4-1973

Using the Construct of Instructor Credibility to Forecast Student Decision-Making Behaviors

Robert David Mendelsohn
Western Michigan University

Follow this and additional works at: https://scholarworks.wmich.edu/dissertations
Part of the Educational Sociology Commons

Recommended Citation
https://scholarworks.wmich.edu/dissertations/2870

This Dissertation-Open Access is brought to you for free and open access by the Graduate College at ScholarWorks at WMU. It has been accepted for inclusion in Dissertations by an authorized administrator of ScholarWorks at WMU. For more information, please contact maira.bundza@wmich.edu.
USING THE CONSTRUCT OF INSTRUCTOR CREDIBILITY TO FORECAST STUDENT DECISION-MAKING BEHAVIORS

by

Robert David Mendelsohn

A Dissertation Submitted to the Faculty of The Graduate College in partial fulfillment of the Degree of Doctor of Philosophy

Western Michigan University
Kalamazoo, Michigan
April 1973
ACKNOWLEDGEMENTS

The impetus for this dissertation grew out of a series of conflict situations between myself and my major advisor, Dr. Edsel L. Erickson. I am now in the position to formally express to him my thanks for channeling my hostility into what has hopefully become a productive intellectual endeavor. Consequently, it is appropriate at this point to confess that I perceive him as a highly credible individual, both as an instructor and as a friend.

I would also like to thank my wife, Susan, for her emotional and intellectual encouragement throughout yet another long project.

Gratitude is expressed for the assistance provided by the other members of my committee, Dr. Herbert Smith, Mr. Robert Waite and especially to Dr. James Bosco, who provided positive evaluations late in the dissertation when they were sorely needed. Finally, I would like to thank Dr. David Adams for his early assistance.

Robert David Mendelsohn
INFORMATION TO USERS

This material was produced from a microfilm copy of the original document. While the most advanced technological means to photograph and reproduce this document have been used, the quality is heavily dependent upon the quality of the original submitted.

The following explanation of techniques is provided to help you understand markings or patterns which may appear on this reproduction.

1. The sign or "target" for pages apparently lacking from the document photographed is "Missing Page(s)". If it was possible to obtain the missing page(s) or section, they are spliced into the film along with adjacent pages. This may have necessitated cutting thru an image and duplicating adjacent pages to insure you complete continuity.

2. When an image on the film is obliterated with a large round black mark, it is an indication that the photographer suspected that the copy may have moved during exposure and thus cause a blurred image. You will find a good image of the page in the adjacent frame.

3. When a map, drawing or chart, etc., was part of the material being photographed the photographer followed a definite method in "sectioning" the material. It is customary to begin photoing at the upper left hand corner of a large sheet and to continue photoing from left to right in equal sections with a small overlap. If necessary, sectioning is continued again — beginning below the first row and continuing on until complete.

4. The majority of users indicate that the textual content is of greatest value, however, a somewhat higher quality reproduction could be made from "photographs" if essential to the understanding of the dissertation. Silver prints of "photographs" may be ordered at additional charge by writing the Order Department, giving the catalog number, title, author and specific pages you wish reproduced.

5. PLEASE NOTE: Some pages may have indistinct print. Filmed as received.

Xerox University Microfilms
300 North Zeib Road
Ann Arbor, Michigan 48106

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
MENDELSON, Robert David, 1945-
USING THE CONSTRUCT OF INSTRUCTOR CREDIBILITY
TO FORECAST STUDENT DECISION-MAKING BEHAVIORS.

Western Michigan University, Ph.D., 1973
Sociology, general

University Microfilms, A XEROX Company, Ann Arbor, Michigan

THIS DISSERTATION HAS BEEN MICROFILMED EXACTLY AS RECEIVED.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Tables</td>
<td>vi</td>
</tr>
<tr>
<td><strong>I. PROBLEMS, THEORETICAL DEVELOPMENT AND RESEARCH OBJECTIVES</strong></td>
<td>1</td>
</tr>
<tr>
<td>An Overview of the Research Problem</td>
<td>2</td>
</tr>
<tr>
<td>Review of Literature and Theoretical Background</td>
<td>8</td>
</tr>
<tr>
<td>Credibility as an explanation</td>
<td>22</td>
</tr>
<tr>
<td>Decision-Making</td>
<td>35</td>
</tr>
<tr>
<td>Social interaction</td>
<td>38</td>
</tr>
<tr>
<td>Research Objectives</td>
<td>48</td>
</tr>
<tr>
<td><strong>II. METHODS</strong></td>
<td>51</td>
</tr>
<tr>
<td>Populations and Samples</td>
<td>51</td>
</tr>
<tr>
<td>Instrumentation</td>
<td>52</td>
</tr>
<tr>
<td>Socioeconomic Status (SES)</td>
<td>52</td>
</tr>
<tr>
<td>Academic Achievement (GPA)</td>
<td>53</td>
</tr>
<tr>
<td>Minority Group Status (Race)</td>
<td>54</td>
</tr>
<tr>
<td>Frequency of Student and Instructor Interaction (FSII)</td>
<td>55</td>
</tr>
<tr>
<td>Student Assessments of Instructor Believability (BEL.)</td>
<td>57</td>
</tr>
<tr>
<td>Student Perceptions of Instructor Expertise ( EXP.)</td>
<td>59</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student Perceptions of Instructor</td>
<td>60</td>
</tr>
<tr>
<td>Trustworthiness (TRU.)</td>
<td></td>
</tr>
<tr>
<td>Actual Student Course Entry Plans (PLANS)</td>
<td>62</td>
</tr>
<tr>
<td>Actual Student Course Entry (ENTRY)</td>
<td>63</td>
</tr>
<tr>
<td>Major Interaction Variables</td>
<td>64</td>
</tr>
<tr>
<td>Analysis</td>
<td>65</td>
</tr>
<tr>
<td>Exploratory Analysis</td>
<td>71</td>
</tr>
<tr>
<td>III. FINDINGS</td>
<td>74</td>
</tr>
<tr>
<td>Sex</td>
<td>76</td>
</tr>
<tr>
<td>Minority Group Status</td>
<td>76</td>
</tr>
<tr>
<td>Academic Achievement</td>
<td>77</td>
</tr>
<tr>
<td>Socioeconomic Status</td>
<td>78</td>
</tr>
<tr>
<td>Frequency of Student and Instructor Interaction</td>
<td>79</td>
</tr>
<tr>
<td>Student Course Entry Plans</td>
<td>79</td>
</tr>
<tr>
<td>Credibility Variables and Student Entry into Courses</td>
<td>80</td>
</tr>
<tr>
<td>Credibility and Criterion Variables</td>
<td>83</td>
</tr>
<tr>
<td>Credibility Components and Student Plans</td>
<td>85</td>
</tr>
<tr>
<td>Components of Credibility As Predictors of Student Enrollment</td>
<td>90</td>
</tr>
<tr>
<td>IV. DISCUSSION AND IMPLICATIONS</td>
<td>106</td>
</tr>
<tr>
<td>Summary of the Problem</td>
<td>106</td>
</tr>
<tr>
<td>Summary of Research Methods</td>
<td>108</td>
</tr>
<tr>
<td>CHAPTER</td>
<td>PAGE</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Implications for Education</td>
<td>117</td>
</tr>
<tr>
<td>Suggestions for Further Research</td>
<td>122</td>
</tr>
<tr>
<td>SELECTED BIBLIOGRAPHY</td>
<td>129</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
LIST OF TABLES

<table>
<thead>
<tr>
<th>TABLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.0. Student Responses to Duncan SES Categories</td>
</tr>
<tr>
<td>2.1. Distribution of Student Grade Point Averages</td>
</tr>
<tr>
<td>2.2. Frequency and Percent Distributions of Student Responses to Interaction Item</td>
</tr>
<tr>
<td>2.3. Dichotomized Distribution of Student Responses to Interaction Item</td>
</tr>
<tr>
<td>2.4. Frequency and Percent Distribution of Student Responses to Believability Item</td>
</tr>
<tr>
<td>2.5. Dichotomized Distribution of Student Responses to Believability Item</td>
</tr>
<tr>
<td>2.6. Frequency and Percent Distribution of Student Responses to Expertise Item</td>
</tr>
<tr>
<td>2.7. Dichotomized Distribution of Student Responses to Expertise Item</td>
</tr>
<tr>
<td>2.8. Frequency and Percent Distribution of Student Responses to Trustworthiness Item</td>
</tr>
<tr>
<td>2.9. Dichotomized Distribution of Student Responses to Trustworthiness Item</td>
</tr>
<tr>
<td>2.10. Frequency and Percent Distribution of Student Responses to Plans Item</td>
</tr>
<tr>
<td>2.11. Dichotomized Distribution of Plans Item</td>
</tr>
<tr>
<td>3.0. Correlations Between Actual Student Course Entry and Sex, Race, Achievement, SES, Frequency of Student-Instructor Interaction and Student Course Plans</td>
</tr>
<tr>
<td>3.1. Comparison of Student Entry into Courses by Sex</td>
</tr>
<tr>
<td>3.2. A Comparison of Student Course Entry by Minority Group Status</td>
</tr>
<tr>
<td>3.3. A Comparison of Student Course Entry by Student Academic Achievement</td>
</tr>
<tr>
<td>3.4. A Comparison of Student Course Entry by Socioeconomic Status Level</td>
</tr>
<tr>
<td>3.5. Student Course Entry by Frequency of Student/Instructor Interaction</td>
</tr>
<tr>
<td>3.6. A Comparison of Student Course Entry According to Student Plans</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
<table>
<thead>
<tr>
<th>TABLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.9.</td>
<td>Comparison of Traditional Variables with Full Model Consisting of Traditional Variables Plus the Measure of Student Course Entry Plans for Predicting Actual Student Entry.</td>
</tr>
<tr>
<td>3.10.</td>
<td>Table of Intercorrelations Between Three Credibility Components Selected for Use Throughout this Study.</td>
</tr>
<tr>
<td>3.11.</td>
<td>Comparison of Restricted Model Consisting of Traditional Variables with Full Model Consisting of Traditional Variables Plus a Measure of Student Assessments of Instructor Believability for Predicting Actual Course Entry.</td>
</tr>
<tr>
<td>3.12.</td>
<td>Comparison of Model Using Traditional Variables with One Using Traditional Variables Plus Expertise for Forecasting Actual Student Course Entry.</td>
</tr>
<tr>
<td>3.13.</td>
<td>Comparison of Restricted Regression Model Made Up of Traditional Variables with a Full Model Consisting of Traditional Variables Plus the Addition of a Measure of Instructor Trustworthiness for Predicting Student Course Entry.</td>
</tr>
<tr>
<td>3.14.</td>
<td>Comparison of a Restricted Model Composed of Traditional Variables and the Concept of Instructor Trustworthiness with a Full Model Composed of the Traditional Variables, Trustworthiness, Plus a Measure of Instructor Believability in Predicting Student Decisions to Enroll in Courses.</td>
</tr>
<tr>
<td>3.15.</td>
<td>Comparison of Restricted Model Consisting of Traditional Variables Plus Trustworthiness with Full Model Containing Restricted Model Plus Measure of Believability and Expertise for Predicting Actual Student Entry into Courses.</td>
</tr>
<tr>
<td>TABLE</td>
<td>PAGE</td>
</tr>
<tr>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>3.16. Comparison of Restricted Model Containing Traditional Variables Plus Trustworthiness with Full Model Containing Restricted Model Plus a Measure of the Interaction of High Believability and High Trustworthiness Predicting Course Entry.</td>
<td>102</td>
</tr>
<tr>
<td>3.17 Comparison of Restricted Model Containing Traditional Variables Plus Trustworthiness with a Full Model Containing the Restricted Model Plus a Measure of the Interaction Between High Expertise and High Trustworthiness Predicting Entry.</td>
<td>103</td>
</tr>
<tr>
<td>3.18. Comparison of Restricted Model Containing Traditional Variables Plus Trustworthiness with a Full Model Containing the Restricted Model Plus a Measure of the Interaction of High Believability and High Expertise Predicting Course Entry.</td>
<td>104</td>
</tr>
<tr>
<td>3.19. Comparison of a Restricted Model of Traditional Variables Plus Trustworthiness with a Full Model Containing the Restricted Model Plus a Measure of the Interaction of High Believability, Expertise and Trustworthiness Forecasting Course Entry.</td>
<td>105</td>
</tr>
<tr>
<td>4.1. Product Moment Correlations Between Each of Three Components of Perceived Credibility and Later Acts of Students to Enter Courses.</td>
<td>110</td>
</tr>
</tbody>
</table>
CHAPTER I

PROBLEMS, THEORETICAL DEVELOPMENT
AND RESEARCH OBJECTIVES

This study examines the possible relationship between college students' perceptions of the credibility of their instructors and their later entry into courses within the disciplines of those instructors. The general reason for this research concern is to empirically assess the utility of selected indicators of credibility in social situations as predictors of later social behaviors. The utility of these indicators is predicated on the basis of a theoretical literature in the social sciences. As shown in prior social science research, the courses selected by college students are initial steps in choosing career fields of study, which in turn influence the fields of study selected by college study and thereby shape their later career.


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
development. Therefore, if predictions of student course entry can be made from a knowledge of student perceptions of the credibility of their instructors, then a basis may be laid for developing a theoretical linkage between perceived credibility of instructors and student career development. If such a linkage credibility and career actions can be developed, then, perhaps a linkage between perceived credibility and behavior in other areas can also be established.

An Overview of the Research Problem

Of course there are other variables besides credibility which one could use to predict the courses entered by students. Sex, socioeconomic status, college grades, race, plans, and the frequency of student interaction with their instructors are among the most commonly used variables to predict or explain course selection by students in the research traditions of education and the

social sciences. In the course of examining whether college student perceptions of instructor credibility are associated with later courses of study, this investigation will assess the predictive utility of selected measures of credibility against a criterion made up of these more commonly employed or "traditional" predictor variables.

By employing a criterion made up of traditional variables, it is possible to assess how much added knowledge about course entry is gained from using data on the perceived credibility of faculty in contrast and in addition to using the more commonly employed data.

---


2 The term "traditional" is used in this study in the sense of usual or commonly used variables. Although more complete documentation appears later in this chapter, the following studies may be viewed as employing traditional variables: sex: Abe, C., and Holland, J. L., "A Description of College Freshmen: I. Students
of sex, socioeconomic status, race, and so on. In other words, one element of the research objective stated earlier is to provide empirical support for considering information on instructor credibility as an independent variable for the prediction and explanation of student course entry.

Past theory and research provide considerable evidence to warrant inquiry concerning the impact of faculty members upon the career actions of college students. In a general sense, the evidence supports the view that some of the more important determinants of students' career decisions occur in the students' relationships with their instructors. However, it has not been clearly demonstrated

---


1For discussions of the possible influences of college instructors upon student career-decision making, see: Stechlein, J. E., and Echert, R. E., "An Exploratory Study of Factors Influencing the Choice of College Teaching as a Career," U.S. Department of Health, Education, and Welfare, Project No. 169. (Minneapolis, Minn: Bureau of Institutional Research, University of Minnesota, 1958); Corcoran, M., "Where Does College Teaching Stand in the Career Plans of Superior College Seniors?: An Exploratory Study of Interest in Academic Careers," (Minneapolis, Minn.: Bureau of Institutional Research, University of Minnesota, 1961); Astin,
exactly what it is about relationships between students and their instructors that is important. The present study examines the theoretical generalization that student perceptions of their instructors' credibility are important in the shaping of later career acts.

This study also directs attention to the general phenomenon of credibility. What is involved in instructor credibility from the perspective of the student? Theorists do not seem to be in clear agreement about what should be included when referring to perceived credibility beyond the fact that credibility has been used most often to refer to attributions attached by actors to the messages of others. Even at the level of actor messages, there are at least three distinct interpretations of credibility. Believability, expertise, and trustworthiness are the three most commonly used attributions signifying credibility. However, it is unclear in the


1 Relevant research literature on credibility variables is presented in later sections of this chapter.
research literature whether these three commonly applied attributes should be considered as three components of a common phenomenon, i.e., whether they combine into a total of generalized perception of credibility, or whether believability, expertise, and trustworthiness should be conceptualized as mutually distinct phenomena which are not components of a common condition called credibility. It may be that these three so-called analytical components are merely redundant expressions of the same phenomenon using different terms. In accord with the research objectives of this study, the effects of each of three potential credibility components will be assessed separately, additively, and in interaction.

Earlier it was noted that this investigation was concerned with whether student perceptions of instructor credibility were associated with later course entry. What is the most appropriate measure of later course entry? Most research has not directly assessed the actual later course entry of students, but rather has assessed student indications of their plans to take further courses. In such cases, social scientists and educators often make an implicit assumption that student indications of their plans to take further courses are reasonably equivalent to the courses they, in fact, do enter at a later time in life. In accord with secondary research and theoretical objectives, the equivalence between plans for behavior and actual later behavior will also be assessed in regard to their common dependence

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
upon credibility conditions. The design of this study is a longitudinal examination of student perceptions of the credibility of their instructors in relation to their actual later entry into courses. In addition to gathering information on student perceptions of their instructor's credibility, data will be gathered at the same time on their educational course plans. With data on both plans to take given courses and students' actual later course entries, it will be possible to assess their equivalence and their relative dependence on perceptions of instructor credibility.

In a more elaborated sense, the primary focus of this study is on the utility of three indices of credibility—believability, expertise, and trustworthiness—as predictors of later entry into courses within the disciplines of these instructors. If these indices are predictive in accord with theoretically relevant hypotheses, then further inferences relevant to the development of the construct of credibility can be offered. The specification of all of the conditions associated with student course entry is not an objective of this investigation. Inasmuch as there is a common tendency in sociology to strive toward the accounting of the maximum explainable variance in the dependent variable, perhaps it is important to emphasize that a general accounting of the development of career roles among any general population of students is not of prime concern in this investigation. The primary objective of this study is
to assess credibility as an influence leading to course and career decisions. This task can be viewed as similar to the pathologist's attempts to determine if a given set of conditions leads to death rather than specifying all of the conditions from which people may die.

Review of Literature and Theoretical Background

Many social scientists, educators, and interested laymen are concerned with the social conditions which influence the entry of students into the various career roles available to them. Among social scientists, several major theoretical schemes have been employed for understanding the processes involved in student selection of careers. These explanatory schemes have met with varying degrees of success in research. The first portion of this review of literature will be a presentation of research on competing explanatory systems for the development of career roles which will be followed by an overview of selected literature relevant to the theoretical definitions of perceived credibility.

One prominent explanation of career role selection emphasizes purposive behavior. Among sociologists and psychologists of a social psychological orientation, stress is often placed upon individuals' goals and expectations as determinants of role
choice. In addition to goals and expectations, the related concepts of plans and aspirations are also used as a basis for forecasting later career decisions. These latter two concepts have had particular appeal for researchers working in the field of education.

A second prominent theme in sociology and social psychology used to explain career role choice falls under the rubric of self concept theory, i.e., individuals select careers of occupations according to those roles which best compliment their conceptions


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
of selves.  

Some educators and social psychologists maintain that a person interprets the career choices available to him in terms of his ability to maximize those aspects of self most relevant to him. Much of the work using constructs of self has focused on how the content of student interactions with others becomes translated into self evaluations. These are thought to be ultimately related to the processes of adjustment and compromise involved in career role selection.  

---


A third prominent theme or perspective among social scientists and educators is the notion that academic performance (often taken as a proxy indicator of intellectual ability) is related to individuals' choices of career roles. One implication of this theme is that persons may evaluate their roles on the basis of their self-evaluations of ability and then select occupations they believe they are most able to perform. In this sense, the process is very similar to the self-conceptualization theme discussed earlier. However, an additional feature of the academic performance perspective lies in the supposition that individuals (especially students) are allocated by the educational system into certain roles. This process of allocation is instituted on the basis of assumed ability. Furthermore, there is often the added assumption that individuals of similar academic or intellectual abilities will be motivated toward career

---


roles involving similar skill levels.¹

A fourth important theme which attempts to account for career selection concerns the manner in which individuals' attitudes are formed and the processes involved in the modification of attitudes. Among social psychologists and educators, there have been areas of research which have provided information relating attitude change to role selection. The first area is generally labeled "communication studies."² In communications studies the focus has frequently been upon characteristics of a source, often representative of a given type of role, as they influence the attitudes of an audience. The second area of research falls under the rubric of


"attraction-avoidance studies."¹ Much of the research in this area is based upon the assumption that individuals "... would be more inclined to emulate a drive-satisfying agent than a punitive one, through association with the satisfying state of affairs, the former person's ideas and behavior should be more attractive in their own right, and therefore more likely to be copied."² As the research and theoretical speculation in the area of communications research is lengthy, a further elaboration of the research and theoretical speculation in this area is presented later in the section of this study which reviews literature on the concept of credibility.

A fifth major theme for explaining career role selection consists of a configuration of organizational or systems variables. Many educators and social scientists have attempted to understand the forces influencing career decisions of college students by employing selected characteristics of the university social system.


The organizational and systems approaches generally deal with one of three types of research concerns. The three areas most commonly studied are: (1) the effects of instructor conditions on students;¹ (2) student definitions of their instructors;² and (3) factors affecting college dropout.³ As will be discussed later, the most


³See: Astin, A. W., "Personal and Environmental Factors Associated with College Dropouts Among High Aptitude Students,"
important of these systems variables for this investigation is the
frequency of student and instructor interaction.

It should be noted that as a part of studies of school systems,
several researchers have examined the magnitude of influence
teachers may exert in face-to-face situations on their students'
educational goals through attaining student identification with them. 1
However, research focusing on the degree to which face-to-face in-
teraction facilitates or inhibits students' identification with faculty
is inconclusive. 2 On the other hand, it has been concluded that
the frequency of face-to-face interaction which occurs between stu-
dents and faculty often affects the saliency of certain faculty members

---

Journal of Educational Psychology, LV (1964), 219-227; Banzet,
Basic College at Michigan State University. (New York: Harper,
1958); Homes, C. H., "Why They Left College: A Study of Volun-
tary Freshman Withdrawals from the College of Liberal Arts at
Syracuse University," College and University, XXXIV (1959), 295-300;
Eckland, B. K., "A Source of Error in College Attrition Studies,"
Sociology of Education, XXXI(1964), 60-72; Fox, J. T., "Presentation
of Attrition Study." In E. J. McGrath (Ed.), The Liberal
Arts College's Responsibility for the Individual Student. (New
York: Teachers College Press, Columbia University, 1966) 86-120;
and Freeman, N. L., Johnson, A. P., Moyer, D. H., and Bridge-
man, D. S., "Engineering Student Dropouts: Report of the ASEE
Sub-Committee on Dropouts of Engineering Students," Journal of

1 Riesman, D., "The Academic Career: Notes on Recruitment

2 See: Coelho, C. Y., Hamburg, D. A., and Murphey, B. H.,
"Coping Strategies in a New Learning Environment: A Study of Amer-
ican College Freshmen," Archives of General Psychiatry, IX. (1963),
433-443.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
as role model for students.¹ For example, in a study of students graduating from college, those students reporting the most frequent personal contact with faculty within their college were also the most likely to report plans to enter professional or graduate school during the coming year.² Other researchers supportive of the importance of frequency of interaction report findings indicating that the greater or more frequent the contact between students and their instructors, the higher the educational aspirations of students.³

A sixth theme, one used to explain the emergence of career choices, may be generally termed "the normative approach." The normative approach is characterized as those studies stressing the importance of social norms, particularly class norms, as deter-

¹Grigg, C. M., "Recruitment to Graduate Study: College Senior's Plans for Postgraduate Education and Their Implementation the Year After Commencement." SREB Research Monograph No. 10. Atlanta, Georgia: Southern Regional Education Board. (1965).

²Ibid.

minants of career selection and allocation patterns. Such studies usually involve the norm indicators of racial, ethnic, or socioeconomic status, parental educational level, rural-urban differences, sex, and peer or occupational membership. Sometimes these variables are referred to as social background variables. Membership in such social categories are thought to be predictive of career role choices because they indicate sets of normative demands which influence role selection. In sociology, much of the empirical work utilizing this normative approach has been conducted by theorists concerned with social class and stratification. Socioeconomic status and race are perhaps the most commonly used of these normative indices of parents', teachers', and peers' expectations.

---


2 For examples in the literature concerned with normative influences of parents, teachers, and peers' expectations used in

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
In this study, three of the more important normative indicator variables are tested for their purported influence upon career role selection. Each of these variables, sex, race, and socioeconomic status is documented in greater detail, vis-a-vis its influence upon course enrollment, in the following section.

Studies employing measures of socioeconomic status as a factor influencing college course and major career selection suggest three trends. There are indications that a high percentage of upper socioeconomic status students tend to choose or are allocated to careers in medicine, the social sciences, the arts, the humanities, law and political science; those students from the lower-middle and lower socioeconomic statuses predominately select or

are allocated to majors and future careers in education and engineering. Whatever the case, there appears to be a tendency for college students from the lower socioeconomic statuses to enter the technical fields more often than do middle to upper socioeconomic status students. Third, certain subjects, for example, biology, physics, and mathematics, tend to have a mixture of socioeconomic status students with no one level predominating.¹

Research has also indicated that a person's sex status is often associated with decisions to enter and/or be allocated into major

occupational fields. As a case in point, women are generally over representative in education, the fine arts, the humanities, and both the biological and social sciences. On the other hand, men are more likely to be over representative in business, pre-law, engineering, and the physical sciences. These trends relating sex status to student entry into major field are not surprising. Culturally influenced perspectives about "correct" occupations for male and female roles undoubtedly perpetuates sexual distinctions by areas of persons' major in college. Reciprocally, the distributions of career majors according to sex status probably supports social definitions of "correct" role selection.

The major occupational field which a student enters has also been found to be associated with racial and ethnic background.

Findings discussed by Davis, \(^1\) for example, report that whites enter, in greater proportions than do blacks, the areas of business, pre-law, the humanities, and the physical sciences. General education, the biological sciences, and the social sciences were found by Davis to be represented by a higher proportion of black students than found in other areas of study. Quite obviously, as more whites than blacks attend college, there is likely to be more whites in every major field. However, variations in proportions of black students do vary by field of study.

In summary, while none of the commonly employed variables discussed above has been purported to be the sole or even the greatest determining factor in influencing major field of entry, each has been widely employed as an explanation to account for career entry. The findings of the literature reviewed in the preceding section, while not providing conclusive causal linkages, clearly warrant the inclusion of (1) sex, (2) socioeconomic status, (3) race, (4) achievement assessed by grade point average, and (5) the frequency of student and instructor interaction as important variables to be included in this study.

Credibility as an explanation

The major focus of social psychological research relevant to credibility as a construct related to attitude change and formation has centered on "social influence" situations. One characteristic of the research on social influence situations has been a broad diversity of findings which have been differentially interpreted. As McGuire notes, this diversity of interpretations has made it difficult to generalize from one study to another. Perhaps the diversity of perspectives among theorists is responsible. For example, to Harold Laswell, the medium of communication, through which social influence operates, is described as a process involving, "Who says what to whom with what effects?" Borrowing terminology from communications engineers, McGuire has

---


2Ibid., 173-175.

3Ibid.


5McGuire proposed a system of grouping theoretical orientations and research findings concerned with social influences into five categories. Those five categories are: Suggestive Situations, Conforming Situations, Group Discussion Situations, Persuasive
modified Laswell's general theoretical statement by suggesting that communications may be viewed as consisting of five components: source, message, channel, receiver, and destination. One consequence of this frame of reference has been considerable research on conditions labeled as "source credibility" variables. Of course, concern with the effects of variation in source characteristics of persons of influence and their resultant changes in attitudes among others has long interested social scientists studying the communications processes.

Perhaps the earliest and most consistently researched source characteristics has been the purported credibility of the communicator.\(^1\) Clearly, the most influential attempts to empirically examine the influences of a communicator's credibility upon the attitudes of an audience are the "Yale Communications Studies."\(^2\) The experimental situations employed in the Yale studies attempted to manipulate variations in the attributions of the communicator's

---

\(^1\)McGuire, op. cit., 175-76.

credibility rather than the content of the message he imparts.¹
For example, in one study by Hovland and Weiss,² two groups
of students were presented newspaper and magazine material to
read. Each of the articles reflected "one-sided" arguments either
for or against a series of currently "controversial" issues of the
day, e.g., antihistamine drugs, the possibilities of constructing an
atomic submarine, and so on. Both groups of students received
identical messages; however, the source of each message differed,
i.e., prominent American scientists vs. Pravda. Before as well
as after reading each set of messages, students were given atti-
tudinal questionnaires. Findings indicated a greater shift in
American student attitudes between the time of the first and second
questionnaires when the source of the article was an American
scientist. The amount of information retained, that is, the content
of the argument presented on the issues, was not affected. While
credibility tended to be associated with students' changes in atti-
tudes on an issue, the actual amount of the message they learned
was not affected.³

¹McGuire, loc. cit.
²Hovland, C.I., and Weiss, W., "The Influence of Source
Credibility on Communication Effectiveness." Public Opinion
Quarterly, XV (1951), 635-650.
³ibid.
The preceding example illustrates a "typical" approach in early communications studies of attitude change. It is important to recognize that the concept of credibility as used in the majority of these early studies often depended upon stereotypes. For instance, the experimenter often relied upon conveying an abstract sense of "trust" on the part of the source through the use of images occurring in the culture. For example, in the studies by Hovland and Weiss, the assumption was made that an American scientist would be more likely to tell the truth than would a Russian writing in Pravda. In the words of the experimenters (Hovland and Weiss) "the overall design of the study was to present an identical communication to two groups, one in which a communicator of a generally "trustworthy" character was used and the other in which the communicator was generally regarded as "untrustworthy." This technique which Hovland and Weiss employed is characteristic of the majority of research studies which have focused on source characteristics and receiver attitude formation and change in

1Hovland and Weiss, op. cit.

2ibid., p. 636.

"persuasive" situations. Of course, there is a certain degree of common, everyday justification in conceptualizing credibility in this manner. Essentially the authors are maintaining that the media, e.g., newspapers, magazines, radio, etc., are in a continual process of "creating" credibility about objects and persons. Hence there should exist certain commonly accepted representations of high and low credibility sources. It was reasoned, therefore, that statements attributed to such sources should differ in terms of public trust.

Going beyond general images of trust, theoreticians and researchers have added two constructs as components of credibility: expertise and trustworthiness.¹ Expertise has been defined as "...the extent to which a communicator is perceived as the source

of valid or correct ascertainment."¹ Trustworthiness has been conceptionalized as "...the degree of confidence in the communi-
cator's intent to communicate the ascertainment he considers most valid."²

Another component of credibility added by some theoriticians is the perceived objectivity of the source.³ Objectivity as is usually conceptualized in communications research refers to the perceived intention of the source to attempt to persuade the receiver into accepting the source's opinions on an issue.⁴ As one might note, there may be a redundancy problem in the definitions of trustworth-
iness, expertise, and objectivity. This problem of mutually exclu-
sive definitions and conceptual precision accentuates a major diffi-
culty in much of the communications literature on credibility to date.

Research employing the objectivity dimension of credibility has tended to assume that the greater the perceived objectivity of

¹Keisler, et al., op. cit., 107.
²Ibid.
³Triandis, H. C., Attitude and Attitude Change (New York: John Wiley and Sons, Inc., 1971)
⁴Ibid.
a source, the more likely that that source should be able to persuade the audience into accepting its (the source's) opinions. Early findings by Hovland and Weiss\(^1\) and Kelman and Hovland\(^2\) were used to substantiate this assumption. However, subsequent findings have at best been inconclusive in supporting the "objectivity" generalization. In fact, certain recent research using perceived source objectivity suggests the opposite conclusion. For example, McGuire,\(^3\) notes a "somewhat paradoxical outcome...that the subject's awareness of the source's bias and intent to persuade actually increases the amount of attitude change." Thus, there remains ambiguity in the literature regarding whether objectivity of a source enhances or detracts from its credibility.\(^4\)

Herbert Kelman has expanded on the relevance of objectivity by emphasizing the dynamics of attitude change.\(^5\) Kelman developed


\(^3\)McGuire, op. cit., 185.

\(^4\)ibid.

a systematic paradigm involving three characteristics--credibility, attractiveness, and power--each of which "...leads to attitude change via three different psychological modes which Kelman calls, internalization, identification, and compliance."¹ Each of the three "psychological modes" is linked to one type of source characteristic; for example, internalization to credibility; identification to attractiveness; and, compliance to power.²

There is an interesting hierarchy which is implicit within Kelman's source paradigm which relates to the intensity or degree of attitude change "experienced" by the receiver.³ With internalization, the receiver incorporates into his own belief system the content of a source's message. The receiver in this instance accepts the source's message on the basis of the individual's (receiver) perceptions of the source's degree of credibility, that is expertise and trustworthiness.

The motivation associated with the receiver's mode of attitude change resulting in identification is his desire to "...establish

---

¹McGuire, op. cit., 185.

²Ibid.

³The remainder of the discussion on source characteristics and psychological modes of behavior are this author's interpretations of Kelman (1958) paradigm. For another interpretation see McGuire, op. cit., 1969.
lish a gratifying role relationship to the source, either in actuality or within his own . . . self-concept."¹ The main source characteristic in this instance is attractiveness. McGuire and Kelman both maintain that to the extent that a source is attractive to a receiver, that receiver will accept and even adopt the source's message.² This acceptance occurs because the receiver desires to maintain the role relationship, rather than because of the validity or reliability of the source's message.

Compliant behaviors result from the degree of power one party to the social relationship has over another. In instances of compliant behavior, the receiver neither internalizes the source's message, nor identifies with the source on the level of a reciprocal role relationship. Instead, he (the receiver) conforms to the source's message because the source is able by virtue of greater power to exert some control "... over the recipient's means to attain desirable goals."³

The position of Kelman is in certain ways not too unlike other theoretical positions concerning role-playing and attitude

¹McGuire, loc. cit., 179.
²Ibid; Kelman, loc. cit., 51-60.
³McGuire, op. cit., 180.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
change. In the symbolic interactionist traditions, when one engages in role-playing for a prolonged period of time (at either the identification or compliant levels) one may begin to "internalize" certain aspects of the role as one's own.

Employing concepts from both Kelman and symbolic interactionism certain compatibilities of these concepts may be seen. For example, in many situations an individual is forced to conform to the demands (message) of some source as a result of the individual's inferior power to achieve the goals he desires. As a case in point, a student may initially disagree with but learn the views of his instructor for the sole reason that he wants to pass the instructor's class. Later, the student may begin to passively believe his instructor. Still later, the student may take as his own his instructor's viewpoint. When this happens, the course content which includes his instructor's views becomes a part of his own role definition. From this frame of reference, the student is no longer merely "playing" a role. He is said to have taken on or internalized the role as defined by the instructor. This interpretation, it should

---

1 The notion of role-playing is being used in the manner described by Goffman in, The Presentation of the Self in Everyday Life (New York: Doubleday and Company, Incorporated, 1959).

2 Ibid.
be recognized, emphasizes the importance of attractiveness for attitude change. In addition to Kelman, a number of other researchers\(^1\) have also utilized the notion of attractiveness without always defining attractiveness as a source characteristic believed to influence attitude formation.

However, many authors maintain a conceptual distinction between credibility and attractiveness. McGuire,\(^2\) in his monumental review of attitude change literature, distinguishes between credibility and attractiveness:

In discussing source credibility, we were concerned with the subject's motivation to attain a veridical position on the issue, to which end he uses his perception of the source's expertise and objectivity as a cue to the correctness of the position urged . . . . in discussing the source's attractiveness, we deal with the subject's motivation to attain a gratifying self concept through his position on the issue vis-a-vis the position advocated by the source . . . in adopting the position urged by the source . . . he can enhance his self-esteem through identification with the source.


\(^{2}\) McGuire, op. cit., 187.
One of the most frequently studied indicators of the degree of attractiveness of a source (source credibility) is the similarity(ies) of shared needs and aspirations between a source and a receiver. Studies by Newcomb, Sampson and Insko, and others have produced a substantial body of findings supporting the general contention that when persons share similar ideological characteristics, e.g., political orientations, a foundation is laid for the development of affective dispositions towards one another. Furthermore, greater similarities of ideas among individuals increases the chances that those individuals will tend to interact with each other with greater frequency, thus reinforcing the degree of "familiarity" each has with the other. Perhaps the net results following from liking someone, being familiar with him as an individual, and sharing common belief systems is a change in attitudes towards greater similarity.

An important element in the process of developing similar

---


attitudes is implied in the term "believability." For example, when someone says something which "fits" or coincides with another person's belief system, the communicator may be referred to as "credible." According to Heider,¹ becoming more credible suggests that one individual has a potential of exerting an influence on another person's covert as well as overt behavior. When persons share personality characteristics, are familiar with each other, and like each other, there is an increased possibility that they will share and/or attempt to share common belief systems,² one theoretical definition of credibility.³

Obviously credibility does not function apart from social situations. There are, however, several theoretical perspectives which could be used to characterize the social context within which credibility may operate. The major perspectives which contributed to the development of this investigation and its major hypotheses and research questions are in accord with much of the tradition referred to as "symbolic interactionism." It is not the purpose to elaborate


²Ibid.

³This is also similar to Kelman's "interaction."

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
on this tradition, but certain views guiding this research should, perhaps, be presented because of their special importance to this study. These views center around the notions of decision-making, social interaction, role relationships, and self-evaluations. Each of these notions are elaborated upon in the following discussion.

Decision-Making

Decision-making\(^1\) as the term is being used in this study differs extensively from other usages as found in economics, social psychology and mathematical game theories. Research utilizing decision-making or risk theory models has produced a fruitful body of findings in the field of social psychology.\(^2\) However, the major emphasis of the research has concentrated on "contrived" situations. Such situations require varying degrees of risk-taking by participants who are attempting to "solve" specified tasks.\(^3\) For example, experimental situations may be designed in which a subject, either alone or in concert with others, must select one course of action from a series of alternative choices to best maximize gains while best minimizing costs.\(^4\) In effect, this interpretation of decision-

\(^1\) See: Brookover, et al., op. cit.

\(^2\) Berkowitz, 1965.


making defines decision-making as a process in which an individual "weighs" the subjectively expected utilities among the various alternatives open to him.¹

From an interactionist perspective, decision-making is conceptualized essentially in terms of the social processes through which the individual engages in continually "defining the situation" he is experiencing. Discussing mankind's unique ability to make his own decisions, Thomas has proposed:²

Preliminary to any self-determined act of behavior there is always a stage of examination and deliberation which we may call the definition of the situation. And actually not only the concrete acts are dependent on the definitions of the situation, but gradually a whole life-policy and the personality of the individual himself follow from a series of such definitions.

As noted, this orientation of how individuals decide upon their behaviors was advanced at an early date by Mead with his concept of "the completion of the act."³ Blumer, following in the Median tradition, has provided a further elaboration of the decision-making process for human beings. Blumer states:⁴

...human group activity is carried on, in the main, through a process of interpretation or definition...

¹Edwards, op. cit.
³Mead, op. cit.
we act singly, collectively and socially on the basis of the meaning things have for us...the process of interpretation may be viewed as a vast digestive process through which the confrontations of experience are transformed into activity.

This investigation's specific interest in the process of interpretation centers upon one selected group of factors which are believed to enter into a college student's interpretation of certain aspects of his college environment. These factors relate to the interpretations of the content of the social interaction between the individual and his instructors within the college situation. Most importantly, it examines the transformation of these interpretations into behaviors which are likely to affect college career outcomes.

An important part of nearly every theory of human behavior is the notion that others in interaction with an individual constitute an important influence upon his behaviors. From the orientation of this study, one important human behavior is one's response to self as well as to others. Furthermore, the manner in which one perceives and evaluates the actions of persons with whom he interacts helps to shape his conceptualizations of himself as well as of his overt behaviors. A person's conceptions of his or her self are not the result of innate characteristics; rather they arise out of interaction with individuals with whom he comes into contact.¹

¹Mead, op. cit., 138.
In this study, one general condition—credibility—of students' contact or interaction with instructors is examined for its impact on career entry.

Social interaction

One construct which has gained wide acceptance as a medium for analyzing the context of human interaction is role.\(^1\) Perhaps the earliest systematic attempt at employing the notion of role was developed by Linton.\(^2\) A disturbing aspect of the history of role theory may be not its lack of popularity among social scientists, but rather the exceptional diversity of perspectives on what a role is and how role concepts "should" be used in theory and research.\(^3\)

In this investigation, an attempt is made to incorporate views taken from both sociological and social psychological interpretations of role.

Since selected portions of two differing role traditions are utilized in the present study, it may be helpful to consider several working definitions of the major concepts pertinent for this investigation. One begins with the observation that all persons occupy

---

\(^{1}\text{Gross, N., Mason, W., and McEachern, A., Explorations in Role Analysis (New York: John Wiley and Sons, Inc., 1958), Chapter One.}\)

\(^{2}\text{Linton, R., The Study of Man (New York: Appleton-Century Company, 1936).}\)

\(^{3}\text{Gross, et al., op. cit.}\)
certain specific "positions" within society. Position is simply a shorthand reference to a particular location within a given social structure. Of course, the main position being examined in the present investigation is that of "student." For each position in a social structure, there are varying numbers of "expectations" specifying the normative behaviors, culturally deemed appropriate for the occupant of the position. The total number of expectations directed to any position constitute the role for that position.

Role expectations do not, however, exist in a vacuum; rather they arise out of the social context of human interaction. Those persons holding the most central or relevant expectations for a particular position are sometimes referred to as "significant others." In this sense, some theorists may use the term "significant others" in a fashion similar to the way some theorists may use the term "credible others." That is, the central or most relevant expectations are those which are perceived as stemming from credible sources. Using the college student as a case

---

1Gross, et al., op. cit.

2Ibid. Practically speaking, only the most important or central expectations constitute the role as it is impossible to clearly enumerate all of the potential expectations being held for any role over a prolonged period of time.

3Gross, et al., op. cit.
in point, one may take the perspective that the student's parents, teachers, and friends constitute "significant others," or synonymously "credible others" in that they are influential to some degree in defining the student's role(s). Whether credibility should be included as an attribute of or totally synonymous with significant others is beyond the scope of the present study. It is being discussed here merely to show that the way significant others is sometimes used implies the ideas of believability, expertise, and trustworthiness, but without any precise demarcation. To some, an important element in determining how a role is defined is the individual's perceptions and interpretations of the role expectations of persons defined as believable, expert, and trustworthy.\(^1\) Herein may lie a contribution of certain traditions of symbolic interactionism to role analysis which emphasizes the importance of credibility.

While it is certainly important to know the content of others' expectations for a role, mere knowledge of others' expectations per se may not be sufficient to provide a comprehensive picture of the role incumbent's behavior. The role incumbent's ability to symbolize enables him to evaluate the expectations impinging on him and then act on the basis of those evaluations. Perhaps

\[^1\text{Mendelsohn, R. D., Brookover, W. B., and Erickson, E. L.," Teacher Credibility and Parental Involvement in School-Related Activities" (Paper presented at the American Educational Research Association Meetings; Chicago, April 1972).}\]
evaluations of believability, expertise, and trustworthiness are important. Whatever the case, it seems that although others' expectations will provide an investigator with a general social definition of a role, it is necessary to assess the meaning such expectations have for the role incumbent if one is to predict his behavior with greater accuracy than that possible from social definitions alone.

Another problem surrounding the notion of role definitions is a lack of conceptual articulation in the theoretical literature as to which set of role expectations from which others are most relevant to the role occupant. This brings one back to the topic of significant others, influential others, and credible others. Examining an individual's assessments of others' credibility may provide a meaningful criterion for determining the development of influential or significant others, depending upon one's definitions of terms.

The process of defining a role is further complicated by the fact that any given position may incorporate not one, but a "set" of roles. The term "role-set" is not meant here to imply the notion of multiple roles, e.g., a man may be a father, teacher, club president, and so forth. Rather the notion of role-set is used in the Mertonian sense to indicate "...that complement of role relationships which persons have by virtue of occupying a particular social status."\(^1\) Returning to the example of the college student, one


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
might observe an "academic student role" vis-a-vis the classroom; a "student athletic role" on the football field; a "student-teacher role" and so on.

As an individual draws upon the various roles contained within the role-set associated with the position of student, certain of those roles are more likely than others to become important or assume a greater centrality for him. Brookover and Erickson refer to this centrality as (role) value.\(^1\) The authors note, "this value is a function of the extent to which we perceive that others will allow us to achieve or maintain desired social relationships as well as personal satisfactions."\(^2\) The authors further maintain that in order to sustain these role relationships, one not only learns the expectations which others hold for one's roles; but also, in the process, evaluate the "costs" and "rewards" of continuing such social relationships.\(^3\)

Central to the sharing of role expectations among the parties to a common role-set is the notion of role taking. This study takes the position of Lindensmith and Strauss, where role taking is defined as when "a person, by imagining or actually using the gestures, postures, words, and intonations of someone else and by drawing


\(^2\)Brookover, and Erickson, op. cit., 103.

\(^3\)ibid.
upon his understanding of that person from past experience, invokes in himself responses that approximate those of the other person. "\textsuperscript{1}

The notion of role-taking is an integral component of the Median perspective on how individuals define and adjust their behaviors in reference to their "generalized others." As we noted earlier, part of the process of this "adjustment" of one's behaviors to another, i.e., makes decisions, occurs with the "cognitive completion of the act." Following Mead, Meltzer states: \textsuperscript{2}

\begin{quote}
Human beings... respond to one another on the basis of the intentions of meanings of gestures, i.e., the gesture becomes a symbol to be interpreted; it becomes something which, in the imagination of the participants, stands for the entire act.

Role-taking enters as a part of the individuals' cognitive completion of the act by allowing the individual to make sense out of his social "environment" in order to regulate his future behavioral responses. Meltzer goes on to elaborate: \textsuperscript{3}

\begin{quote}
The imaginative completion of the act—which Mead calls 'meaning' and which represents mental activity necessarily takes place through role-taking. To
\end{quote}
\end{quote}

\begin{footnotes}

\item \textsuperscript{2}Meltzer, B., \textit{The Social Psychology of George Herbert Mead} (Kalamazoo, Michigan: Center for Sociological Research, Western Michigan University, 1966), 14.

\item \textsuperscript{3}Meltzer, op. cit., 14.
\end{footnotes}
complete imaginatively the total act... the individual must put himself in the position of the other person, and identify with him.

Thus, the element of identification looms important for the processes involved in taking the role of another, particularly when one views the consequences of role-taking as does Turner, i.e., as a major "determinant of behavior."¹

Vonk,² following Mead's usage of role-taking, has drawn a conceptual distinction, separating the notion of "identification of others" and "identification with others." The author states:³

Identification of others is deemed more important because one cannot have identification with others without identification of others.

The author goes on to state:⁴

... before one can take the role of the other, one must identify the acts which go along with the role of the other.

Particularly when one is investigating how and why persons engage in certain forms of decision-making, it may be important to


³ibid.

⁴Vonk, op. cit., 8.
maintain this analytical distinction between "identification of" and "identification with" others. That is, identification of refers to a process wherein there is enumeration of one's environment, social and otherwise, e.g., human beings categorize persons, things and events. Identification with others is a relational construct which implies that an individual covertly reasons through a course of action which he "imagines" an other will likewise pursue. Several implications logically follow from this analytical separation of the two processes.

Perhaps one's capacity for identification (of the role) of others may determine the accuracy with which one takes that other's role, i.e., places himself in the position (cognitively speaking) of the other person. Within the context of student-instructor interaction it is seemingly essential that both parties are able to meaningfully comprehend each other's intentions and subsequent behaviors if a sharing of appropriate beliefs is to occur. Focusing on the student member of the interaction, for the student to accurately interpret the intentions of a professor's behaviors, the student must initially categorize (define) what a "professor's role" is. Then, having ascertained that the person with whom he (the student) is inter­acting is in fact a professor (that is a person whose role consists of certain expectations), the student is in the position to more precisely take the role of the professor. That is, he assesses how
the professor will view and respond to various events. Being able to take the professorial role, the student is, by definition, able to interpret the professor's behaviors toward him (the student).

Perhaps ideas of credibility are important criteria by which individuals categorize and come to identify with others. For example, assume for the moment that a student's perceptions of his instructor's expertise affects how he takes that instructor's role. Perhaps this attachment of relative expertise may in turn affect the student's being attracted to maintaining a role relationship with that instructor.

To continue this discussion of role further, one may consider the idea of reciprocal rights and obligations involved in roles. Often, the relationships found within one's role-set are termed reciprocal role relationships. Using Kelman's definition, a reciprocal role relationship is one "...in which the roles of the two parties are defined with reference to one another."¹ That is, there are certain commonalities between the roles found within a role-set which provide a raison d'être for a sharing of the expectations for each of the roles. The rights and obligations accorded one role are defined with reference to another role within the set when someone, as Kelman observes,² "...enacts a social role...as in the relationship

²Kelman, op. cit., 64.
between patient and doctor, "or, for example, between student and professor.

Reciprocal role relationships are thought to be related to the role decisions individuals make in a variety of ways. For example, as Kelman\(^1\) asserts, ". . . if an individual finds a particular relationship satisfying, he will tend to behave in such a way as to meet the expectations of the other." Perhaps not too infrequently, one party to a reciprocal role relationship is a significant other in the sense of being defined as credible for the other member of the relationship. Credible others, as noted earlier, not only may hold major role expectations for an individual's behaviors. Persons may also be credible in the sense when they contribute to another individual's positive or negative self definitions. Assuming for the moment that persons favor positive self definitions in as many instances as possible, perhaps as suggested by some authors,\(^2\) men will tend to seek out relationships with others whose evaluations best complement the desired qualities for self. From such a perspective, an important initial step in the individual's decisions, e.g., career selections, may well be to align himself with others who are perceived to contribute to his development of positive self conceptuali-

\(^1\)ibid.

\(^2\)Brookover and Erickson, op. cit.
In the course of sustaining these reciprocal role relationships, the other party may develop into a role model, suggesting further career choices. As discussed earlier, it is suggested that the credibility persons attach to others not only influences whether the other individuals become influential, but also affects the degree to which a person seeks to maintain or sever his role relationships with them. Whatever the case, if career role entry can be successfully predicted from information about perceived believability, expertise, and trustworthiness of instructors, such a finding would probably be of importance to theorists concerned with role models, significant others, and related phenomena associated with the concept of role. In order to empirically assess the utility of credibility variables for predicting student course entry, a series of research hypotheses have been derived from the review of literature and theoretical orientation guiding this study.

Research Objectives

It has been proposed that assessments by students of their instructors' believability, expertise, and trustworthiness should be important factors in student decisions to take additional courses in their instructor's field. Accordingly, the first three research hypotheses will test this proposition:
HR$_1$: There will be a positive association between a measure of student assessments of instructor believability and student entry into additional courses within that instructor's academic field.

HR$_2$: There will be a positive association between a measure of student assessments of instructor expertise and student entry into courses within the academic discipline of the instructor.

HR$_3$: There will be a positive association between a measure of student assessments of instructor trustworthiness and student entry into courses within the academic discipline of the instructor.

In the review of the research and theoretical literature devoted to the issue of student career role selection, several competing explanations of career role choice were discussed. Out of that discussion, five variables commonly thought important in student career role selection have been selected for use as a criterion against which to assess the efficacy of credibility components for forecasting student entry into courses. The five variables constituting the criterion are: sex, minority group status, achievement, socioeconomic status, and the frequency of student interaction with instructors. The following research hypothesis was developed to test the predictive utility of the credibility variables against the above criterion:

HR$_4$: Three indices of perceived credibility, when added to the concepts, sex, race, socioeconomic status, achievement, and the frequency of student/instructor interaction, will provide a greater predictability of student entry into courses than will the concepts used without the three credibility indices.
A review of literature concerned with the utilization of student course entry plans and later decision-making behaviors, i.e., course enrollment, was also discussed in this chapter. A secondary research objective of this investigation is to test the efficacy of credibility variables against a criterion consisting of student course entry plans and the traditional variables used in Hypothesis 4. The following hypothesis was developed for this test:

\[ HR_5: \] The addition of three indices of credibility to a measure of student course entry plans plus traditional variables, will increase the predictability of student entry into courses within the discipline of the instructor whose credibility they assessed.

In addition to the preceding research hypotheses, the investigation also examines several exploratory models utilizing credibility components and traditional variables in the prediction of actual course entry. While these additional statistical models of credibility variables are not regarded as formal tests of the propositions discussed earlier, it is hoped that they will provide additional insight into the operation of the three components of credibility.

Further elaboration of the models, which dummy variable regression analysis, is presented in Chapter II: Methods, and in Chapter III: Findings.
CHAPTER II

METHODS

This chapter contains three sections. The population and sampling procedures are presented in section one. In section two, the instrumentation of the major variables is presented. The last section contains a discussion of the techniques used in analysis of the data.

Populations and Samples

The sample used in this investigation consisted of students enrolled in sociology courses at a large, midwestern university. The institution is located in a medium size, industrialized metropolitan area of approximately eighty thousand persons.

One hundred and thirty-four students enrolled in two classifications of sociology courses offered during the Winter Term of 1971 comprised the sample for this investigation. The two courses were: a one-semester principles of sociology course and a one-semester modern social problems course. Both courses were lecture-oriented, three credit hours long, and were viewed by the department of sociology as elementary courses. The two courses are often specified as prerequisites for students who wish to enroll
in future courses within sociology. That is, as the courses were of an introductory nature, it seemed reasonable to assume that a greater number of underclassmen would be enrolled in them. As underclassmen are more likely than upperclassmen to be undecided on their major fields of study, they have more opportunities to enroll in additional sociology courses throughout their college careers.

Collection of the data involved the administration of student questionnaires at the end of the Winter, 1971 semester. In addition, data were gathered from the students' school records for the three succeeding semesters in order to determine which students entered additional courses within sociology. This provided a longitudinal picture of student responses and student course entry.

Instrumentation

Socioeconomic Status (SES)

A measure of SES was obtained by asking students to respond, both generally and specifically, to a set of items asking about their father's occupation (or the occupation of the head of the household). Their responses were coded according to the Duncan Scale, which provided a score of value ranging from 01 (the lowest) to 100 (the highest). The scores rank a broad spectrum of occupations within the United States for purposes of attaining an indication of socioeconomic status. Data presented in Table 2.0 depict student scores
within five of Duncan SES levels:

<table>
<thead>
<tr>
<th>Duncan SES Value:</th>
<th>0-14</th>
<th>15-30</th>
<th>31-68</th>
<th>69-84</th>
<th>84-99</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency:</td>
<td>25</td>
<td>19</td>
<td>54</td>
<td>25</td>
<td>17</td>
</tr>
<tr>
<td>% of Total:</td>
<td>18.7</td>
<td>14.2</td>
<td>40.3</td>
<td>18.6</td>
<td>8.2</td>
</tr>
<tr>
<td>N=134</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Since the type of analysis which was to be used in this study necessitated that the variables be dichotomized, there was a decision to make as to where to divide the data presented in Table 2.0. Accordingly, it was decided to place the middle category with the lower two categories for purposes of analysis. Consequently, SES was dichotomized at 68 on the Duncan Scale. Inasmuch as this decision may have an affect on the analysis, subsequent analysis with the middle category placed with the upper two categories is planned. For purposes of the present analysis, there were ninety-eight (73.1%) students in the low category and thirty-six (26.9%) in the upper socioeconomic status category.

Academic Achievement (GPA)

Academic achievement was operationalized as a student's current grade point average. Students were asked to indicate their present grade point average based upon the university at which they were currently attending. The grading system used at the institution at which this data was collected was based upon 000 to 4.00

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
scale, with 0 representing the lowest category and 4.00 the highest. Since grade point of 2.00 is regarded as average, grades were dichotomized at 2.75. That is, students whose GPA was 2.75 or below were categorized as low, while those whose GPA was 2.76 or above were categorized as high. This resulted in the following distribution of GPA's.

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>75</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>N=134</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sex**

Students were asked to indicate whether they were male or female. There were eighty-two females (61.2%) and fifty-two males (38.8%) in this sample.

**Minority Group Status (Race)**

Students were asked to indicate their minority group membership and/or majority group membership. There were two categories: White and Non-white. There were twenty-one non-white (15.7%) and one hundred and thirteen white (84.3%) students used in this sample.
The remaining variables discussed in this instrumentation section are those concerned with perceived credibility, student course entry plans, student and instructor interaction, student enrollment, and several "created" interaction variables. The weighing or score for the responses to each of the following variables has been done on the basis of face validity. No internal reliability-validity analysis was done for these variables. However, the concern of this study is with predictive validity. If predictive validity is achieved in this study, then the reliability of the items may be regarded as given. This is because reliability is a function of validity, and predictive validity is one form of validity.

**Frequency of Student and Instructor Interaction (FSII)**

Frequency of student and instructor interaction refers to the relative frequency with which students indicated they interact with faculty members. Frequency of student and instructor interaction is operationally specified as a student's response to the question: "When is the last time you talked to the instructor of this course?"

There were five possible responses ranging from "Today" to "I

---

1 For a more complete discussion of the types of and requirements for validity and reliability, see: American Psychological Association, "Technical Recommendations for Psychological Test and Diagnostic Techniques." *Psychological Bulletin*, XVI, No. 2 (Special Supplement, March, 1954).
haven't talked to the instructor of this course." The ranked scores on this item are indicated as follows:

"When is the last time that you talked to the instructor of this course?"

<table>
<thead>
<tr>
<th>Score</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>a) Today</td>
</tr>
<tr>
<td>4</td>
<td>b) From two to five days ago</td>
</tr>
<tr>
<td>3</td>
<td>c) From five to ten days ago</td>
</tr>
<tr>
<td>2</td>
<td>d) More than ten days ago</td>
</tr>
<tr>
<td>1</td>
<td>e) I haven't talked to the instructor of this course.</td>
</tr>
</tbody>
</table>

Table 2.2 presents the distribution of responses to the above item:

TABLE 2.2 -- Frequency and Percent Distributions of Student Responses to Interaction Item

<table>
<thead>
<tr>
<th>Value</th>
<th>1.00</th>
<th>2.00</th>
<th>3.00</th>
<th>4.00</th>
<th>5.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>84</td>
<td>7</td>
<td>20</td>
<td>12</td>
<td>11</td>
</tr>
<tr>
<td>Percent</td>
<td>62.7</td>
<td>5.2</td>
<td>14.9</td>
<td>9.0</td>
<td>8.2</td>
</tr>
</tbody>
</table>

N=134

High frequency of student and instructor interaction is operationally specified as a student's score of a "4" or a "5" on the above item. Low frequency of student and instructor interaction is operationally specified as a student's score of a "1," "2," or "3" on the above item. Accordingly, the data on frequency of student and instructor interaction were dichotomized in the following manner:
TABLE 2, 3. --Dichotomized Distribution of Student Responses to Interaction Item

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>89</td>
<td>45</td>
</tr>
<tr>
<td></td>
<td>(66.4%)</td>
<td>(33.6%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N=134</td>
<td></td>
</tr>
</tbody>
</table>

Credibility Variables

Student Assessments of Instructor Believability (BEL.)

This variable refers to the extent to which a student rates faculty statements and opinions as acceptable in terms of the student's own opinion and belief systems. 1 "Believability" was operationally specified as the scored response by a student to the question: "In general, how frequently do you find the subject matter presented by this instructor to be congruent with your own beliefs?" There were five possible responses ranging from "Almost all of the time" to "Almost never." The ranked scores on this item are indicated below:

"In general, how frequently do you find the subject matter presented by this


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
instructor to be congruent with your own beliefs?"

<table>
<thead>
<tr>
<th>Score</th>
<th>a) Almost all of the time</th>
<th>b) Most of the time</th>
<th>c) Occasionally</th>
<th>d) Only in rare instances</th>
<th>e) Almost never</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

Table 2.4 depicts the distribution for the above item:

**TABLE 2.4. --Frequency and Percent Distribution of Student Responses to Believability Item**

<table>
<thead>
<tr>
<th>Value</th>
<th>1.00</th>
<th>2.00</th>
<th>3.00</th>
<th>4.00</th>
<th>5.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>6</td>
<td>6</td>
<td>35</td>
<td>73</td>
<td>15</td>
</tr>
<tr>
<td>Percent</td>
<td>4.5</td>
<td>4.5</td>
<td>25.3</td>
<td>54.5</td>
<td>11.2</td>
</tr>
</tbody>
</table>

N=134

High believability is operationally specified as a student's score of a "4" or a "5" on the above item. Low believability is operationally specified as a student's score of a "1," "2," or a "3" on the above item. Table 2.5 presents the distribution for the dichotomization of the above item:

**TABLE 2.5. --Dichotomized Distribution of Student Responses to Believability Item**

<table>
<thead>
<tr>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>47</td>
<td>87</td>
</tr>
<tr>
<td>(35.1%)</td>
<td>(64.9%)</td>
</tr>
</tbody>
</table>

N=134

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Student Perceptions of Instructor Expertise (EXP.)

This variable refers to whether an instructor is defined by his students as a "qualified" or "knowledgeable" source of accurate information by those interacting with him. This variable is operationally specified as the scored response by a student to the following question: "In your opinion, how well qualified in this subject area is the instructor of this course?" There were five possible responses ranging from "He is very well qualified" to "He is not well qualified in this subject area." This item is scored in the following manner:

"In your opinion, how well qualified in this subject area is the instructor of this course?"

<table>
<thead>
<tr>
<th>Score</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>a) He is very well qualified in this subject area</td>
</tr>
<tr>
<td>4</td>
<td>b) He is well qualified in this subject area</td>
</tr>
<tr>
<td>3</td>
<td>c) I am unsure</td>
</tr>
<tr>
<td>2</td>
<td>d) He is somewhat qualified in this subject area</td>
</tr>
<tr>
<td>1</td>
<td>e) He is not qualified in this subject area</td>
</tr>
</tbody>
</table>

Table 2.6 depicts student responses to the above item:

---

1 ibid., 897, "Expertise" was defined as "expert opinion, or reference of a subject to, or its consideration by, experts. Hence, expert, skill, or knowledge, in any field.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
TABLE 2.6.--Frequency and Percent Distribution of Student Responses to Expertise Item

<table>
<thead>
<tr>
<th>Value</th>
<th>1.00</th>
<th>2.00</th>
<th>3.00</th>
<th>4.00</th>
<th>5.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>6</td>
<td>9</td>
<td>7</td>
<td>33</td>
<td>79</td>
</tr>
<tr>
<td>Percent</td>
<td>4.5</td>
<td>6.7</td>
<td>5.2</td>
<td>24.6</td>
<td>59.0</td>
</tr>
</tbody>
</table>

N=134

High student assessments of instructor expertise is operationally specified as a student's score of a "4" or a "5" on the above item. Low student assessments of instructor expertise is operationally specified as a student's score of a "1," "2," or a "3" on the above item. Table 2.7 depicts the distribution of student scores on the above item when it was dichotomized:

TABLE 2.7.--Dichotomized Distribution of Student Responses to Expertise Item

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>22 (16.4%)</td>
<td>112 (83.6%)</td>
</tr>
</tbody>
</table>

N=134

Student Perceptions of Instructor Trustworthiness (TRU.)

This refers to the extent to which students have confidence that an instructor will behave justly regarding matters which affect students' attainment of school-related goals. This variable is
operationally specified as a student's scored response to the following question: "In your opinion, is (or will be) the instructor of this course objective in his grading procedures?" There were five possible responses to this item, ranging from "Yes, definitely" to "Definitely not." The item is scored in the manner indicated below:

"In your opinion, is (or will be) the instructor of this course objective in his grading procedures?"

<table>
<thead>
<tr>
<th>Score</th>
<th>a) Yes, definitely</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>b) Yes, probably</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>c) Not sure either way</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>d) Probably not</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>e) Definitely not</td>
<td>1</td>
</tr>
</tbody>
</table>

Data presented in Table 2.8 represent student responses to the above item:

<p>| TABLE 2.8. --Frequency and Percent Distribution of Student Responses to Trustworthiness Item |
|-----------------------------------------------|-----------------------------------------------|</p>
<table>
<thead>
<tr>
<th>Value</th>
<th>1.00</th>
<th>2.00</th>
<th>3.00</th>
<th>4.00</th>
<th>5.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>3</td>
<td>3</td>
<td>19</td>
<td>58</td>
<td>51</td>
</tr>
<tr>
<td>Percent</td>
<td>2.2</td>
<td>2.2</td>
<td>14.2</td>
<td>43.3</td>
<td>38.1</td>
</tr>
</tbody>
</table>

N=134

High student assessments of instructor trustworthiness is operationally specified as a student's score of a "4" or a "5" on the preceding item. Low student assessments of instructor trustworthiness is operationally specified as a student's score of a "1,"
"2," or a "3" on the preceding item. The distribution of dichotomized scores on the trustworthy item is presented below in Table 2.9:

TABLE 2.9. - Dichotomized Distribution of Student Responses to Trustworthiness Item

<table>
<thead>
<tr>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>27</td>
<td>107</td>
</tr>
<tr>
<td>(20.1%)</td>
<td>(79.9%)</td>
</tr>
<tr>
<td>N-134</td>
<td></td>
</tr>
</tbody>
</table>

Actual Student Course Entry Plans (PLANS)

This variable refers to those courses in which students plan to enroll. It is operationally specified as a student's scored response to the following question: "Do you intend to enroll in other courses in this discipline during your future work at this institution?"

There were five possible responses to the item, ranging from "Yes, definitely" to "Definitely not." The item is scored in the manner indicated below:

"Do you intend to enroll in any additional courses in this discipline during your future work at this institution?"

<table>
<thead>
<tr>
<th></th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Yes, definitely</td>
<td>5</td>
</tr>
<tr>
<td>b) Yes, probably</td>
<td>4</td>
</tr>
<tr>
<td>c) Not sure either way</td>
<td>3</td>
</tr>
<tr>
<td>d) Probably not</td>
<td>2</td>
</tr>
<tr>
<td>e) Definitely not</td>
<td>1</td>
</tr>
</tbody>
</table>
The distribution of student scores on the plans variable is presented in Table 2.10:

**TABLE 2.10.--Frequency and Percent Distribution of Student Responses to Plans Item**

<table>
<thead>
<tr>
<th>Value</th>
<th>1.00</th>
<th>2.00</th>
<th>3.00</th>
<th>4.00</th>
<th>5.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
<td>17</td>
<td>18</td>
<td>9</td>
<td>28</td>
<td>62</td>
</tr>
<tr>
<td>Percent</td>
<td>12.7</td>
<td>13.4</td>
<td>6.7</td>
<td>20.9</td>
<td>46.3</td>
</tr>
</tbody>
</table>

N=134

Greater likelihood of entering additional courses is operationally specified as a student's score of a "4" or a "5" on the above item. Less likelihood of entering additional courses is operationally specified as a student's score of a "1," "2," or a "3" on the above item. The distribution of greater and lesser likelihood to enter course scores is presented in Table 2.11, below:

**TABLE 2.11.--Dichotomized Distribution of Plans Item**

<table>
<thead>
<tr>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>44</td>
<td>90</td>
</tr>
<tr>
<td>(32.8%)</td>
<td>(67.2%)</td>
</tr>
</tbody>
</table>

N=134

**Actual Student Course Entry (ENTRY)**

This variable is operationally specified as whether a student actually enrolled in another sociology course during the following three semesters (Spring, Summer, or Fall) after administration.
of the questionnaire at the university in which this study was conducted.

**Major Interaction Variables**

There are four interaction variables used in this investigation. The distribution of student scores on each of the interaction terms will be presented after a brief example depicting how one of the interaction terms was constructed.

**Interaction of High Believability and High Expertise (BEL,* EXP.).** This is a dummy or "created" variable referring to the interaction of high student assessments of an instructor's believability and expertise. The variable is created by combining all scores of a "4" or a "5" on the believability and expertise items. If a student assessed the instructor lower, for example, a "1," "2," or a "3" on either the believability or the expertise item, then there would be no effects of high interaction on the two variables in combination. This procedure is discussed in greater detail in the section of this chapter where the statistical techniques used in the dummy variable analysis are discussed.

**Interaction of High Believability with High Trustworthiness (BEL,* TRU.).** This variable is created in the same manner as the first interaction term. It is, however, concerned with the interaction of high believability and high trustworthiness.
Interaction of High Expertise and High Trustworthiness (EXP. * TRU.). --This variable is created in the same manner as the other two interaction terms.

Interaction of High Believability and High Expertise and High Trustworthiness (BEL. * EXP. * TRU.). --This variable is created in the same manner as the other interaction terms.

It should be noted that several decisions were necessary for the process of dichotomizing the variables just described. The basic problem was how to divide a five category response item into two categories. Ideally, one seeks to arrive at a distribution of 49% and 51% of the responses in the two created categories. There is, however, the question of where to place those responses which were in the middle categories on the original five category response. It was reasoned that since the purpose of this exploratory study was on providing an initial test of the efficacy of a new concept---credibility---accordingly, as one means of adding rigor to the testing, all middle categories were grouped with the low evaluations.

Analysis

The following discussion focuses on the techniques for analysis of the hypotheses developed to assist in answering the research questions discussed in Chapter I. As noted earlier, five
hypotheses are tested in this investigation. They are presented below:

HYPOTHESIS I: There will be a positive association between a measure of student assessments of instructor believability and student course entry.

HYPOTHESIS II: There will be a positive association between a measure of student assessments of instructor expertise and student course entry.

HYPOTHESIS III: There will be a positive association between a measure of student assessments of instructor trustworthiness and student course entry.

HYPOTHESIS IV: Three indices of perceived credibility, when added to traditional concepts, will increase the predictability of student course entry.

HYPOTHESIS V: The addition of three indices of credibility to a measure of student course entry plans will increase the predictability of student course entry.

Hypotheses I, II, and III are tested with the Pearson Product Moment Statistic.\(^2\)

\(^1\)The level of significance for acceptance of any of the hypotheses used throughout this study is the .05 level.

The other hypotheses are tested by multiple regression analysis. There were two main reasons for selecting this technique. One had to do with the nature of the dependent variable; namely, that it was dichotomous. Although there are several statistical techniques which might be appropriate, multiple regression analysis was not only suitable, but also was necessary for the second and perhaps more important reason. That is, the purpose of this investigation was to indicate whether credibility variables would provide explanatory information beyond that obtained with traditional explanations. Hence, as regression analysis provided a means for comparing differing explanatory models, it was selected.

Hypotheses IV and V are tested by a variation of multiple regression analysis. The procedures for using multiple regression analysis is as follows:

Initially a criterion measure is secured (Y, which in this case represents students actual entry or non-entry into courses), which may be conceived of as being determined by a multitude of diverse factors or conditions. The multiple regression analysis is an attempt to explain variations in a dependent variable (actual course entry) on the basis of other theoretically relevant information.

---

i.e., independent variables. In the present instance, the relevant variables are those concerned with student decision-making behaviors in the area of actual course entry.

Those variables thought to be related to student career decision-making should provide some measure of the total variance which occurs in the sample of university students actual entry into additional sociology classes. Accordingly, if a variable is presumed to be irrelevant to students' decisions to elect additional courses, then it should explain little to none of the variance in the dependent variable.

In testing Hypothesis IV, a comparison will be made of two regression models: \((R_1):(\text{SEX}) + (\text{RACE}) + (\text{SOCIOECONOMIC STATUS}) + (\text{ACHIEVEMENT}) + (\text{FREQUENCY OF STUDENT AND INSTRUCTOR INTERACTION}) + \text{ERROR} = \text{ENTRY};\) and \((R_A):(R_1) + (\text{BELIEVABILITY}) + (\text{EXPERTISE}) + (\text{TRUSTWORTHINESS}) + \text{ERROR} = \text{ENTRY}.\)

The first of the preceding models is referred to as a "restricted" model; that is, it does not include any of the credibility components, only the "traditional" variables. The full model \((R_A)\) includes the same "traditional" social and social psychological variables as does the restricted model; however, it also includes a measure of student assessments of instructor believ-
ability, expertise, and trustworthiness. A statistical description of both models appears below:

**RESTRICTED** ($R_1$):

\[ Y = a + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5 + e \]

Where:

- $a =$ a regression constant
- $b_1 =$ a least squares regression weight for student's sex
- $b_2 =$ a least squares regression weight for student's race
- $b_3 =$ a least squares regression weight for student's socioeconomic status
- $b_4 =$ a least squares regression weight for student's academic achievement (grade point average)
- $b_5 =$ a least squares regression weight for the frequency of student and instructor interaction
- $e =$ an error term, statistically controlled for in the above equation

$Y =$ student's actual behaviors (actual entry into courses)

**FULL** ($R_A$):

\[ Y = a + b_1 x_1 + b_2 x_2 + b_3 x_3 + b_4 x_4 + b_5 x_5 + b_6 x_6 + b_7 x_7 + b_8 x_8 + e \]

Where:

- $a =$ a regression constant
- $b_1, b_2, b_3, b_4, b_5 =$ those variables described above.
- $b_6 =$ a least squares regression weight for believability
- $b_7 =$ a least squares regression weight for expertise
$b_8$ = a least squares regression weight for trustworthiness

e = an error term, statistically controlled for in the above equation

\( Y = \text{students actual behaviors (course entry)} \)

The \( R^2 \) obtained in the restricted model presented on the preceding page will indicate what proportion of the variance in student course entry is explained by the set of "traditional" variables. Similarly, an \( R^2 \) will be obtained for the full regression model presented above. The two \( R^2 \)'s will then be compared statistically using the techniques proposed by Melichar.\(^1\) This procedure involves the formula (presented on Page 69 to compute an F-Test or F-Ratio between the restricted and full regression models. This procedure will be conducted for all subsequent regression model comparisons done in this investigation. The formula for computing the F-Ratio appears below:

\[
F = \frac{(R^2_A - R^2_B) (n - k_1 - k_2 - 1)}{(1 - R^2_A) \ (k_1)}
\]


\(^2\)Melichar, op. cit., 9.
Where:

\[ k_1 = \text{number of independent variables representing factor A} \]

\[ k_2 = \text{number of independent variables other than those representing factor A} \]

\[ n = \text{number of observations} \]

\[ R_A^2 = \text{coefficient of multiple determination for equation with } (k_1 + k_2) \text{ variables} \]

\[ R_B^2 = \text{coefficient of multiple determination for equation with } (k_2) \text{ variables.} \]

The testing of Hypothesis V uses the same statistical techniques just discussed for Hypothesis IV. Again, two regression models are developed, tested, and compared for significant differences in the amount of explained variance. Both models are presented below:

**RESTRICTED (R_3):**

\[
\text{(SEX) + (RACE) + (SES) + (GPA) + (STUDENT COURSE PLANS) + ERROR = ENTRY.}
\]

**FULL (R_4):**

\[
(R_3) + \text{(EXPERTISE) + (BELIEVABILITY) + (TRUSTWORTHINESS) + ERROR = ENTRY.}
\]

**Exploratory Analysis**

In the present investigation, the major objective is to determine whether the concept of perceived credibility adds to the predictive utility of previously employed social and social psychological variables which have been used to explain student course entry. In

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
using multiple regression models, it is possible to explore further some of the characteristics of the three indices or components of credibility. Multiple regression analysis provides an indication of the relative contribution which each theoretically relevant component makes when placed into a regression model or equation. Ideally, the greatest explanation of the variance in a dependent variable, combined with the fewest number of independent variables is the objective of this type of analysis. In the examination of the configuration of the three proposed components of perceived credibility, a variation of the multiple regression procedure will be employed: dummy variable analysis.

Dummy variable analysis is often used when one is interested in examining the possible interactive effects of two or more variables. The form of the interaction is first determined, e.g., high A with high B, then a new variable is constructed by isolating those respondents whose scores represent "high" on both variable A and B. The following example may help to clarify this procedure.

It is possible that an interaction effect between high student assessments of instructor believability and high assessments of instructor expertise may occur. This interaction between the two variables may produce an outcome which is distinctly different from that which would have been discovered had the two variables been analyzed independently and/or additively. An excellent
rationale for researchers to consider the effects of possible interaction has been offered by Morgan and Songuist: ¹

... measured classifications are only proxy variables for other things and are frequently proxies for more than one construct. Several of the measured factors may jointly represent a theoretical construct. We may have interaction effects not because the world is full of interactions, but because our variables have to interact to produce the theoretical constructs that really matter.

The exploratory regression models are not presented in this chapter due to the large and complicated number of models which were used. All exploratory models are presented in Chapter III: Findings, where the logic of their sequence will be apparent.

CHAPTER III

FINDINGS

As has been developed in previous chapters, the major objective of this investigation is to empirically ascertain whether measures of student assessments of their instructors' credibility are associated with student entry into certain courses. In addition, it was stated earlier that measures of student assessments of instructor credibility would be statistically analyzed in conjunction with a set of traditional variables consisting of sex, race, academic achievement (grade point average), socioeconomic status, and the frequency of student and instructor interaction. Finally, credibility data are compared against student plans as a predictor of later decisions of students to actually enroll in courses. The first portion of this chapter presents findings relevant to the traditional variables and plans as predictors of later acts of students to enroll in sociology courses.

A correlation matrix depicting associations among the criterion variables was presented in Chapter II: Methods (see Table 2.0). In Table 3.0, the zero order correlations between the traditional variables plus plans, and actual student course entry. As the data presented in Table 3.0 indicate, the largest association existed between student socioeconomic status and later decisions.
to take additional sociology courses. This finding is consistent with the literature on socioeconomic status and career choice which was reviewed in Chapter I. That is, there appears to be a tendency for students in the upper socioeconomic statuses to choose careers in, among other areas, the social sciences.

**TABLE 3.0.** Correlations Between Actual Student Course Entry and Sex, Race, Achievement, SES, Frequency of Student-Instructor Interaction and Student Course Plans

<table>
<thead>
<tr>
<th></th>
<th>Student Course Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>-.06</td>
</tr>
<tr>
<td>Race</td>
<td>.02</td>
</tr>
<tr>
<td>SES</td>
<td>.27</td>
</tr>
<tr>
<td>GPA</td>
<td>.20</td>
</tr>
<tr>
<td>Frequency Student/Instructor Int.</td>
<td>.14</td>
</tr>
<tr>
<td>Plans to enter courses</td>
<td>.16</td>
</tr>
</tbody>
</table>

N=134

With the exception of grade point average, none of the other traditional variables is very closely associated with later student entry into courses (and of course the amount of explained variance with achievement was only four percent). However, for descriptive purposes, a cross-tab analysis of each of the traditional variables and student course entry is presented in the following discussion. It should be noted, that as it is not the objective of this study to account for why the traditional variables are or are not associated with student course entry, the discussion is limited to a description of the characteristics of the sample used in this study and the
dependent variable of course entry.

Sex

As the data presented in Table 3.1 indicate, there appears to be a slight association, if any, between the sex of students and their decisions to enroll in additional sociology courses.

<table>
<thead>
<tr>
<th>Course</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry</td>
<td>39 (29.1%)</td>
<td>28 (20.9%)</td>
</tr>
</tbody>
</table>

N=134; $X^2=.5028$ with d/f=1; ($p<.05$).

Minority Group Status:

There were twenty-one non-white (15.7%) and one hundred and thirteen (84.3%) white students used in this sample. Data depicted in Table 3.2 indicate the degree of association between minority group status and decisions to take additional courses in sociology.

As the data presented in Table 3.2 indicate, there is no significant difference (.05 level) between whites and non-whites, as sampled in this study, in student course entry. This lack of difference runs counter to the general findings reported earlier.
by Davis in which the author found that a higher proportion of black students entered the social sciences than did white students. However, as sociology is but one of several social sciences, the finding of no difference in course entry by racial membership is probably not of great importance. In the absence of additional data about student entry into other disciplines within the social sciences at the university in which this sample was taken, it is difficult to form any conclusions on this finding.

TABLE 3.2--A Comparison of Student Course Entry by Minority Group Status

<table>
<thead>
<tr>
<th></th>
<th>Non-white</th>
<th>White</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course</td>
<td>11</td>
<td>56</td>
</tr>
<tr>
<td></td>
<td>(8.2%)</td>
<td>(41.8%)</td>
</tr>
<tr>
<td>Entry</td>
<td>10</td>
<td>57</td>
</tr>
<tr>
<td></td>
<td>(7.5%)</td>
<td>(42.5%)</td>
</tr>
</tbody>
</table>

N-134; $X^2 = .05657$ with d/f = 1; (p > .05).

Academic Achievement

Table 3.3 presents data relevant to the question: Do students differ by academic achievement in their decisions to enroll in additional sociology courses? The findings indicate that prior academic performance is associated with student course enrollment within the field of sociology. That is, students who achieved a grade point average of 2.75 or better on a 4.00 scale were more likely to pursue additional work in sociology courses than students.
whose grade point average was less than 2.75.

**TABLE 3.3.---A Comparison of Student Course Entry By Student Academic Achievement**

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course</td>
<td>44</td>
<td>23</td>
</tr>
<tr>
<td>Entry</td>
<td>31</td>
<td>36</td>
</tr>
</tbody>
</table>

N=134; \( X^2 = 5.11774 \) with d/f=1; \( p < .05 \).

**Socioeconomic Status**

Data presented in Table 3.4 depict student course entry by socioeconomic status. As the data indicate, there is a positive association between socioeconomic status and later course entry among the students sampled for this investigation. Higher socioeconomic status students appear to be more likely to enroll in later courses within sociology than are lower status students. This finding conforms to the literature; namely, that higher status students tend to select careers and enter courses within the social sciences.

**TABLE 3.4.---A Comparison of Student Course Entry By Socioeconomic Status Level**

<table>
<thead>
<tr>
<th></th>
<th>Low</th>
<th>High</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course</td>
<td>57</td>
<td>10</td>
</tr>
<tr>
<td>Entry</td>
<td>41</td>
<td>26</td>
</tr>
</tbody>
</table>

N=134; \( X^2 = 9.72334 \) with d/f=1; \( p < .05 \).
Frequency of Student and Instructor Interaction

It has been maintained that the interaction between students and faculty members may exert some kind of an influence upon student entry into sociology courses. The data presented in Table 3.5 depict the association between the frequency of student and faculty interaction and later acts of students to take additional sociology courses. As the table indicates, while there appears to be a slight observed association between student entry into sociology courses and the frequency of interaction between students and instructors, this finding is not significantly greater (.05 level) than one would expect by chance.

| TABLE 3.5. --Student Course Entry By Frequency of Student/Instructor Interaction |
|----------------------------------|----------------|----------------|
|                                 | Low            | High           |
| Course                          |                |                |
| Non-entry                       | 49             | 18             |
|                                 | (37%)          | (13%)          |
| Entry q                         | 40             | 27             |
|                                 | (30%)          | (20%)          |

N=134; $X^2=2.71011$ with d/f=1; (p > .05).

Student Course Entry Plans

Table 3.6 presents data relevant to the question: Are plans significantly associated with later behaviors? Data presented in Table 3.6 indicate that plans are significantly associated at the .05 level with later behaviors, although the product moment
correlation between plans and course entry is low \((r=.16)\). However, the majority of the students sampled in this study who indicated that they would enroll in another sociology course made that decision. Accordingly, the majority of those who indicated that they would not enroll in another sociology course conformed in their behavior to their stated plans.

**TABLE 3.6. --A Comparison of Student Course Entry According to Student Plans**

<table>
<thead>
<tr>
<th>Course</th>
<th>Non-entry</th>
<th>Entry</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>27 (20%)</td>
<td>17 (13%)</td>
</tr>
<tr>
<td>High</td>
<td>40 (30%)</td>
<td>50 (37%)</td>
</tr>
</tbody>
</table>

\(N=134; \chi^2=3.38338 \text{ with } d/f=1; (p<.05).\)

**Credibility Variables and Student Entry into Courses**

The following section of findings focuses upon the associations between credibility variables and student course entry. As has been developed in previous chapters, the major objective of this investigation is to empirically ascertain whether measures of student assessments of their instructors' credibility are associated with student entry into certain courses. Using the theoretical framework outlined earlier, the following hypotheses were constructed and tested to determine whether associations existed between student assessments of three indices of instructor credi-
bility and later decisions to enroll or not enroll in courses within
the disciplines of those instructors. The three proposed theoreti-
cal indices of perceived credibility which were used in the hypoth-
eses are: believability, expertise, and trustworthiness. Each of
the following hypotheses is discussed in the order presented in
Chapter I.

_Hypothesis I._—There will be a positive association
between a measure of student assessments of in-
structor believability and student entry into courses
within the disciplines of the instructors.

The above hypothesis was tested with the Pearson Product
Moment Correlation Statistic. This hypothesis was supported by
the data used in this investigation. The association between in-
structor believability as assessed by students and student course
entry was in the predicted direction (\(r = .36\)) and was statistically
significant beyond the .05 level.

_Hypothesis II._—There will be a positive association
between a measure of student assessments of in-
structor expertise and student entry into courses
within the disciplines of the instructor.

The above hypothesis was tested in the same manner as was
the first hypothesis. A significant Product Moment Correlation
(\(r = .32\)) supported Hypothesis II.
Hypothesis III. -- There will be a positive association between a measure of student assessments of instructor trustworthiness and student entry into courses within the disciplines of the instructors.

The above hypothesis was tested with the Pearson Product Moment Correlation Statistic. Hypothesis III was supported with a significant association (r = .39) in the direction predicted.

The findings just presented support the general theoretical proposition presented in this study; namely, that on the basis of the data used in this study, student assessments of three theoretical indices of instructor credibility--believability, expertise, and trustworthiness--are significantly associated with later acts of students to enroll or not enroll in additional courses within the disciplines of those instructors whose credibility the students assessed. Although the magnitude of the zero-order correlations between student course entry and each of the three components of perceived credibility did not vary in extreme, the greatest association found was between students' assessments of their instructors' trustworthiness and later course entry behaviors of students. That association (r = .39) accounted for 15% of the variance in student entry.
Credibility and Criterion Variables

Earlier in the examination of selected research and theoretical literature, a discussion was presented concerning variables traditionally thought to be related to student role decisions. Those variables discussed were: sex, race, socioeconomic status, achievement (measured in terms of grade point average) and the frequency of student and instructor interaction. Also discussed were three theoretical components or indices of the credibility students assign to their instructors. Those components were: believability, expertise, and trustworthiness. Findings have already been presented which demonstrate that measures of each of the three credibility components and student course entry, it was further hypothesized in Chapter I, that the three components should increase the prediction of student course entry when used in conjunction with the traditional variables noted earlier. To test this proposition, the following hypothesis, presented earlier, was developed:

Hypothesis IV. --Three indices of perceived credibility, when added to traditional concepts, will increase the predictability of student course entry.

In the analysis of Hypothesis IV, two regression models were developed, one restricted and one full. The restricted model (R₁)
consisted of measures of sex, race, socioeconomic status, academic achievement (measured by grade point average), and the frequency of student and instructor interaction. The full model ($R_2$) contained all of the variables presented in the restricted model ($R_1$), plus a measure of each of the three indices of credibility used in this investigation. Both models are presented below:

\[
\text{REstricted Model (R}_1): \ (\text{SEX}) + (\text{RACE}) + (\text{SES}) +
\]
\[
(\text{GPA}) + (\text{FSII}) + \text{ERROR} = \text{ENTRY}.
\]

\[
\text{Full Model (R}_2): \ (R_1) + (\text{BEL}) + (\text{EXP}) + (\text{TRU}) +
\]
\[
\text{ERROR} = \text{ENTRY}.
\]

As discussed in the previous chapters, it has been hypothesized that the full model ($R_2$) made up of sex, race, socioeconomic status, grade point average, the frequency of student and instructor interaction, and measures of student assessments of instructor believability, expertise, and trustworthiness would account for significantly more of the variance ($R^2_2$) in student enrollment than would the restricted model ($R^2_1$). In this fashion, the predictive validity of the following research hypothesis was tested:

Research Hypothesis (HR_4): $R^2_2$ \(\geq\) $R^2_1$

Statistic: F-Test \quad Alpha Level: \(\alpha \leq .05\)

In Table 3.7, findings are presented which indicate the amount of variance in student enrollment explained by the restricted and full models.
TABLE 3.7.--Comparison of Traditional Variables with Traditional
Variables Plus Measures of Student Assessments of Instructor
Believability, Expertise, and Trustworthiness as Predic-
tors of Student Course Entry

<table>
<thead>
<tr>
<th>Variables</th>
<th>R</th>
<th>$R^2$</th>
<th>Significance of Increased Explained Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$R_1$: (SEX) + (RACE) + (SES) + (GPA) + (FSII) + ERROR = ENTRY.</td>
<td>.335</td>
<td>.123</td>
<td></td>
</tr>
</tbody>
</table>
| $R_2$: (R_1) + (BELIEVABILITY) + (EXPERTISE) + (TRUST-
  WORTHINESS) + ERROR = ENTRY. | .528 | .279  | $F=3.2455 \times <.05$ with d/f= 8/125      |

N=134

Data presented in Table 3.7 indicate that the restricted model
(R_1), composed of a set of traditionally employed variables was able
to account for 12% of the variance in student enrollment. On the
other hand, when measures of student assessments of instructor
believability, expertise, and trustworthiness were added to the same
set of traditional variables, the amount of explained variance in-
creased to 28%. This increase was statistically significant beyond
the .05 level. Therefore, Hypothesis IV was accepted.

Credibility Components and Student Plans

This section presents findings related to the fifth research
hypothesis proposed earlier.

Hypothesis V.--The addition of three indices of

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
of credibility to a measure of student course entry
plans, plus traditional variables, will increase the
predictability of student course entry.

In order to test the above hypothesis, a number of regression
models were developed. The first part of the analysis was to de-
termine whether student plans, when added to the set of traditional
variables used throughout this investigation, increased the predict-
ability of student enrollment. 1 The two models, labeled (R1) and
(R3) are presented below:

RESTRICTED MODEL (R1): (SEX) + (RACE) + (SES) +
(GPA) + (FSII) + ERROR = ENROLLMENT.

FULL MODEL (R3): (R1) + (STUDENT COURSE PLANS) +
ERROR = ENROLLMENT.

An F-Test was computed between the multiple R of each of
the two preceding models. The results are presented in Table 3.8.

As the data presented in Table 3.8 indicate, the addition of
a measure of student course entry plans to a set of traditional vari-
ables does not significantly increase the amount of explained vari-
ance in student course entry. Without the inclusion of a measure
of student plans, the set of traditional variables was able to account

1 Throughout the remainder of this investigation, the terms
"course entry" and "course enrollment" will be used interchangably.
for 12% of the variance in enrollment. With the addition of student course entry plans, the amount of increase in explained variance of student enrollment is a mere 1%, and not statistically significant. This finding was not surprising as the simple product-moment correlation between student course entry plans and later acts of enrollment was only $r = .16$. It is apparent, therefore, that a knowledge of student plans is not as helpful in predicting future student course entry behaviors as are such variables as sex, race, socioeconomic status, academic achievement, and the frequency of student and instructor interaction. In addition, the earlier speculation of this study concerning whether the inclusion of student plans would suppress the effects of credibility variables when all are included in the same regression model was found not to be accurate.

TABLE 3.8. --Comparison of a Restricted Model Made up of Traditional Variables with a Full Model Consisting of Traditional Variables Plus Student Course Entry Plans for Predicting Actual Student Entry

<table>
<thead>
<tr>
<th>Variables</th>
<th>$R$</th>
<th>$R^2$</th>
<th>Significance of Increased Explained Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$R_1$: (SEX) + (RACE) + (SES) + (GPA) + (FSII) + ERROR = ENTRY</td>
<td>.335</td>
<td>.123</td>
<td></td>
</tr>
<tr>
<td>$R_3$: ($R_1$) + (STUDENT COURSE PLANS) + ERROR = ENTRY</td>
<td>.373</td>
<td>.139</td>
<td>$F = .03685 &lt; \alpha &gt; .05$ with $d/f = 6/127$</td>
</tr>
</tbody>
</table>
It will be recalled from the findings presented in Table 3.7 that the addition of three indices of credibility--believability, expertise, and trustworthiness--to a set of traditional variables increased the amount of explained variance from 12% to 28%. Since the addition of student course entry plans to the same set of traditional variables only provided a 1% increase in explained variance, it is concluded that credibility variables are better predictors of this one form of student behavior, i.e., later course entry. Consequently, Hypothesis V was accepted. To provide further conformation regarding the acceptance of Hypothesis V, two additional regression models were analyzed, one restricted and the other full. Both models are presented below:

**RESTRICTED MODEL (R₃):** (SEX) + (RACE) + (SES) + (GPA) + (FSII) + (STUDENT COURSE PLANS) + ERROR = STUDENT COURSE ENTRY.

**FULL MODEL (R₄):** (R₃) + (BELIEVABILITY) + (EXPERTISE) + (TRUSTWORTHINESS) + ERROR = STUDENT COURSE ENTRY.

An F-Test was computed between the multiple R of each of the two models presented above. The results are presented in Table 3.9. As the table indicates, 14% of the variance in actual student course enrollment is accounted for when plans are used in addition to a set of traditional variables consisting of sex, race, socioeconomic status, achievement (measured by grade point...
average), and the frequency of student and instructor interaction.

In contrast, when the three indices of credibility—believability, expertise, and trustworthiness—are added to a model consisting of traditional variables plus student course entry plans, 30%, more than twice as large, of the variance in actual student course enrollment is accounted for. This increase was statistically significant beyond the .05 level. Therefore Hypothesis V described earlier is accepted.

### Table 3.9: Comparison of a Restricted Model Consisting of Traditional Variables Plus the Measure of Student Course Entry Plans with a Full Model Consisting of the Traditional Variables, (SCP), (BEL.), (EXP.), and (TRU.) Predicting Entry

<table>
<thead>
<tr>
<th>Variables</th>
<th>$R_2$</th>
<th>$R^2$</th>
<th>Significance of Increased Explained Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>$R_3$: ($SEX) + (RACE) + (SES) + (GPA) + (FSII) + (STUDENT COURSE PLANS) + ERROR = ENTRY.</td>
<td>.373</td>
<td>.139</td>
<td></td>
</tr>
<tr>
<td>$R_4$: ($R_3) + (BELIEVABILITY) + (EXPERTISE) + (TRUST-WORTHINESS) + ERROR = ENTRY.</td>
<td>.549</td>
<td>.302</td>
<td>$F=2.6780 \lessdot \chi^2 .05$ with d/f = 9/124.</td>
</tr>
</tbody>
</table>

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Components of Credibility As Predictors of Student Enrollment

Findings have been presented which indicate that each of three indices of credibility, believability, expertise, and trustworthiness, is significantly associated with later acts of students to enroll or not to enroll in future courses. In addition, it was demonstrated that a model consisting of a set of traditional variables—sex, race, socioeconomic status, academic achievement (assessed by grade point average) and the frequency of student and instructor interaction—with the addition of three indices of credibility—believability, expertise, and trustworthiness—was able to account for significantly more of the variance in actual student course enrollment than was a model using the traditional variables alone. It was also demonstrated that the same three indices of credibility, when added to a set of traditional variables described above, provided greater predictability of actual student course entry than did the addition of a measure of student course enrollment plans. On the basis of the findings just reviewed, it was concluded that the three indices of credibility used in this investigation—believability, expertise, and trustworthiness—had predictive utility for forecasting student decisions to enroll or not to enroll in selected courses.

There is, however, still an unresolved issue in the literature
concerned with perceived credibility. As discussed in Chapter I, the issue involves the nature of the phenomenon of perceived credibility. Three of the more frequently employed components or indices of perceived credibility—believability, expertise, and trustworthiness—have been used throughout this investigation. As presented in Chapter II of this research, the three credibility components were found to be moderately intercorrelated. The intercorrelation matrix of believability, expertise, and trustworthiness as assessed with the data used in this study, is presented in Table 3.10.

TABLE 3.10. --Table of Intercorrelations Between Three Credibility Components Selected for Use Throughout this Study

<table>
<thead>
<tr>
<th></th>
<th>Believability</th>
<th>Expertise</th>
<th>Trustworthiness</th>
</tr>
</thead>
<tbody>
<tr>
<td>Believability</td>
<td>---</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expertise</td>
<td>.43</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Trustworthiness</td>
<td>.57</td>
<td>.58</td>
<td>---</td>
</tr>
</tbody>
</table>

N=134; p = < .05.

The confusion in the literature concerning the three components of credibility used in this investigation is illustrated by the correlation matrix presented in Table 3.10. This confusion may be summarized by the following three questions: Are the three indices of credibility—believability, expertise, and trustworthiness—separate
independent measures of perceived credibility? Do the three indices function in some additive combination in the prediction of behavior? Are some or all of the three components interactive with one in other in accounting for various forms of behavior? The following discussion presents findings relevant to these questions. The findings presented are the result of examining, through a series of exploratory multiple regression equations, several statistical manipulations of the three credibility components in an attempt to arrive at the best predictive model for forecasting student course entry. It is necessary to reemphasize the exploratory nature of the following presentation which should not be viewed as further testing of the five research hypotheses discussed earlier.

The predictive utility of adding a measure of each of the three indices of credibility—believability, expertise, and trustworthiness—to a set of traditionally employed variables for predicting student behaviors has been demonstrated earlier in this investigation. The following findings explore further usages of the three credibility components for explaining the variance in student course entry. The first issue is whether any of the three components of perceived credibility, when added to the set of traditional variables used throughout this study, increases the explained variance in student course entry. Again, the set of traditional variables are: sex, race, socioeconomic status, academic achievement (measured in terms of grade point average), and the frequency of student and
instructor interaction. The set of traditional variables became the restricted model ($R_1$) or criterion against which three models, each including one of the credibility components was tested in predicting student course entry. All four models are presented below:

**RESTRICTED MODEL ($R_1$):** 
(SEX) + (RACE) + (SES) + (GPA) + (FSII) + ERROR = STUDENT COURSE ENTRY.

**FULL MODEL ($R_A$):** 
($R_1$) + (BELIEVABILITY) + ERROR = ENTRY.

**FULL MODEL ($R_B$):** 
($R_1$) + (EXPERTISE) + ERROR = ENTRY.

**FULL MODEL ($R_C$):** 
($R_1$) + (TRUSTWORTHINESS) + ERROR = ENTRY.

An F-Test was computed between the multiple R of each of the full models ($R_A$), ($R_B$), ($R_C$) and the restricted model ($R_1$). The results of that analysis are presented in Tables 3.11, 3.12, and 3.13 for each comparison of full and restricted regression models.

As the data presented in Table 3.11 indicate, when the component, believability, was added to a set of traditional variables—sex, race, socioeconomic status, achievement (grade point average) and the frequency of student and instructor interaction—the resulting model explained almost twice the amount of variance in actual student course entry (22%) as did the model composed of the traditional predictors alone (12%). The increase
in explained variance as well as the statistical significance of
the increase ($p < .05$) lent support to the contention that believ-
ability should be retained as a component of perceived credibility.

Data presented in Table 3.14 are the results of adding the
component expertise to the same set of traditional predictor vari-
ables depicted in Table 3.14. As may be noted in Table 3.12, the
addition of a measure of student assessments of instructor exper-
tise ($R_{B}$) resulted in accounting for 19% of the variance in student
course entry. Although this increase was considerably larger
(7%) than the 12% explained variance provided by the traditional
variables--sex, race, socioeconomic status, grade point average,
and the frequency of student and instructor interaction--the increase
was not statistically significant at the .05 level. Therefore, it
was decided to eliminate the component of instructor expertise
from further analysis, until the potential effects of interaction
between high and/or low expertise and the other credibility com-
ponents could be analyzed.

In Table 3.14, findings are presented regarding the addition
of the component, trustworthiness, to a regression model con-
sisting of sex, race, socioeconomic status, grade point average,
and the frequency of student and instructor interaction. The re-
results of this analysis indicate that the amount of variance in student
course entry, which was 12% with the traditional variables alone,
rose to 26% when a measure of student assessments of instructor trustworthiness was added to the same set of traditional predictors. As this increase was statistically significant beyond the .05 level, it was concluded that trustworthiness, as a measure of perceived credibility, independently contributes to the prediction of certain forms of student behaviors, i.e., actual course entry.

The findings which have been reported in Tables 3.11, 3.12, and 3.13 have demonstrated that two out of the three theoretically proposed components of perceived credibility (believability and trustworthiness) individually increase the predictive utility of a regression model composed of sex, race, socioeconomic status, academic achievement (grade point average), and the frequency of student and instructor interaction. The third theoretical component (expertise), while accounting for an additional 7% in explained variance in student course entry over that accounted for by the traditional variables alone (19% and 12% respectively), was not statistically significant at the level employed in the research.

The next issue to which this investigation addresses itself to concerns: How do the components of believability and trustworthiness function when used in combination with each other in the prediction of student course entry?

It will be recalled from earlier discussions that of the three credibility components which were independently added to the set
TABLE 3.11. **Comparison of Restricted Model Consisting of Traditional Variables with Full Model Consisting of Traditional Variables Plus a Measure of Student Assessments of Instructor Believability for Predicting Actual Course Entry.**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Significance of Increased Explained Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RESTRICTED (R₁):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(SEX) + (RACE) + (SES) +</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(GPA) + (FSII) + ERROR =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENROLLMENT</td>
<td>.335</td>
<td>.123</td>
<td></td>
</tr>
<tr>
<td><strong>FULL (R₂):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(R₁) + (BELIEVABILITY) +</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ERROR = ENROLLMENT</td>
<td>.473</td>
<td>.224</td>
<td><strong>F = 2.6460 &lt; .05</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>with d/f = 6/127</td>
</tr>
</tbody>
</table>

N=134

TABLE 3.12. **Comparison of Model Using Traditional Variables With One Using Traditional Variables Plus Expertise for Forecasting Actual Student Course Entry.**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Significance of Increased Explained Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RESTRICTED (R₁):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(SEX) + (RACE) + (SES) +</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(GPA) + (FSII) + ERROR =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTR Y</td>
<td>.335</td>
<td>.123</td>
<td></td>
</tr>
<tr>
<td><strong>FULL (R₂):</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(R₁) + (EXP.) + ERROR =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTRY</td>
<td>.434</td>
<td>.188</td>
<td><strong>F = 1.5949 &lt; .05</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>with d/f = 6/127</td>
</tr>
</tbody>
</table>

N = 134.
TABLE 3.13. -Comparison of Restricted Regression Model Made Up of Traditional Variables with a Full Model Consisting of Traditional Variables Plus the Addition of a Measure of Instructor Trustworthiness for Predicting Student Course Entry.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>( R^2 )</th>
<th>Significance of Increased Explained Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESTRICTED ((R_I)): (SEX) + (RACE) + (SES) + (^1) (GPA) + (FSII) + ERROR = ENTRY.</td>
<td>.335</td>
<td>.123</td>
<td></td>
</tr>
<tr>
<td>FULL ((R_C)): ((R_I)) + (TRUSTWORTHINESS) + ERROR = ENTRY.</td>
<td>.506</td>
<td>.256</td>
<td>( F = 3.4108 \ll .05 ) with d/f = 6/127.</td>
</tr>
</tbody>
</table>

N=134.

of traditional variables used throughout this study, trustworthiness combined with the traditional variables afforded the largest increase in percentage of explained variance in student course entry. Therefore, for the following discussion, a new restricted regression was employed. The new model consists of the traditional variables plus the addition of a measure of student assessments of instructor trustworthiness.

RESTRICTED MODEL \((R_C)\): (SEX) + (RACE) + (SES) + (FSII) + (TRUSTWORTHINESS) + ERROR = ENTRY.

The above restricted regression model was then statistically compared with a new full model in which the component of instructor believability was added to \((R_C)\).
FULL MODEL \((R_D)\): \((R_C) + \text{(BELIEVABILITY)} + \text{ERROR} = \text{ENTRY.}\)

The findings presented in Table 3.14 indicate that the addition of a measure of student assessments of their instructor's believability to the restricted model \((R_C)\) did not significantly increase the amount of explained variance in student enrollment afforded by the restricted model alone.

**TABLE 3.14.** --Comparison of a Restricted Model Composed of Traditional Variables and the Concept of Instructor Trustworthiness with a Full Model Composed of the Traditional Variables, Trustworthiness, Plus a Measure of Instructor Believability in Predicting Student Decisions to Enroll in Courses.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>(R^2)</th>
<th>Significance of Increased Explained Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESTRICTED ((R_C)): (SEX) +</td>
<td>.506</td>
<td>.256</td>
<td></td>
</tr>
<tr>
<td>(RACE) + (GPA) + (FSII) +</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(TRUSTWORTHINESS) + ERROR =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTR Y.</td>
<td>.506</td>
<td>.256</td>
<td></td>
</tr>
<tr>
<td>FULL ((R_D)): ((R_C) + \text{(BELIEVABILITY)}) + ERROR =</td>
<td>.526</td>
<td>.277</td>
<td>(F = .4622 \ll .05) with d/f = 7/126.</td>
</tr>
<tr>
<td>ENTRY.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N=134.

The data presented in Table 3.14 depict the amount of increase explained variance in enrollment which occurred when believability was added to the model consisting of traditional variables plus trustworthiness. These findings indicate that 2% increase in
explained variance afforded by the full model ($R_D^2$) over the restricted model ($R_C^2$) was not statistically significant at the .05 level.

Since it has been demonstrated that the addition of instructor expertise to a set of traditional variables will not provide a significant increase in the explained variance in student course entry over that accomplished with the traditional variables alone, the addition of expertise was not compared with the new restricted model ($R_C$). However, it was recalled that earlier in the analysis of Hypothesis IV, it was demonstrated that the addition of measures of each of the three credibility components--believability, expertise, and trustworthiness--to the set of traditional variables provided a larger percentage of explained variance in student course entry than did the traditional variables alone (see Table. 3.7). Accordingly, it was decided to compare a model containing the traditional variables plus the three credibility components with the new restricted model ($R_C$) discussed above. It should be noted, however, that this analysis is exploratory and not a further testing of Hypothesis IV. The goal is to provide additional insight into the operation of the three credibility components rather than to retest a research hypothesis whose outcome is already known with this set of data. Both models are depicted below:

\[
\text{RESTRICTED MODEL (R}_C\text{): (SEX) + (RACE) + (SES) + (GPA) + (FSII) + (TRUSTWORTHINESS) + ERROR = ENTRY.}
\]
FULL MODEL (Rg): (Rcrap) + (BELIEVABILITY) + (EXPERIENCE) + ERROR = ENTRY.

As presented in Table 3.15 below, the addition of both believability and expertise to the restricted model composed of sex, race, socioeconomic status, grade point average, the frequency of student and instructor interaction, and a measure of student assessments of instructor trustworthiness accounted for only 2% more of the variance in student course entry than did the restricted model (28% and 26% respectively). Furthermore, the 2% increase in explained variance provided by the full model (Rg) was not statistically significant at the .05 level.

**TABLE 3.15. --Comparison of Restricted Model Consisting of Traditional Variables Plus Trustworthiness with Full Model Containing Restricted Model Plus Measure of Believability and Expertise for Predicting Actual Student Entry into Courses.**

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Significance of Increase Explained Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESTRICTED (Rc): (SEX) + (RACE) + (SES) + (GPA) + (FSII) + (TRU.) + ERROR = ENTRY.</td>
<td>.506</td>
<td>.256</td>
<td></td>
</tr>
<tr>
<td>FULL MODEL (Rg): (Rcrap) + (BEL.) + (EXP.) + ERROR = ENTRY.</td>
<td>.528</td>
<td>.279</td>
<td>F = .4745 ≪.05 with d/f = 8/125.</td>
</tr>
</tbody>
</table>

N=134.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
Findings have been presented which have demonstrated that with the data used throughout this investigation, the three proposed theoretical components of perceived credibility each separately contributed to an increase in explained variance in student entry into courses when these variables were added to a set of traditional variables. However, it was demonstrated that the addition of two or more of the credibility components (believability and expertise) to the same set of traditional predictors did not significantly increase the amount of explained variance in student course entry over that amount obtained when the traditional variables plus instructor trustworthiness were employed. Thus, the greatest amount of variance, statistically significant, in student course entry was obtained with a regression model consisting of traditional variables plus trustworthiness, i.e., 26%.

Given the above analyses, there remained the possibility that interaction among the three credibility components may make a significant contribution to the explanation of student course entry. Therefore, the following discussion examines the interactive characteristics of all three components of perceived credibility used throughout this study against a criterion consisting of traditional variables and a measure of student assessments of instructor trustworthiness. The models are presented below. ¹

¹The * used in the above models denotes high interaction
RESTRICTED MODEL \( (R_C): \) (SEX) + (RACE) + (SES) + (GPA) + (FSII) + TRUSTWORTHINESS) + ERROR = ENTRY.

\( (R_F): \) (\( R_C \)) + (BEL. *TRU.) + ERROR = ENTRY.

\( (R_C): \) (\( R_C \)) + (BEL. *EXP.) + ERROR = ENTRY.

\( (R_l): \) (\( R_C \)) + (BEL. *EXP. *TRU.) + ERROR = ENTRY.

The findings presented in Table 3.16 indicate the amount of increased variance explained by the addition of a measure of the

<table>
<thead>
<tr>
<th>Model</th>
<th>( R )</th>
<th>( R^2 )</th>
<th>Significance of Increase Explained Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RESTRICTED (R_C):</strong></td>
<td>.506</td>
<td>.256</td>
<td></td>
</tr>
<tr>
<td><strong>FULL (R_F):</strong></td>
<td>.528</td>
<td>.279</td>
<td>( F = .4951 &lt; .05 ) with ( d/f = 8/125 )</td>
</tr>
</tbody>
</table>

N=134.

interaction of high believability with high trustworthiness to the restricted model \( (R_C) \). As the data indicate, the amount of ex-

between the variables in the model, e.g., (BEL. *TRU,) is a dummy variable consisting of the interaction of high assessed believability with high assessed trustworthiness.
plained variance in student course entry accounted for with the full model \( (R_F^2) \) was approximately 28% or 2% more than the amount provided by the restricted model \( (R_C^2 = 26\%) \). This increase was not statistically significant.

The data presented in Table 3.17 are the results of the analysis comparing the restricted model \( (R_C) \) with a full model \( (R_q) \) which contains a measure of the interaction between high student assessments of instructor expertise with high student assessments of instructor trustworthiness. As Table 3.17 indicates, the addition of the interaction term \( (\text{EXP.} \times \text{TRU.}) \) to the restricted model raised the percentage of explained variance in student course entry to approximately 30%. However, this increase of 4%, over the variance accounted for by the traditional variables plus trustworthiness \( (R_C^2 = 26\%) \) by themselves, was not significant at the .05 level.

**TABLE 3.17. --Comparison of Restricted Model Containing Traditional Variables Plus Trustworthiness with A full Model Containing the Restricted Model Plus a Measure of the Interaction Between High Expertise and High Trustworthiness Predicting Entry**

<table>
<thead>
<tr>
<th>Model</th>
<th>( R )</th>
<th>( R^2 )</th>
<th>Significance of Increase Explained Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>RESTRICTED</strong> (( R_C )): (SEX) + (RACE) + (SES) + (GPA) + (FSII) + (TRU.) + ERROR = ENTRY.</td>
<td>.506</td>
<td>.256</td>
<td></td>
</tr>
<tr>
<td><strong>FULL</strong> (( R_q )): (( R_C )) + (( R_q )) + EXP. *TRU.) + ERROR = ENTRY.</td>
<td>.546</td>
<td>.297</td>
<td>( F = .8677 \approx .05 ) with ( d/f = 8/125 )</td>
</tr>
</tbody>
</table>

\( N=134 \).

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
In Table 3.18, findings are reported concerning the outcome of adding a measure of the interaction of high student assessments of instructor expertise with high believability to a set of traditional variables including the concept of trustworthiness. The findings indicate that the full model \((R_H)\) was able to account for slightly less of the variance in student course entry than had been earlier provided by the restricted model \((R_C)\), approximately 25% and 26% respectively.

### TABLE 3.18. -- Comparison of Restricted Model Containing Traditional Variables Plus Trustworthiness with A Full Model Containing the Restricted Model Plus a Measure of the Interaction of High Believability and High Expertise Predicting Course Entry

<table>
<thead>
<tr>
<th>Model</th>
<th>(R)</th>
<th>(R^2)</th>
<th>Significance of Increased Explained Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESTRICTED ((R_C)): (SEX) + (RACE) + (SES) + (GPA) + (FSII) + (TRU.) + ERROR = ENTRY.</td>
<td>.506</td>
<td>.256</td>
<td></td>
</tr>
<tr>
<td>FULL ((R_H)): (R) + (EXP. *BEL.) + ERROR = ENTRY.</td>
<td>.499</td>
<td>.249</td>
<td>(F = .4387 \lessapprox .05) with (d/f = 8/125).</td>
</tr>
</tbody>
</table>

\(N=134\)

The result of adding the last interaction variable, the interaction among high student assessments of instructor believability, expertise, and trustworthiness, to a model consisting of a set of traditional variables plus a measure of assessed instructor trust-
worthiness, is presented in Table 3.19. As may be noted from the
data appearing in this table, the full model \((R)\) accounted for over
31\% (31.4\%) of the variance in student course entry. On the other
hand, the restricted model \((R_C)\) accounted for 26\% of the variance
in course entry. Although the restricted model increased the ex-
plained variance by almost 6\%, this increase was not statistically
significant at the .05 level.

TABLE 3.19. --Comparison of a Restricted Model of Traditional
Variables Plus Trustworthiness with a Full Model Contain-
ing the Restricted Model Plus a Measure of the Inter-
action of High Believability, Expertise, and
Trustworthiness Forecasting Course
Entry.

<table>
<thead>
<tr>
<th>Model</th>
<th>(R)</th>
<th>(R^2)</th>
<th>Significance of Increased Explained Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESTRICTED ((R_C)): (SEX) +</td>
<td>.506</td>
<td>.256</td>
<td></td>
</tr>
<tr>
<td>(RACE) + (SES) + (GPA) +</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(FSII) + (TRU.) + ERROR =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTRY.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FULL ((R)): ((R_C)) + (BEL,</td>
<td>.560</td>
<td>.314</td>
<td>(F = .8102 \ll&lt;\ll &gt;.05) with (d/f = 12/121).</td>
</tr>
<tr>
<td>*EXP.*TRU.) + ERROR =</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENTRY.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

N=134.
CHAPTER IV

DISCUSSION AND IMPLICATIONS

Summary of the Problem

The major concern of this investigation was upon ascertaining the predictive utility of three proposed theoretical components or indices of perceived instructor credibility as forecasters of the later entry of students into courses within their instructors' disciplines. The three components of perceived credibility were: believability, expertise, and trustworthiness. The courses were in the academic disciplines of those instructors whose credibility the students assessed; namely, sociology. This study was described as exploratory with the primary emphasis being placed upon making an initial determination of the predictive utility of employing perceived credibility as a construct relevant to selected forms of student decision-making behaviors. Toward that end, five theoretically relevant hypotheses were developed and tested. Three of the hypotheses specified the existence of product moment correlations between measures of student assessments of their instructors' believability, expertise, and trustworthiness and the students' later acts of entering or not entering sociology courses. It was also hypothesized that greater predictive utility would be achieved when
a measure of each of the above three credibility components was added to a set of traditionally employed predictors of student course entry than when the same traditional variables were used without the addition of the credibility components. The traditional variables used throughout this investigation were: sex, race, socioeconomic status, academic achievement (measured by grade point average), and the frequency of student and instructor interaction.

A secondary research objective of this investigation examined the equivalence between students' stated plans regarding course entry and their actual occurring later behaviors. A research hypothesis specified that the addition of a measure of student plans to the traditional variables would not account for as large a percentage of the variance in actual student course entry as would the addition of the three components of perceived credibility to the same traditional variables. It was noted that the specification of all of the conditions associated with student entry into courses was not an objective of this study. Rather, the primary concern was to provide findings justifying further consideration of credibility variables as significant factors leading to course and career decisions.

Finally, this study was interested in examining, through analysis of statistical models, the various ways in which the three components of perceived credibility operated in the prediction of student course entry. This portion of the investigation proposed no
research hypotheses as it was decided to first attempt to lay a foundation for consideration of credibility variables as significant factors in persons' behaviors before embarking upon a detailed testing of specific conditions.

Summary of Research Methods

The sample used throughout this investigation studied students in eight sociology classes offered at a large midwestern university. All of the classes were lecture oriented, three credit-hours long, and met for one semester. In addition, the eight classes were selected because they provided a variety of instructor experience. Collection of the data involved the administration of student questionnaires as well as the examination of university records. The questionnaires were administered at the beginning and at the end of the Winter, 1971 semester. Two hundred students were selected from the eight classes and were followed through school records for the next three consecutive semesters in order to determine which students entered additional courses within sociology. This provided a longitudinal picture of student responses and student course entry.

From the questionnaire data, the following five variables were selected and combined to form the major criterion against which to assess the efficacy of credibility data. These five variables were labeled as traditional variables throughout the study. They are presented below:
1. Sex
2. Race
3. Socioeconomic status
4. Academic achievement (assessed in terms of grade point average)
5. The frequency of student and instructor interaction

The variable, student course entry plans, was also secured with the questionnaires and was used in later portions of the analysis.

Seven variables pertaining to the concept of perceived credibility were employed throughout this investigation. They are:

1. Student assessments of instructor believability
2. Student assessments of instructor expertise
3. Student assessments of instructor trustworthiness
4. The interaction of high instructor believability with high instructor expertise
5. The interaction of high instructor believability with high instructor trustworthiness
6. The interaction of high instructor expertise with high instructor trustworthiness
7. The interaction of high instructor believability with high instructor expertise with high instructor trustworthiness

Summary and Discussion of Findings

The major finding of this investigation is that measures of student indications of the credibility of their instructors are predictive of their actual later entry into future courses within the academic disciplines of those instructors. In the initial step toward predicting actual student course entry, one measure of each of the three indices of perceived credibility, obtained near the end of the
semester, was employed. The measures used consisted of student responses to three items, each of which assessed perceptions of an instructor's believability, expertise, and trustworthiness. It was hypothesized and confirmed (p<.05) that there would be a positive association between each credibility component and actual student entry into courses. The product moment correlations between the three components and actual course entry are presented in the following table.

<table>
<thead>
<tr>
<th>Table 4.1: Product Moment Correlations Between Each of Three Components of Perceived Credibility and Later Acts of Students to Enter Courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Believability</td>
</tr>
<tr>
<td>Expertise</td>
</tr>
<tr>
<td>Trustworthiness</td>
</tr>
</tbody>
</table>

N=134, p<.05

As the above table indicates, each of the three components is positively associated with student course entry. The largest correlation was found between student assessments of instructor trustworthiness and course entry, r=.39. This stronger association between trustworthiness and course entry relative to the other two credibility components was a factor in later analyses conducted in this study. It is difficult to state precisely why the largest association should have been between trustworthiness and course entry.
over the other two components of believability and expertise. Speculating upon the matter, one might conclude that of the three components, expertise is perhaps the most likely characteristic to be granted to instructors by students simply on the basis of traditional role definitions. Therefore, perhaps faculty being defined as expert is not as critical for student entry into courses of the instructor's discipline as being defined as trustworthy. The ability to rely on the intentions of others may be far more influential upon one's behaviors than merely recognizing that another person is well qualified.

Another major finding of this investigation was the demonstration (p= <.05) that perceived credibility data (believability, expertise, and trustworthiness) afforded greater predictability of student course entry when added to a set of traditional variables composed of sex, race, socioeconomic status, academic achievement (grade point average) and the frequency of student and instructor interaction, than was achieved with the traditional variables alone. The addition of the credibility contributed an additional 16% in explained variance over that provided by the traditional variables, 28% and 12%, respectively.

The third major finding of this study concerned the equivalency between student stated plans to enter courses and actual student entry into courses. It was demonstrated that the addition
of a measure of student course entry plans to the set of traditional variables did not afford as large a percentage of explained variance in course entry as did the addition of the three measures of perceived credibility to the same set of traditional variables. The percentages of explained variance in student course entry were 14% and 26%, respectively. It was concluded that while student plans are associated with later behaviors regarding course entry (r=.16) the association is low. Furthermore, the element of time is ambiguous enough to warrant the view that plans are a poor substitute for measures of actual behavior. This finding looms important in light of the frequency, discussed in Chapter I, with which researchers in education and social science are prone to accept individuals' statements about what they intend to do in lieu of actual behavioral data.

Finally, findings were derived from a series of multiple regression models using the three credibility components as well as the interaction of various combinations of the three components in the prediction of student course entry. It was found that a measure of each one of the three credibility components, when added to the set of traditional variables, increased the predictability of student course entry. However, the model using expertise was not significant. Of the three credibility components, trustworthiness afforded the largest percentage of explained variance in student course entry,
26%. Trustworthiness was therefore combined into a model with the set of traditional variables ($R_C$). This model was then used as a new criterion against which other models employing addition of one or more of the credibility components as well as the interaction of the three credibility components could be analyzed. Throughout the remainder of the exploratory portion of this study, no combination of credibility variables was found to significantly add to the amount of explained variance in student course entry which was provided by the criterion of traditional variables plus a measure of trustworthiness. Therefore, it was concluded that, with the data used throughout this investigation, trustworthiness provided the best approximation of the phenomenon of instructor credibility in terms of predictability.

As with many investigations of human behavior, this exploratory study contains several shortcomings or limitations which suggest a word of caution regarding the interpretations and generalizations from the findings. Hopefully, these limitations will be eliminated from future studies dealing with the construct of credibility.

The first limitation of this investigation was the size of its sample of students. The sample of one hundred thirty four students may have had restricting or conservative effects on the analysis conducted later in the study. For example, when the various re-
gression models were compared, the amount of increase in explained variance required to attain statistical significance increased with each additional variable placed into the models. This in itself is not unusual, however, as when the total number of observations is low, there may occur unintended biasing against larger models. This occurrence may be observed in the comparison of the two regression models, the findings of which were reported in Table 3.12, Chapter III. It will be recalled that the restricted model \( R_C \) was composed of sex, race, socioeconomic status, academic achievement (grade point average), the frequency of student and instructor interaction, and a measure of student assessments of the trustworthiness of their instructors. The full model \( R_I \) contained all of the variables in the above restricted model with the addition of a measure of the interaction among student assessments of instructor believability, expertise, and trustworthiness. The amount of explained variance in actual student course entry provided by the restricted model \( R_C \) was approximately 26%. The amount of explained variance in student course entry afforded by the full model \( R_I \) was over 31%. Hence, the full model \( R^2_I = 31.4\% \) provided a substantial increase in explained variance over that provided by the restricted model \( R^2_C = 25.6\% \). However, this increase was found not to be statistically significant at the .05 level \( (F=.8102, \ d/f=12/121) \). Although no conclusive
determination may be made on the basis of this data alone, part of the difficulty in achieving statistical significance when comparing the two models may have been a result of the large number of variables in the full model with the corresponding small size of the sample which was used. Melichar, in fact, attempts to alert the user of formula for computing the F-test that the sample size may well exert an influence upon the results. Of course, the size of the sample used throughout this investigation may have affected each portion of the analysis. Until a replication of this study is undertaken to determine reliability, it is impossible to determine the sample size's influence.

Another limitation of this investigation which suggests that caution should be used in the interpretation of the findings is the lack of information regarding the reliability of the items used to assess credibility. Unfortunately only one measure of each of the three components of credibility was used in this investigation. Future research should include a series of items for each of the three credibility components—believability, expertise, and trustworthiness—which would allow for factor analysis, and so forth. As has been noted in earlier chapters of this study, the items which were used did demonstrate predictive validity as well as

\[\text{Melichar, op. cit., 10.}\]
face validity. Future investigations may be able to expand the
tests of reliability and validity beyond these two levels.

Another limitation may have been the manner in which the
variables were dichotomized. For example, it was often necessary
to make a decision regarding where (either high or low) to group
the middle categories. As a way of achieving a conservative test
of the credibility variables, the middle categories were always
grouped against high credibility. In one instance, student course
plans, it was suspected that by using only the "yes, definitely" as
high, plans would have afforded greater predictability of actual
behavior, than the "yes, definitely" and "yes, probably" categories
which were grouped as high. In later analysis, this procedure was
followed; however, the results were not substantially different than
those found earlier. Perhaps, using Automatic Interaction Detection
 techniques would provide a better rationale for future dichoto-
mizations of all variables.

Finally, it has been suggested to this author that the three
components of perceived credibility may have some curvilinear
characteristics. For example, trustworthiness may operate as a
threshold variables at one or more levels. That is, the strongest
associations between trustworthiness and course entry may occur
when trustworthiness is assessed either very high, or very low.
Thus, what may be important is (in terms of degree) how trust-
worthy or untrustworthy an instructor is evaluated, rather than whether a general degree of trustworthiness is perceived by his students. However, analyses inspection of the data used throughout this investigation did not reveal any extreme curvilinear distributions. Hence, it was felt that the linear statistics used in the analysis were appropriate. As Nunnally notes, "even if there is some departure from linearity in particular comparisons, a best-fitting straight line often does a reasonably good job of describing the degree of relationship." Further analysis of the data used in this investigation, beyond the scope originally specified in the discussion of problems and objectives, may provide further clarification on this question.

Implications for Education

In light of the findings of this study, it is appropriate to examine how the concept of perceived credibility is relevant to other issues within the field of education. One issue concerns

---

1Nunnally, J., *Psychometric Theory* (New York: McGraw-Hill Book Company, 1967), 133. The author goes on to note, "Multivariate analysis is possible with nonlinear counterparts (eta) of the P.M. coefficient, but such methods are difficult to derive and very tedious to apply. Probably for some time to come most forms of multivariate analysis will be outgrowths of linear P.M. correlation. As was stated previously, even in cases where relations are not strictly linear, linear measures often do a satisfactory job of describing the trends."
student evaluations of the role of professor. Many educators are concerned with determining the attributes which students deem important for their college instructors. In examining the influence of perceived credibility upon the behaviors of students, this investigation demonstrated that three instructor characteristics deemed important by students were related to later entry of the students into certain courses of study. ¹ This study provided findings indicating that not only do students assess believability, expertise, and trustworthiness as important, but also that such assessed role characteristics of instructors have an important effect upon students later behaviors. This study moved beyond the enumeration of student statements of the importance particular role characteristics of their instructors. The study demonstrated that the greater a student's assessments an instructor as expert, believable, or trustworthy, the more likely the instructor will become a significant other for the student in the area of later courses in the instructor's disciplines.

One of the more obvious problems facing nearly every educator concerns the truthfulness or validity which his students attach to his messages. When a teacher says, "Four plus four are equal to eight," or that a certain economic principle has one outcome or another, it is generally deemed important by the teacher that he or she be believed. How does a teacher come to be believed? Stated differently, how can a teacher present himself or herself so as to maximize students positive assessments of his or her credibility? Goffman, ¹ while not specifically using the construct of perceived credibility, may provide some theoretical insight which is relevant for teachers and researchers within the field of education. In Goffman's discussion of how persons "present" themselves in everyday situations, he notes that persons are continually striving to present a desirable image of self to others around them. He emphasizes that the information which individuals convey about themselves helps to define the situation in which interaction occurs, enabling others to know in advance what he (the individual) will expect of them. ² Of course it is difficult, if not impossible, to "know" how one is presenting himself in the absence of cues from other individuals. In this type of condition, credibility may operate

²Ibid.
in a two-fold fashion. First, one person may simply assess or evaluate the credibility of another person. The greater this assessment of another's credibility, the more likely that person will become an important source of information for the evaluator others involved in the interaction. Since persons generally provide cues about their evaluations of others, cues regarding the perception of credibility may serve as a stimulus for the manipulation of credibility. That is, the individual may attempt to modify his presentation of self in such a way as to influence others' assessments of his credibility. This admittedly abstract conception of a two-fold process of credibility may be more concretely observed in the classroom behaviors of students and teachers wherein both parties are continually assessing each other's credibility and at the same time provide cues to each other about each party's credibility. A teacher may ask a "bright" student whether he (the teacher) is presenting materials in a "relevant" or believable manner, and so forth. The teacher may attempt to modify his classroom manner of presentation based upon the student's information. Teachers are constantly assessing the credibility of their colleagues and principles, and in turn having their own credibility assessed.

There is also the theoretical problem faced by both educators and social scientists concerning the notion of significant other. Substantial research and theoretical speculation have used the
concept of significant other as an influential source of role expectations for an individual's behavior. The question which is usually only partially answered is why are significant others significant. The findings of this investigation suggest that in addition to the traditional consideration of location within a social structure, it may be helpful to consider audience assessments of believability, expertise, and trustworthiness. Thus in education, a teacher may become a significant other because students evaluate his or her credibility as high rather than simply because the teacher occupies the position of teacher qua teacher in the school social structure.

Another issue in education concerns how to maximize parental involvement in the activities of their children's schools. The desirability of having parents participate in the day-to-day occurrences of their children's education is now widely advocated by educators and interested laymen alike. For example, Silberman described the daily activities of one teacher who was so involved with parental participation that she regarded herself as "...an educator of parents as well as of children and teachers."¹ But what enhances or inhibits parental involvement in school activities? The findings of the present investigation suggest that parental assessments of their children's teachers' credibility may be one type of condition. Certainly this study has provided findings justifying consideration

of teacher credibility as an influential variable for student behaviors.

Suggestions for Further Research

This study has provided considerable evidence that credibility is a potentially useful theoretical and empirical construct for predicting human behavior. A strong feature of this study was the employment of an actual measure of student behaviors as the main dependent variable rather than merely asking students what they planned on doing. However, future studies should attempt to broaden the measure of actual behavior and provide a dependent variable containing greater variation than the dichotomy of enrollment vs. nonenrollment. For example, it may be possible to collect data about the number of courses students enrolled in, the types of courses they enrolled in, and whether they enrolled in a class taught by the same instructor whose credibility they earlier evaluated. Such measures could be compared with measures of actual student selection of major and minor fields of study. It would, therefore, be possible to illustrate in a variety of ways the linkage between student assessments of instructor credibility and the various stages in career role selection.

Another consideration for theory and research might involve the stability of student assessments of instructor credibility over-time. This study did not examine whether changes in student
assessments of instructor credibility were associated with later acts of course entry. One might inquire if perceptions of credibility change and under what conditions changes in student perceptions of instructor credibility are likely to occur. One might ask if each of the three components of credibility used throughout this investigation change under similar conditions. Restated, is it more or less likely that student assessments of expertise will undergo changes than their assessments of the believability or trustworthiness of their instructors? Does a student's assessments of an instructor's believability change differentially than his assessments of the other two components of credibility, and so on. Specific information about these issues would not only provide more theoretical knowledge about the operation of perceived credibility, but might also aid instructors toward enhancing their credibility with their students and others as well.

Further theoretical concerns and studies might also examine conditions of perceived credibility across a variety of social system attributes. For example, how does the academic discipline of the instructor influence, if it does, student assessments of the instructor's credibility? Are instructors within the "hard" sciences, e.g., physics, defined as more "expert" by their students than are the instructors of the social sciences, e.g., sociology? What may operate to modify the credibility status of various academic disci-
disciplines within a university? Perhaps the element of believability is not as important a component of credibility within mathematics as it might be within economics or anthropology. Other social systems variables might have an effect upon how a discipline's credibility is assessed and evaluated. For instance, what is the effect of class composition upon the assessment of instructor credibility? That is, do college freshmen attribute greater expertise to their instructors than do college seniors? Class size itself may also influence student assessments of an instructor's credibility. Does the "impersonalness" often present in large lecture halls influence student perceptions of the instructor's credibility? What effect does the minority group status of the instructor have upon how credible students evaluate him?

The questions posed in the preceding discussion should not be researched only through survey methods. It may well be possible to combine an experimental design with longitudinal survey techniques. Certain systems attributes may be manipulated in studies focusing on the amount of credibility students attach to their instructors. For example, some systems attributes which might be manipulated are: class size; lecture vs. non-lecture presentation of course materials; student composition, i.e., the level or year in college; and, the subject matter presented in the classes. In fact, the manipulation of systems or organizational variables

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.
within the arena of higher education may point the way for examining the effects of persons' assessments of the credibility of others with whom they interact with in other complex organizations besides school systems, e.g., line-staff relationships in business companies.

Another theoretical concern is the casual relationship(s) among credibility, plans, and aspirations. Using recently developed strategies for assessing credibility, such as path coefficient analysis, may indicate not only whether credibility intervenes between plans and behaviors or vice-a-versa, but also if there is a causal sequence among the three theoretical components of credibility. This is particularly appropriate when assuming cause with only cross-sectional survey data. The question is, does the perceived expertise of another person lead to perceived believability of that person? Or, does the attributing of trustworthiness to a person begin the process whereby that person is perceived by others as an expert? Of course, these lines of theorizing and research may necessitate additional inquiry into the actual measurement of perceived credibility. Perhaps research should begin with an analysis of the measurement properties, e.g., scaling, of the three components of credibility which were used throughout this investigation.

The results of this investigation which found a given theoretical system to be fruitful of schemes for collecting credibility data
are suggestive of avenues of inquiry for determining sources of perceived credibility. In this study, it was maintained and empirically demonstrated that the assessments of others are influential upon the behaviors of the perceivers. Using the orientation guiding this investigation, it may be possible to isolate conditions which influence perceptions of credibility. By way of example, five propositions, central to the educational arena and derived from the theoretical traditions which guides this study, are presented below as suggestions for future research:

One: Teacher credibility is dependent upon the educational environment. For example, students will be more likely to attach credibility to their teachers within the school than within the community at large.

Two: Credibility is affected by membership in a common subculture. For example, there is a tendency for students to attribute credibility to teachers who are of the same racial or ethnic status.

Three: Credibility is a function of the relevance of the information transmitted between source and receiver. Students are likely to attribute credibility to teachers dealing with subjects
which the students define as important to their future, e.g., college, careers, etc.

Four: Credibility is affected by the degree to which the source displays characteristics of the culture of the receiver. Students are likely to attribute credibility to teachers who are aware and/or receptive of the "popular culture."

Five: Credibility is a function of common ideological systems. For example, students are likely to attribute credibility to conservatively oriented teachers if they (the students) are conservatively oriented; liberal, if students are liberal, and so on.

It should be noted that other propositions concerning sources of credibility can be derived from the same theoretical orientation and literature used throughout this investigation. The main point made here is to merely provide an illustration of the fruitfulness of the frame of reference used in this study for future research on credibility.

One final summation is in order. The literature of the social sciences and of everyday life are continually employing the notion of credibility. As with many other concepts which overlap both commonly used and scientific definitions, there is a considerable degree
of ambiguity. The present investigation certainly did not exhaust all of the possible definitions of credibility. Rather, it provided one conceptualization; incorporated that conceptualization within a general theoretical framework; deduced and confirmed research hypotheses with data gathered in accord with that framework; and provided a modest interpretation of one form of human activity. Certainly, this was only the initial step. Greater theoretical clarity concerning the nature and operation of credibility is still required. Other types of social behaviors besides the one used in this investigation need to be successfully forecasted if the theoretical efficacy of this study is to be definitely accepted. However, regardless of the limitations of scope and methodology of this investigation, one conclusion is clearly in order. Credibility as assessed in this study made a dramatic contribution to the successful prediction of the actual later course entry of college students. Furthermore, that contribution was far beyond that provided by the usual predictor variables employed by social scientists and educators. On that basis, credibility deserves added consideration as a construct for inclusion in theoretical schemes of human conduct.
SELECTED BIBLIOGRAPHY

Abe, C. and Holland, J. L. "A Description of College Freshmen: I. Students with Different Choices of Major Field." ACT Research Reports, No. 3. Iowa City, Iowa: American College Testing Program.


________. "Personal and Environmental Factors Associated with College Dropouts Among High Aptitude Students." Journal of Educational Psychology, LV (1964), 219-227.


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.

Bennett, William S., Jr. and Gist, Noel P. "Class and Family Influence on Student Aspirations." *Social Forces,* XLIII (December 1964), 167-173.


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.


Grigg, C. M. "Recruitment to Graduate Study: College Senior's Plans for Postgraduate Education and Their Implementation the Year After Commencement." SREB Research Monograph No. 10., Atlanta, Georgia: Southern Regional Education Board, 1965.


Homes, C. H. "Why They Left College: A Study of Voluntary Freshman Withdrawals from the College of Liberal Arts at Syracuse University." *College and University*, XXXIV (1959), 295-300.


Hovland, C. I. and Mandell, W. "An Experimental Comparison of Conclusion-Drawing by the Communicator and by the Audience." *Journal of Abnormal Social Psychology*, XLVII (1952), 822-832.


Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.


Musella, D., and Rusch, R. "Student Opinion on College Teaching." Improving College and University Teaching, XVI (1968), 137-140.


Shuey, A. M. "Choice of Major Subject as Related to American Council Examination Score and College Grades." Journal of Educational Psychology, XLII (1950), 292-300.


Wright, J. C. and Scarborough, B. B. "Relationship of the Interests of College Freshmen to Their Interests as Sophomores and as Seniors." Educational and Psychological Measurement, XVIII (1958), 153-158.

Reproduced with permission of the copyright owner. Further reproduction prohibited without permission.