is no difference between groups on the Internal Scale (Personal Control).

These two hypotheses are discussed together because a review of the literature has indicated that disadvantaged groups are more external on the locus of control continuum. Disadvantaged groups are ones whose social position is one of minimal power; it refers to minority groups and low socioeconomic level groups. As was hypothesized, for both disadvantaged groups in the present study, black and low socioeconomic class students, there was no significant difference in Personal Control as compared to white and high socioeconomic class students; however, there were group differences on measures of Society Control as was hypothesized. Only one of the measures of Society Control, though, was significant for each group. Black students were significantly more external than white students on the Chance Scale, but not on the Powerful Others Scale. Low socioeconomic class students were significantly more external than high socioeconomic class students on the Powerful Others Scale, but not on the Chance Scale.

One of the rationales for the present study was to use a multidimensional approach to determine whether blacks and low
socioeconomic class groups were external on all three measures of locus of control as might be expected based on the differences between groups when a unidimensional measure is used. It was suggested that if disadvantaged groups were external on one or two of the measures, then perhaps an environment could be so arranged that the external control would become more internal.

The results suggest a possible reason that disadvantaged groups are more external than advantaged groups is that disadvantaged groups are more external on Society Control, not Personal Control. The results support the findings of other studies which found no significant difference between groups when the Intellectual Achievement Responsibility (IAR) Scale was used to measure locus of control. Thus there is no difference between black and white students and between low and high socioeconomic class students in responding to items on the IAR, questions concerned primarily with the sense of personal control over reinforcements in the intellectual achievement area, or items like those on the Internal Scale, such as "How many friends I have depends upon how nice a person I am."

It is quite understandable that disadvantaged groups are external on chance or powerful other. Because of their position in society, blacks often may not be compensated (chance) for behavior which deserves a reward. Consequently, black sixth graders have an expectancy that chance has some control over positive and negative events which are a consequence of one's
behavior. They have a tendency to believe statements such as 
"It's chiefly a matter of fate whether or not I have a few 
friends or many friends." Low socioeconomic class people 
realize that often they are not rewarded unless they play up 
to those people in positions of power. Therefore, low socio-
economic sixth graders have an expectancy that powerful others 
have some control over positive and negative events which are 
a consequence of one's behavior. They have a tendency to 
believe statements such as, "Whether or not I have friends 
depends upon whether I please those people who have power over 
me."

Schools may be providing an environment which allows 
disadvantaged students to feel that they have as much personal 
control as advantaged students. One of the rationales for 
explaining why disadvantaged students were no different than 
advantaged students when the IAR Scale was used was because 
the IAR locus of control Scale asks questions which are primarily 
concerned with reinforcements in the intellectual achievement 
area. No difference between groups on Personal Control implies 
that schools are providing disadvantaged as well as advantaged 
students with the feeling that they have some sense of personal 
control over what happens to them. Schools seem to be giving 
disadvantaged students the feeling that consequences are a 
result of a student's action. Disadvantaged students are being 
given the opportunity to see that effort pays off.
Providing conditions which promote an internal locus of control in Society Control for disadvantaged students, however, is a more difficult task. It is not as easy to make changes in society to provide the appropriate consequences for disadvantaged groups. Chance or powerful others factors may continue for a relatively long period of time.

Hypothesis 3. There is a significant relationship between the score of students who perceive their teacher as being nurturant, consistent in discipline and standards, protective, and exerting achievement pressure and an internal score on Levenson's Internal Scale.

Hypothesis 4. There is a significant relationship between the score of students who perceive their teacher as being inconsistent in discipline and standards and an external score on Levenson's Chance Scale.

Hypothesis 5. There is a significant relationship between the score of students who perceive their teacher as being punishing and an external score on the Powerful Others Scale.

Of the six perceived teacher behaviors that were hypothesized to relate to the Internal Scale, three perceived behaviors were related. There was a significant relationship between the score of students who perceived their teacher as being protective, exerting achievement pressure and using principled discipline, and an internal score on the Internal Scale. The other three perceived teacher behaviors, nurturance, instrumental companionship, and predictability of standards,
did not relate to an internal score. Although sex was used as a variable in the predictor set of variables, its weight was clearly not significant. Thus, in the present study, sex is not a factor in relating perceived teacher behavior to locus of control in the way that sex is a factor in relating perceived parent behavior and locus of control.

None of the perceived teacher behaviors in Hypotheses 4 and 5 were related, as hypothesized to the Powerful Others or Chance Scales. Therefore, Hypotheses 4 and 5 were rejected. There was, however, a relationship between the perceived teacher behaviors of protectiveness, exerting achievement pressure and principled discipline and an external score on the Powerful Others Scale and the Chance Scale. The same three perceived teacher behaviors that related to an internal score on the Internal Scale also related to an external score on the Powerful Others and Chance Scales.

The results indicate that one way of promoting an environment which would foster an internal Personal Control is to have the teacher perform behaviors which students would perceive as protective, exerting achievement pressure and using principled discipline. The question arises, Why did the same perceived teacher behaviors relate to an external control on Powerful Others and Chance Scales? Gurin (1969) and Lao (1970) indicated from their findings that better adjusted black college
students were internal on Personal Control and external on Society Control. Black students with these orientations had better self-concepts, were more politically active, and had higher levels of aspirations. The students had an expectation that they themselves were responsible for positive and negative outcomes which resulted from their actions, but they also had an expectation that forces outside of their control had an effect on what happened to them. By having this orientation, the black students were often able to feel good (responsibly) for positive outcomes and blame the system (something outside their power) for negative outcomes. The result was better self-concept, more political activity, and a higher level of aspiration.

The sixth grade students in the present study may, because of their age, experience, or some other factor, feel internal on Personal Control and external on Society Control. They feel somewhat responsible for positive and negative outcomes which result from their actions because they are old enough to perceive the relationship between cause and effect. Internality increases with development and sixth graders are becoming independent of adults and authority. On the other hand, sixth graders are still aware of teachers, parents, and older brothers and sisters who have power over them. They still realize that they must have permission before they are able
to do many things. Sixth graders are also very concerned about what is or is not fair. If two students study for one hour and one student receives a "C" and the other receives an "A", the one that received an "A" was lucky or else received the grade because of being a teacher's pet. Receiving positive or negative outcomes is partly because of being lucky or unlucky. Further research will help to clarify whether the relationship between perceived teacher behavior and internal control on Personal Control and external control on Society was because of the age group, the Springfield School System, or some other factor.

One of the purposes of the present study was to determine if certain perceived teacher behaviors were related to an internal locus of control. If certain behaviors were related, then emphasis could be placed on these behaviors to foster an internal locus of control. Because the same behaviors related to internal control on Personal Control and external control on Society Control, however, no inference can be made that teachers should be protective of students, exert achievement pressure or use principled discipline. If, however, the best locus of control orientation for a black student to have is an internal Personal Control and an external Society Control, as Lao and Gurin suggest, then these perceived teacher behaviors might be very beneficial for black and perhaps for
low socioeconomic students. Lao found that Personal Control
was related to achievement for college students. Further research
is needed to determine if Personal Control and/or Society Control
are related to achievement for sixth graders and other grades.
For disadvantaged students information is needed as to whether
internal/external Personal Control and internal/external Society
Control are more highly related to achievement.

Research Question: Are there differences in perceived
teacher behavior between black and
white students, between low and
high socioeconomic students, and
between male and female students?

The research question was asked because one explana-
tion of why disadvantaged groups are more external is that the
disadvantaged groups may be receiving different teacher behaviors
than advantaged students. The results indicated that there
are race, socioeconomic class, and sex differences in the way
the groups perceived the behavior of their teacher. Black
students perceived their teacher as being protective and using
affective punishment. Low socioeconomic class students per-
ceived their teacher as being protective, exerting achievement
pressure and using instrumental companionship. Male students
perceived their teacher as using affective and physical punish-
ment.

Both black and low socioeconomic students perceived
their teacher as being protective. The protective perceived
teacher behavior factor was the highest weight in the significant canonical correlation. It related to internal control on the Internal Scale and external control on the Powerful Others and Chance Scales. In addition, low socioeconomic students perceived their teachers as exerting achievement pressure, the perceived teacher behavior with the second highest weight. Thus, it can not be concluded that some part of why disadvantaged students are external is because of the behavior of the teacher. It appears that black students and especially low socioeconomic class students are perceiving behaviors which may be conductive, not inhibiting, to producing an internal locus of control if internal control on Personal Control and external Control on Society Control is the best for these groups. The findings in the present study are somewhat different from the Cosca and Jackson study (1974) which found education opportunities, measured in the form of student-teacher interaction, to be inequal for a minority group as compared to Anglos. Differences in teacher behaviors and perceived teacher behaviors for disadvantaged versus advantaged students is another fertile area for research.

Limitations of the Study

The study was limited to one city school system. Students selected as being high socioeconomic class were middle or upper-middle socioeconomic class student. This was especially true for the black students. An abundance of low socioeconomic
students were found, but four elementary schools were needed to obtain enough high socioeconomic class black students. Therefore, the distinction between low and high socioeconomic class was not as wide as it might be in other school systems.

Students were selected from only grade six. Results cannot be considered generalizable to all grade levels based upon the findings of one grade level. Some of the results on Personal Control and Society Control may be applicable particularly to sixth graders but not to fourth graders or eighth graders.

The present study made an implication that a student's locus of control can change during the year. Locus of control was measured in May and the measurement was correlated to perceived teacher behavior. A more effective way of measuring whether certain teacher behaviors change locus of control would be to measure a student's locus of control at the beginning and at the end of the school year. Teacher behavior or perceived teacher behavior would be measured and at the end of the school information could be gathered to determine if certain behaviors or perceived behaviors changed a student's locus of control. Such a study would be similar to Yando's study (1966) on impulsivity-reflectivity.

Recommendations for Further Study

Completion of the present study suggests several possibilities for further research. Six possibilities are:
1) An experimental study is needed which is designed to measure if a student's locus of control changes from the beginning to the end of the school year, based on the behaviors or perceived behaviors of the teacher.

2) A study could be designed to determine if other multidimensional measures of locus of control reveal race and socioeconomic class differences on Society Control but no difference on Personal Control.

3) An investigation is needed to determine whether internal Personal Control and external Society Control is beneficial to disadvantaged students. The relationship of Personal Control and Society Control to achievement is unclear for grade school and high school students. Laos study (1970) indicated Personal Control but not Society Control was related to achievement for college students.

4) Replication of the present study using older or younger students would help clarify whether the relationship obtained in the present study can be generalized across grade levels, or are specific to sixth graders.

5) It has been suggested that unequal opportunity for disadvantaged students may be partly because of
different teacher behaviors for Anglos or high socioeconomic class students versus minorities and low socioeconomic class students. The present study found differences in perceived teacher behaviors, but the advantage in terms of fostering an internal locus of control seems perhaps, to be with the black and low socioeconomic students only.

6) Previous studies as well as the present study refer to internal-external control as an all or none phenomenon. A student is either external or internal. In reality locus of control is a generalized expectancy along a continuum. A person has a 0%-100% expectancy that his actions will make a difference in what happens to him. Evidence is needed to determine where on the continuum is most beneficial for students in specific situations. A person at the internal end of the locus of control continuum might have as many educational difficulties as a person at the external end, for if a person felt that he was responsible for all outcomes, he might become extremely critical of himself and discouraged.
APPENDIX A

LETTER TO PARENTS
Dear Parent,

I am conducting a study which is designed to determine how sixth grade students view themselves and their teachers. I am interested in finding out if teachers can have a positive influence on how children view themselves. The study will consist of asking your child to complete two questionnaires, one about himself, and another about his teacher. All questionnaires will remain anonymous. The questionnaires are not an intelligence test or a personality test. Information is for research purposes only and will in no way be a part of your child's school record.

I would like to begin this study as soon as possible. Would you please check one of the boxes below and send the form to school with your child regardless of the box you check?

☐ My child may be included in the research study.
☐ My child may not be included in the research study.

Sincerely,

Garry W. Royer
School Psychologist
Springfield City Schools

Date ____________________________ Signature ____________________________

GWR/ss
APPENDIX B

INSTRUCTIONS FOR THE PERCEIVED
TEACHER BEHAVIOR QUESTIONNAIRE
Instructions for the Perceived Teacher Behavior Questionnaire

This is a questionnaire to find out how often your teacher uses certain behaviors. I will read each sentence aloud to you as you read it to yourself. Then I will read the five possible answers. Put an "x" in the box of the word or words indicating how often your teacher uses the behavior that is mentioned in the sentence. The questionnaire is a measure of personal belief: obviously, there are no right or wrong answers. Your answer may not be the same as the person sitting next to you. Mark the answer which is the best answer for you. The results of this questionnaire will not be shown to your teacher; the results will only be used in my research study. Be sure to mark an answer for each question. If you are unsure of the meaning of any word or sentence, please ask me. Thank you for your cooperation.
APPENDIX C

PERCEIVED TEACHER BEHAVIOR QUESTIONNAIRE
PERCEIVED TEACHER BEHAVIOR QUESTIONNAIRE

Name:
School:
Sex:
Race:
SES:
Date:

Put An "x" In The Proper Box

1. My teacher made me feel that she was there when I needed her.
   □ Never □ Only once in a while □ Sometimes □ Usually □ Almost always

2. My teacher kept after me to do better than other children.
   □ Never □ Only once in a while □ Sometimes □ Usually □ Almost always

3. My teacher worried about my being able to take care of myself.
   □ Never □ Only once in a while □ Sometimes □ Usually □ Almost never

4. My teacher taught me things that I wanted to learn.
   □ Never □ Only once or twice a year □ About once a month □ About once a week □ Almost everyday

5. My teacher spanked me.
   □ Never □ Only once or twice a year □ About once a month □ About once a week □ Almost everyday

6. When my teacher wanted me to do something, she explained why.
   □ Never □ Only once in a while □ Sometimes □ Usually □ Almost always

7. My teacher nagged at me.
   □ Never □ Only once or twice a year □ About once a month □ About once a week □ Almost everyday

8. When I did something she didn't like, I knew exactly what to expect of my teacher.
   □ Never □ Only once in a while □ Sometimes □ Usually □ Almost always
9. My teacher punished me by not allowing me to be with my friends.
   - Never
   - Only once or twice a year
   - About once a month
   - About once a week
   - Almost everyday

10. My teacher slapped me.
    - Never
    - Only once or twice a year
    - About once a month
    - About once a week
    - Almost everyday

11. If I did something she didn't like, my teacher would act cold and unfriendly.
    - Never
    - Only once in a while
    - Sometimes
    - Usually
    - Almost always

12. My teacher scolded and yelled at me.
    - Never
    - Only once or twice a year
    - About once a month
    - About once a week
    - Almost everyday

13. I knew what my teacher expected of me and how she wanted me to behave.
    - Never
    - Only once in a while
    - Sometimes
    - Usually
    - Almost always

14. When I did something my teacher didn't like, she acted hurt and disappointed.
    - Never
    - Only once in a while
    - Sometimes
    - Usually
    - Almost always

15. My teacher wouldn't let me go places because something might happen to me.
    - Never
    - Only once in a while
    - Sometimes
    - Usually
    - Almost always

16. My teacher helped me with my school work when I didn't understand something.
    - Never
    - Only once or twice a year
    - About once a month
    - About once a week
    - Almost everyday

17. My teacher punished me by trying to make me feel guilty and ashamed.
    - Never
    - Only once in a while
    - Sometimes
    - Usually
    - Almost always
18. My teacher insisted that I get particularly good marks in school.
   □ Never □ Only once in a while □ Sometimes □ Often
   □ Very Often

19. My teacher comforted me and helped me when I had troubles.
   □ Never □ Only once in a while □ Sometimes □ Usually
   □ Almost always

20. My teacher punished me by not letting me use my favorite things for a while.
   □ Never □ Only once or twice a year □ About once a month
   □ About once a week □ Almost everyday

21. When my teacher punished me, she explained why.
   □ Never □ Only once in a while □ Sometimes □ Usually
   □ Almost always
BIBLIOGRAPHY


