

TEACHERS' SELF-ATTRIBUTIONS AND THEIR
PROJECTIONS OF STUDENT ATTRIBUTIONS
UNDER VARYING CONDITIONS

By

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Submitted to the Faculty of the
Graduate College of the
Oklahoma State University
in partial fulfillment of
the requirements for
the Degree of
DOCTOR OF PHILOSOPHY
July, 1979

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July, 1979

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ACKNOWLEDGMENTS

Thanks are owed to many whose help, encouragement, and patience allowed the completion of this study. To my committee chairman, Dr. Paul Warden, thank you for your guidance, for your readiness to help, and your patience as I strained our friendship. Thank you to my committee members: Dr. John Hampton for his demanding that I remain on firm ground and that I be able to substantiate its firmness; Dr. Bill Elson for his insightful suggestions and support in the design and data analyses; and Dr. Larry Brown for the many astute questions and suggestions that lead to a more comprehensible paper.

Also, thank you to a close friend, Dr. Steve Grisson, for his help and for learning with me as I wrestled with the analyses.

A special thanks to Debbie Fauquay for her support. She shared my exuberance and exhaustion. . .and amazement.

The study is dedicated to my children, Christopher and Stephanie. They were very patient with their father and made the task easier by their demonstrations of love and concern.

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CHAPTER I

THE RESEARCH PROBLEM

Introduction

Teachers expend a large proportion of their efforts and time in the making of decisions (Good & Brophy, 1977). Decision-making is reflected in virtually every aspect of the school environment created by the teacher; tasks assigned to students, grouping for instruction, pupil evaluation, and discipline strategies are examples. Given the wide-ranging implications for school children of those decisions, the processes by which they are made have been investigated extensively. Individuals have been shown to vary greatly in the amount and kind of information they use in making decisions (Corro, 1977). It has further been noted that individuals are selective in considering and remembering information about others; they attend to that information most salient to their purposes (Jones & Nisbett, 1972). Consequently, one area of concern, as indicated by the sheer quantity of the relevant literature, has been that of the types of information used by teachers in their decision-making and the possible sources of error in that decision-making process. Prolific and potentially fruitful has been

research in the area of teacher expectancy (Rosenthal & Jacobson, 1968). Research in that area is distinctive, primarily due to the lack of agreement among authors as to the efficacy of a teacher expectancy model in the interpretation of student achievement-related outcomes. Friend and Wood (1973) have noted the lack of an underlying theoretical framework for investigation in this area. They have also pointed out the effectiveness of attribution theory (Heider, 1958; Kelly, 1973; Weiner, 1974, 1976) in the interpretation of the considerable body of research on the effects of induced expectations in teachers that has developed since the classic study by Rosenthal and Jacobson (1968). Attribution theory, as noted by Friend and Wood (1973), provides that theoretical framework for making more definitive statements about expectancies. Causal attribution theory considers any combination of high and low values of ability, effort, task difficulty, and luck in the interpretation of the causes of behavior. That is, an individual observing the behavior of another (or their own behavior) seldom accepts that behavior at face value. Rather, in order to better understand that behavior, the individual attributes to it certain underlying causes. The four causes proposed by Heider (1958) may be viewed as varying on two dimensions: locus of control and stability over time. Ability and effort may be seen as internal to the individual while task difficulty and luck may be seen as external. Additionally,

ability and task difficulty are viewed as relatively stable over time, while effort and luck are far more subject to fluctuation over time.

Numerous authors (Barnett & Kaiser, 1977; Corro, 1977; Fyans & Maehr, 1977) have demonstrated the applicability of causal attribution theory to the field of education. Teachers' attributions of differing causal factors to achievement-related behaviors have been investigated as they relate to student sex, race, diagnostic label, and performance. While studies indicating the presence of effects due to student sex have been inconclusive, the race of the student has been shown to affect teacher attributions. Effects of the child's diagnostic label on attributions to different causal factors, e.g. luck versus ability, have also been demonstrated and become especially significant with the Public Law 94-142 mandated placement of exceptional learners in the "least restrictive environment". In many cases the appropriate least restrictive environment for a child previously confined to a self-contained special class is the regular classroom. As such, regular class teachers are now charged with making decisions concerning pupils heretofore beyond the scope of their experience. A further body of research exists that describes the relationships between one's attributions for one's own behavior and one's attributions for the behavior of another.

Errors and biases on the part of the teacher in the educational decision-making process impact upon the classroom environment and the opportunities provided each student (Barnett & Kaiser, 1977; Brophy & Good, 1970). To the extent that the teacher's decisions concerning a student reflect stereotypical projections of the student's race or diagnostic label, or of the teacher's own personality characteristics, those decisions are subject to error (Metzner, 1971).

Bar-Tal (1978), in his recent review of the literature in this area, reports numerous studies which examine the impact of student characteristics on teacher perceptions. Hanes (1978), in his review of related research, substantiates the conclusions derived from Bar-Tal (1978). The effects on teachers' perceptions of and resulting behaviors toward children of varying races, diagnostic labels, and levels of achievement have been well documented. Also well documented is the area of the interrelation of attributions made for oneself and others. Unrepresented, however, are research efforts attempting to integrate the effects of both teacher and student characteristics. Therefore, the research in this area allows only piecemeal, sketchy interpretation of the interaction between characteristics inherent in the teacher and intrinsic or imposed characteristics of the student, and the effects of those variables on the teacher's perceptions of both the succeeding and failing

student. Consequently, little help is available from the literature which facilitates the sound development of preservice or inservice intervention strategies aimed at minimizing a recognized problem.

Statement of the Problem

No previous investigation has attempted to examine simultaneously the effects of race, diagnostic label, and performance outcome on teachers' perceptions of student attributions. Further, no investigation has included with those variables an examination of the relationship between the attributions made by teachers for their own performance and their perceptions of the the students' attributions. Thus, the comparison of the relative impact of those variables was heretofore precluded. A problem, therefore, exists in the attempt to integrate the previous research findings.

Purpose of the Study

The purpose of this experiment was to attempt the integration of previous efforts by the simultaneous investigation of the effects of student race, diagnostic label, and performance outcome on teachers' perceptions of the attributions made by students for their performance to differing causal agents: while examining those perceptions in the light of their relationship to the attributions made by teachers for their own achievement related behavior.

The specific questions for which answers were sought in the present research are: What are the effects of student race, diagnostic label, and performance outcome on teachers' projections of student attributions to different causal factors? How do teachers' attributions of causes to their own achievement-related behaviors (self-attributions) relate to their projections of students' attributions?

Significance of the Study

The present study of variables affecting teachers' perceptions of students is significant in that it could lead to the development of greater sensitivity on the part of teachers and teacher-trainers to those factors which lead to misinterpretation of the causes of student behavior. The research detailing the significant, concomitant alterations in teacher behavior toward students to whom differing attributions of causality have been made is presented in Chapter II. An integrative analysis of those perception-altering variables could allow more unbiased decision making and enhance teachers' prospects of improving each student's achievement and fostering continuing, effortful scholarship.

Definitions of terms

Definitions of terms and concepts important to the purposes of this study are presented below:

Student(s) were defined as the fictitious student(s) rated by the teachers.

Student race (race) was defined as the race assigned to each fictitious student in the descriptions provided the teachers. As such, it was further divided into American Indian (Indian), black, and white levels.

Student diagnostic label (label) was defined as the previous, special or regular class placement indicated for each fictitious student in the descriptions provided the teachers. The categories of "label" were learning disabled, educably mentally handicapped, emotionally disturbed, and normal.

Student performance outcome (performance) was defined as the fictitious students' stated success or failure when placed in the regular classroom; also as indicated in the descriptions provided teachers.

Teacher self-attributions were defined as the subjects' (teachers') scores on the four basic attributional factors (ability, task, effort, and luck) when attributing causes to their own achievement-related behavior. Scores were obtained through the use of the Achievement Attribution Self-Report (Feuquay and Bull, 1979); analogous to the Individual Achievement Responsibility questionnaire (Crandall, Katkovsky, & Crandall, 1965) developed by Weiner and Potepan (1970).

Hypotheses

While previous research provides a relatively sound basis for predicting the effects of the independent variables, both in isolation and paired, the hypotheses are stated in the null due to the complexity of the three way interactions investigated in the present research. The specific hypotheses which were investigated in this experiment are listed below:

Ho1: Teachers' attributions of student performance to the ability of the student will not be affected by:

- a. the student's diagnostic label,
- b. the student's race,
- c. the student's performance, or
- d. interactions of student label, race and performance.

Ho2: Teachers' attributions of student performance to the effort of the student will not be affected by:

- a. the student's diagnostic label,
- b. the student's race,
- c. the student's performance, or
- d. interactions of student label, race and performance.

Ho3: Teachers' attributions of student performance to the difficulty of the task will not be affected by:

- a. the student's diagnostic label,
- b. the student's race,
- c. the student's performance, or
- d. interactions of student label, race and performance.

Ho4: Teachers' attributions of student performance to luck will not be affected by:

- a. the student's diagnostic label,
- b. the student's race,
- c. the student's performance, or

d. interactions of student label, race and performance.

H₀₅: No significant relationship will be found between the attributions teachers make for their own performance and the attributions they make for the performance of students.

CHAPTER II

SELECTED SURVEY OF THE LITERATURE

Introduction

This chapter includes a selected review of the literature relevant to the purposes of this study. Included are sections dealing with teacher expectancy, attitudes of teachers toward exceptional children, causal attribution theory, factors impinging upon causal attributions, instrumentation, and educational implications.

Overview of Teacher Expectancy

The now-classic study by Rosenthal and Jacobson (1968) in the area of teacher expectancy generated a tremendous amount of interest and controversy, the result of which has been a large body of conflicting research. The controversy is by no means resolved. However, it is safe to say that, under some circumstances, teachers develop expectancies (expectations) for certain students. Further, those expectations result and are reflected in the teachers' behavior toward their students. The students perceive those behaviors, interpret them, and often respond accordingly.

In the original research by Rosenthal and Jacobson (1968), teachers were told that a randomly selected group of their pupils were "late bloomers" as indicated by previously completed testing. In relation to their control-group peers, for whom no information had been provided the teacher, the experimental group showed significant gains in measured I.Q. This was interpreted as indicating that teachers communicate their expectations to their students and also alter the learning environment in such a way as to provide the students for whom they have positive expectations with enhanced opportunities for intellectual growth. In their examination of the behavioral concomitants of teacher expectancy, Brophy and Good (1970) conclude that the expectations of the teacher function as self-fulfilling prophecies and indicate some of the intervening behavioral mechanisms involved in the process.

The teachers demanded better performance from those children for whom they had higher expectations and were more likely to praise such performance when it was elicited. In contrast, they were more likely to accept poor performance from students for whom they held low expectations and were less likely to praise good performance from these students when it occurred (Brophy and Good, 1970, p. 365).

Barber, Calverly, Forcione, McPeake, Chaves, and Bowen (1969) provide an analysis of self-fulfilling prophecies which allows a closer examination of the situational components intrinsic to a transmitted expectation. Those authors broke self-fulfilling prophecies into seven necessary components.

The teacher must attend to, comprehend, and retain the expectancy;
the teacher must transmit the expectancy to the students;
the student must attend to, comprehend, and act upon the expectancy (Barber *et al.*, 1969, p.123).

Foster and Ysseldyke (1976) and Salvia, Clark, and Ysseldyke (1973) have demonstrated the efficacy of the Barber, *et al.* (1969) model in the examination of self-fulfilling prophecies. The results of the Foster and Ysseldyke (1976) research will be more closely examined later in this chapter.

Sociology professors Sexton and Friedenborg, as reported by Metzner (1971), have stated that teachers reward students without reference to their true achievements, capabilities, and potential. Rather, students are rewarded by middle-class teachers on the basis of how closely the students adhere to middle-class standards. It can be easily argued that many characteristics of students, in addition to their socio-economic-status (SES), impinge upon the teacher's perceptions of those students. However, the work of Brophy and Good (1970) included the statistical control of the differences in teacher expectancy attributable to the children themselves. Even with that added control, those authors, as previously noted, suggest that teachers systematically discriminate in favor of high-achieving students over low-achieving students in demanding and reinforcing quality performance. A related finding by Medway and Baron (1977) indicates that, in the area of cross-age tutoring,

tutors with high expectancy for tutee success are more effective teachers.

While many student characteristics may be observable and may be legitimate input to decisions about the student, Hofer (1978) concludes that teachers and schoolmates selectively attend to a student's attributes that are relevant to the teachers' and students' roles. Other attributes are perceived to the degree to which the student being observed is important to them. In addition to the impact of selective attending on teachers' perceptions, Foster and Salvia (1977) have reported data indicating that teachers manufacture student behavior to fit their expectancies. In a study of teachers' responses to children labeled learning disabled, those authors found that teachers asked to rate the frequency of undesirable behaviors exhibited by a child were willing to rate in the absence of observable behaviors. It should be noted that the teachers in this study indicated the presence of fewer undesirable behaviors in learning disabled children when they were asked to be objective. However, they still noted more deviance in the learning disabled children than in the normal children. This finding is exacerbated by Foster and Ysseldyke's (1976) report that teachers maintain their negative biases even in the face of conflicting evidence. Research carried out by Therrien (1976) provides a possible interpretation for the findings reported by Foster and Ysseldyke (1976). Therrien (1976)

found that teachers' estimates of student ability indicate a significant overall primacy effect. She notes that: "Primacy effect errors could result in a teacher never recognizing the learning which is taking place (or perhaps not taking place) (p. 213)." That study, wherein subjects rated students reported to have either ascending or descending success, indicated that a child who gives the impression of being a "slow starter" may never be able to shake the impression; neither with their current teacher nor with subsequent teachers to whom records and informal information are passed.

Attitudes of Teachers Toward Exceptional Children

Bryan and Wheeler (1976) have noted:

The relationship of teacher expectancies, labels, and outcomes for children is a controversial and unresolved issue (MacMillan, Jones, and Aloia, 1974). It is likely to remain so until we study the interactions which comprise adult relationships with handicapped children (p. 41).

In order to better understand those relationships this section examines research which summarizes teacher attitudes toward exceptional students, students exceptional by race and diagnostic label.

Numerous authors have investigated student characteristics that may alter the teacher's expectations. A portion of the expectancy research is devoted to the biasing effects of special education, diagnostic labels. The work of Foster

and Vsseldyke (1976) demonstrates that classroom teachers hold negative expectations towards children labeled deviant; specifically those labeled learning disabled, emotionally disturbed, and educably mentally retarded. The educable mentally retarded label was reported to generate a greater degree of negative bias than the labels of learning disabled or emotionally disturbed. Gillung and Rucker (1977) confirm that regular education teachers have lower expectations for children who are labeled than for children with identical behaviors who are not labeled. Those authors found essentially the same results for special education teachers having seven or more years of experience.

Yoshida and Meyers (1975) provide data representative of research conflicting with the concept of teacher expectancy. Their finding that the educable mentally retarded (versus regular class) label did not lower expectancy scores is interpreted as indicating that the teacher's reliance on labels may be reduced by the availability of other cues for making evaluations. In their research, the other cues consisted of a videotape of a child actor. A problem with their methodology can be seen in their providing teachers with written case descriptions containing information contradictory to the child's observed performance. Additionally, the sole videotaped child was black, thereby fostering, but disallowing interpretation of, a possibly significant, confounding race by label interaction. More

sound was the research by MacMillan, Jones, and Aloia (1974) wherein, after viewing four videotaped sessions of children, neither teachers of classes for the educably mentally retarded nor regular class teachers were found to have differences in expectancies for children labeled educably mentally retarded and normal. These findings were offered as evidence that observations outweigh stereotypes.

According to Foster and Ysseldyke (1976), imminent in the purview of school psychological services remains a Binet-like rationale—the identification of children who can't learn. Those authors state that this is partly to eliminate the blame placed on teachers for child failure. Labels are said to provide an excuse for a system's failure to teach children adequately. For labels to so function, teachers must accept their accuracy and assume certain definitive child characteristics to be associated with those labels.

As mentioned previously, Barber *et al.* (1969) have noted seven components to a self-fulfilling prophesy. The research of Foster and Ysseldyke (1976) demonstrates that deviancy labels meet at least three of those seven requirements for the establishment of a self-fulfilling prophesy. That is, teachers attend to deviancy labels, associate negative expectancies with those labels, and retain their negative expectancies even when confronted with behavior incongruent with the label. The same authors note that studies

on labeling that investigate child behavior are dealing with the sum effect of the Barber, *et al.* (1969) model. That is, the student acts on the expectancy.

The conclusions of Silberman (1969) are that teachers' attitudes are generally revealed in their actions toward students. Specifically, the attitudes of concern, indifference, rejection, and attachment were investigated. Silberman (1969) found that those four attitudes were translated into action in different ways, such that teachers' expressions of concern and indifference were more clearly expressed than their expressions of rejection and attachment. Further noted was the finding that both the students to whom the teacher behavior was directed and other students in the class were aware of most of the behavioral expressions of the teacher's attitudes. Silberman (1969) concluded that the teacher's actions both informed the students of the teacher's feelings toward them and guided their peers perceptions of and behavior toward them. Helton and Oakland (1977) report that the ability characteristics of students, while related to teachers' attitudes of attachment and indifference, are most strongly related to teachers' attitudes of concern; the most clearly expressed of the four attitudes examined by Silberman (1969). Helton and Oakland (1977) further note that childrens' personality characteristics account for most of the variance associated with teacher attitudes of attachment and rejection.

The attitudes of teachers toward students have been found to be related to the race of the student. Exemplary is the work of Zucker and Prieto (1977) wherein, irrespective of the sex of the child, teachers indicated that placement in a class for the educably mentally handicapped was more appropriate for Mexican-American children than for white children. Those authors interpret their findings as possibly due to the ethnocentrism of teachers or ethnic linkage with lower socioeconomic status resulting in a confounding socioeconomic status stereotype. Another investigation (Jackson and Cosca, 1974) surveyed 494 classrooms in the southwestern United States. They concluded that, relative to their Mexican-American students, teachers praise or encourage whites 35% more, accepted or used the ideas of whites 40% more, and directed 21% more questions to whites. Rubovits and Maehr (1973) report findings for black versus white students analogous to the Mexican-American versus white findings of Jackson and Cosca (1974). Black students were found to be given less attention, were ignored more, praised less, and criticized more than white students. Noteworthy was the finding that, in relation to all white students and black students of normal intelligence, it is the gifted black who is given the least attention, is the least praised, and the most criticized.

The relationship of race to teachers' attitudes was further explored by Friend and Wood (1973). Those authors

found a tendency on the part of teachers to believe that, across race and SES, black, middle-class children felt the most pride and most shame upon success and failure, respectively. Teachers apparently believed that those children were particularly motivated to achieve and, therefore, more affected by success and failure. Alternatively, teachers in the Friend and Wood (1973) research believed that lower-class, black children felt the least pride for success and the least shame for failure. This finding suggests that teachers believe those children do not care about success or failure.

The differential behavior and attitudes of teachers have also been investigated in relation to the diagnostic (deviance) label of the student. As described by Bryan and Wheeler (1976), differences exist in the ways in which special educators and regular-class teachers relate to their classes. Teachers of children diagnosed as learning disabled or trainably mentally retarded relate to their pupils primarily as individuals and elicit a high response rate. Teachers of the multiply handicapped also relate to their pupils as individuals, but the communication is more in the form of a soliloquy--minimal responding on the child's part. Markedly different from Bryan and Wheeler's (1976) special educators, regular-class teachers communicated primarily by addressing the group as a whole. Panda and Bartel's (1972) research indicates that various forms of exceptionalities

are perceived differently by teachers. As compared to normal and gifted students, exceptional students were seen as more dirty, ugly, and bad. These characteristics were perceived to be more pronounced in culturally deprived and emotionally disturbed children than in mentally retarded children. Additionally, mentally retarded, emotionally disturbed, and culturally deprived children were seen as small, weak, and delicate compared to gifted and delinquent children, with mentally retarded worse than emotionally disturbed and culturally deprived. All three of the above types of exceptional students were seen as more passive, duller, and slower than normal students, with the mentally retarded viewed as worse than the emotionally disturbed. The general conclusion of Panda and Bartel (1972) was that exceptionalities labeled on sociopsychological grounds were rated lower than those labeled in terms of physical impairment. Confirmation of different teacher perceptions of different types of exceptional students is found in work done by Algozzine and Sutherland (1977). When teachers observed a child exhibiting destructiveness, fighting, negativism, and disobedience, the behavior sample was rated as more bothersome and less acceptable when the child was thought to be learning disabled than when thought to be emotionally disturbed. These findings imply that negative behaviors not expected from a child having a given label are considered more serious than those behaviors when expected.

In addition to different teacher attitudes being related to certain labels, teachers believe children having certain labels to differ in their school-related attitudes. Children labeled gifted (as opposed to their normal peers) are seen as holding more positive attitudes toward tasks, toward their own performance. Children labeled mentally retarded were rated less favorably on the above two dimensions and on their reactions to adults, motor reactions, and verbalizations. The labels appeared to have had a selective rather than pervasive effect on ratings of behavior.

Several studies report more heartening findings for labeled children. Exemplary are those by Condell and Tonn (1965), and Jaffe (1966). In the first study, willingness to teach mentally retarded children increased with the experience of the teacher. The second study indicates that personal experience with an exceptional child leads to a greater perception of positive traits. Also promising are the results reported by Foster and Salvia (1977), previously mentioned, which indicate that a demand for objectivity minimizes the label bias.

Causal Attribution Theory

As noted previously, Friend and Wood (1973) have described causal attribution theory (Heider, 1958) as a possible framework for the making of more definitive statements about expectancies. This "theory of motivation," as it is

called by Brophy and Good (1977), deals with the perception of causes of, or explanations for, behavior, specifically, success and failure in achievement-oriented situations. Underlying the model is the assumption that beliefs about the causes of success or failure mediate between the perceptions of an achievement task and the final performance. Considered are four possible causes for success or failure: ability, effort, task difficulty, and luck. As noted in the first chapter, the model views these causes as varying on two dimensions: locus of control and stability over time. As such, causes internal to the individual are ability and effort; external are task difficulty and luck. Stable over time are ability and task difficulty; more variable are effort and luck. The four causes are not meant to be considered an exhaustive list of all possible reasons to which success or failure may be attributed. Rather, they are proposed as major reasons. Rosenbaum (1972) has proposed adding intentionality as a third causal dimension. However, little support for this is evidenced in the recent literature; virtually all of the research has concentrated on further analysis of the reasons originally proposed.

One author (Bar-Ial, 1978), in reviewing research to date, notes that the locus of control dimension influences the affective reactions of shame or pride in the performance outcomes. The stability dimension affects cognitive changes in expectancy following success or failure. Thus, for exam-

ple, an individual perceiving another's success to be due to ability or effort would be expected to infer that the other had more pride in the accomplishment than a person whose success was perceived to be due to luck or the easiness of the task. Additionally, an individual perceiving another's success to be due to ability or easy tasks would expect continued success from the other; more than from another whose success was perceived to be due to effort or luck. This is supported, in part, by the work of Feather and Simon (1971) who found that, for both oneself and others, unexpected outcomes were more often attributed to environmental factors than were expected outcomes. This may be integrated with the research of McMahan (1973), who found that task attributions appear relatively independent of expectancy disconfirmation, and that the greater the disparity between expectancy and actual outcome, the greater weight given to effort and luck as causal factors and the less weight given to ability. Thus, luck is left as the primary inferred culprit for unexpected outcomes.

The two studies just mentioned fall within the purview of the "consistency model" initially proposed by Frieze and Weiner (1971). This model maintains that temporal consistency of success and failure leads to ability and task difficulty attributions; temporal inconsistency leads to effort and luck attributions. On the other hand, interpersonal consistency leads to task difficulty attributions; interper-

sonal inconsistency to ability, effort, and luck attributions. Interpersonal consistency and inconsistency refer to the degree of congruence of the individual's behavior (performance) with that of his/her peers. Frieze and Weiner (1971) note that the effects of interpersonal comparisons are mitigated by the degree of perceived similarity of those to whom comparisons are being made. Those authors suggest this indicates the relative importance of ego-oriented motives over consistency alone. The importance of ego-oriented motives is substantiated by Medway, Lowe, and Baron (1975) in their finding that subjects who saw their own success as due to high ability (or task ease) did not see their own failure as due to low ability (or task difficulty).

Branct, Hayden, and Brophy (1975) offer a positive note in their finding that:

The more a teacher interacts with a student, even a fictitious one, the more the student's apparent performance and not the experimenter's ascription of the student's motivation determines the teacher's attitudes toward him. (p. 123)

Supportive of the above conclusions are those of Fontaine (1975), who states that the strong support for the consistency model might be due, in part, to the minimal information usually received by subjects. Fontaine (1975) adds that in real-task situations subjects look at both outcome and situational variables. Offsetting these positive indicants are the previously mentioned studies by Therrien (1976) and Foster and Ysseldyke (1976) which report a significant overall

primacy effect in ability estimates, and that teachers maintain their negative biases even in the face of conflicting evidence. The conclusion of Corro (1977, p. 2) facilitates integration of these disparate findings, "Individuals vary greatly in the amount and kind of information they use to make achievement attributions."

Atkinson's (1964) theory of achievement motivation has been investigated extensively from a causal attribution perspective. As noted by Bar-Tal (1978), four types of achievement related responses are predicted from Atkinson's theory: free-choice behavior, persistence of behavior, intensity of performance, and risk performance. That causal attributions influence the direction, magnitude, and persistence of achievement-related behavior finds support in the work of Corro (1977). Specific interrelationships reported by Bar-Tal (1978) include the finding that individuals high in need for achievement are inclined to attribute their successes to ability and effort, and therefore experience pride or reward. Individuals low in need for achievement are predisposed to attribute success to luck or easiness of the task (external causes), thereby experiencing less pride for success. Using a path analysis procedure, Omelich and Covington (1977) confirm differences in attributions of success-oriented and failure-avoidant students. However, their analysis indicates the differences are not causally important to student performance.

Another area that has received attention is that of the relation of an individual's attributions of causes for his or her own behavior to that individual's attributions of causes for the behavior of others. Barnett and Kaiser (1977) report finding that the causes to which children attribute their own and another individual's intellectual-academic outcome demonstrate a high level of congruency. This finding, however, represents a minority opinion. The consensus is that there are important self-other (actor versus observer) differences in the attribution process (Jones and Nisbett, 1972). Specific differences, noted by Bar-Tal and Frieze (1975), include the finding that people experiencing success or failure are relatively more likely to perceive their outcomes as caused by external factors (task and luck). Conversely, people watching the performance attribute the outcomes to internal factors (ability and effort). Feather and Simon (1971) had previously stated that the success of another was more often attributed to ability than one's own success. Those authors consider this to be an attempt on the part of the subject to avoid boastfulness and communicate approval of the other. They go on to say that another's failure was more often attributed to bad luck than was the subject's own failure. The rationale proposed for this finding is that those attributions allow subjects to avoid making excuses for themselves and criticisms of the other. Medway, Lowe, and Baron (1975) extended the examina-

tion of self-other differences in attributions by adding variation on an interpersonal dimension; the "other" was either liked or disliked by the subjects, or subjects were neutral toward the "other". Successful neutral others were perceived to be similar to successful liked others, such that more personal attribution was assigned to neutral and liked others than to oneself, and more to oneself than to disliked others. Unsuccessful neutral others were perceived to be similar to unsuccessful disliked others; more personal attributions for failure were assigned to disliked others than to oneself and neutral others, and more to these persons than to liked others. Additionally, subjects who attributed the success of liked and disliked others to high effort (or task ease) did not perceive the failure of those persons as cue to low effort (or task difficulty). However, for neutral others, to the extent that subjects attributed success to high effort, task ease, and good luck they attributed failure to low effort, task difficulty, and bad luck. In this research it is the "liked other" condition that provides results corresponding to those of Feather and Simon (1971).

Factors Impinging Upon Causal
Attributions

Student Race, SES, and Sex

As noted by Friend and Neale (1972) and reiterated by Bar-Tal (1978), tendencies to form causal attributions are learned, such that:

groups such as blacks and females and individuals with certain causal perceptions may perform in a classroom below their abilities because of their maladaptive patterns of attribution (Friend and Neale, 1972, p. 267).

Research by Friend and Wood (1973) indicates that subjects saw black children as attributing to themselves a lack of ability and explaining their performance in terms of luck. However, the children themselves do not totally share the biases of the Friend and Wood (1973) subjects. Black and white children, in a study by Friend and Neale (1972), were found to attribute essentially equal amounts of ability and effort to themselves given success and failure. While the amounts of ability and effort were judged equal by the children, they did confirm the biases of the adult subjects in another area. White children were found to judge ability and effort as a more important cause for their performance than task difficulty and luck. The reverse tendency was found for black children. That is, white children were found to rate internal factors as more important (especially following failure) than did black children. Ross and Salvia

(1975) indicate the existence of another aspect to the racial differences in attributions. They found that, in success conditions, both whites and blacks make attributions to ability. However, this is true for blacks only when that success is consistent with their expectations. Berg and Hyde (1976) report that whites attribute failure more than success to luck. The same was found for blacks when the failure was unexpected; the reverse when the failure was expected. Those authors also report that blacks have higher grade expectations following failure, when failure was unexpected. The interpretation made was that this finding supports previous research indicating that blacks tend to have unrealistic aspirations based on past performance. This interpretation indicates a possible lack of insight into the study's three-way interaction, race x performance outcome x performance expectation. An alternative explanation is that whites unrealistically base future expectations most heavily on performance outcome rather than also using the reasonableness of that outcome in terms of their performance expectations. Available peer group comparisons also impinge upon the attribution process such that students in low-achieving minority groups or schools are less likely to attribute low grades to lack of ability than are students in high-achievement schools. The subjects in the Friend and Wood (1973) study saw lower-class children as using low ability and high effort explanations; middle-class children as using high

ability and low effort explanations. Those subjects were more influenced by social class and race of the students than were the students themselves.

While research by Berg and Hyde (1976) reports no gender differences in causal attributions following achievement behavior, many others do report such differences. Weiner *et al.* (1975) report as being especially pronounced for females the tendency for unattractive individuals to be seen as having high ability and effort when successful, but very low ability and effort when they failed. While Brandt, Hayden, and Brophy (1975) note differences in the ways males and females assume responsibility related to their locus of control, the sex of individuals was found to have no effect on assignment of responsibility. Those authors conclude that sex differences are relatively unimportant in teachers' attributions of responsibility. Adding further confusion to this area is Hanes' (1979) finding of a three-way interaction effect on attributions due to student sex x performance x giftedness without significant main effects for sex.

Diagnostic Category (Label) and Performance Outcome

As previously mentioned, Foster and Ysselcye (1976) note that labels provide an excuse for a system's failure to teach children. The inverse may also be true. Hanes (1979) has described the impact of the gifted label. His analyses

indicated that labels may also provide a rationale for a system's success in teaching children. In addition to the effects of labels, Bar-Tal and Frieze (1974) note that attributions for oneself and others are strongly affected by whether the outcome was success or failure. Mecway and Baron (1977) extend the findings of the previous authors with their report that tutors with high expectancies for tutee success are more effective teachers. In the absence of observable behavior, teachers are still willing to rate children (Foster and Salvia, 1977); extrapolating from available observations and from conclusions deduced from labeling, file-folder information, and other sources.

Research in this area generally has been supportive of both the augmentation and discounting principles of Kelly (1973), and Frieze and Weiner's (1971) principles of consistency. Teachers have been shown to attribute consistent, high performance to child ability. Deteriorating performance may be attributed to situational demands (for example - task difficulty) in addition to being attributed to ability and effort (Beckman, 1970). However, on improvement in a child's performance, teachers assume responsibility themselves (Johnson, Genbaum, and Weiby, 1964). Additionally, teachers of successful students assign more responsibility to themselves than do teachers of unsuccessful students (Brandt, Hayden, and Brophy, 1975).

One type of information shown to be related to teachers' attributions is that contained in the child's file folder. For the succeeding student, teachers are more likely to infer high student ability and/or effort when they are told positive file-folder information. Given negative file-folder information they are more likely to see the successful student as having good luck. Attributions to ability were also influenced by how reliable the file-folder information was perceived to be (Borko and Shavelson, 1978).

Low ability, a characteristic implicit in the educably mentally handicapped label, causes the amount of effort expended to attain a given measure of success to be perceived to be greater than that expended by a person of high ability. The more successful the outcome, the greater is the amount of inferred effort (Rest, Nierenberg, Weiner, and Heckhausen, 1973). Those authors also state that, for a successful student, perceived high effort and low ability augment rewards for achievement. The more successful the outcome and the greater the perceived effort, the larger the dispensed rewards. This holds regardless of the perceived difficulty of the task. However, perceiving failure to be due to low ability of the student causes a belief that effort cannot reverse the trend (Nicholls, 1975). The implications of these studies are that where the student's success is not consistent with the teacher's expectations, resulting from label or file-folder information, the teacher

will attribute the success to the student's good luck or high effort. Consequently, while achievement may be highly rewarded, there will be no teacher expectation for future success. Perceiving a student's failure to be consistent with the label or file-folder induced expectations leads to attributions to low ability and, secondarily, task difficulty (Johnson, Feigenbaum, and Weiby, 1964); and the expectation of continued failure. In marked contrast, perceiving a success as caused by high ability results in a belief that the succeeding trend could be maintained easily (Nicholls, 1975). To the extent that teachers make attributions to ability, they can absolve themselves of responsibility for their students' success or failure.

Instrumentation

Normative and ipsative, likert-type and forced choice scales have previously been employed in the measurement of causal attributions. The Intellectual Achievement Responsibility scale (IAR) (Crandall, Katkovsky, and Crandall, 1965) and the adult variant of the IAR (Weiner and Potepan, 1970) are examples of the ipsative, forced-choice variety. Those scales yield personal attribution scores derived by summing and weighting equally, ability and effort attributions (excluding items in which ability and effort were paired). Weiner (1979) has indicated problems with the adult adaptation stemming from subjects' difficulties in determining to

which attributional factor the item choices refer. A more promising alternative to the IAR and its variants has been offered by McMahan (1973). That author's forced choice, ipsative scale employs simplistic responses, easily classifiable as to their reference to ability, effort, task, or luck. By assigning one point to a factor for each time it is checked as preferred, McMahan obtains scores for an individual on each attributional factor. While the forced choice format, properly employed, is one means of controlling for social desirability of the responses, no mention of any attempt to determine the relative social desirability of the paired responses was found. Given Edwards (1957) demonstration of a correlations of .80 to .90 between the frequency of a response and its judged social desirability, there appears to be at least one fatal flaw in the previously mentioned scales. They are further derogated by the limited normative comparisons resulting from their ipsative nature.

Exemplary of attempts to determine causal attributions through the use of likert-type instruments are the efforts of Friend and Wood (1973) and, more recently, Hanes (1979). While these scales retain full access to the normative advantages and leave no room for confusion as to which causal factor is being referenced by each item, the possibility of social desirability bias is still evident. As implied by Edwards (1957), the effectiveness of the scales in reflect-

ing individual differences in achievement attributions is inversely related to the scale bias due to social desirability.

Ideally, a scale would have responses on which there was general agreement as to the attributional factor indicated by each item. In order to minimize the impact of social desirability, the scale would employ a forced choice, ipsative format. Paired responses would be matched on social desirability in varying contexts, both before and after preliminary pairing. While the imposition of normative interpretation on ipsative scales can lead to confusing interpretations, it has been successfully employed on the Edwards Personal Preference Schedule (EPPS). Further, score pattern analyses appropriate to ipsative scores should be employed in validation (Anastasi, 1976, pp. 511-520).

Educational Implications

the conceptualization of causal perceptions as a variable intervening between need for achievement and achievement behavior...opens a possibility for intervention by modifying individuals' causal perceptions of success and failure (Bar-Tal, 1978, p. 264).

That individuals differ in their perceptions of the reasons for their own and others' successes and failures, and that those perceptions affect their behavioral responses to a given performance has been previously documented. Corro (1977) has further noted that findings which demonstrate

that causal perceptions can be manipulated experimentally suggest the possibility that attributional processes are trainable. Corro's (1977) report gains significance in the light of Dweck's (1975) conclusion that a change in students' maladaptive causal perceptions of success and failure should improve their academic performance. While Brandt, Haycen, and Brophy (1975) indicate that the experimental studies in this area may make teachers appear more self-serving and defensive in their attributions than is actually the case in naturalistic settings, data suggest that differing achievement levels in classes are related to the teachers' expectations and performance demands (Brophy and Good, 1970). The present research examines not only teachers' attributions for their own and students' performance, but also the relationship between the two.

Just as expectations of the students' future performance serve to influence the teacher-student interaction and subsequent academic achievement, so might attribution incongruency play an important role in the establishment and maintenance of school-related difficulties (Barnett and Kaiser, 1977, p. 123).

While McMahan (1973) reports the stability dimension to be more salient in achievement contexts, the importance of the locus of control dimension is made clear by Bar-Tal's (1978) recent review of the literature. A student's success or failure being perceived to be due to unstable causes (luck and effort) brings the expectancy of possible future changes in performance outcome. Expectancy for change is

minimized when performance is attributed to stable causes (ability and task difficulty). Of the two stable causes, task difficulty attributions leave the teacher with the possibility of their enhancing student performance by modifying the task. Conversely, should the teacher assume the student's performance to be due to student ability, they may absolve themselves of responsibility for modifying the environment. Barnett and Kaiser (1977) indicate a possible way student and teacher attributions may interact. Those authors give as an example:

a student who attributes his or her own performance to a lack of effort or to some external cause is unlikely to be optimally guided or motivated by a teacher who is unaware of the student's perception and attributes the poor performance predominantly to low ability (pp. 16 & 17).

Reported to generalize across age, sex, and sociocultural groups is the finding that students from fifth through twelfth grades are likely to seek tasks compatible with their attributions for success to ability, effort, or luck. This tendency is relatively unaffected by the students' success or failure on the chosen tasks (Fyans and Maehr, 1977). Thus, knowledge of a student's attributions allows predictions of their activity choices. Further, children who persist in spite of failure have been found to assume greater personal responsibility for their performance; such that they tend to attribute failure to lack of effort (Bar-Tal, 1978). Conversely, boys who accept little responsibility for their intellectual-achievement outcomes have been

reported to have lower grade point averages, achievement test percentile scores, and intelligence test scores (Barnett and Kaiser, 1977). These findings support Dweck's (1975) previously mentioned conclusion that encouraging students to make internal attributions for success and lack-of-effort attributions for failure offers the possibility of maximizing achievement behavior.

Specific attempts to operationalize these recommendations actually predate the recommendations themselves. DeCharms' (1972) personal causation training was designed to train teachers to change children's self-perceptions. Its use resulted in academic improvement of participating students. Similar success was reported by Chapin and Dyck (1976). These authors report that, after receiving attribution retraining, children experiencing reading difficulties developed more reading persistence than a control group. Including specific procedures for helping children deal with failure is far more effective than skirting the issue by trying to ensure success or glossing over failure (Dweck, 1975).

Several authors have made specific suggestions for the use of attributional information in schools. Pursuant to his own findings, Dweck (1975) has suggested that the student's attributions could be used to determine which individuals would fare well in a less-structured, more self-guided environment and which should be given more structure

and feedback designed to foster or enhance their self-reliance. Thus, as Fyans (1976) concludes, students who make attributions to ability and effort would be placed in a less-structured, more open-education environment. Students who attribute success to external factors and failure to inability would be better placed in an environment structured to facilitate attribution retraining. Suggestions for curriculum development are offered by Corro (1977, pp. 4-7):

- 1) Instructional activities should be constructed to emphasize the role of effort in success.
- 2) Students should be helped to make accurate attributions by attending to possible areas of misattribution.
- 3) Instructional environments should minimize the threat of failure.
- 4) Students should be informed of their progress in instruction as it relates to their past performance and the performance of their peers

Attention to the attributions made by the child for his or her performance and, where applicable, attribution retraining offers the possibility of enhancing the likelihood of each student achieving to their potential. This is true to the extent that the child's attributional system is consistent over time and correctly identified. Serious concerns may be voiced concerning individualization based on attribution to the extent that a teacher's perceptions of a child's attributions are reflections of the teacher's own attributions, the student's race, diagnostic label, or past performance.

CHAPTER III

METHOD

Introduction

This chapter details the subjects, procedures, and materials used in this research. Also included are sections on the instruments on which the subjects were asked to respond and on the data analysis procedures.

Subjects

Instructors of nine graduate classes in the Oklahoma State University College of Education were asked to allow their pupils to participate in the present research. Experimental packets, each designed to fit one of the four experimental conditions, were passed out by the instructors in their classes. Instructors received an instruction sheet which allowed them to respond to student questions and concerns. The packets had previously been placed in random sequence through the use of a random number table. Of the 200 potential subjects, 78 indicated they were in professions other than teaching and were therefore excluded from the subject pool. Subjects actually included in the analysis were randomly selected from the remaining 122 until each experimental condition included 20 teachers.

Procedures

As indicated above, subjects were randomly assigned to one of four levels of the label treatment (educably mentally handicapped, emotionally disturbed, learning disabled, and "normal"). Within the assigned label condition each subject was required to make attributions for students' performances under both success and failure conditions in all categories of the race treatment (black, white, Indian) (see Figure 1). Thus, with the repeated measures across performance and race, each teacher made attributions for the performance of six fictitious students.

Materials

Each teacher received a packet including: (A) Introduction, (B) Materials to rate the six students, and (C) a copy of each of the three forms of the Feuquay - Bull Achievement Attribution Self-Report (FAASR) (Feuquay and Bull, 1979).

(A) ~~Introduction~~. The introduction was in two parts -- one read aloud to the class, and one read only by the teacher-subjects themselves. Part one was:

This research is part of the effort to standardize the enclosed scale. In order to determine the situations and individuals the scale is suited for, you are asked to provide information about yourself and to rate both yourself and six different children. Your responses will remain anonymous. Do not write your name on the forms.

Performance within Race

	black		white		Indian		"FBAASR" 3 forms
	s	f	s	f	s	f	
	u	a	u	a	u	a	
	c	i	c	i	c	i	
	c	l	c	l	c	l	
	e	u	e	u	e	u	
	s	r	s	r	s	r	
	s	e	s	e	s	e	
E.D.	S1	.	.	.	.	.	.
	S20	.	.	.	.	.	.
L.D.	S21	.	.	.	.	.	.
	S40	.	.	.	.	.	.
E.M.H.	S41	.	.	.	.	.	.
	S60	.	.	.	.	.	.
Normal	S61	.	.	.	.	.	.
	S80	.	.	.	.	.	.

Figure 1. Experimental Design

Part two varied depending upon the level of label being presented. The basic format is listed below; portions in parentheses represent variations to fit differing stimulus conditions.

Each of the children you are asked to evaluate has been performing adequately in (the regular classroom; a class for the educably mentally handicapped; a class for the emotionally disturbed; or a class for the learning disabled) for the last two years. Recent testing has confirmed that these students (belong in the regular classroom; meet all criteria for placement in the educably mentally handicapped program; meet all criteria for

placement in the emotionally disturbed program; or meet all criteria for placement in the learning disabled program). However this year (their achievement, as measured by a standardized achievement test, has changed considerably; or the placement team determined that the appropriate least restrictive environment for these children is the regular class. Since their return to the regular class, their achievement, as measured by a standardized achievement test, has changed considerably).

Assume that you are the teacher of these children. Using the information provided, you are asked to determine the reasons each student would be expected to give for the change in their performance.

(B) **Student Materials.** Three sheets were provided for this section of the packet; one for each category of race (black, white, Indian). On each sheet the teacher was asked to rate two students; one who had succeeded and one who had failed. Information about each student was provided directly above the response area in one of the forms below.

Achievement this year: one grade level (above; below) classmates
 Race:(black; white; Indian)
 Previous placement:(Educably Mentally Handicapped; Emotionally Disturbed; Learning Disabled; Regular Classroom)

(C) **FBAASR's.** After completing their ratings of the six fictitious students, the teachers were asked to complete the three forms of the FBAASR (FBAASR-S, school form; FBAASR-I, interpersonal form; FBAASR-W, work form). These were completed in reference to themselves. The FBAASR is described in the next section of this chapter, and may be found in Appendices I, II, and III.

Terminology

As detailed in the materials subsection of the Procedures, teachers were asked to determine the reasons each student would be expected to give for the change in the student's performance. Those projections/perceptions of the teachers are also referred to in the text as, simply, "the attributions made by teachers for students," or similar phrases. Those alternative phrasings are employed interchangeably.

Instrumentation

The three forms of the Feuguay - Bull Achievement Attribution Self-Report (Feuguay and Bull, 1979) were developed for use in this study as a response to the dearth of appropriate, standardized instruments. As previously mentioned, copies of the three forms may be found in Appendices I, II, and III. Those copies, while accurate in content, have been changed in their layout on the page to allow their inclusion here. The scale incorporates the forced-choice, ipsative format developed on the IAR (Crandall, Katkovsky, and Crandall, 1965) and simplified by McMahan (1973).

Initially, Feuguay and Bull (1979) generated 132 phrases they believed to refer to ability, effort, task difficulty, or luck. A thesaurus was used to develop alternative phrases. Ten individuals were asked to assign the phrases to the attributional category to which they believed

the phrases belonged. One hundred percent agreement was found for 53 items referring to conditions of successful performance; 15 to ability, 17 to effort, 12 to task difficulty, and 11 to luck. Also one hundred percent agreement was found for 40 items referring to failure conditions; 12 to ability, 10 to effort, nine to task difficulty, and nine to luck.

One hundred, thirty-four individuals were asked to rate the 93 items (53 success and 40 failure) on a one to seven point, likert-type, social acceptability scale. Those items highly correlated and showing no significant difference in mean social acceptability were paired such that six pairs were created for success conditions and six were created for failure conditions. The social acceptability of each item in the 93-item set had been ascertained in school, work, and interpersonal situations for both males and females. In creating the two sets of six pairs, items showing situational or across-sex differences in mean social acceptability were excluded.

The 24 remaining items (two sets of six pairs) were presented to 137 individuals in their paired format and were again rated on social acceptability. No significant within-pair differences in mean social acceptability were found. That pairing was retained in the final forms. The three final forms differ in their question stems; describing school, work, or interpersonal (social) situations. It

should be noted that all individuals participating in the standardization process were pupils attending classes in the Oklahoma State University College of Education.

The scale provides two basic sets of indices, (1) ability, effort, task difficulty, and luck indices in success and failure conditions, and, by summation across success and failure conditions, (2) ability, effort, task difficulty, and luck indices without regard to performance conditions. The range of each index of the first set is from 0-3. The range of each index of the second set is 0-6. All indices are additive as indicated by Tukey's test for non-additivity and Cronbach's alpha ranges from .63 to .83 for the first set and from .63 to .68 for the second set. Reliability and additivity data were obtained from the 80 teachers who served as subjects in this study.

Data Analyses

Given the ipsative nature of the scale employed, each of the four attributional factors on which students were rated was treated as the sole dependent variable in a Kirk SPF-p.qr design (Kirk, 1968, pp. 298-307), i.e., a Lindquist Type VI (Lindquist, 1953). These analyses were run under release 76.6D of SAS (Statistical Analysis System; Barr, Goodnight, Sall, and Helwig, 1976) at the Oklahoma State University Computer Center. Significant program statements are included in Appendix IV. These analyses, where appro-

priate, were followed by Tukey's multiple comparison test and F-tests for simple effects. Procedures for the follow-up analyses were adapted from Kirk (1968).

The relationship between the attributions teachers made for their own performance and those that they perceived of students was examined using stepwise multiple regression of each student attributional factor onto the set of teacher self-attributions. A separate regression analysis was performed for each student attributional factor due to the dictates of the ipsative instrument. These analyses were performed using version H, release 8.0 of SPSS (Statistical Package for the Social Sciences; Nie, Hull, Jenkins, Steinbrenner, and Bent; 1978) at the Oklahoma State University Computer Center.

Given previous research in this area, plethoric with claims of significant, but disparate, findings, alpha was set at .01 for all statistical tests in this research. Apparent Type I errors in conjunction with incomplete specification of terms have led to considerable confusion in the area of expectancy research. Minimizing the possibility of Type I errors may result in a more cohesive body of research.

CHAPTER IV

ANALYSIS OF THE DATA

Introduction

This chapter includes a report of the results of this research as they relate to the stated hypotheses. Results are reported separately for each hypothesis. Also included is a section on the explanatory power of the various independent variables found to affect or be related to the dependent measures.

Results

Hypothesis I

Teachers' attributions of student performance to the ability of the student will not be affected by:

- a. the student's diagnostic label,
- b. the student's race,
- c. the student's performance, or
- d. interactions of student label, race, and performance.

Attributions to ability were analyzed as the dependent variable in a Kirk SFF-p.gr design (Kirk, 1968); a three-way analysis of variance with repeated measures on two factors

(Bruning and Kintz, 1977). That analysis is detailed in Table I. As indicated in the table, the students' reported performance had a significant effect on teachers' attributions to ability ($F=18.32$; $df=1,76$; $p<0.0001$). Specifically, attributions to high ability in success conditions (Mean=1.7458) were made more frequently than were attributions to low ability in failure conditions (Mean=1.2917). Thus $H_0 IC$ was rejected. Hypotheses IA, IB, and ID were not rejected.

TABLE I
ANOV SUMMARY TABLE FOR ABILITY
ATTRIBUTIONS

Source	SS	df	MS	F
Between subjects	135.998	79	---	---
Label	1.540	3	0.513	< 1
Subj w.groups	134.458	76	1.769	---
Within subjects	305.833	400	---	---
Race	2.850	2	1.425	2.22
Label X race	4.067	6	0.678	1.06
Race X subj w.groups	97.417	152	0.641	---
Performance	24.752	1	24.752	18.32*
Label X performance	1.056	3	0.352	< 1
Performance X subj w.groups	102.692	76	1.351	---
Race X performance	1.267	2	0.634	1.44
Label X race X performance	4.850	6	0.808	1.84
Race X performance X subj w.groups	66.883	152	0.440	---
Total	441.830	479	---	---

* $p < 0.0001$

Hypothesis II

Teachers' attributions of student performance to the effort of the student will not be affected by:

- a. the student's diagnostic label,
- b. the student's race,
- c. the student's performance, or
- d. interactions of student label, race, and performance.

Attributions to effort were also analyzed as the dependent variable in a Kirk SPF-p.qr design (Kirk, 1968). That analysis is detailed in Table II. The students' performance had a significant effect on attributions to effort ($F=14.12$; $df=1,76$; $p<0.0003$). Attributions to high effort in success conditions (Mean=1.5125) were made with more frequency than were attributions to low effort in failure conditions (Mean=1.0958). The tabled results indicate that H_0 IIC was rejected while Hypotheses IIA, IIB, and IID were not rejected.

Hypothesis III

Teachers' attributions of student performance to the difficulty of the task will not be affected by:

- a. the student's diagnostic label,
- b. the student's race,
- c. the student's performance, or
- d. interactions of student label, race, and performance.

TABLE II
ANOV SUMMARY TABLE FOR EFFORT
ATTRIBUTIONS

Source	SS	df	MS	F
Between subjects	127.995	79	---	---
Label	3.892	3	1.297	< 1
Subj w.groups	124.033	76	1.632	---
Within subjects	375.667	400	---	---
Race	0.554	2	0.277	< 1
Label X race	1.596	6	0.266	< 1
Race X subj w.groups	146.517	152	0.964	---
Performance	20.833	1	20.833	14.12*
Label X performance	2.067	3	0.689	< 1
Performance X subj w.groups	112.100	76	1.475	---
Race X performance	0.279	2	0.140	< 1
Label X race X performance	3.671	6	0.612	1.06
Race X performance X subj w.groups	88.050	152	0.579	---
Total	503.592	479	---	---

* $p < 0.0003$

Attributions to task difficulty were also analyzed as the dependent variable in a Kirk SPF-p-gr design (Kirk, 1968). That analysis is detailed in Table III. The students' performance had a significant effect on attributions to task difficulty ($F=43.34$; $df=1,76$; $p<0.0001$). Attributions to the easiness of the task in success conditions (Mean=1.208) were made less frequently than were attributions to the difficulty of the task in failure conditions (Mean=1.808). Thus, H_0 IIIC was rejected while Hypotheses IIIA, IIIB, and IIID were not rejected.

TABLE III
ANOV SUMMARY TABLE FOR TASK ATTRIBUTIONS

Source	SS	df	MS	F
Between subjects	108.633	79	---	---
Label	12.150	3	4.050	3.19
Subj w.groups	96.483	76	1.269	---
Within subjects	305.334	400	---	---
Race	1.904	2	0.952	1.60
Label X race	1.913	6	0.319	< 1
Race X subj w.groups	90.517	152	0.596	---
Performance	43.200	1	43.200	43.34*
Label X performance	5.050	3	1.683	1.69
Performance X subj w.groups	75.750	76	0.997	---
Race X performance	3.462	2	1.731	3.30
Label X race X performance	3.688	6	0.615	1.17
Race X performance X subj w.groups	79.850	152	0.525	---
Total	413.967	479	---	---

* $p < 0.0001$

Hypothesis IV

Teachers' attributions of student performance to luck will not be affected by:

- a. the student's diagnostic label,
- b. the student's race,
- c. the student's performance, or
- d. interactions of student label, race, and performance.

As with the previous hypotheses, a Kirk SPF-p.qr design was employed in this analysis. Results can be found in Table IV.

TABLE IV
ANOV SUMMARY TABLE FOR LUCK ATTRIBUTIONS

Source	SS	df	MS	F
Between subjects	164.498	79	---	---
Label	3.540	3	1.180	< 1
Subj w.groups	160.958	76	2.118	---
Within subjects	363.833	400	---	---
Race	12.188	2	6.094	9.30*
Label X race	5.529	6	0.922	1.41
Race X subj w.groups	99.617	152	0.655	---
Performance	8.802	1	8.802	5.88
Label X performance	3.306	3	1.102	< 1
Performance X subj w.groups	113.725	76	1.496	---
Race X performance	10.879	2	5.440	8.22**
Label X race X performance	9.238	6	1.540	2.33
Race X performance X subj w.groups	100.550	152	0.662	---
Total	528.331	479	---	---

* $p < 0.0002$

** $p < 0.0004$

The student's race had a significant effect on attributions to luck ($F=9.30$; $df=2,152$; $p<0.0002$). Further, there was a significant race x performance interaction effect ($F=8.22$;

$df=2,152$; $p<0.0004$). The race x performance summary table (Table V) and subsequent simple effects analysis (Table VI) indicate that, while no differences exist between races in the success condition, in the failure condition attributions to bad luck are made more frequently for blacks (Mean=1.731) and Indians (Mean=1.825) than for whites (Mean=1.450). Attributions to luck were not different for blacks and Indians. Thus, H_0 IVB and H_0 IVD were rejected, while H_0 IVA and H_0 IVC were not rejected.

TABLE V
RACE BY PERFORMANCE SUMMARY TABLE FOR
LUCK ATTRIBUTIONS

Race	Performance	
	Success	Failure
white	122	110
Indian	129	163
black	117	160

n=80

Hypothesis V

No significant relationship will be found between the attributions teachers make for their own performance and the attributions they make for the performance of students to:

a. the students' ability,

TABLE VI
SIMPLE EFFECTS OF RACE AND PERFORMANCE
ON LUCK ATTRIBUTIONS

Source	SS	df	MS	F
b @ c1	0.9083	2	0.4542	< 1
b @ c2	22.1583	2	11.0792	16.83**
Error	---	304	0.6585	---
c @ b1	0.9000	1	0.9000	< 1
c @ b2	7.3250	1	7.3250	7.80*
c @ b3	11.5563	1	11.5563	12.29**
Error	---	128	0.9400	---

b1 = white
b2 = indian
b3 = black

c1 = success
c2 = failure

* p < 0.005

** p < 0.001

- b. the students' effort,
- c. the difficulty of the task, or
- d. luck.

Independent treatment of the q (outcome) variables using stepwise multiple regression was employed in the analyses of Hypothesis V. As such, four separate regressions were performed. Neither the teachers' perceptions of the students' attributions to effort nor task difficulty were significantly related to the teachers' self-attributions. However, related to the set of teacher self-attributions were their perceptions of students' attributions to ability ($F=12.78$; $df=2,77$; $p<.001$) and to luck ($F=16.503$; $df=1,78$; $p<0.001$).

Attributions to student ability. Two teacher self-attributions were found to be related to their perceptions of student attributions to ability. The teacher self-attributions were in the areas of luck and task difficulty. The Multiple R was .499 and R Squared equaled .249. The regres-

$$sa = 17.744 - 0.3306(tl) - 0.1752(tt)$$

where: sa is student ability, tl is teacher self-attribution to luck, and tt is teacher self-attribution to task difficulty.

sion equation takes the form: That is, the less frequently teachers attribute their own performance to luck and the difficulty of the task, the more frequently they perceive the student to attribute performance to ability.

Attributions to luck. One teacher self-attribution was found to be related to their perceptions of student attributions to luck. That was self-attributions in the area of luck. The Multiple R was .418 and R Squared equaled .175.

$$sl = 5.004 + 0.2852(tl)$$

where: sl is student luck and tl is teacher self-attribution to luck.

That regression equation takes the form: Thus, the more frequently teachers attribute their own performance to luck, the more frequently they perceive the student to attribute performance to luck.

Explanatory Power of Independent Variables

This design allows for an indirect examination of the explanatory power of the race, label, and performance variables, and the teachers' self-attributions in relation to the variation in attributions teachers presume of students. Table VII lists each dependent variable and those independent variables found to have a significant effect upon or relationship with them. The shared variance/variance accounted for in the case of the effects of performance, race, and race by performance is derived from the ratio of the Sum of Squares associated with the specific effect and the total Sum of Squares for the model including that effect. In the case of the teacher self-attributions, the shared variance/variance accounted for is equal to R Squared for the regression involving the appropriate dependent variable.

TABLE VII
EXPLANATORY POWER OF THE INDEPENDENT
VARIABLES

Dependent variable	Related independent variable(s)	Shared variance/ variance accounted for
Ability	Performance	5.6%
	Teacher self-attributions	24.9%
Effort	Performance	4.1%
Task	Performance	10.4%
Luck	Race	2.3%
	Race x performance	2.1%
	Teacher self-attributions	17.5%

CHAPTER V

SUMMARY AND CONCLUSIONS

Introduction

This chapter presents a summary of the present investigation, an interpretive discussion of the major findings and conclusions, and a section on recommendations. Included in the recommendations section is a discussion of the limitations of this research.

Summary of the Research

This study examined the effects of student race, special education diagnostic label, and performance on teachers' ratings of the attributions they would expect students to make for the student's own performance. Following the original Heider (1958) model and utilizing a research procedure analogous to that employed by Friend and Wood (1973) and Hanes (1979), attributions to ability, effort, task difficulty, and luck were examined.

Eighty subjects were randomly selected from those teachers attending graduate classes in the department of Applied Behavioral Studies at Oklahoma State University during the Spring semester of 1979. Those eighty teachers were

randomly assigned to one of four treatment conditions. Teachers within each treatment condition were asked to rate six fictitious students, the treatments differing as to the diagnostic label of the students being rated. That is, each teacher rated six learning disabled, six emotionally disturbed, six educably mentally handicapped, or six regular class students. Within each treatment condition, rated students were purported to vary as to their race (white, Indian, or black) and their performance (success or failure) such that every combination of race and performance was presented to every teacher. Ratings of students were made on the Feiguay - Bull Achievement Attribution Self-Report (Feiguay and Bull, 1979) which provided scores ranging from 0-3 on each of the four attributional factors separately under success and failure conditions. The scale also provides scores ranging from 0-6 on each of the four attributional factors upon summing the success and failure scores.

Fictitious students were employed to prevent the questionable ethics involved in the manipulation of teachers' perceptions of real students and the possibility of altering the teachers' behavior towards those students. A repeated measures design alleviated problems associated with inter-subject variability and offered power equivalent to a fully between-subjects design having 480 subjects.

Five null hypotheses were posited. The first hypothesis was that attributions to ability would not be affected by

(a) diagnostic label, (b) race, (c) performance, or (d) interactions of those variables. The second, third, and fourth hypotheses were identical to the first with the exception that they dealt with attributions to effort, task difficulty, and luck, respectively. Each of the first four hypotheses was analyzed using a separate three-way analysis of variance, each analysis having a specific attributional factor as the dependent variable. It was found that the performance of the student had a significant effect on attributions to ability, effort, and task difficulty. Attributions to high ability and high effort in success conditions were more frequent than attributions to low ability and low effort in failure conditions. Conversely, attributions to the difficulty of the task were more frequent in the failure condition than were attributions to the easiness of the task in the success condition. Attributions to luck were affected by the race of the student, both alone and in interaction with the student's performance. Further analysis of the race by performance interaction indicated no differences between races in the success condition. However, in the failure condition, attributions to bad luck were made more frequently for blacks and Indians than for whites.

The fifth hypothesis anticipated a lack of relation between the attributions made by teachers for their own behavior and those made by teachers in reference to students. Using four stepwise multiple regressions the teacher-

student relationship was examined for each attributional factor by regressing a singular student factor onto the set of teacher factors. Attributions to student ability and luck were related to the teachers' attributions for their own behavior, while attributions to student effort and the difficulty of the task were not.

Discussion and Conclusions

That success or failure (performance) should affect attributions to ability, effort, and task difficulty is congruent with previous research (Bar-Tal, 1978). The significant main effect of race on attributions to luck was interpreted in the light of a significant race by performance interactive effect on attributions to luck. That race by performance interactive effect lends support to Friend and Wood's (1973) results wherein subjects saw black children as explaining their success and failure in terms of luck. The subjects in the research of Friend and Wood (1973) did not perceive white children as employing "luck" explanations. The present research indicates that those perceived race differences may not be as pervasive as indicated by previous research. Race differences were found in attributions to luck, but only in failure conditions. However, teachers perceived both blacks and Indians to rely more heavily than whites on bad luck as an excuse for failure. This implies the belief that blacks and Indians would be expected to feel less shame for their failure (Friend and Wood, 1973).

Foster and Salvia (1977) have reported that label bias is minimized when objectivity is requested. Further, Brandt, Hayden, and Brophy (1975) and Yoshida and Meyers (1975) have reported results that indicate that the impact of information is diluted as a teacher has more experience with or information about a student. Instructions used in the present research asked teachers to pay careful attention to all information. Also, three different types of information about each fictitious student were included. Through effects similar to those reported by Brandt, Hayden, and Brophy (1975), and Foster and Salvia (1977), the instructions and information may account for the lack of effects found for the label variable.

In the present research, it was found that as teachers decrease in the attribution of their own performance to luck and task difficulty, they increase in the frequency of their attribution of student performance to student ability. A possible explanation for this finding has previously been reported. Barnett and Kaiser (1977) report a high degree of congruency between attributions for one's own performance and the performance of others. Interpreted in the light of the work of Barnett and Kaiser (1977), the present research indicates that as teachers decrease in the attribution of their own performance to external factors, they increase in their attribution of the performance of students to an internal factor, ability. Also reported in the present

research is the finding that as teachers increase in the frequency of their attributions of their own performance to luck, they also increase in their attributions of student performance to luck. This finding is also congruous with Barnett and Kaiser's (1977) observation of similarity of "self" and "other" attributions.

Noteworthy is the finding that 24.9% of the variance in the attributions to student ability and 17.5% of the variance in the attributions to luck is variance shared with the teachers' attributions for their own performance. Given the repeated measures design employed in the present research in conjunction with the ipsative nature of the scale only an indirect examination of the relative explanatory power of teacher self-attributions, diagnostic label, race, and performance is possible. That examination was initiated in Chapter IV in the discussion of the relative explanatory power of the independent variables (see Table VII). The previous research reviewed included no attempts to analyze the relative impact of those characteristics internal to the teacher and those internal or assigned to the student. It was found in the present research that the largest proportion of variance accounted for by the variables diagnostic label, race, and performance was in the area of attributions to task difficulty. There the performance of the student accounted for 10.4% of the variance in the dependent variable. Less than 6% of the variance in attributions to abil-

ity, effort, or luck was accounted for by the three experimental variables. The vast majority of the research cited in the area of teacher expectancy concentrated on the impact of student characteristics on those expectations. The present research indicates a possible reason for the inconsistency in the results reported. That is, expectations held by teachers may be more a function of those teachers' personal characteristics than of the characteristics of the students. Teachers manufacture student behavior to fit their expectations (Foster and Salvia, 1977). They may manufacture expectations to validate their internal biases. Further interpretation must wait for additional research in the area.

Recommendations

While the impact of social acceptability on the attributions one makes for oneself and others dictates the use of an ipsative scale, there are serious limitations imposed by its use. These limitations are primarily in the area of multicollinearity of the resultant dependent measures which precludes simultaneous analysis of those measures. The inability of available statistical procedures to effectively analyze ipsative data disallows analysis of the relative nature of the four-factor attributional framework used in the present research. A possible alternative approach may be to maintain the ipsative format in a lengthened form while holding the analysis to the present set of items. This,

while not eliminating the interrelation of the subscales, would allow conventional analysis.

It is recommended that future research include an analysis of the relative effects of factors internal to the teacher and factors inherent in the student. The present research was able to demonstrate that, at least in the areas of ability and luck, teachers' attributions for their own performance are reflected in their perceptions of the attributions made by students. This becomes important should the teacher attempt to resolve problems which the student is having or when deciding on the rewards or credit a student deserves for his/her success. As previously stated in the educational implications section of Chapter II, attention to the attributions made by the child for his or her performance offers the possibility of enhancing the likelihood of each student achieving to their potential. Serious concerns may be voiced concerning individualization based on attribution to the extent that a teacher's perceptions of a child's attributions are reflections of the teacher's own attributions, the student's race, diagnostic label, or past performance. The present research lends support to the view that the teacher's perceptions are based, at least in part, on their own attributions, on the student's race, and on the student's past performance.

BIBLIOGRAPHY

- Algozzine, Bob, John Sutherland. The learning disabilities label: an experimental analysis. Contemporary Educational Psychology, 1977, 2, 292-297.
- Anastasi, Anne. Psychological Testing. 4th Ed. New York: MacMillan Publishing Co., Inc., 1976.
- Atkinson, J. W. An Introduction to Motivation. Princeton, N.J.: Van Nostrand, 1964.
- Barber, T., D. Calverly, A. Forgione, J. McPeake, J. Chaves, E. Bowen. Five attempts to replicate the experimenter bias effect. Journal of Consulting and Clinical Psychology, 1969, 33, 11-14.
- Barnett, Mark A., Donn L. Kaiser. The relationship between intellectual-achievement responsibility attributions and performance. Paper presented at the annual meeting of the Midwestern Psychological Association (Chicago, Ill., May 5-7, 1977).
- Bar-Tal, Daniel. Attributional analysis of achievement-related behavior. Review of Educational Research, 1978, 48, 259-271.
- Bar-Tal, Daniel, Irene H. Frieze. Attributions of success and failure for males and females as actors and observers. Pittsburgh University, Pa. Learning Research and Development Center, Report Ms. No. 1975/8, 1974.
- Beckman, L. Effects of students' performance on teachers' and observers' attributions of causality. Journal of Educational Psychology, 1970, 61, 76-82.
- Berg, Phyllis A., Janet S. Hyde. Gender and race differences in causal attributions in achievement situations. Paper presented at the annual meeting of the American Psychological Association (84th, Washington, D.C., September 3-7, 1976).

- Borko, Hilda, Richard J. Shavelson. Teachers' sensitivity to the reliability of information in making causal attributions in an achievement situation. Journal of Educational Psychology, 1978, 70, 271-279.
- Barr, Anthony J., James H. Goodnight, John P. Sall, Jane T. Helwig. A User's Guide to SAS 76. Raleigh, North Carolina: SAS Institute, Inc., 1976.
- Brandt, Larry J., Mary E. Hayden, and Jere E. Brophy. Teachers' attitudes and ascription of causation. Journal of Educational Psychology, 1975, 67, 677-682.
- Brophy, Jere E., and Thomas L. Good. Teachers' communications of differential expectations for children's classroom performance: Some behavioral data. Journal of Educational Psychology, 1970, 61, 365-374.
- Bruning, James L. and B. L. Kintz. Computational Handbook of Statistics, 2nd edition. Glenview, Illinois: Scott, Foresman and Company, 1977.
- Bryan, Tanis H. and Roslyn A. Wheeler. Teachers' behaviors in classes for severely retarded - multiply trainable mentally retarded, learning disabled, and normal children. Mental Retardation, 1976, August, 41-45.
- Chapin, M. and D. G. Dyck. Persistence of children's reading behavior as a function of N length and attribution retraining. Journal of Abnormal Psychology, 1976, 85, 511-515.
- Concell, J. F. and M. H. Tonn. A comparison of MTAI scores. Mental Retardation, 1965, 3, pp 123-125.
- Cooley, William W. Techniques for considering multiple measurements. In Robert L. Thorndike (Ed.), Educational Measurement, 2nd edition. Washington, D. C.: American Council on Education, 1971.
- Corro, Lyn. Implications of research on causal attributions for curriculum development. Paper presented at the annual meeting of the American Educational Research Association (New York, April 4-8, 1977).

Crandall, V. C., M. Katkovsky, and V. J. Crandall. Children's beliefs in their own control of reinforcements in intellectual - academic achievement situations. *Child Development*, 1965, 36, 91-109.

Darlington, R. E. Multiple regression. *Psychological Bulletin*, 1968, 161-182.

Davidson, Helen H. and Gerhard Lang. Children's perceptions of their teachers' feelings toward them related to self - perception, school achievement, and behavior. *Journal of Experimental Education*, 1960, 29, 107-118.

DeCharms, R. Personal causation training in the schools. *Journal of Applied Psychology*, 1972, 2, 95-113.

Dweck, C. S. The role of expectations and attributions in the alleviation of learned helplessness. *Journal of Personality and Social Psychology*, 1975, 31, 674-685.

Feather, N. T. and J. E. Simon. Attribution of responsibility and valence of outcome in relation to initial confidence and success and failure of self and other. *Journal of Personality and Social Psychology*, 1971, 18 173-188.

Feuquay, J. P. and K. S. Bull. Preliminary standardization of an achievement attribution self report form. (Paper in preparation, 1979).

Fontaine, Gary. Causal attributions in simulated versus real situations: When are people logical, when are they not? *Journal of Personality and Social Psychology*, 1975, 32 1021-1029.

Foster, Glen G. and John Salvia. Teacher response to the label of learning disabled as a function of demand characteristics. *Exceptional Children*, 1977, 48 533-534.

Foster, G. and J. Ysseldyke. Expectancy and halo effects as a result of artificially induced teacher bias. *Contemporary Educational Psychology*, 1976, 1, 37-45.

Friend, Ronald M. and John M. Neale. Children's perceptions of success and failure: An attributional analysis of the effects of race and social class. *Developmental Psychology*, 1972, 7 124-128.

- Friend, Ronald M. and Lorraine E. Hood. Adults' attributions of responsibility for success and failure of children from different social backgrounds. *Psychology in the Schools*, 1973, 10, 337-344.
- Frieze, I. and B. Weiner. Cue utilization and attributional judgements for success and failure. *Journal of Personality*, 1971, 39, 591-606.
- Fyans, Leslie J., Jr. Attributional self-selection and the implications for the individualization of education. Paper presented at the annual meeting of the American Psychological Association (84th, Washington, D.C., September 3-7, 1976).
- Fyans, Leslie J., Jr. and Martin L. Naehr. Attributional style and task selection: A dynamic perspective on personality x situation interactions. Unpublished manuscript; available from Dr. Leslie J. Fyans, Jr., Illinois Office of Education, 100 N. First Street, Springfield, Illinois 62707; 1977.
- Gillung, Tom B. and Chauncy N. Rucker. Labels and teacher expectancies. *Exceptional Children*, 1977, 48 464-465.
- Good, T. L. and J. E. Erophy. *Educational Psychology: A Realistic Approach*. New York: Holt, Rinehart, and Winston, 1973.
- Hanes, Bailey F. Causal attributions by teacher-trainees for success and failure outcomes of elementary students labeled normal and gifted. Unpublished doctoral dissertation. Oklahoma State University, 1979.
- Helton, George B. and Thomas D. Oakland. Teachers' attitudinal responses to differing characteristics of elementary school students. *Journal of Educational Psychology*, 1977, 69 261-265.
- Hofer, Manfred. Implicit personality theory of teachers' causal attribution and their perception of students. Paper presented at the annual meeting of the American Educational Research Association (Toronto, Canada, March 27-31, 1978).

- Jackson, G. and G. Cosca. The inequality of educational opportunity in the Southwest: An observational study of ethnically mixed classrooms. *American Educational Research Journal*, 1974, 11, 219-229.
- Jaffe, J. Attitudes of adolescents toward mentally retarded. *American Journal of Mental Deficiency*, 1966, 70, 907-917.
- Johnson, T., R. Feigenbaum, and M. Weiby. Some determinants and consequences of the teacher's perception of causation. *Journal of Educational Psychology*, 1964, 55, 237-246.
- Johnston, J. *Econometric Methods*, 2nd ed., New York: McGraw-Hill, 1972.
- Jones, E. E. and R. E. Nisbett. The actor and the observer: Divergent perceptions of the causes of behavior. In E. E. Jones et al. (Eds.), *Attribution: Perceiving the Causes of Behavior*. Morristown, N.J.: General Learning Press, 1972.
- Kelly, H. H. Attribution theory in social psychology. *Nebraska Symposium on Motivation*, 1967, 15, 192-241.
- Kelly, Harold H. The process of causal attribution. *American Psychologist*, February, 1973, 107-128.
- Kirk, R. *Experimental Design: Procedures for the Behavioral Sciences*. Belmont, California: Wadsworth, 1968.
- Lindquist, E. F. *Design and Analysis of Experiments in Psychology and Education*. Boston: Houghton Mifflin, 1953.
- Macwillan, D. L., R. L. Jones, and G. F. Aloia. The mentally retarded label: A theoretical analysis and review of the research. *American Journal of Mental Deficiency*, 1974, 79, 241-261.
- Massey, Grace C. and Sanford M. Darnbusch. Self-enhancement, self-consistency, and distinctiveness of feedback in a field study of academic self-concept: Attribution processes in inner-city high schools. Technical Report No. 49, Stanford Center for Research and Development in Teaching, Stanford University, California, 1976.

- McMahan, Ian D. Relationships between causal attributions and expectancy of success. Journal of Personality and Social Psychology, 1973, 28, 108-114.
- Medway, Frederic J., Charles A. Lowe, and Reuben M. Baron. Different blames for different names: divergent self-other attributions for success and failure. Paper presented at the annual meeting of the Midwestern Psychological Association (46th, Chicago, Illinois, May 2-4, 1975).
- Medway, Frederic J. and Reuben M. Baron. Locus of control and tutor's instructional style as determinants of cross-age tutoring effectiveness. Contemporary Educational Psychology, 1977, 2, 298-310.
- Metzner, Setmour. Teacher bias in pupil evaluation: A critical analysis. The Journal of Teacher Education, 1971, 22, 197.
- Nicholls, J. G. Causal attributions and other achievement related cognitions: Effects of task outcome, attainment value, and sex. Journal of Personality and Social Psychology, 1975, 31, 379-389.
- Nie, N. H., C. H. Hull, J. G. Jenkins, R. Steinbrenner, and D. H. Bent. Statistical Package for the Social Sciences, 2nd edition. New York: McGraw-Hill, 1975.
- Omlich, Carol L. and Martin V. Covington. Is there causality in causal attributions? Paper presented at the annual meeting of the Western Psychological Association (Seattle, Washington, April, 1977).
- Panda, Kailas C. and Nettie R. Bartel. Teacher perception of exceptional children. Journal of Special Education, 1972, 6, 261-266.
- Rest, Stanley, Richard Nierenberg, Bernard Weiner, and Heinz Heckhausen. Further evidence concerning the effects of perceptions of ability and effort on achievement evaluation. Journal of Personality and Social Psychology, 1973, 28, 187-191.
- Rosenthal, R. and L. Jacobson. Pygmalion in the Classroom: Teacher Expectation and Pupils' Intellectual Development. New York: Holt, Rinehart, and Winston, 1968.

- Ross, M. B. and J. Salvia. Attractiveness as a biasing factor in teacher judgements. *American Journal of Mental Deficiency*, 1975, 80, 96-98.
- Rubovits, Pamela C. and Martin L. Maehr. Pygmalion black and white. *Journal of Personality and Social Psychology*, 1973, 25 210-218.
- Salvia, John, Gary M. Clark, and James E Ysseldyke. Teacher retention of stereotypes of exceptionality. *Exceptional Children*, May, 1973, 651-652.
- Silberman, Melvin L. Behavioral expression of teachers' attitudes toward elementary school students. *Journal of Educational Psychology*, 1969, 60 402-407.
- Therrien, Susan. Teachers' attributions of student ability. *The Alberta Journal of Educational Research*, 1976, 22 205-214.
- Weiner, B. Attribution theory, achievement motivation, and the educational process. *Review of Educational Research*, 1972, 42, 203-215.
- Weiner, B. Personal communication with author by phone and mail in reference to scale development in the area of causal attributions. May, 1979.
- Weiner, B. and P. A. Potepan. Personality characteristics and affective reactions toward exams of superior and failing college students. *Journal of Educational Psychology*, 1970, 61 144-151.
- Weiner, Seymour, and others. The effects of physical attractiveness on attributions of causality for success and failure. Paper presented at the annual meeting of the Midwestern Psychological Association (46th, Chicago, Illinois, May 2-4, 1975).
- Yoshida, Roland K. and C. Edward Meyers. Effects of labeling as educably mentally retarded on teachers' expectancies for change in a student's performance. *Journal of Educational Psychology*, 1975, 67, 521-527.
- Zucker, Stanley H. and Alfonso G. Frieto. Ethnicity and teacher bias in educational decisions. *Journal of Instructional Psychology*, 1976-1977, 4 2-5.

APPENDIX A

FEUQUAY - BULL ACHIEVEMENT ATTRIBUTION

SELF REPORT: SCHOOL FORM

1. When I am successful on an examination, it is mainly because:

A. I really strained at it OR

B. I am good at it

A. I used a lot of energy OR

B. The problems were few

A. I was lucky OR

B. I really strained at it

A. The problems were few OR

B. I have a talent in that area

A. I was fortunate OR

B. The problems were few

A. I am clever OR

B. I was fortunate

2. When I do poorly on a written examination, it is mainly because:

A. I am not masterful when it comes to that OR

B. What was required was very difficult

A. The functions were extreme OR

B. Things were unfavorable

A. I don't have the aptitude for it OR

B. I didn't have the opportunities

A. I was not as careful as usual OR

B. It was a hard task

A. I didn't try very hard OR

B. I am not talented in that area

- A. I didn't labor with it OR
- B. I didn't have the opportunities

3. When I do well on a written assignment, it is mainly

because:

- A. The problems were few OR
- B. I have a talent in that area

- A. I was fortunate OR
- B. The problems were few

- A. I am clever OR
- B. I was fortunate

- A. I really strained at it OR
- B. I am good at it

- A. I used a lot of energy OR
- B. The problems were few

- A. I was lucky OR
- B. I really strained at it

4. When I do poorly on an examination, it is mainly

because:

- A. I was not as careful as usual OR
- B. It was a hard task

- A. I didn't try very hard OR
- B. I am not talented in that area

- A. I didn't labor with it OR
- B. I didn't have the opportunities

- A. I am not masterful when it comes to that OR
- B. What was required was very difficult

- A. The functions were extreme OR
- B. Things were unfavorable

- A. I don't have the aptitude for it OR
- B. I didn't have the opportunities

APPENDIX B

FEUQUAY - BULL ACHIEVEMENT ATTRIBUTION

SELF REPORT: INTERPERSONAL

FORM

1. When I try to become friends with someone and I succeed, it is mainly because:

- A. I really strained at it OR
- B. I am good at it

- A. I used a lot of energy OR
- B. The problems were few

- A. I was lucky OR
- B. I really strained at it

- A. The problems were few OR
- B. I have a talent in that area

- A. I was fortunate OR
- B. The problems were few

- A. I am clever OR
- B. I was fortunate

2. When I fail to be included in a group of my peers, it is mainly because:

- A. I am not masterful when it comes to that OR
- B. What was required was very difficult

- A. The functions were extreme OR
- B. Things were unfavorable

- A. I don't have the aptitude for it OR
- B. I didn't have the opportunities

- A. I was not as careful as usual OR
- S. It was a hard task

- A. I didn't try very hard OR
- B. I am not talented in that area

- A. I didn't labor with it OR
- B. I didn't have the opportunities

3. When I succeed in being included in a group of my peers, it is mainly because:

- A. The problems were few OR
- B. I have a talent in that area

- A. I was fortunate OR
- B. The problems were few

- A. I am clever OR
- B. I was fortunate

- A. I really strained at it OR
- B. I am good at it

- A. I used a lot of energy OR
- B. The problems were few

- A. I was lucky OR
- B. I really strained at it

4. When I try to become friends with someone and I fail, it is mainly because:

- A. I was not as careful as usual OR
- B. It was a hard task

- A. I didn't try very hard OR
- B. I am not talented in that area

- A. I didn't labor with it OR
- B. I didn't have the opportunities

- A. I am not masterful when it comes to that OR
- B. What was required was very difficult

- A. The functions were extreme OR
- B. Things were unfavorable

- A. I don't have the aptitude for it OR
- B. I didn't have the opportunities

APPENDIX C

FEUQUAY - BULL ACHIEVEMENT ATTRIBUTION

SELF REPORT: WORK FORM

1. When I am successful in a job, it is mainly because:

A. I really strained at it OR
B. I am good at it

A. I used a lot of energy OR
B. The problems were few

A. I was lucky OR
B. I really strained at it

A. The problems were few OR
B. I have a talent in that area

A. I was fortunate OR
B. The problems were few

A. I am clever OR
B. I was fortunate

2. When I fail to get a promotion or raise, it is mainly because:

A. I am not masterful when it comes to that OR
B. What was required was very difficult

A. The functions were extreme OR
B. Things were unfavorable

A. I don't have the aptitude for it OR
B. I didn't have the opportunities

A. I was not as careful as usual OR
B. It was a hard task

A. I didn't try very hard OR
B. I am not talented in that area

A. I didn't labor with it OR

B. I didn't have the opportunities

3. When I succeed in getting a promotion or raise, it is mainly because:

A. The problems were few OR
B. I have a talent in that area

A. I was fortunate OR
B. The problems were few

A. I am clever OR
B. I was fortunate

A. I really strained at it OR
B. I am good at it

A. I used a lot of energy OR
B. The problems were few

A. I was lucky OR
B. I really strained at it

4. When I am unsuccessful in a job, it is mainly because:

A. I was not as careful as usual OR
B. It was a hard task

A. I didn't try very hard OR
B. I am not talented in that area

A. I didn't labor with it OR
B. I didn't have the opportunities

A. I am not masterful when it comes to that OR
B. What was required was very difficult

A. The functions were extreme OR
B. Things were unfavorable

A. I don't have the aptitude for it OR
B. I didn't have the opportunities

APPENDIX D

ANOV MODEL FOR THE STATISTICAL ANALYSIS SYSTEM

The basic program steps for SAS are listed below:

```
PROC ANOVA(CLASSES A B C S)
MODEL W=A B(A)
      B A*B B*S(A)
      C A*C C*S(A)
      B*C A*B*C B*C*S(A);
TEST H=A E=S(A);
TEST H=B A*B E=B*S(A);
TEST H=C A*C E=C*S(A);
TEST H=B*C A*B*C E=B*C*S(A);
```

2
VITA

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Doctor of Philosophy

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