PROFESSIONAL COMMITMENT, ORGANIZATIONAL COMMITMENT, AND ORGANIZATIONAL-PROFESSIONAL CONFLICT IN THE INTERNAL AUDIT FUNCTION: MODEL DEVELOPMENT AND TEST

DISSEPTION

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By

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This dissertation is a descriptive, exploratory examination of professional commitment, organizational commitment, and conflict between those commitments in the internal audit profession. That conflict has been suggested in prior studies as the source of dysfunctional outcomes such as increased role stress, high turnover, decreased job satisfaction, and the exercise of improper judgment leading to audit failures.

The descriptive aspect of this study deals with the development of a more comprehensive structural model of the factors and relationships involved in commitment and conflict than has been developed by previous research dealing with accountants. The exploratory aspect deals with the testing and refinement of the developed model utilizing the internal audit profession as the field of examination.

The model developed in this study is derived from the synthesis of factors suggested by role theory, the concept of side bets, the cosmopolitan-local construct, and the concept of commitment as a process. This research utilizes a questionnaire administered to 205 practicing internal auditors in order to test 30 hypothesized relationships. Path analysis is used to determine the significant direct relationships between variables with a
process of theory trimming being conducted in order to produce more parsimonious structural models. Indirect relationships between significant variables are identified and their redundant or suppressive nature determined. Explanations of these suppressive or redundant relationships are provided based on the theoretical considerations identified above. Such a determination and explanation of the redundant and suppressive indirect relationships involved in the commitment-conflict relationship has not been accomplished in earlier studies of the subject.

Although the procedures used here do not support causal conclusions, the findings of this study indirectly provide evidence that conflict between the two commitments in the internal audit area is not to be considered inherent. The findings also suggest a possible undesirable relationship between organizational formalization and professional commitment.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>LIST OF TABLES</td>
<td>vi</td>
</tr>
<tr>
<td>LIST OF ILLUSTRATIONS</td>
<td>viii</td>
</tr>
<tr>
<td>CHAPTER</td>
<td></td>
</tr>
<tr>
<td>I. OVERVIEW AND INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>Introduction</td>
<td></td>
</tr>
<tr>
<td>Suggestions from the Conceptual Literature</td>
<td></td>
</tr>
<tr>
<td>Lack of Comprehensive Structural Models</td>
<td></td>
</tr>
<tr>
<td>Purpose of this Research</td>
<td></td>
</tr>
<tr>
<td>Contribution of this Research</td>
<td></td>
</tr>
<tr>
<td>Structure of this Study</td>
<td></td>
</tr>
<tr>
<td>II. LITERATURE REVIEW AND THEORY DISCUSSION</td>
<td>11</td>
</tr>
<tr>
<td>Studies of Commitment and Conflict in Accountants</td>
<td></td>
</tr>
<tr>
<td>Sorensen</td>
<td></td>
</tr>
<tr>
<td>Sorensen and Sorensen</td>
<td></td>
</tr>
<tr>
<td>Watson</td>
<td></td>
</tr>
<tr>
<td>Schroeder and Imdieke</td>
<td></td>
</tr>
<tr>
<td>Aranya, Pollock, and Amernic</td>
<td></td>
</tr>
<tr>
<td>Aranya, Lachman, and Amernic</td>
<td></td>
</tr>
<tr>
<td>Ferris</td>
<td></td>
</tr>
<tr>
<td>Aranya and Ferris</td>
<td></td>
</tr>
<tr>
<td>Norris and Niebuhr</td>
<td></td>
</tr>
<tr>
<td>Harrell, Chewning, and Taylor</td>
<td></td>
</tr>
<tr>
<td>Mautz, Tiessen, and Colson</td>
<td></td>
</tr>
<tr>
<td>Senatra</td>
<td></td>
</tr>
<tr>
<td>Lengermann</td>
<td></td>
</tr>
<tr>
<td>Theoretical and Conceptual Considerations</td>
<td></td>
</tr>
<tr>
<td>Becker's Theory of Side Bets</td>
<td></td>
</tr>
<tr>
<td>Gouldner's Cosmopolitans and Locals</td>
<td></td>
</tr>
<tr>
<td>Role Theory</td>
<td></td>
</tr>
<tr>
<td>Commitment as a Process</td>
<td></td>
</tr>
<tr>
<td>III. MODEL SPECIFICATION, VARIABLE IDENTIFICATION, AND HYPOTHESES</td>
<td>70</td>
</tr>
<tr>
<td>Proposed Model</td>
<td></td>
</tr>
<tr>
<td>Discussion of Model Variables</td>
<td></td>
</tr>
</tbody>
</table>
Table of Contents (continued)

III. (continued)
Organizational Commitment
Professional Commitment
The Relationship Between Organizational Commitment and Professional Commitment
Organizational-Professional Conflict
Age
Level of Education
Professional Memberships
Professional Certification
Tenure
Hierarchical Position
Formalization
Centralization
Professional Criteria in Promotion

IV. PROCEDURES UTILIZED FOR DATA MEASUREMENT, GATHERING, TESTING, AND ANALYSIS .............108
Measurement of Variables
Measurement of Organizational Commitment in Prior Studies
Measurement of Professional Commitment in Prior Studies
Measurement of Organizational Commitment and Professional Commitment in This Study
Measurement of Organizational-Professional Conflict
Measurement of Exogenous Variables
Data Gathering
Procedure for Model Testing and Revision
Path Analysis
Regression Procedures for Path Analysis
Hierarchical Strategy for Conducting the Path Analysis
Orthogonalization of Dependent Variables
Hypotheses Tests
Theory Trimming and Model Revision
Determining the Significant Paths for Theory Trimming
Direct Effects, Indirect Effects, Redundancy, and Suppression
Procedures Used for Identification of Direct Effects, Indirect Effects, Redundancy, and Suppression
Table of Contents (continued)

V. ANALYSIS OF DATA AND EXPLANATION OF RELATIONSHIPS .......................... 143

Results of the Statistical Tests of the Hypothesized Relationships
Explanation of Actual Results Which are of Opposite Nature from That Hypothesized Theory Trimming and Model Reduction
Reduced Model of Organizational-Professional Conflict
Reduced Model of Organizational Commitment
Reduced Model of Professional Commitment
Examination of Indirect Effects
Analysis of Significant Relationships
Analysis of the Organizational-Professional Conflict Model
Professional Membership - Conflict
Professional Certification - Conflict
Hierarchical Position - Conflict
Centralization - Conflict
Professional Criteria in Promotion - Conflict
Professional Commitment - Conflict
Analysis of the Organizational Commitment Model
Tenure - Organizational Commitment
Active Professional Membership - Organizational Commitment
Degrees Held - Organizational Commitment
Hierarchical Position - Organizational Commitment
Analysis of the Professional Commitment Model
Age - Professional Commitment
Active Professional Membership - Professional Commitment
Professional Certification - Professional Commitment
Hierarchical Position - Professional Commitment

VI. SUMMARY MODEL, CONCLUSIONS, AND SUGGESTIONS FOR FUTURE RESEARCH ..................... 200

Summary Model
Limitations of the Study
Conclusions and Findings
Suggestions for Future Research

APPENDIX A ................................................................. 217
APPENDIX B ................................................................. 225
BIBLIOGRAPHY ............................................................. 231
<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Directionality of Relationships</td>
<td>71</td>
</tr>
<tr>
<td>2 Research Hypotheses</td>
<td>105</td>
</tr>
<tr>
<td>3 Questionnaire Responses</td>
<td>117</td>
</tr>
<tr>
<td>4 Results of Research Hypotheses Tests</td>
<td>145</td>
</tr>
<tr>
<td>5 Organizational-Professional Conflict Model: Significant Total and Direct Effects</td>
<td>152</td>
</tr>
<tr>
<td>6 Reduced Organizational-Professional Conflict Model: Significant Total and Direct Effects</td>
<td>153</td>
</tr>
<tr>
<td>7 Organizational Commitment Model: Significant Total and Direct Effects</td>
<td>154</td>
</tr>
<tr>
<td>8 Reduced Organizational Commitment Model: Significant Total and Direct Effect</td>
<td>155</td>
</tr>
<tr>
<td>9 Professional Commitment Model: Significant Total and Direct Effects</td>
<td>156</td>
</tr>
<tr>
<td>10 Reduced Professional Commitment Model: Significant Total and Direct Effects</td>
<td>156</td>
</tr>
<tr>
<td>11 Organizational-Professional Conflict: Direct and Indirect Relationships of Significant Variables</td>
<td>159</td>
</tr>
<tr>
<td>12 Organizational Commitment: Direct and Indirect Relationships of Significant Variables</td>
<td>160</td>
</tr>
<tr>
<td>13 Professional Commitment: Direct and Indirect Relationships of Significant Variables</td>
<td>161</td>
</tr>
<tr>
<td>14 Analysis of Variable Relationships: Reduced Model of Organizational-Professional Conflict</td>
<td>163</td>
</tr>
</tbody>
</table>
Variable Relationships:
15 Professional Certification - Conflict ........................................... 169
16 Hierarchical Position - Conflict .................................................. 172
17 Centralization - Conflict .......................................................... 174
18 Professional Criteria in Promotion - Conflict .................................. 176
19 Professional Commitment - Conflict .............................................. 178
20 Analysis of Variable Relationships: Reduced Model of Organizational Commitment ...... 180
21 Active Professional Membership - Organizational Commitment ............... 183
22 Degrees Held - Organizational Commitment ...................................... 186
23 Hierarchical Position - Organizational Commitment .......................... 188
24 Analysis of Variable Relationships: Reduced Model of Professional Commitment ...... 190
25 Professional Membership - Professional Commitment .......................... 193
26 Professional Certification - Professional Commitment .......................... 196
27 Hierarchical Position - Professional Commitment .............................. 198
# LIST OF ILLUSTRATIONS

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Proposed Model</td>
<td>71</td>
</tr>
<tr>
<td>2</td>
<td>Hierarchical Order for Variable Entry</td>
<td>123</td>
</tr>
<tr>
<td>3</td>
<td>Summary Model of Relationships</td>
<td>201</td>
</tr>
</tbody>
</table>
CHAPTER I

OVERVIEW AND INTRODUCTION

Introduction

A professional accountant may be committed to both the profession and to an organization. The accountant may experience conflict due to the inconsistencies which may arise between professional commitment and organizational commitment. Such conflict may lead to dysfunctional outcomes which affect the profession, the individual, and the organization.

This conflict is addressed in a number of studies dealing with accountants performing professional tasks in an organizational setting [Aranya, Pollock, and Amernic, 1981; Aranya and Ferris, 1984; Aranya, Lachman, and Amernic, 1982; Ferris, 1981; Harrell, Chewning, and Taylor, 1986; Norris and Niebuhr, 1983; Schroeder and Imdieke, 1977; Senatra, 1980; Sorensen, 1967; Sorensen and Sorensen, 1974; Watson, 1975]. Aranya, Pollock, and Amernic [1981] suggest that the stress situations created by such conflict may lead to the exercise of improper judgment and thereby contribute to audit failures. Such failures lead to criticisms of the profession. Increased turnover and decreased job satisfaction have been identified as outcomes of this conflict which adversely affect both the individual and the organization [Aranya and Ferris, 1984; Aranya, Lachman, and Amernic, 1982;
Harrell, Chewning, and Taylor, 1986; Senatra, 1980; Sorensen, 1967; Sorensen and Sorensen, 1974. Senatra [1980] suggests that the traditional explanations for turnover such as excessive travel and inadequate salary may be incomplete. The stress produced by the conflict situation and the increased job-related tension on the part of accountants experiencing conflict may be major contributing factors to increased turnover.

The studies of accounting professionals in organizational settings have identified organizational-professional conflict as a contributing factor when dysfunctional outcomes result. However, there is a lack of consensus regarding the nature of organizational-professional conflict, the relationships which affect that conflict, and/or the factors which affect those relationships.

Certain studies of accounting professionals in organizational settings report support for an assumption of inherent conflict between professionalism and bureaucracy which is manifested in the conflict between the individual's professional commitment and organizational commitment [Schroeder and Imdieke, 1977; Senatra, 1980; Sorensen, 1967; Sorensen and Sorensen, 1974; Watson, 1975]. Other studies provide support for the concept that professional commitment and organizational commitment are congruent or compatible rather than inherently in conflict [Aranya and Ferris, 1984; Aranya, Lachman, and Amernic, 1982; Aranya, Pollock, and Amernic, 1981; Morris and Steers, 1980; Morris, Steers, and Koch, 1979; Norris and Niebuhr, 1983]. These latter studies do not, however, report a total absence of organizational-professional conflict. Therefore, the nature of the relationship between organizational-professional conflict and the
two antecedent commitments has not been clearly and definitively established. As indicated by Norris and Niebuhr [1983, p. 51], "the relationship between professionalism [professional commitment] and organizational commitment has proven to be quite complex, and reported research examining the relationships between the variables is inconsistent."

**Suggestions from the Conceptual Literature**

If organizational-professional conflict is to be studied further, what suggestions are offered by the literature? Mowday, Porter, and Steers [1982, p. 73] identify five agenda items for research in the area of commitment. One involves addressing the suggestion by Gouldner "that commitments in one area of an individual's life may prevent commitments in other areas." These authors suggest that the influence of multiple commitments and the conflict which those multiple commitments may create should be viewed as an "important area of future research" [Mowday, Porter, and Steers, 1982, p. 73].

The studies of professional accountants in organizational settings primarily take the viewpoint of the professional becoming a member of an organization. Typical of this viewpoint is the Aranya, Lachman, and Amernic [1982] study which suggests that the individual enters the organization with certain professional expectations and conflict may result if those expectations are not met. However, Vollmer and Mills [1966, p. 205] point out that differences between the profession and the organization provide "the basis for a considerable degree of role conflict when
professional individuals become salaried employees in a complex organization—or conversely, when certain categories of employees in bureaucratic organizations become more professionalized." As discussed subsequently, this latter case, the professionalization of a bureaucracy, has occurred to a high degree in the internal audit segment of the accounting profession. Systematic study of the relationships and factors relating to commitment and conflict involved in the internal audit area may be of benefit as other segments of industry experience a similar transformation.

Lack of Comprehensive Structural Models

The studies previously noted have reported evidence of various "moderating variables" or "antecedent characteristics" which affect professional commitment, organizational commitment, organizational-professional conflict, and the relationships among these factors. These antecedent characteristics include factors such as age, educational level, hierarchical position in the organization, professional memberships, tenure with the organization, functional area of the organization, type of organization, degree of formalization and centralization, and others. These antecedent characteristics, however, have not been systematically and comprehensively combined by any one of the models utilized by prior studies. The models in each respective study contain only selected variables. Therefore, the interrelationships between all of these antecedent
characteristics and conflict have not been examined by means of comprehensive, unified models.

More comprehensive structural models containing the various personal and organizational antecedent characteristics along with the two commitments and organizational-professional conflict may provide greater insight into the complex relationships involved in commitment and conflict. Hrebeniak and Alutto [1972, p. 557] suggest that "current research which neglects the interactive effects of personal and organizational variables is probably understating the complexity of the commitment process."

**Purpose of this Research**

This research is both descriptive and exploratory. The descriptive aspect will suggest a more comprehensive structural model of the factors and relationships involved in organizational commitment, professional commitment, and organizational-professional conflict. The model will include, to the extent possible, the individual and organizational factors and characteristics which have been suggested by empirical research and by relevant theoretical and conceptual constructs as being salient to these relationships. The model will specify the directionality (positive or inverse) of relationships between antecedent characteristics and the commitments and conflict. The concepts of role theory [Biddle, 1979; Biddle and Thomas, 1966; Katz and Kahn, 1978], Becker's [1960] theory of "side bets", and Gouldner's [1957, 1958] cosmopolitan-local construct will form
the frame of reference for specification of the nature of these relationships.

The exploratory aspect of this research will utilize the developed comprehensive model of the factors and relationships involved in commitment and conflict as a means of addressing these concepts in the internal audit profession. There are three reasons for testing the model in that particular setting.

The internal audit segment of the accounting profession is an emerging area which may benefit from an understanding of the relationships between organizational commitment, professional commitment, and organizational-professional conflict and the factors which may affect these relationships. Mautz, Tiessen, and Colson [1984a, 1984b] suggest drastic changes in the internal audit profession due to recent developments such as the Foreign Corrupt Practices Act, mandatory audit committees of the board of directors, greater utilization of computers, increased company diversification and size, increased foreign competition, and the applications of centralized/decentralized theories of management. The profession of internal auditing may be seeking the nature of its own existence. Knowledge of the relationships and factors involved in commitment and conflict may provide useful insights in that quest. The examination of the relationships between antecedent characteristics, commitments, and conflict of internal auditors has been virtually ignored in prior studies. Only one of the previously cited studies [Harrell, Chewning, and Taylor, 1986] specifically addresses these considerations in relation to internal auditors.
The internal audit area represents the professionalization of members of a bureaucracy. The standards for the practice of internal auditing were first promulgated in a formal manner in 1978, but the internal audit function has existed much longer [Brink, 1982]. The potential for conflict "when certain categories of employees in bureaucratized organizations become more professionalized" is as great as the potential present in the process of bureaucratization of the professional [Vollmer and Mills, 1966, p. 265]. Understanding the factors and relationships involved may be more critical due to a higher potential for conflict.

This is an exploratory study with a prime objective of model specification and development. The initial model may not possess the sensitivity necessary to identify relationships in the presence of the potential confounding effect of organizational and professional goal congruence. In studies dealing with accountants in public practice there has been the assumption of congruence between the goals of the organization and the goals of the profession. Such goal congruence is assumed to lead to congruence between the norms and standards of the profession and those of the organization [Hall, 1968; Morris, Steers, and Koch, 1979]. Such goal congruence cannot be assumed to exist in relation to internal audit profession goals and the overall commercial goals of the organizations which utilize the profession [Harrell, Chewning, and Taylor, 1988].

The models developed are tested using path analysis. The hypothesized relationships between the antecedent characteristics, both types of commitment, and organizational-professional conflict are examined. Path analysis
permits the process of "theory trimming" [Aranya, Lachman, and Amernic, 1982; Asher, 1983; Heise, 1969] which leads to more parsimonious models and theories. The "theory trimming" process is conducted in this study in a manner which permits the analysis of redundant and suppressive relationships in the models.

Contribution of this Research

Development of more comprehensive structural models of the relationships and factors involved in organizational commitment, professional commitment, and organizational-professional conflict will contribute to the systematic understanding of commitment and conflict. Such models may provide insights into the influence of multiple commitments upon conflict. Testing of the models in an area of accounting which has been largely ignored in previous studies may bring greater understanding of the factors and relationships involved in commitment and conflict. Such understanding would benefit both the professionals in that area and the organizations which employ them. A greater understanding may provide insights as to how the levels of commitment and conflict may be affected by changes in the factors over which the professionals and/or the organizations have some control.

Trade-offs may be involved when one factor which is related to commitment and/or conflict is manipulated. More comprehensive structural models would serve to highlight those potential trade-offs and bring awareness of the potential effects of change on the overall complex system. As indicated by Heise
[1969, p. 42], "given a structural model, it is possible to calculate how a change in any one variable in the system will affect the values of the other variables." The research conducted in this study is an attempt to further develop the "given" structural model of commitment and conflict where professionals operate in structured, non-professional organizations.

Structure of this Study

Chapter II provides a discussion of previously conducted research on commitment and conflict where accountants were the subjects. Also included in that chapter is a discussion of the theoretical and conceptual constructs which form the basis for the model tested in this study. Chapter III provides the specific identification of the variables and relationships to be included in the model and a statement of each research hypotheses to be examined. Included in the discussion of each variable is the theoretical basis for its inclusion in the model. The nature (positive or inverse) of each variable's role in the various relationships is also indicated. Chapter IV discusses how the variables were measured, how the data were gathered, and the statistical processes used to test the model proposed in Chapter III. Chapter IV also provides a discussion of the procedures used to conduct the "theory trimming" process in order to develop more parsimonious models. Chapter V provides the actual results of the statistical tests of the hypotheses, the results of the "theory trimming" process, and, in order to bring greater understanding to the nature of the relationships found, a
discussion of the redundancy and suppression exhibited in the modeled relationships. Chapter VI contains the refined, "trimmed" summary model, the conclusions reached as the result of this effort, and the suggestions for future research in this area.
CHAPTER II

LITERATURE REVIEW AND THEORY DISCUSSION

The initial sections of this chapter provide a review of the research dealing with organizational and professional commitment and conflict between the two in the field of accounting. Following that review is a discussion of the relevant theoretical constructs which serve as the theoretical foundation for the current study.

Studies of Commitment and Conflict in Accountants

In the sections which follow the studies which have addressed conflict and commitment in the field of accounting are examined. In most cases, these studies dealt with accountants in public practice. In a few instances, accountants in industry were included. In one study, the primary focus was on internal auditors.

Sorensen

Sorensen [1967] examines the proposition that in large CPA firms the professional’s orientation and behavior will be affected by the contrasts arising from the combined professional and bureaucratic organizational setting present in such firms. He suggests professional expertise and bureaucratic discipline as
alternative methods for dealing with uncertainty. Sorensen views professionalism and bureaucracy as providing different types of authority, specialization, and standardization due to the two different ways in which each attempts to deal with the same problem. Sorensen characterizes bureaucracy as incorporating the following: authority based on office, rules sanctioned by hierarchical authority, decisions based on application of rules to routine problems, loyalty to superiors and the organization, emphasis on uniformity, emphasis on stability, and the performance of tasks based on the practice of a narrow range of technical skills. The professional mode of operation, however, is characterized by rules sanctioned by the profession, authority based on personal competence, decisions based on professional policy, loyalty to the profession and to colleagues, emphasis on uniqueness, emphasis on creativity, and the performance of tasks based primarily on generalized knowledge.

Sorensen expects the professional’s degree of job satisfaction and his or her plans to remain with the firm (or even the profession) to be affected by his or her orientations (professional vs bureaucratic), their interrelationships, and how they are achieved in reality. Orientations in this case are defined as "the CPA’s conception of an ideal configuration of bureaucratic or professional norms" [1967, p. 558]. Based on a random sample of 264 individuals (stratified by position) in 24 offices of four national CPA firms, Sorensen reaches a number of conclusions regarding the professional and bureaucratic norms faced by these individuals and the conflict between those norms.
Sorensen reports a marked difference in professional and bureaucratic orientations among accountants holding different positions and with varying years of experience. Lower positional incumbents (juniors and seniors) are more professionally oriented, less bureaucratically oriented, and believe there is too much bureaucracy in the firms. Higher position incumbents (managers and partners) are generally less professionally oriented, more bureaucratically oriented, and believe there is too little bureaucracy in the firms. The same relationships hold when the data are examined on the basis of less experienced versus more experienced individuals (based on number of years with the firm). This leads Sorensen to speculate that "newer members of the public accounting profession employed by large firms face a strain because of an inappropriate blend of orientations" [1967, p. 560] and that an individual's perception of bureaucratic and professional organization is related to his or her position in the firm. In discussing this latter conclusion, Sorensen suggests that professional expectations may be revised downward as rank increases in the firm.

In examining the possible combinations of professional and bureaucratic orientations, Sorensen reports CPAs who possess a combination of high professional and high bureaucratic orientations experience high levels of conflict. He suggests that such conflict arises from not being able to fulfill the conflicting expectations derived from these orientations. Those with low orientation for both areas will experience realities in both orientations which exceed expectations. In this latter case, conflict will be minimal. Sorensen suggests that these findings
"provide additional evidence that when high professional and high bureaucratic orientations are considered jointly they produce conflict" [1967, p. 562].

Sorensen and Sorensen

Sorensen and Sorensen [1974] suggest that the differences in orientations associated with position observed by Sorensen [1967] may be due either to socialization or differential selection within the CPA firms. The increased bureaucratic orientation and reduced professional orientation observed for higher level individuals may result from the socialization that occurs as individuals progress upward in the hierarchy. There also may be a systematic exclusion of the less bureaucratically oriented individuals as promotions are distributed.

Sorensen and Sorensen also suggest that the observed conflict between professional and bureaucratic norms arises due to the inconsistent roles of a single position within the firm. For example, the manager is expected to fulfill the role of fellow-professional and also the role of subordinate employee when dealing with the partners of the firm. The inconsistency arising from adherence to professional norms when acting as a fellow-professional and adherence to bureaucratic norms when acting as a subordinate employee is the genesis of conflict.
In a study of the organizational structure of a CPA firm, Watson concludes that Sorensen's [1967] findings of conflict between orientations in large firms "is not constant among functional areas of the firm" [Watson, 1975, p. 271]. Utilizing the contingency framework, Watson examines the organizational structure of a "major" public accounting firm along both organizational dimensions and small group dimensions. He reports that the data support a hypothesis that the environment faced by the management services functional area of the firm is less certain than the environment faced by the auditing area. Therefore, the management services function of the firm will exhibit a lower degree of structure and formalization than will the auditing function.

Watson reports no observed difference between the two areas in relation to the organizational structure dimension of supervision. However, he reports that organizational rules are considered more restrictive in the auditing area than in the management services area. Both areas emphasize adaptive behavior, but the emphasis is greater in the management services area.

In examining the small group dimension of delegation of work, Watson reports that management services partners delegate more to managers than do audit partners. He also reports that the locus of decision making exists at a lower level in the organization for the management services area than in the auditing area.
Regarding the problem solving patterns utilized in each area, Watson reasons that different problem solving patterns develop in each functional area due to the differences in the nature of the problems faced. Watson bases this proposition on his finding that client-associated problems dominate in management services but technical problems dominate in auditing. These two types of problems would require, according to Watson, different problem solving patterns.

Watson concludes that these observed differences between the management services area and the auditing area will lead to differing degrees of conflict in each area. He suggests, due to the mechanistic organization of the auditing area, that "it is not surprising to find conflict between bureaucratic and professional orientations in this functional area" [1975, p. 271]. The organismic organization of the management services area is, according to Watson, more compatible with professional orientation and will produce lower levels of conflict. Thus, the organismic organization of the management services area will lead to higher job satisfaction and lower turnover when compared to auditing. This reasoning serves as the basis for Watson’s suggestion for a modification of Sorensen's findings due to organizational structure differences between functional areas in CPA firms.

Schroeder and Imdieke

Schroeder and Imdieke [1977], in a study of 172 accountants in "small, medium, and large" CPA firms, report support for
Sorensen’s [1967] findings regarding increased bureaucratic orientations at higher positions in the firms. These authors, like Sorensen and Sorensen [1974], suggest socialization in the firm as a possible explanation for this finding. They suggest that “the individuals enter the profession with a particular identity; however, in order to be accommodated within the profession they soon realize that loyalty to the firm is an important requirement for success” [1977, p. 42]. Schroeder and Imdieke conclude that their results support the finding of role conflict where professionals work in an organizational setting. They base this conclusion on an examination of the data based on the cosmopolitan-local construct described by Gouldner [1957, 1958]. In each of five attributes of bureaucracy examined, the locals “do not perceive bureaucracy to be as great a factor [problem] as do the individuals who are relatively more externally oriented (cosmopolitans)” [1977, p. 44]. Therefore, the cosmopolitan-local dichotomy supports “the general notion that loyalty to profession and loyalty to firm do come in conflict” [1977, p. 44].

Aranya, Pollock, and Amernic

Aranya, Pollock, and Amernic [1981] examine the factors contributing to differences in the levels of professional commitment for a sample of Canadian Chartered Accountants in public practice. The major factors hypothesized to influence professional commitment were: organizational commitment, professional-organizational conflict, and satisfaction with rewards
(level of income). The position level of the individual within the firm (partner, manager, senior, and semi-senior) was included as a moderating variable due to the findings of earlier research [Sorensen, 1967; Sorensen and Sorensen, 1974]. The data indicate statistically significant differences in the levels of professional commitment between partners, managers, and seniors/semi-seniors. The level of professional commitment varied directly with position in the firm. The data also indicate a strong relationship between professional commitment and organizational commitment for the sample as a whole and for each position level. Aranya, Pollock, and Amernic state that organizational commitment "was found to be the most powerful predictor of professional commitment" [1981, p. 276]. Due to this strong positive relationship, the authors suggest that organizational and professional commitment are compatible.

An analysis of the absolute levels of organizational commitment indicates that partners have the highest levels of organizational commitment and seniors/semi-seniors the lowest levels. The authors also compare the level of professional commitment with the level of organizational commitment for each position in the firm. They indicate that for partners organizational commitment is higher than professional commitment. The situation is reversed for managers and seniors/semi-seniors with professional commitment being higher than organizational commitment.

The authors report a statistically significant relationship between professional commitment and satisfaction with level of income for the total sample. However, when examined according
to position in the firm, the data indicate that the relationship is significant only for partners and for seniors/semi-seniors.

For partners and managers, the authors report no significant relationship between professional commitment and organizational-professional conflict. This conflict, however, is significantly related to professional commitment in the case of seniors and semi-seniors. The absolute levels of conflict are low for the upper level groups (partners and managers) and higher for seniors and semi-seniors. Aranya, Pollock, and Amernic [1981] reason that the lower levels of conflict at the higher levels in the firm indicate that incumbents of higher positions are in the position to resolve conflict or are less sensitive to organizational-professional conflict.

*Aranya, Lachman, and Amernic*

Aranya, Lachman, and Amernic [1982] develop a process model of accountant's job satisfaction which incorporates organizational and professional commitments and need deprivation. They then use the model to examine job satisfaction and job migration intentions of a sample of Chartered Accountants in three occupational settings: partners and sole practitioners in public practice, employees in professional organizations, and employees in bureaucratic (non-professional) organizations.

The model utilized assumes directionality of relations between the components. Professional commitment is assumed to be developed during the process of socialization into the
profession. According to the authors, that process fosters an attitude of adherence to the professional values strongly emphasized by the profession. Therefore, professional commitment is assumed to precede organizational commitment to a particular organization. Once developed, professional commitment is incorporated into work expectations. The extent to which these expectations are realized in a given work situation affects the professional's work alienation, job satisfaction, and organizational commitment.

The model includes the factor of work need deprivation in order to deal with the potential discrepancies between work expectations and the realities of the work situation. Organizational commitment is included as the factor resulting from the process interaction of professional commitment and work need satisfaction and is theorized to affect both job satisfaction and job migration tendencies. The full theoretical model, therefore, predicts a direct relationship between professional commitment and work need deprivation, between work need deprivation and organizational commitment, and between organizational commitment and migration tendencies. The model also anticipates a direct relationship between both work need deprivation and organizational commitment and the level of job satisfaction of the individual. Job satisfaction, in turn, is expected to directly affect migration tendencies.

When the responses of 1,206 Chartered Accountants in different occupational settings were examined, the authors report that the model accounted for 59% of the variance in job satisfaction. Analysis of the data from all subjects supported the
hypothesized process interactions except for the absence of a direct effect between job satisfaction and job migration tendencies. The data also indicate the unanticipated presence of a direct effect of professional commitment upon organizational commitment without the hypothesized intervening variable of work need deprivation. Need deprivation did, however, directly affect organizational commitment.

When the data were analyzed for the partner and sole practitioner group, the model accounted for 55% of the variance in job satisfaction. The authors report that among this group, professional commitment has a strong direct effect on organizational commitment as well as the hypothesized indirect effect through need deprivation. They also indicate that professional commitment exhibits a "weak" effect on job satisfaction. The hypothesized direct effect between job satisfaction and job migration tendencies is not, however, present.

For the employees of professional organizations group, the model accounts for 60% of the variance in job satisfaction. The relationships in the model for this group generally parallel those for sole practitioners and partners except for a "stronger" relationship between organizational commitment and job satisfaction, a direct effect between need deprivation and job migration tendencies, and the absence of a relationship between professional commitment and job satisfaction.

For the CAs employed in bureaucratic (non-professional) organizations, need deprivation and organizational commitment are directly related to job satisfaction. The authors also report
that migration tendencies for this group are slightly affected by organizational commitment. Professional commitment, however, is unrelated to any of the other variables included in the model. This leads the researchers to state that "the way CAs in non-professional organizations feel about their profession is unrelated to the way they feel about their work place" [1982, p. 209].

Diverse findings lead the authors to conclude that Chartered Accountants cannot be treated as a homogeneous group. The authors take the position that the particular occupational setting must be considered when examining the processes which influence attitudes concerning job satisfaction and job migration. This position is similar to the position taken by Kerr, Von Glinow, and Schriesheim [1977] in their study of the differences between engineers and scientists. Those authors question the assumption of research studies which treat the two occupations as a homogeneous group. Their position is that the assumption of similar attitudinal and behavioral characteristics among similar professionals ignores systematic differences in the professionalization of the occupations. In the Aranya, Lachman, and Amernic study, this potential systematic differentiation is most evident in the different process relationships found between CA's in public practice and CA's in nonpublic practice. Both groups are chartered and conceptually possess (or possessed at one time) the same degree of professionalization. They, however, exhibit differences in the relationships in the empirical model. Ananya, Lachman, and Amernic do suggest that their model should be revised for CA's in nonpublic practice, but they do not
address the nature of the revision or the factors which may account for the observed differences between public and nonpublic accountants.

The presence of a direct relationship between need deprivation and organizational commitment which, in turn, affects job satisfaction supports the theoretical argument for inclusion of need deprivation as a factor in examining a process model of job satisfaction for accountants. Aranya, Lachman, and Amernic believe that their finding "suggests that the fulfillment of work needs is a determinant of both job satisfaction and commitment to the organization which allows for such fulfillment" [1982, p. 210]. The absence of a significant relationship between professional commitment and organizational commitment for CAs in bureaucratic settings leads the authors to support the contention of other research [Greene, 1978; Miller, 1967; Sorensen and Sorensen, 1974] that the two commitments, for this occupational setting, are independent. For CAs in professional settings the relationship found between professional and organizational commitment "suggests that high professional commitment of CAs in professional settings leads to high organizational commitment and both lead to high job satisfaction" [1982, p. 211].

Ferris

Ferris [1981] examines the relationship between the organizational commitment and performance of professional staff accountants in a "large public accounting firm." Ferris proposes a
model in which employee performance is related to the degree of organizational commitment on the part of the individual. The model hypothesizes two types of antecedent characteristics which affect organizational commitment: (1) personal characteristics and (2) work-related characteristics. Task-related ability is included in the model as a moderating variable affecting the relationship between organizational commitment and performance.

Personal characteristics are those characteristics "which define the individual" [1981, p. 318]. A number of these characteristics and their relationships to commitment are identified by other research. Age, marital status, and social background have been found to be positively related to organizational commitment [Hrebiniak and Alutto, 1972; Sheldon, 1970]. The level of educational attainment by the individual exhibits a negative relationship with organizational commitment [Grusky, 1966; Steers, 1977]. Work-related characteristics are those variables "which define the individual in terms of the job or job environment" [Ferris, 1981, p. 318]. Organizational commitment and the work related characteristic of job tenure are positively related [Grusky, 1966; Sheldon, 1970; Stevens, Beyer, and Trice, 1978]. The perceived reward (or outcome) utility of the job is also positively related to organizational commitment [Grusky, 1966; Hrebiniak and Alutto, 1972]. Ritzer and Trice [1969] and Stevens, Beyer, and Trice [1978] indicate a positive relationship between organizational commitment and occupational commitment.

Ferris determines the level of organizational commitment in his study based on two characteristics of such commitment: (1) a
willingness to exert considerable effort on behalf of the organization, and (2) a strong desire to maintain membership in the organization. He identifies four personal characteristics which are examined in relation to organizational commitment: age, marital status, level of education (bachelor's versus master's degree), and social background (as determined by respondent's father's occupation). Ferris [1981] reports finding only one significant correlation between these personal characteristics and organizational commitment. For senior-level accountants, he reports an inverse relationship between educational level and the desire to maintain membership in the organization. Ferris suggests that the reduced job opportunities for individuals with only a bachelor's degree may lead to greater organizational commitment. Although no other significant relationships were found between personal characteristics and organizational commitment, Ferris reports a significant negative relationship between age and both ability and performance. He also reports that level of education is positively related to ability and that marital status for juniors and social background for seniors are both positively related to performance. Due to only one observed significant relationship between personal characteristics and organizational commitment, Ferris concludes that personal characteristics do not significantly influence organizational commitment.

Ferris examines the relationship between organizational commitment and three work-related characteristics: job tenure, occupational commitment, and utility of the job for certain rewards or outcomes. He concludes that the data generally
support his hypothesized relationships concerning these factors. For junior level accountants the desire to maintain membership in the organization is correlated with all three work-related characteristics, but the willingness to exert effort on behalf of the organization is correlated only with job tenure and the utility for rewards. For senior level accountants the only significant relationship reported is a positive relationship between the desire to maintain membership and both occupational commitment and utility for rewards. The presence of the significant correlation (for both juniors and seniors) between occupational commitment and the desire to maintain membership in the organization leads Ferris to suggest that a high degree of occupational commitment is a precondition for high organizational commitment. Ferris also suggests, based on the observed relationship between the desire to maintain membership and the utility of the job for rewards, that "the organizational ties of professional accountants are conditioned by the firm's ability to satisfy their utility function" [1981, p. 323].

In examining the relationship between organizational commitment and employee performance, Ferris suggests that for juniors, performance is influenced by a willingness to exert effort on behalf of the organization. For seniors, however, performance is influenced by a desire to maintain membership in the organization. Ferris concludes, therefore, that "the nature of organizational commitment changes over time" [1981, p. 324].

Ferris measures the proposed mediating variable of task-related ability by examining the rating which the respondent received upon completion of the firm's initial-employment training.
program. He reports no significant moderating effect of this variable on the relationship between commitment and performance. He does point out, however, that the ability measure which he utilized may be insufficient. Due to the positive relationship between organizational commitment and performance and the absence of a moderating effect of ability, Ferris suggests that "organizational commitment may be an avenue for increasing employee performance" [1981, p. 344]. He does not address, however, how organizational commitment can be manipulated in the observed presence of the changing nature of that commitment.

**Aranya and Ferris**

Aranya and Ferris [1984] examine the nature and consequences of organizational-professional conflict in a sample of Canadian Chartered Accountants and California CPAs working in public accounting, industry and government. The authors acknowledge the potential for conflict between professional and organizational-bureaucratic value systems outlined by prior research [Corwin, 1961; Gouldner, 1957; Kornhauser, 1962]. However, following the ideas proposed by Hall [1963], Engle [1970], and Tuma and Grimes [1981], Aranya and Ferris hypothesize that both the organizational and professional commitment of accountants in professional organizations (public accounting) will tend to be higher than that of accountants in nonprofessional organizations (industry and government). They also hypothesize that the level of organizational-professional conflict will be lower for accountants in professional
organizations than for accountants in non-professional organizations. Their rationale for both hypotheses is that professional organizations (public accounting firms) establish organizational goals which more closely parallel professional goals. Therefore, the relationship between professional and organizational goals in such organizations is, presumably, one of compatibility. Such compatibility is thought to increase both organizational and professional commitment and reduce organizational-professional conflict.

The authors report support for both hypotheses from the examination of the data. Accountants in professional organizations indicate higher levels of both professional and organizational commitment and significantly lower levels of organizational-professional conflict than do accountants in non-professional organizations. The authors suggest that the observed compatibility of organizational and professional commitments may be due to the nature of accounting as a "technical-scientific" profession (which is assumedly more compatible with organizations) rather than a "person" profession such as law or medicine. Aranya and Ferris also suggest, based on the between group differences in commitments and levels of perceived conflict, that the type of organization (professional vs non-professional) will affect professional and organizational commitment and the degree of conflict between those two commitments. To Aranya and Ferris the high correlation between organizational commitment and professional commitment in the professional organizations indicates a compatibility between organizational and professional norms and values in such
organizations. This leads to their conclusion concerning commitment compatibility. The authors do not, however, qualify this conclusion by differentiating between accountants in professional versus non-professional organizations even though they do differentiate between the two types of organizations when suggesting the compatibility of norms and values.

Aranya and Ferris examine, for the subjects in public accounting, one major factor which has been proposed as affecting accountant's organizational commitment, professional commitment, and perceived conflict between the two. The individual's position in the organizational hierarchy has been found to be related to commitment and conflict in a number of studies of accountants [Schroeder and Imdieke, 1977; Sorensen, 1967; Sorensen and Sorensen, 1974]. Aranya and Ferris hypothesize that professional and organizational commitment will be positively related to position in the hierarchy and that the perceived level of organizational-professional conflict will be inversely related to hierarchical position. These hypotheses follow the findings of other research and are based on the idea that "longevity in both professional and organizational service may reflect a psychological ability (or effort) to reconcile conflicting demands" [1984, p. 5]. Another explanation offered is that individuals in higher hierarchical positions have more "at stake" in the organization. Therefore, such an individual will exhibit a higher degree of organizational commitment. Both of these explanations, however, appear to be more related to organizational commitment than to professional commitment. Aranya and Ferris do not explain why longevity in the
organization or having more "at stake" in the organization will lead to greater professional commitment. However, if the assumption is made that professional organizations hold organizational goals which parallel professional goals, there may be a positive relationship between longevity and "investment" in the organization and professional commitment. The authors address the relationship of positional level and commitment/conflict only in the professional organizations (public accounting firms), a locale where they accept the congruence of goals assumption.

Aranya and Ferris report partial support for the hypothesized positive relationship between hierarchical position and commitment. Organizational commitment is highest for partners and lowest for staff members. Managers are between the two extremes. For professional commitment, however, the level of commitment for partners is not significantly different from that of managers. However, the levels of professional commitment of both partners and managers are higher than that of staff members. The hypothesized inverse relationship between position in the firm and the level of perceived organizational-professional conflict is, as the authors indicate, supported by the analysis.

Aranya and Ferris theorize an interaction between organizational commitment and professional commitment which may affect the perception of organizational-professional conflict. They reason that an individual who is highly committed to both the profession and to the organization "may tend to overlook possible incompatibility between the two and therefore perceive lower organizational-professional conflict" [1984, p. 15].
Individuals who are low in commitment to both the profession and the organization may perceive high levels of conflict due to potential occupational maladjustment. Individuals with commitment levels between these extremes will perceive moderate levels of conflict.

These propositions follow the suggestions of other research [Aranya and Jacobson, 1975; Ritzer and Trice, 1969; Stevens, Beyer, and Trice, 1978] which suggest a psychological link between professional and organizational commitment and the perceived level of organizational-professional conflict. Aranya and Ferris examine this proposed interactive effect for individuals in the public accounting organizations in their sample. They report finding a significant negative relationship between organizational-professional conflict and the interaction of the individual's level of organizational and professional commitment. Individuals high in both commitments exhibit the lowest levels of perceived conflict. Individuals with low commitments exhibit the highest perceived conflict. Individuals with combinations of high and low commitments indicate levels of perceived conflict between the two extremes.

As a final test, Aranya and Ferris examine two potential behavioral outcomes of organizational-professional conflict. Job satisfaction and turnover intentions have been identified by other research as being affected by the level of organizational-professional conflict perceived by the individual [Glaser, 1963; Hall, 1982; Tuma and Grimes, 1981]. Aranya and Ferris hypothesize that job satisfaction is inversely related to organizational-professional conflict and that
organizational-professional conflict is related positively to turnover intentions. For the subjects in the professional organizations, the authors report a significant negative relationship between perceived levels of conflict and job satisfaction and a significant positive relationship between turnover intentions and the perceived levels of conflict. They do point out, however, that variables not examined in their study, such as alternative job opportunities and market or economic conditions, may influence job satisfaction and turnover intentions.

Although Aranya and Ferris do not propose a model of the relationships evidenced by their empirical findings, such a model may be intimated from those findings. In such a model, job satisfaction would have a direct, positive relationship to conflict and turnover intentions would have a direct negative relationship to conflict. Organizational-professional conflict would have a direct negative relationship to both organizational commitment and professional commitment as well as a direct negative relationship with the interaction of the two commitments. The individual's position in the organizational hierarchy (for professional organizations) would be directly and positively related to both commitments and directly and inversely related to organizational-professional conflict. The type of organization (professional vs non-professional) would be directly related to both organizational and professional commitment. The validity of such a model would suffer in the case of non-professional organizations due to the failure of Aranya and Ferris to examine all of these relationships for individuals in such organizations.
Norris and Niebuhr [1983] examine the relationship between professionalism and organizational commitment and the effect of this relationship on job satisfaction for public accountants in a "Big Eight" firm. Following Kerr, Von Glinow, and Schreisheim [1977], the authors identify five attitudinal aspects of professionalism: autonomy, collegial maintenance of standards, ethics, professional commitment (dedication to work and long-term career aspirations), and professional identification (use of profession and fellow professionals as a major reference). The authors choose a "Big Eight" accounting firm (three field offices) for examination due to their assumption that such an environment is perceived to be supportive of professional orientations. The authors hypothesize that to the extent that such an organization is supportive of the professional environment, there will be a positive correlation between professionalism and organizational commitment. The authors test for correlations between each dimension of professionalism, overall professionalism, and organizational commitment.

Each of the five dimensions of professionalism correlates highly with the overall measure of professionalism, and four of the five dimensions (autonomy being the exception) are significantly correlated with organizational commitment. Together all five dimensions account for 57.5% of the variance in organizational commitment with professional commitment alone accounting for 53.6% of the total variance. The authors also hypothesize that professionalism and organizational commitment
both will be related positively to job satisfaction for accountants in such an environment. Five subscales of satisfaction are identified: satisfaction with work, pay, supervision, promotions, and co-workers. The authors examine the correlations between the five dimensions of professionalism, organizational commitment, and the five dimensions of satisfaction.

Organizational commitment, according to the data, is significantly correlated to each of the five satisfaction dimensions and to a measure of overall job satisfaction. Three dimensions of professionalism (ethics, commitment, and identification) are significantly correlated with overall job satisfaction but not with all dimensions of satisfaction. Contrary to the arguments of Watson [1975] and the findings of Benke and Rhode [1980], the authors find no significant differences in professionalism, organizational commitment, or job satisfaction for respondents in different functional areas of the firm. Position in the organizational hierarchy does, however, "appear to have an impact on employee professionalism... accountants who held higher jobs reported higher levels of professionalism" [Norris and Niebuhr, 1983, p. 53]. The data also indicate that job level, years in occupation, or years with the firm are not related to organizational commitment or job satisfaction.

Norris and Niebuhr conclude that their data do not support the contention of potential conflict between professionalism and organizational commitment. They also believe that their study does not support the contention of other studies [Berger and Grimes, 1973; Flango and Brumbaugh, 1974; Jauch, Gluek, and Osborn, 1978] that the two concepts are independent. They
believe that their results support Bartol’s [1979] finding of a positive relationship between professional commitment and organizational commitment due to the positive correlations between four of the five professionalism dimensions and organizational commitment. In discussing the absence of any correlations between the professional dimension of autonomy and any other variable studied, Norris and Niebuhr suggest that public accountants do not associate professional attitudes, organizational commitment, or job satisfaction with autonomous rights to make independent decisions. They suggest that the presence of rules and ethics promulgated by the AICPA fosters a situation of reliance on standard procedures rather than on professional judgment (autonomy). Norris and Niebuhr conclude that their results suggest that accounting organizations which employ professionals and which provide "the proper professional environment have a greater likelihood that their employees will be strongly committed to the organization and satisfied with their jobs" [1983, p. 57]. The authors suggest, therefore, organizational climate or environment may be the key to commitment and job satisfaction.

Harrell, Chewning and Taylor

In a study dealing specifically and totally with internal auditors, Harrell, Chewning and Taylor [1986] examine the relationships between organizational commitment, professional commitment, organizational-professional conflict, job satisfaction, and turnover intentions of a sample of that group of individuals.
The authors adopt the assumption of potential conflict between professional goals and organizational goals in the internal audit environment. They suggest that the potential for such conflict in the case of internal auditors may be higher than that for accountants in public practice. Their position is that the suggestion [Aranya and Ferris, 1984] of congruence between the goals of public accounting organizations and the individual professional goals of CPAs and CAs may not apply to internal auditors. Internal auditors may face the situation in which their professional judgement is in conflict with the commercial goals of their employing organization. Harrell, Chewning, and Taylor reason that

Since management controls the firm’s reward system, it may be necessary for internal auditors to act in conflict with their firm’s commercial goals and accept the potential risk of lesser organizational rewards in order to comply with the requirements of their profession [1986, p. 111].

The study utilizes path analysis to determine the presence (absence) of direct and/or indirect relationships between the variables of interest for a sample of 59 bank internal auditors in three banks in the southeastern United States. The data support hypothesized direct and negative relationships between organizational professional conflict and job satisfaction and between professional commitment and organizational-professional conflict. The authors report the indicated presence of a direct and positive relationship between organizational commitment and organizational-professional conflict, but fail to find support for a hypothesized direct relationship between organizational-professional conflict and turnover intentions.
Three hypotheses concerning the relationship of organizational variables are also examined. The authors report a direct and positive relationship between membership in the Institute of Internal Auditors and the level of professional commitment. A direct relationship also exists between status as a supervisor and organizational commitment. The data did not, however, support a hypothesized direct and positive relationship between tenure with the organization and organizational commitment.

Three unanticipated direct relationships are also reported by the authors: (1) tenure, professional commitment, and job satisfaction are negatively related to turnover intentions, (2) organizational commitment is directly and positively related to job satisfaction, and (3) tenure and membership in the Institute of Internal Auditors are directly and positively related to the level of organizational-professional conflict.

In addition to analyzing the data from their survey, Harrell, Chewning, and Taylor compare the levels of professional commitment, organizational commitment, and organizational-professional conflict of the internal auditors in their sample with the levels of these factors for CPAs and CAs in public practice found in the Aranya and Ferris [1984] study. The internal auditors exhibited lower levels of professional and organizational commitment than did the CPAs and CAs. However, the internal auditors also exhibited lower levels of organizational-professional conflict than did the CPAs and CAs. This is contrary, according to the authors, to the findings of Aranya and Ferris [1984] which suggest that a combination of
high levels of commitment are compatible with low levels of conflict due to the possible congruence of attitudes in the accounting profession. Aranya and Ferris do, however, primarily address public accounting when they make this suggestion and do point out that the type of organization may affect the compatibility between the commitments and the resultant levels of organizational-professional conflict.

Harrell, Chewning, and Taylor suggest that the presence of lower conflict levels in the presence of lower commitment levels may be due either to the existence of an internal audit function organizational environment which lessens such conflict (the situation described by the audit directors of the three banks involved) or due to the influence of the Institute of Internal Auditors (of which 65% of the respondents were members). Membership in that organization, according to the authors, may provide peer-group availability of information and support which helps to provide means through which such conflict may be lessened. However, the findings of lower conflict levels in the presence of lower commitment levels lead the authors to suggest that "factors other than an individual's organizational and professional commitment levels affect the person's level of organizational-professional conflict" [1986, p. 119].

Mautz, Tiessen and Colson

In one section of an extensive study of the field of internal auditing, Mautz, Tiessen, and Colson [1984] examine the job satisfaction of 330 directors of internal audit functions and 1,240
internal audit staff members. From the data gathered, the authors propose a model of the factors most important to the job satisfaction of internal auditors. The model presented views job satisfaction as the result of the direct and interactive effects of organizational structure, job characteristics, and career orientations. The authors report that "our results indicate that job satisfaction is systematically related to organizational structure, to job characteristics, and to career-orientation variables" [1984, p. 44]. For both directors and staff members, the job characteristics of role clarity, challenge, and learning opportunities "have strong, positive relationships with job satisfaction" [1984, p. 50]. Among the organizational structure variables, the authors report no discernable relationship between job satisfaction and centralization or formalization for directors but a "slightly positive" relationship with formalization and a "very negative" relationship with centralization among staff members. The structural variable of flexibility appears related to job satisfaction of directors but unrelated to the job satisfaction of the staff. The authors report a positive correlation between job satisfaction and both participatory management style and open communications for both groups of respondents.

Mautz, Tiessen, and Colson identify and examine five variables related to career orientations: professional commitment, commitment to organizational goals, external orientation, organizational immobility, and concern for career advancement. Concern for career advancement deals with the individual's pursuit of promotions and salary levels. For both directors and staff the authors identify a positive correlation between job
satisfaction and concern for career advancement. As used in this study, organizational immobility is defined as "an index indicating whether employees consider themselves committed to a career in their company or willing to move to another company" [1984, p. 100]. The authors indicate that for both directors and staff there is a positive correlation between job satisfaction and career immobility. The strength of the correlation for directors and analysis of other questionnaire responses lead Mautz, Tiessen, and Colson to state that "directors who have made up their minds to remain with their current companies are consistently in the groups who responded 'very satisfied' or 'satisfied' on the job-satisfaction variable" [1984, p. 50].

Professional commitment, as used in this study, deals with the loyalty of internal auditors to their profession. Such commitment is "embodied in standards, certification, professional societies, and professional responsibilities" [1984, p. 100]. For directors of internal audit functions, Mautz, Tiessen, and Colson report that their data indicate professional commitment to be exemplified by three principal concerns: active membership in the Institute of Internal Auditors, passing the CIA exam, and passing the CPA exam. These three factors "were identified in the statistical analysis as critical in the minds of directors" [1984, p. 48] in relation to professional commitment. An interesting yet not statistically significant finding from the data is that the directors who identified the importance of professional membership and certification "generally did not agree with the importance of refusing to comply with an inappropriate audit request from a superior" [1984, p. 48]. Mautz, Tiessen, and Colson raise the
question of a difference between commitment to professional institutions and personal responsibility for commitment to professional standards in light of this finding. This idea is similar to the concept advanced by Kidron [1978] of the separation of commitment into two forms: calculative commitment and moral commitment. Under such a view, calculative commitment refers to the willingness of the individual to remain with a particular system given an alternative job that provides slightly better outcomes for the individual. Moral commitment refers to the individual's internalization of the values and goals of the organization (profession) into his or her own identity. According to Kidron, age, tenure, and income are significantly associated with both moral and calculative commitment.

Overall, Mautz, Tiessen and Colson report a "moderate" degree of correlation between job satisfaction and professional commitment for directors. The authors indicate, for internal audit staff members, a concern for the same three elements of professional commitment as was found for directors. However, the three factors were considered less important by staff members than by directors. The correlation between staff members' job satisfaction and professional commitment was, according to the authors, only "slightly positive." The authors believe that the differences between directors and staff in professional commitment and their effects on job satisfaction are to be expected because "directors are more committed to internal auditing than are their staff members" [1984, p. 101].

External orientation in this study deals with the sources of professional auditing stimulation. The sources identified are
colleagues within the internal audit department, professional meetings, professional journals and continuing education seminars presented by the company. The authors indicate that for both directors and staff members, external orientation has a negative relationship to job satisfaction. In the case of directors, the authors state that "directors who tend to be oriented toward groups outside their departments for internal audit stimulation tend to be less satisfied with their jobs than those who are internally oriented" [1984, p. 50].

The authors report that both directors and staff members are inconsistent on the variable of commitment to organizational goals. Directors in general indicate that their primary loyalty is to their employer but do not indicate a high concern for the company having a reputation as an efficient and well-managed organization. For staff members, the only systematically important aspect of organizational commitment deals "with the responsibility to assure the efficient company operation beyond the performance of assigned internal audit duties" [1984, p. 101]. This difference in emphasis with regard to organizational commitment is similar to the findings of Ferris [1981] which relate to public accountants. Ferris suggests that the nature of organizational commitment changes over time. His data indicate that for junior level accountants, organizational commitment is related to a willingness to exert effort on behalf of the organization. Seniors, however, exhibit organizational commitment as a desire to maintain membership in the organization. The observed emphasis of directors on loyalty to the organization is of the same nature as the seniors’ desire to
maintain membership in the organization. Staff members' concern with assuring efficient operations may be viewed as a desire to exert effort on the behalf of the organization.

Mautz, Tiessen, and Colson report a positive correlation between job satisfaction and commitment to organizational goals for both groups with the correlation for directors being "high." This finding is in accord with the findings of Aranya, Lachman, and Amernic [1982] which indicate a strong relationship between organizational commitment and job satisfaction and with the findings of Harrell, Chewning, and Taylor [1986] which indicate a direct relationship between organizational commitment and job satisfaction. The difference in the degree of correlation between directors and staff members is similar to the findings of Aranya and Ferris [1984] which indicate higher levels of organizational commitment and job satisfaction for individuals who occupy higher positions in the organizational hierarchy.

Senatra

Senatra [1980] examines the consequences of role conflict and role ambiguity experienced by audit seniors in CPA firms and attempts to identify organizational climate conditions in the firm which may contribute to role conflict and ambiguity. Although he does not specifically address organizational-professional conflict in the study, Senatra [1980, p. 103] adopts Wolf and Snoek's definition of role conflict as "the simultaneous occurrence of two (or more) sets of pressures such that compliance with one would make difficult or impossible compliance with the other."
Organizational-professional conflict may also be characterized by opposing pressures and the individual may be in a situation where compliance with the norms and values associated with one orientation may make difficult or impossible compliance with the norms and values of the other.

Senatra alludes to the link between organizational-professional conflict and role conflict when he suggests that role conflict results from stressful conditions perceived by the individual. A contributing factor to the existence of such stress in large professional organizations, according to Senatra, may be the conflict between professional and bureaucratic norms as suggested by Sorensen [1967].

Senatra identifies three potential outcomes of role conflict and role ambiguity: job-related tension, job dissatisfaction, and propensity to leave the organization. These outcomes are conceptually the same as the outcomes theorized as the result of organizational-professional conflict on the part of accountants [Aranya and Ferris, 1984; Aranya, Lachman, and Amernic, 1982; Harrell, Chewning, and Taylor, 1986; Norris and Niebuhr, 1983; Sorensen, 1967; Watson, 1975]. Therefore, not only does the construct of role conflict appear to be conceptually compatible with the organizational-professional conflict construct, the behavioral outcomes of the two constructs are identical.

From analysis of the data provided by audit seniors in eight offices of one "Big Eight" firm, Senatra reports that there are significant relationships between role conflict and job related tension and between role ambiguity and job satisfaction. Senatra speculates that the absence of significant relationships between
role conflict and a propensity to leave may be due to the seniors' expectations of role conflict as an inherent "part of the job." In such a case, "because the conflict is expected, it may not result in job dissatisfaction or a propensity to leave" [1980, p. 600].

Senatra identified ten characteristics of organizational climate in the CPA firm which may be viewed as sources of role conflict and role ambiguity. The set of ten variables accounted for 43% of the variation in role conflict and 59% of the role ambiguity experienced by the audit seniors. The data indicate that two organizational climate characteristics (violation of the chain of command and suppression of information) possess significant positive relationships with role conflict. One of the characteristics (formalization of rules and procedures) exhibited a significant inverse relationship with role conflict. Of the four organizational characteristics which exhibit a significant relationship with role ambiguity, one indicates a positive relationship (violation of the chain of command) and three indicate inverse relationships (top-management receptiveness, decision timeliness, and adequacy of authority).

Lengermann

Lengermann [1971] examines the professional attribute of autonomy in relation to different CPA work situations. The study addresses the assumptions and findings of the general literature on professions and organizations which, as Lengermann indicates, are that professional autonomy and some other professional characteristics "are negatively related to large-scale
organization and to the bureaucratic factor necessitated by size and complexity" [1971, p. 666]. He uses a questionnaire to examine the beliefs concerning professional autonomy and the actual levels of professional autonomy for 373 New York CPAs and prospective CPAs in six work situations: sole practice, local firm, regional firm, national firm-small office, national firm-large office, and non-CPA organizations. The data indicates "a strong belief among CPAs that the opportunity for professional autonomy is highest in sole practice offices and in small firms and that it decreases considerably in the large firms and non-CPA organizations" [1971, p. 667]. Lengermann reports a similar pattern with respect to actual experience regarding professional autonomy. Sole practice situations provide the highest opportunity for professional autonomy with progressively lesser opportunities in local firms, regional firms, and small offices of national firms. The lowest experienced level of opportunity for professional autonomy occurs in the large offices of national firms and in non-CPA organization situations. Lengermann anticipates the lower levels of professional autonomy in non-CPA organization situations. He explains this by stating that:

Since non-CPA organizations are neither organized for the sake of carrying out professional CPA activity nor directed by CPAs as such, we can expect the professional autonomy of CPAs in this kind of work situation to be the lowest of any CPA group. Incompatibility between the professional and the bureaucratic modes of operating is almost certain to operate in such non-CPA organizations [1971, p. 669].

However, when position level is controlled in the data for CPA firms, the level of professional autonomy, according to Lengermann, "is very positively related to position level in the
firm" [1971, p. 670]. The strength of this positive relationship is expected but is categorized by Lengermann as "disconcerting" in that professional autonomy may depend too exclusively on the bureaucratic factor of positional authority in CPA firms. Lengermann indicates that "when we control separately for the four position levels [junior, senior, supervisors, and partners], we find that the relationship between the type of firms and professional autonomy becomes very weak or ceases to exist" [1971, p. 671]. This leads Lengermann to suggest, contrary to the "beliefs" expressed by CPAs, that there is equivalent opportunity for professional autonomy at equivalent position levels regardless of the type or size of CPA firm. When the quantitative factors of number of branch offices and size of professional staff in each branch office are substituted for the local, regional, national firm taxonomy, the data suggests "a sort of U-curve effect, with professional autonomy being lowest at the middle ranges of CPA firm size and almost as high at the upper-size ranges as at the lower-size ranges" [1971, p. 672]. Based on this finding, Lengermann concludes that rather than having a deleterious effect, size and the accompanying large-scale organization factors may actually increase professional autonomy.

Although he does not report the data, Lengermann reports that in the non-CPA organizations there is also a strong relationship between position level and professional autonomy. However, he indicates that the strength of this relationship is less than that found in CPA firms. This finding presents an interesting anomaly. In professional organizations (CPA firms) professional autonomy is highly related to the bureaucratic attribute of
position in the hierarchy. In non-CPA organizations, which are presumably more bureaucratic than their professional counterparts, professional autonomy appears less related to the bureaucratic attribute of hierarchical position. This finding appears somewhat incongruent with Lengermann's statement concerning the incompatibility of the professional and the bureaucratic modes of operating in non-CPA organizations.

Theoretical and Conceptual Considerations

A number of theories and conceptual constructs are involved in explaining the relationships between and among antecedent characteristics, organizational commitment, professional commitment, and organizational-professional conflict. Among these are Becker's [1960] theory of "side bets" dealing with antecedent characteristics, Gouldner's [1957, 1958] cosmopolitan-local construct dealing with conflict in social roles, Role Theory [Biddle, 1979; Biddle and Thomas, 1966; Katz and Kahn, 1978; Parsons, 1951] dealing with conflict in the role situation, and commitment as a process [Tuma and Grimes, 1974]. The following sections contain discussions of these various theories and conceptual constructs.

Becker's Theory of Side Bets

Howard Becker [1960, p. 33] categorizes commitment as the concept used "to account for the fact that people engage in consistent lines of activity." In studies of occupations and
careers, commitment is the concept used to explain why individuals normally engage in one career in a limited field rather than changing jobs and careers "with the alacrity of the proverbial economic man under changing market conditions" [1960, p. 33]. Becker suggests that the individual may be committed (engages in consistent behavior) due to "side bets" which the individual has made or have been made for him or her due to circumstances.

The idea of a side bet is that the individual who is committed to a course of action has acted in such a way as to involve other of his interests, originally extraneous to the particular action, directly in that action. The individual's decisions regarding a particular line of action has, in the presence of side bets, consequences on interests and activities not necessarily related to that action. For example, an individual may pursue a certain career or job in part due to the time which that particular activity allows for family activities. Such an individual has made a side bet that the particular activity (career or job) will allow such time as well as provide the desired levels of economic or psychological rewards.

Becker suggests that side bets may arise indirectly or by fiat as well as from deliberate actions on the part of the individual. Generalized cultural expectations may indirectly produce side bets for the individual. Becker cites the example of an individual who is offered a superior job two months after accepting his or her current position. The individual may turn down the superior job because he or she has wagered his or her reputation and trustworthiness on remaining in the current position for a period of time acceptable by generalized cultural expectations. In such a
case, the generalized cultural expectation that frequent job-changers are untrustworthy may give rise to the particular individual's side bet.

Impersonal bureaucratic arrangements may result in side bets being made for the individual. An individual wishing to leave the current firm may find that his or her current pension plan is non-transferable. If the individual leaves the current firm, he or she may lose considerable benefits. Decisions regarding a new job in another firm would involve this financial side bet which has been placed by the bureaucratic arrangement rather than by the individual.

Side bets may also arise from the individual's adjustment to the current position. The individual may establish a pattern of activities in order to conform to the requirements of his current position. This conformity may be so great and the pattern of activities so entrenched that the individual may become unfit for other positions to which he or she may have access. For example, a sole contributor may do an exemplary job in his or her individual position and become highly adjusted to that activity. However, that individual may become so adjusted to being an individual contributor that he or she is incapable of managing others or working in a team situation. When the opportunity to change positions arises, the individual may be so adjusted to the current position that he or she will be unable to conform to the requirements of the new position [Becker, 1960].

Becker also suggests that the individual may become committed by default. In such cases, the individual may engage in a series of acts "no one of which is crucial but which, taken
together, constitute for the actor a series of side bets of such magnitude that he finds himself unwilling to lose them" [1960, p. 38]. Each act may be trivial or a part of the ordinary routines of life. However, the acts in combination may "lock" the individual into his present line of behavior. Getting married, buying a house, having children, and establishing social and community status and relationships are all part of the ordinary routines of life but together may make changing one's current career or job or position an impossible or unacceptable task. The individual may not be willing to lose these side bets by changing his or her current situation. Therefore, the individual is committed to the current line of activity which will not endanger these side bets.

Side bets may arise due to the current activity itself as well as from exogenous sources. As previously mentioned, pension benefits may be lost by changing firms. The loss of seniority or "connections" in the present firm may occur in a change. The ease of doing the work may be lost due to movement to a new, different environment. The potential loss of these side bets may contribute to commitment to the current firm or line of activity.

As Becker points out, the individual may follow lines of activity due to the nature of the activity itself. The rewards which the activity itself bring to the individual may well be the initial impetus for commitment to that activity. However, there are factors extraneous to the activity itself which may openly or covertly affect the individual's commitment to that line of activity. The obligations, arrangements, and personal as well as financial side bets which the individual makes or are made for him may, "brick by brick, build a wall which eventually grows to such a
height the person no longer can climb it" [1960, p. 39]. The factors may arise due to the direct actions of the individual or by the circumstances and processes of living. Regardless of the source, however, these supposedly extraneous interests may result in the individual "staking" something of value on being consistent in his present behavior and activity. In such a manner the individual becomes committed to that behavior or line of activity [Becker, 1960].

Gouldner's Cosmopolitans and Locals

Gouldner suggests [1957, 1958] that a social role is a set of expectations oriented toward an individual in relation to the position which that individual holds in a social system or group. Position is the social identity assigned to the individual by the members of the group in terms of culturally prescribed categories. Different expectations and differing configurations of rights and obligations are associated with differing social identities. Individuals in a given position, however, have a variety of social identities. Gouldner cites the example of a classroom in which individuals are assigned the social identity of students but at the same time are men, women, young, mature, etc. In the classroom, however, the particular social identity of "student" is regarded as central and properly salient. The expectations congruent with that salient identity are of central applicability in such a situation, but other various identities may intrude and affect the individual's behavior. Gouldner defines social identities which are consensually regarded as relevant in a given setting as
manifest social identities. Social identities which are regarded as irrelevant, inappropriate for consideration, or illegitimate in light of the particular position are defined as latent social identities.

Gouldner identifies two latent identities: "cosmopolitan" and "local." Based on his study of a large manufacturing concern, Gouldner outlines the attributes of each of these latent identities. The dimensions were identified in this study from Gouldner's identification of differences between "experts" and "company men" in the organization studied. Experts were restrained from reaching the highest reaches of power in the organization, were required to persuade rather than command, were not given "real promotions," and were under pressure to forego the active pursuit of their specialty if they wished to ascend in the organizational hierarchy. Company men, on the other hand, were regarded as totally committed to the organization in their career orientations and were considered "loyal" to the organization.

Gouldner suggests that the findings in regard to experts may be explained by their long formal training leading to commitment to their specialty rather than to the organization, increased horizontal mobility due to that training, the influence of professional peers outside the organization in the process of continual refinement and development of skills, and recognition of competence from the only individuals capable of judging technical competence, outside peers. Cosmopolitans, the term Gouldner uses to describe the experts, therefore are characterized by low loyalty to the employing organization, high commitment to specialized role skills, and an outer reference group orientation. Locals, the company men, exhibit high organizational loyalty, low
commitment to specialized role skills, and an inner reference group orientation.

Gouldner argues that cosmopolitan and local identities must be regarded as latent because the criteria which distinguish between the two are not fully institutionalized in the organization as a means for classifying individuals. Such factors as skill, competence, training, and experience have been institutionalized for evaluation of performance and classification of individuals rather than factors such as loyalty, commitment, and reference orientation.

In a study utilizing this dichotomy of latent identities, Gouldner reports that cosmopolitans and locals differ in the degrees of influence, participation, and patterns of internal social relations in the organization studied. In summarizing the factors which distinguish cosmopolitans and locals, Gouldner identifies the cosmopolitan factors under the heading of expertise and the local factors as loyalty. However, he points out that organizational survival requires some degree of loyalty on the part of the cosmopolitans. This necessity creates the situation in which there is tension between expertise and loyalty with the "need for loyalty setting certain limits within which the need for expertise is pursued and vice versa" [1958, p. 466]. The cosmopolitan-local dichotomy focuses attention on the potential conflict between expertise and loyalty, between the expert and the company man, or between professionalism and the organization.

Support for the existence of Gouldner's cosmopolitan-local dichotomy is provided by Goldberg, Baker, and Rubenstein
[1965], Friedlander [1971], and Berger and Grimes [1973]. All three studies support the first two dimensions, commitment to specialized role skills and loyalty to organization, but only the latter study supports the dimension of reference group orientation. However, unlike Gouldner's conceptualization, the Goldberg, Baker, and Rubenstein [1965] study did not indicate an incompatibility between a strong organizational orientation and strong professional orientation. Berger and Grimes [1973] indicate that even though all three studies support Gouldner's conceptualization, the dimensions of commitment to specialized role skills and the relationship between professional orientation and organizational orientation are more complex constructs than initially theorized.

Gouldner's conceptualization is an "either/or" or bipolar construct. The individual will have either a cosmopolitan latent role or a local latent role depending upon the particular circumstances. As Blau and Scott [1962] point out, the individual may possess a "professional orientation" (based on a strong commitment to a specialized skill) or a "bureaucratic orientation" (based on a commitment to the particular organization).

Glaser [1963], however, suggests that the two forms of identification (cosmopolitan and local) are separate dimensions. Based on empirical observations, Glaser [1963], Greene [1978], and Miller and Wagner [1967] report four types of role orientations relating to the cosmopolitan-local construct: (1) cosmopolitans (high professional orientation and low organizational orientation), (2) local-cosmopolitan (high professional and high organizational orientations), (3) locals
(high organizational and low professional commitments), and (4) indifferents (low professional and low organizational commitments).

Miller and Wagner [1967, p. 151] suggest that professional orientation and organizational orientation "can be combined to yield additional types of role orientation that more accurately reflect the interdependencies of professions and organizations." Goldberg, Baker, and Rubenstein [1965] suggest that professional orientation is relatively independent of organizational orientation. Therefore, "a multidimensional conceptualization of the phenomena covered by the terms local-cosmopolitan may be more useful than a unidimensional one" [1965, p. 705]. Jauch, Glueck, and Osborn [1978] report that their analysis of the data obtained in a study of academics indicates the independence of organizational loyalty and professional commitment. They suggest that such a finding mitigates any concern over the potential conflict between organizational and professional commitment.

According to Tuma and Grimes [1981], Gouldner's original construct has been most commonly elaborated as a two-dimensional model which included professional commitment (the cosmopolitan orientation) and organizational commitment (the local orientation). Many studies utilizing this elaborated model [Abrahamson, 1965; Ben-David, 1958; Blau and Scott, 1962; Glaser, 1963; Kornhauser, 1962] retain Gouldner's original contention of an inherent conflict between professional commitment and organizational commitment. One rationale for the existence of such conflict [Aranya, Pollock, and Amernic, 1981; Blau, 1968] is that professionals tend to respond to authority
based on expertise whereas bureaucrats (organizationally committed individuals) tend to respond to the authority of the hierarchy. Conflict may also arise due to the organizational use of control systems which are different from, and potentially in conflict with, the control systems utilized by the profession [Aranya and Ferris, 1984]. Professionals are presumably governed by a code of ethics established and monitored by an external peer group. In a bureaucratic setting, the professional's behavior is controlled by directives issued by the employing organization. When the behavior elicited by the profession is consistent and compatible with the behavior elicited by the organization, conflict should not arise.

*Role Theory*

The lack of congruence or inconsistency between professional and organizational standards may produce the situation in which the individual professional is faced with inconsistency in the behavior expected of him or her. As indicated by Rizzo, House, and Lirtzman, role theory states that in such cases the individual will "experience stress, become dissatisfied, and perform less effectively than if the expectations imposed on him did not conflict" [1970, p. 151]. According to these authors, the role theory concept of role conflict is the result of the violation of the principle of chain of command and the principle of unity of command. Professional organizations and professional departments are highly subject to such violations due to the existence of a duality of authority and discipline. In
such organizations, authority and discipline exist not only in the form of organizationally sanctioned positional power but also in the form of professional expertise enforced by collegial authority.

Schuler, Aldag, and Brief describe role theory as "a framework in which to examine the behavior of individuals in organizations" [1977, p. 111]. Katz and Kahn view the concept of role "as the major means for linking the individual and organizational levels of research and theory; it [role] is at once the building block of social systems and the summation of the requirements with which such systems confront their members as individuals" [1978, p. 219]. Biddle [1979, p. 4] characterizes role theory as "the study of behaviors that are characteristic of persons within contexts and with various processes that produce, explain, or are affected by those behaviors."

The concept of role, according to Biddle and Thomas [1966], is the central idea in role theory. The idea behind the concept of role is that individuals occupy societal positions, and their role performance in these positions is determined by social norms, demands, and rules, by the role performances of others in their respective positions, and by the individual's particular capabilities and personality. Role reflects a doctrine of limited social determinism. Under such a doctrine, the "behavior of the individual is examined in terms of how it is shaped by the demands and rules of others, by their sanctions for his conforming and nonconforming behavior, and by the individual's own understanding and conceptions of what his behavior should be" [1966, p. 4].
Katz and Kahn [1978] outline the relationships which exist in relation to the role of the individual in an organization. In an organization the individual can be located in the total set of ongoing relationships and behaviors comprising the organization by determining the "office" held by that individual. Office in this sense refers to a particular point in the organizational space. Associated with each office is a set of activities or expected behaviors which constitute the role to be performed by the office incumbent. The occupants of the offices adjacent (either technologically in the work flow structure or organizationally in the hierarchy of authority) comprise the role-set of the particular role in question. Expected behaviors or role expectations exist in the minds of the members of the role-set and represent the standards for evaluation of the role incumbent's performance. The members of the role-set communicate the expected behaviors to the role incumbent through a "sent role." Through the means of this sent role, the members of the role-set attempt to influence the focal person (role incumbent) and bring about his conformity with the expectations of the senders. As Katz and Kahn [1978, p. 193] point out, "it is the sent role by means of which the organization communicates to each of its members the do's and don'ts associated with his or her office." The pressures which the members of the role-set direct at the occupant of the office are part of the focal person's objective environment. However, the focal person's compliance with the sent role depends on that person's perceptions of the sent role and that person's subjective or psychological perceptions of the role itself. The role sent through the influential and communicative acts of the role-set is
perceived by the person in the form of a "received role" which consists of the focal person's perceptions and cognitions of what was sent. It is that received role which is the immediate source of the focal person's motivation for role performance, but that motivation may not be identical to that intended in the sent role due to miscommunication or defensive distortion. The behavior based on the received role may be opposite or contrary to the sent role expectations if the focal person perceives the sent role expectations as illegitimate or coercive. Therefore, there may be deviations between sent role and received role which result in behavior that is not in accord with the expected behaviors. The sent role and received role do not, however, constitute the total set of determinants of the individual's work behavior.

Katz and Kahn identify a number of factors which may affect the focal person's role behavior in addition to the sent role and received role. The objective, impersonal properties of the situation itself may influence the role behavior of the individual. The individual may perform his or her role because of the objective demands of the situation. The individual may perform his or her role because he or she has been told that a certain activity is his or her job and the work situation itself provides a constant reminder of what he or she is supposed to do. In these cases, the individual responds to cues other than the communicated expectations of the role-set members.

The individual may also be viewed as a "self-sender" or a role-sender to himself or herself. This is especially true when there is an intrinsic satisfaction derived from the content of the role. The individual focal person "has a conception of the office
he or she occupies, and a set of attitudes and beliefs about what
should or should not be done by an occupant of that office" [Katz
and Kahn, 1978, p. 194]. This self-concept of the role may be
especially strong in the case where an individual may have
experienced a long period of formal training and socialization
where he or she acquires a set of values and expectations about
his or her own behavior and abilities and about the nature of
organizational membership. Such individuals may possess an
occupational self-identity and may be motivated to maintain and
enhance the valued attributes of that occupation. The particular
individual may belong to many organizations in addition to the
direct work situation organization. The full engagement of an
individual's personality is not found within any one organizational
setting in such cases. As Katz and Kahn suggest, "the
organizational role stipulates behaviors that imply only a
'psychological slice' of the person, yet people are not recruited
to organizations on this basis; willy-nilly the organization brings
within its boundaries the entire person" [1978, p. 46]. That "entire
person" may have strong beliefs and values concerning the role
which he or she is to fulfill in the organization. In such cases
there may be conflict between the sent role expectations and the
occupational self-identity of the individual involved.

The deviance between sent role expectations and individual
behavior based on a self-concept of what should or should not be
done by a role occupant is in essence the concept of
"person-role" conflict discussed by House and Rizzo [1972] and
person-role conflict as "the extent to which role expectations are
incongruent with the orientations or values of the role incumbent." Biddle [1979, p. 7] characterizes person-role conflict as the situation arising when "the role the person is asked to perform is inconsistent with his or her needs or basic values."

In cases where the expectations of the sent role differ from the values and beliefs of the focal person, conflict may develop due to the individual being "caught" between external expectations and internal values and beliefs. The focal person may be subject to the other forms of role conflict described by these authors, but the character and nature of those other forms differs from person-role conflict. Role overload results when the communicated expectations exceed the available time or resources for their accomplishment. Inter-sender role conflict results when expectations of different role-senders are incompatible. Intra-sender role conflict may exist when the expectations sent by one individual are incompatible. These other types of role conflict are primarily external to the individual focal person. Person-role conflict, however, is the result of the interaction of the external role-set and the individual's internal self-concept of the role.

Talcott Parsons [1951, p. 280] defined role conflict as "the exposure of the actor to conflicting sets of legitimized role expectations such that complete fulfillment of both is realistically impossible." Parsons suggested that in such cases, compromise is necessary in that there is either sacrifice of some of both sets of expectations, or one set is completely sacrificed in favor of the other. In either case, however, the actor is subject to conflict. Parsons suggests that there may be limited possibilities for
transcending the conflict by redefining the situation. However, of the four types of role conflict identified, redefining the situation would be most readily accomplished in situations of conflict due to role overload or incompatible external expectations. Load reduction and unification of external expectations should alleviate such conflict situations. In the case of person-role conflict, however, redefining the situation may not be possible. The legitimate role expectations of the role-set may be based on organizational objectives. The self-concept of the role held by the incumbent may be based on strongly held beliefs and values. Elimination of conflict between the two viewpoints may require changes in objectives, beliefs, and/or values rather than simply situation redefinition.

Jackson and Schuler [1985], in a meta-analysis of the empirical research on role conflict and role ambiguity, reach a number of conclusions based on the analysis of approximately one hundred research studies. These authors indicate, as do Mowday, Porter, and Steers [1982], that there is not yet a full understanding of the psychological processes that explain the observed correlation between commitment and role ambiguity and role conflict. However, the correlations between commitment and role conflict and ambiguity are consistently observed in empirical research. Jackson and Schuler suggest that commitment may partially determine the experienced levels of ambiguity and conflict. They reason that:
Employees who feel behaviorally committed to staying in an organization may be more concerned about succeeding within that organization and therefore exert more effort to learn about others' expectations, thereby reducing role ambiguity. Organizationally committed employees may also be less likely to question the values and goals of the organization, the result being less chance that they will experience person-role conflict. In contrast, professional commitment may have just the opposite effect [Jackson and Schuler, 1985, p. 41].

According to this reasoning, commitment may potentially determine the level of role conflict experienced by the individual. Organizational commitment may reduce conflict while professional commitment (for the individual in a nonprofessional organization) may increase conflict. Greene [1978, p. 487] made this same suggestion when he reasoned that "the individual identifying strongly with his or her profession and not the organization (the professional) would likely experience conflict and also feelings of alienation" in the industrial or nonprofessional organization. However, as Greene further indicates, "acceptance of organizational norms and values, regardless of commitment to profession should considerably reduce the potential for conflict and alienation in such organizations" [1978, p. 487]. Greene empirically tested these propositions and found them to be supported by the data examined.

Jackson and Schuler also suggest that role ambiguity and role conflict be regarded as separate constructs. Rizzo, House, and Lirtzman [1970] also suggest that the two concepts are separate dimensions. Jackson and Schuler [1985] point out that role ambiguity and role conflict impact organizations differently (a result supported by empirical observations). In examining role
conflict as a separate dimension, Jackson and Schuler suggest that the examination should distinguish among the various types of role conflict which have been empirically and theoretically identified. Their reasoning is that each type of role conflict may possess a unique relationship to the situational variables and to the particular outcomes.

Commitment as a Process

A number of authors [Abrahamson, 1965; Goode, 1957; Greenwood, 1957; Kornhauser, 1962; Larson, 1977; Scott, 1966; Wilensky, 1964] believe that the individual's professional commitment precedes and is more enduring than his or her organizational commitment. These authors suggest that professional commitment develops during the process of socialization into the profession and is manifested in the work expectations of the individual. As indicated by Aranya, Lachman, and Amernic [1982, p. 202], "professionals expect organizations to enable them to practice their profession and achieve professional goals." The extent to which an organization allows the professional to attain such goals may affect the individual's level of organizational commitment and the perceived level of organizational-professional conflict.

Miller and Wagner [1971] suggest that there are two types and locales for the socialization of the professional. The first type, professional socialization, occurs during the formal learning process in which the professional acquires the skills, attitudes, values, and knowledge relating to the profession. The second
type, organizational socialization, occurs when the professional leaves the formal educational environment and enters the organizational setting. That new setting may differ from the educational environment and require a new process of socialization. As suggested by Dornbusch [1955] and by Hastings and Hinings [1970, p. 363], "the permanence of values inculcated in a socialization setting can be affected by the degree of 'shock' experienced on leaving that setting." The existence of such a dynamic process is contrary to the idea that professional commitment (based on professional socialization) is more enduring than organizational commitment (which may be based on organizational socialization). Therefore, rather than the organization accommodating the professional by allowing the pursuit of professional goals, the situation may be that the professional accommodates the organization and pursues organizational goals. The extent to which the professional must accommodate the organization may affect the individual's perceived level of conflict.

Tuma and Grimes [1981] propose three mechanisms which generate the associations between the dimensions or attributes associated with a professional role. They identify the dimensions associated with a professional's role in an organization as: professional commitment, organizational commitment, organizational immobility (loyalty), external orientation, and concern with advancement. The three mechanisms which these authors suggest as accounting for the observed covariances between these dimensions are: cognitive congruence, organizational selection, and behavior feedback.
Cognitive congruence relates to the balance between an individual’s position on one dimension and his or her position on another dimension. In such cases, an individual’s position on one dimension would directly influence his position on another dimension in order to maintain the cognitive congruence (balance) between the two. For example, in the situation where professional and organizational goals are in conflict, a position of high commitment to professional goals would be congruent with a low organizational commitment.

Organizational selection deals with the unique associations which may arise in an organization due to emphasis by the organization on particular dimensions and the use of those dimensions in selecting and retaining members. Because organizations may differ in the dimensions which are used to select members, the associations between dimensions may vary across organizations. For example, if an organization highly values commitment to organizational goals and emphasizes that dimension in the selection and retention of members, the association between organizational commitment and professional commitment in that organization may be zero. If, however, an organization highly values commitment to both organizational and professional goals, that association between the two commitments will be positive in that organization.

Cognitive congruence assumes a relationship between dimensions which is presumed not to vary according to organizational context. Under such an assumption, role orientations are viewed as stable properties which do not change in response to opportunities within the organization and/or the
profession. The third mechanism described by Tuma and Grimes, behavioral feedback, relaxes this assumption. The concept of behavioral feedback is that an individual's position on one dimension will affect that individual's behavior which, in turn, influences his position on another dimension. Role orientations will therefore shift as the individual's opportunities to behave in particular ways vary. Either the organization or the profession may prompt behavior changes which shift the individual's position on various dimensions and the associations between these dimensions. As an example, Tuma and Grimes point to the association between professional commitment and external orientation. Presumably professional commitment fosters professional behavior such as more frequent contact with professional literature and professionals outside the organization. Such behavior increases external orientation and strengthens the association between the two dimensions. The organization itself may enhance this association if funds are provided to encourage professionals to participate in professional sessions or other activities [Tuma and Grimes, 1981].

Tuma and Grimes suggest that all three of the mechanisms they describe probably operate to some extent in determining the associations between the dimensions of role orientation. The resultant position of an individual on any given dimension is due to the individual and collective effects of all three mechanisms. Therefore, organizational commitment and professional commitment, as well as the outcomes of the relationship between the two commitments, are all part of a dynamic system of interacting variables. The individual, the organization, and the
profession are all sources of inputs which may affect changes in
the relationships between variables. As suggested by Flango and
Brumbaugh [1974], this view of the commitment-conflict process
as an open system of relationships necessitates a dynamic
structural model in order to examine that process.
CHAPTER III

MODEL SPECIFICATION, VARIABLE IDENTIFICATION, AND HYPOTHESES

In the following subsections, the proposed model will be described and specified. The variables included in the model will also be discussed. In each subsection dealing with a model variable, the previous empirical results relating to that variable are summarized and the theoretical basis for specification of that variable's relationship to other variables is provided. Also in each subsection there is a statement of the hypotheses to be tested in relation to that variable. Table 2 (located at the end of this chapter) provides a summarized listing of these hypotheses.

Proposed Model

The model proposed by this study is shown in Figure 1 below. Based on theoretical and empirical discussions and findings, the variables listed as antecedent characteristics are postulated to have specific relationships with professional commitment, organizational commitment, and organizational-professional conflict.
Table 1 below indicates the directionality (inverse or positive) of the relationships shown in the proposed model.

Table 1

<table>
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<tr>
<th>CHARACTERISTIC/VARIABLE</th>
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<th>ORGANIZATIONAL COMMITMENT</th>
<th>ORGANIZATIONAL-PROFESSIONAL CONFLICT</th>
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<td>+</td>
<td>-</td>
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<tr>
<td>Number of Degrees</td>
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<td>-</td>
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Discussion of the Model Variables

The following sections identify and discuss the various variables which are included in the proposed model. The first variables discussed are the variables relating to organizational commitment, professional commitment, and organizational-professional commitment. The second set of variables are those relating to the personal attributes or characteristics of the individual (age, educational level, professional memberships, professional certification, and tenure). The final set of variables are the characteristics of the organization or the structural attributes which may affect the relationships (formalization, centralization, hierarchical position, and organizational reward structure).

Organizational Commitment

Mowday, Porter, and Steers [1982, p. 21] report that a review of ten different studies of organizational commitment reveals ten widely divergent definitions of such commitment. These authors suggest "that no clear consensus exists with respect to construct definition." They do discuss three typologies, based on approaches by Etzioni [1961, 1964], Kanter [1968], and Staw [1980] and Salancik [1983], which address commitment.

Etzioni [1964] suggests that the power or authority that organizations have over individuals is based on the nature of the individual's involvement in the organization. Etzioni identifies three forms of involvement or commitment. First is moral involvement - based on the interaction of the organization's
goals, values, and norms and on an identification with authority. Second is calculative involvement - based on an exchange relationship developed between the individual and the organization. Third is alienative involvement - a negative orientation where individual behavior is severely constrained. Kanter [1968] also suggests three types of commitment. Kanter's first type is continuance commitment - the member's dedication to the survival of the organization. Second is cohesion commitment - an attachment to social relationships in the organization brought about by renunciation of previous ties or ceremonies which enhance group cohesion. The third type is control commitment - the individual's attachment to organizational norms that shape behavior in desired directions.

Staw [1980] and Salancik [1983] suggest the need to differentiate between commitment from an organizational behavior viewpoint (attitudinal viewpoint) and commitment from a social psychology viewpoint (behavioral viewpoint). Attitudinal commitment deals with the process through which the individual comes to identify with the goals and values of the organization and the individual's desire to maintain membership in the organization. Behavioral commitment, however, deals with the process through which the individual's past behavior binds that individual to the organization.

Mowday, Porter, and Steers suggest an interaction between attitudinal commitment and behavioral commitment. These authors suggest that organizational commitment "involves the relative strength of an individual's identification with and involvement in a particular organization" [1982, p. 27]. The
authors conceptually categorize commitment as: "(1) a strong belief in and acceptance of the organization's goals and values, (2) a willingness to exert considerable effort on behalf of the organization, and (3) a strong desire to maintain membership in the organization" [1982, p. 27]. Mowday, Porter, and Steers [1982] also suggest that commitment involves a notion of exchange through which individuals seek to find an environment in which they can use their abilities and skills to satisfy many of their basic needs.

The studies which address organizational commitment by individuals generally adopt the concept of commitment as outlined by Mowday, Porter, and Steers [Adler, 1984; Angle and Perry, 1982; Aranya, Pollock, and Amernic, 1981; Aranya and Ferris, 1984; Aranya, Lachman, and Amernic, 1982; Arnold and Feldman, 1982; Harrell, Chewning, and Taylor, 1986; Morris and Steers, 1980; Norris and Niebuhr, 1983; Porter and Steers, 1973]. The current study will also adopt that conceptualization of organizational commitment. The current study is an initial attempt to specify a more comprehensive model of commitment and conflict; therefore, due to the complexities involved in differentiating among moral, calculative, or alienative commitment, or among other specific forms of commitment, no direct attempt will be made to address such differentiation.

Professional Commitment

Professional commitment deals with the same factors and considerations as does organizational commitment but with the
object of commitment being a profession rather than an organization. Aranya and Ferris [1984, p. 8] suggest that both profession and organization are commitment objects, and "the concept of commitment is independent of any particular object."

Professional commitment involves identification with and involvement in a collegial group consisting of professionals primarily external to the given organization. Hall [1968, 1982] suggests that such an external group provides a major reference and source of norms and values for the individual professional. Professional commitment is usually characterized as the relative strength of identification with and involvement in a particular profession [Angle and Perry, 1981; Aranya, Pollock, and Amernic, 1981; Aranya and Ferris, 1984; Aranya, Lachman, and Amernic, 1982; Harrell, Chewning, and Taylor, 1986] and is categorized by the three factors utilized to categorize organizational commitment (with the profession rather than the organization viewed as the object of commitment).

Commitment may, therefore, be considered to be the construct of importance and the profession, the organization, or some other factor (such as family or political party) as the object of commitment. The current study will utilize this categorization of professional commitment based on the studies discussed above.

*The Relationship Between Organizational Commitment and Professional Commitment*

The empirical results concerning the relationship between organizational commitment and professional commitment are mixed. Sorensen's [1967] suggestion of a downward revision of
professional commitment coupled with increased organizational commitment on the part of public practice CPAs implies an inverse relationship. Other studies, however, [Aranya, Pollock, and Amernic, 1981; Aranya and Ferris, 1984; Norris and Niebuhr, 1983] report a strong positive relationship between the two commitments for such CPAs. Aranya, Lachman, and Amernic [1982] report the absence of a relationship between organizational commitment and professional commitment for accountants in non-professional (industrial) settings. Harrell, Chewning, and Taylor [1986] report an "unanticipated" positive relationship between the two commitments in their study of internal auditors. The only discernable commonality between these results is that organizational setting may impact the relationship.

Gouldner's [1957, 1958] original construct suggests an inverse relationship between organizational commitment and professional commitment. Glaser [1963], however, suggests that the cosmopolitan and local orientations are two dimensions of orientation possessed by each individual with organizational structure being the activator of the appropriate dimension at the proper time and place. Ritzer and Trice [1969] suggest that the individual may be "tied" to the organization in situations where the organization is the necessary locale for the practice of the profession. These authors also suggest that a particular vocation may be in part professional and in part bureaucratic.

Internal auditing is, as described by the suggestions of Ritzer and Trice [1969], part professional and part bureaucratic. The individual professional must practice the profession within the
confines of a structured organization. The individual will be subjected to potentially differing sets of expected behaviors due to this situation. Kast and Rosenzweig [1974, p. 293] suggest that the individual "must somehow develop order out of chaos, rank the various demands on his behavior, and develop a system of trade-offs which allows him to decide that 'on balance' he should behave in a certain way at a particular time."

Under the assumption that the individual will commit to the area where he or she perceives the greater overall rewards at the expense of the other [an assumption based on the suggestions of Grusky [1966] and Hrebeniak and Alutto [1972]] and the argument that the individual will act in a manner so as to reduce conflict [order out of chaos as suggested by Kast and Rosenzweig], the model proposed here postulates an inverse relationship between organizational commitment and professional commitment. Such a relationship is supported by the idea that increased professional commitment may lessen the side bets associated with organizational membership while increased organizational commitment may lessen the side bets associated with the pursuit of professional objectives. These considerations lead to the following hypothesis which is examined in the test of the model:

H1: There is an inverse relationship between the individual's level of professional commitment and the individual's level of organizational commitment.
Due to the statistical methods utilized in this study (as subsequently discussed in Chapter IV), the above stated research hypothesis, and all following hypotheses, implicitly addresses only direct relationships between variables. The path analysis procedure utilized in this study requires differentiation between direct and indirect relationships. Statistical tests are possible only for direct relationships (see Chapter IV). Therefore, only direct relationships are implied in the hypotheses stated in this chapter.

Organizational-Professional Conflict

A number of authors identify organizational-professional conflict as the inherent outcome of the coexistence of organizational commitment and professional commitment [Blau and Scott, 1962; Corwin, 1967; Gouldner, 1957; Kornhauser, 1962; Schroeder and Imdieke, 1977; Scott, 1966; Sorensen, 1967; Sorensen and Sorensen, 1974; Watson, 1975]. The coexistence of the two commitments occurs when a professional performs his or her professional task within a bureaucratic organization as an employee. As Sorensen [1967, p. 551] indicates, "if an individual is expected to behave as a 'professional' and as an 'employee' (more broadly a bureaucrat) at the same time, he may experience a conflict in selecting which behavior to follow."

In situations where the values and goals of the profession differ from the values and goals of the organization, the individual may face a conflict situation if an attempt is made to internalize the goals of both. Blau and Scott [1962] suggest that conflict
between professional goals and values and organizational goals and values is conceptually inherent due to the difference in social control between a profession and an organization. Social control of a professional derives from the period of training and socialization of the professional and from the external surveillance of the professional's conduct by his peers. Control within the bureaucratic organization, however, is vested in a hierarchy of authority. Blau and Scott suggest that a professional may react to such conflict by retaining a high professional orientation and seeking social support from external professional colleagues or may become more organizationally oriented and seek the approval of internal administrative superiors [Blau and Scott, 1962].

House and Rizzo [1972] and Miles and Perrault [1975] identify one form of role conflict, person-role conflict, as "the extent to which role expectations are incongruent with the orientations or values of the role incumbent" [Miles and Perrault, 1975, p. 22]. Biddle [1979, p. 7] characterizes person-role conflict as the situation arising when "the role the person is asked to perform is inconsistent with his or her needs or basic values." If the individual has internalized a set of values (professional or organizational) but the role expectations of his office (from either the profession or the organization) require the deviation from those values, that individual may be subject to person-role conflict in the form of organizational-professional conflict.

An individual who has dual status as a professional and as an employee and who is faced with differences between the goals,
norms, and values of the organization and those of the profession, is subject to conflict. That conflict may be viewed as conflict between the role expectations fostered by the profession and the role expectations fostered by the organization. In some cases, the conflict may be categorized as person-role conflict. Therefore, as suggested by Benson [1973], Sorensen [1967], and Senatra [1980] organizational-professional conflict and role conflict shall be viewed as conceptually identical for purposes of this study.

Under the circumstances previously described where professional norms and standards are potentially incompatible with organizational norms, standards, and/or practices, conflict between the two sets of norms is expected. However, there may be circumstances in which professional and organizational norms and standards are compatible. Therefore, rather than viewing organizational-professional conflict as absolutely inherent or inevitable, the view must be that conflict exists to a lesser or greater degree depending on the particular circumstances.

Where conflict does exist between professional and organizational norms, goals, and standards, the individual auditor will, to the extent of that conflict, be in a role conflict situation. The relative degree of such conflict may be directly related to the relative degrees of professional commitment and organizational commitment on the part of the auditor. An auditor with relatively high professional commitment may perceive a situation of high organizational-professional conflict when faced with a certain situation. An individual with less professional commitment may perceive a lesser degree of conflict under the same conditions.
The individual with the higher level of professional commitment has, assumedly, internalized to a greater extent the standards of the profession and is subject to greater person-role conflict. Due to this circumstance, the model proposed here assumes a direct positive relationship between professional commitment and organizational-professional conflict.

An individual with a high degree of organizational commitment, when faced with circumstances which indicate conflict between professional and organizational standards or norms, may perceive the conflict as being inconsequential. Such an individual may perceive professional standards or norms as being less pertinent than are organizational standards or norms. An individual with high organizational commitment may be content to carry out his or her activities according to the expectations of the organization rather than those of a profession. Such an approach will lessen the severity of perceived conflict in circumstances where standards differ. Therefore, the model proposed here postulates an inverse relationship between organizational commitment and organizational-professional conflict. This relationship is consistent with the findings of Fisher and Gitelson [1983] and Jackson and Schuler [1985] who, based on meta analyses, respectively, of 43 and 96 studies of role conflict, report a significant inverse relationship between organizational commitment and role conflict.

The relationships postulated in the model proposed here lead to the following hypotheses which are examined in the test of the model:
H2: There is a positive relationship between the individual's level of professional commitment and the individual's perceived level of organizational-professional conflict.

H3: There is an inverse relationship between the individual's level of organizational commitment and the individual's perceived level of organizational-professional conflict.

Age


Theoretically, the relationship between age and commitment is explained by Becker's [1960] theory of side bets. Ritzer and Trice [1969, p. 470] categorize age as "the best single indicator" of the number of prior actions of a person staking something of value in his employing organization. The older the individual, the larger number of side bets that individual has made and the higher his or her level of commitment to the organization. Age itself is a side bet, according to Ritzer and Trice, due to society "frowning of the idea of a job-hopping sixty year old" [1969, p.
476]. This line of reasoning may also be applied to the relationship between age and professional commitment. The older professional may have made a larger number of side bets in relation to the profession than has the younger professional. Adler and Aranya [1984] report a positive relationship between age and professional commitment for a sample of accountants and suggest that the older individual is more committed to his or her field. The proposed model, therefore, includes a positive relationship between age and both professional and organizational commitment and an inverse relationship between age and conflict. This leads to the following hypotheses which are examined in the test of the model:

H4: There is a positive relationship between the individual's age and the individual's level of professional commitment.

H5: There is a positive relationship between the individual's age and the individual's level of organizational commitment.

H6: There is an inverse relationship between the individual's age and the individual's level of organizational-professional conflict.

Level of Education

Jackson and Schuler [1985] cite six studies in which a positive relationship between role conflict and educational level are reported. Morris, Steers, and Koch [1979] report a significant positive relationship between education and role conflict. The results reported by Corwin [1961] and those reported by Hellriegel and White [1973] for a sample of accountants suggest a positive relationship between educational level and professional commitment.

Theoretically, an inverse relationship between educational level and organizational commitment is expected. Gouldner's [1957] basic cosmopolitan concept is based on the existence of an expert possessing a high degree of skill in a particular area. Such an individual will tend, according to the cosmopolitan-local construct, to be less organizationally committed. Increased education makes the individual less dependent upon the particular organization and therefore less committed to that organization. Steers suggests that in the case of individuals who have higher levels of education, the organization may not be able to provide sufficient rewards. Therefore, the more highly educated individual (who also tends to be more cosmopolitan) will "be less committed to the organization and perhaps more committed to a profession or trade" [1977, p. 53]. The more highly educated individual should also be more professionally committed than are individuals with lesser education due to a longer period of professional socialization.

In situations where the professional and organizational standards conflict, the expectation would be that role conflict would be high. The higher educated individual has, according to
the concept of socialization, internalized to a greater extent the standards and norms of behavior of the profession. Such an individual may be more sensitive to person-role conflict when faced with circumstances in which professional and organizational expectations differ. Therefore, the expectation is that the individual's level of education will be positively related to the role conflict.

These relationships concerning educational level are included in the model and tested by examination of the following hypotheses:

H7: There is a positive relationship between the individual's level of education and the individual's professional commitment.

H8: There is an inverse relationship between the individual's level of education and the individual's organizational commitment.

H9: There is a positive relationship between the individual's level of education and the individual's perceived level of organizational-professional conflict.

Professional Memberships

Harrell, Chewning, and Taylor [1986] report a direct and positive relationship between membership in the Institute of Internal Auditors and both professional commitment and organizational-professional conflict. A positive relationship between professional memberships and professional commitment is expected in accordance with the attributes of professionalism. One attribute of professionalism is that the professional seeks association with his professional colleagues [Hall, 1968]. Membership in the Institute of Internal Auditors provides such association. The positive relationship is expected in part due to
the concept of behavioral feedback described by Tuma and Grimes [1981]. Professional commitment fosters professional behavior which normally includes an association with other professionals. Such an association may act as a stimulus to increase professional commitment. Therefore, there is a strong positive relationship between professional memberships and professional commitment.

Membership in professional organizations presumes internalization, to some extent, of professional norms and standards. Such internalization may increase the opportunities for conflict situations in the individual’s organizational activities by providing the professional with an available set of professional standards against which organizational practices and norms may be compared. Such a situation may lead to the professional being more sensitive to potential conflict situations. Therefore, a positive relationship between professional memberships and conflict is expected.

Professional memberships may create a situation through which the individual becomes less dependent upon the particular organization for both intrinsic and extrinsic rewards. Recognition by fellow members of the profession may replace organizational recognition in importance. Contact with fellow professionals external to the individual’s current work organization may make the individual aware of opportunities available in other work organizations. Due to these considerations, an inverse relationship is postulated between professional memberships and organizational commitment.
These relationships concerning professional memberships are included in the proposed model and are examined through the following hypotheses:

H10: There is a positive relationship between the individual's membership in professional organizations and the individual's professional commitment.

H11: There is an inverse relationship between the individual's membership in professional organizations and the individual's organizational commitment.

H12: There is a positive relationship between the individual's membership in professional organizations and the individual's perceived level of organizational-professional conflict.

Professional Certification

Professional certification is not specifically addressed in the studies concerning commitments and conflict. However, the same theoretical arguments concerning the relationship between professional memberships and professional commitment may be salient to the relationship between professional certification and professional commitment. Professional certification may be viewed as an outward indication of professional commitment. The relationship may also be viewed in relation to Becker's [1960] theory of side bets. The individual who has achieved a professional certification has invested effort and possibly money in that certification. The expectation would be that such an investment or side bet would lead to a higher level of professional commitment. Professional certification involves the individual in the process of professional socialization. Such socialization is expected to increase the individual's professional commitment. Therefore, professional certification is included in the model with
the expectation that such certification is positively related to professional commitment and positively related to organizational-professional conflict. The expected relationship between certification and organizational commitment is an inverse relationship under the assumption that certification makes the individual less dependent upon the current organization. The certified individual gains recognition as a professional with professional skills which may be readily applicable to organizations beyond the current employment organization.

These relationships concerning professional certification are included in the proposed model and are examined through the following hypotheses in the test of that model:

H13: There is a positive relationship between the individual’s professional certification and the individual’s professional commitment.

H14: There is an inverse relationship between the individual’s professional certification and the individual’s organizational commitment.

H15: There is a positive relationship between the individual’s professional certification and the individual’s perceived level of organizational-professional conflict.

Tenure


Theoretically, tenure should exhibit a positive relationship to organizational commitment in accordance with Becker's [1960] concepts. The longer the individual is employed in the particular organization, the higher "investment" the individual has in that organization. The same reasoning applies to the relationship between tenure and professional commitment. The individual who has been practicing the profession for a longer period has a higher level of investment in that profession and, presumably, a higher commitment to that profession. The longer period of behavioral feedback associated with the longer period of practice supports this relationship. In the case where conflict situations arise between professional standards and organizational practices, the increased organizational and professional commitments associated with tenure would be concomitant with increased role conflict. Harrell, Chewning, and Taylor [1986]
indicate support for this relationship when they report a positive relationship between tenure and organizational-professional conflict.

The following hypotheses are examined in testing the proposed model based on these suggestions regarding tenure:

**H16:** There is a positive relationship between the individual's organizational tenure and the individual's professional commitment.

**H17:** There is a positive relationship between the individual's organizational tenure and the individual's organizational commitment.

**H18:** There is a positive relationship between the individual's organizational tenure and the individual's perceived level of organizational-professional conflict.

**Hierarchical Position**

[Aranya, Pollock, and Amernic, 1981; Aranya and Ferris, 1984] report an inverse relationship between hierarchical position and the level of perceived organizational-professional conflict. Two studies report an inverse relationship between position and role conflict [Hamner and Tosi, 1974; Rizzo, House, and Lirtsman, 1970], but Jackson and Schuler [1985] suggest that there is no empirical or theoretical support for this relationship.

Following Becker's theory of side bets, individuals occupying higher levels in the organizational hierarchy should indicate increased levels of organizational commitment. The increased attachment of the higher level individual to the organization may be prompted by higher levels of monetary and perquisite rewards and/or increased influence and power in the organization. These factors may not be attainable by the individual in organizations outside the present organization.

The studies which indicate a positive relationship between hierarchical position and professional commitment are studies involving autonomous professional organizations where the assumption is made of congruence between organizational and individual professional goals. In the case of professional departments, this assumption may not hold; therefore, the relationship between hierarchical position and professional commitment may be dependent upon organizational type.

The explanation of the inverse relationship between position and organizational-professional conflict [Aranya, Pollock, and Amernic, 1981] is that higher level individuals may be able to take steps to reduce organizational-professional conflict or may be less sensitive to such conflict than are lower position incumbents.
This reasoning may also explain Lengermann's conclusions regarding autonomy and the observed inverse relationships between hierarchical position and role conflict.

Salancik [1983, p. 205] suggests that "any characteristic of a person's job situation which reduces felt responsibility will reduce his commitment." As the individual increases in hierarchical rank, he or she may become, in the case of the skilled professional, less professionally task responsible and increasingly organizationally management responsible [Kerr, VonGlinow, and Schriesheim, 1977]. In such cases organizational commitment may increase due to behavioral feedback, and professional commitment may decrease due to lessened professional responsibility. Sorensen and Sorensen [1974] suggest a downward revision of professional expectations with higher rank. Such a lessening of professional responsibility and professional commitment may create the situation in which the individual is less sensitive to conflict between professional standards and organizational practices. Such a condition of lessened sensitivity may result in lessened role conflict.

These considerations lead to the following hypotheses which are examined in the test of the model:

H19: There is an inverse relationship between the individual's position in the organizational hierarchy and the individual's professional commitment.

H20: There is a positive relationship between the individual's position in the organizational hierarchy and the individual's organizational commitment.

H21: There is an inverse relationship between the individual's position in the organizational hierarchy and the individual's perceived level of organizational-professional conflict.
Formalization

Rogers and Molnar [1976, p. 600] describe formalization as "the degree to which organizational goals and means of achieving them are written." Senatra [1980, p. 596] defines formalization as "the degree to which performance standards, standard practices, policies, and position responsibilities are formalized explicitly." According to these definitions, a highly formalized organization has goals, procedures, and instructions written in detail and communicated in writing to organizational members. Hall, however, takes the position that "it usually doesn't matter whether the procedures or rules are formalized in writing" [1982, p. 97]. He argues that unwritten norms and standards may be as binding on the individual as are those which are written.

A number of authors [Aiken and Hage, 1966; Greene, 1978; Hall, 1972] suggest formalization as a source of alienation and conflict for professionals. Hall [1982, p. 108] suggests that for professionals "the greater the degree of formalization in the organization, the greater the likelihood of alienation from work." These suggestions are based on the idea that organizational formalization serves the same role defining purpose as do professional norms and values. But Greene [1978, p. 487] points out that organizational formalization "seems less valid to the professional and sometimes conflicts with professional norms." Schriesheim, VonGlinow, and Kerr [1977] suggest that the professional's autonomy demands may conflict with the network of written rules and procedures which exists in the formalized organization.
Studies by both Organ and Greene [1981] and by Morris and Steers [1980] report empirical findings indicating a positive relationship between formalization and organizational commitment. Organ and Greene suggest that formalization provides a basis for identification with the organization. The role-relevant expectations communicated by the presence of rules and procedures provides the individual with an indication of the behavior which is expected by the organization. Through the process of behavioral feedback, adherence to such rules and procedures leads to organizationally oriented behavior which enhances the organizational commitment of the individual. Morris and Steers argue that the presence of operationally useful rules and regulations enhances the individual's perception of organizational dependability, and organizational dependability is, according to Buchanan [1974], linked to organizational commitment. An organization that is considered dependable will provide the individual with reduced risk involving the side bets which may be in place due to organizational membership.

Increased formalization, through the utilization of rules and procedures, may result in reduced professional responsibility. A basic professional characteristic [Scott, 1966] is that the professional "expects to be allowed maximum discretion in the selection of means for achieving desired results, being constrained in his operations only by internalized norms which indicate acceptable procedures." The professional, therefore, has the professional responsibility for selection of means to accomplish his or her tasks. Formalization may severely limit the professional's choice of means and may substitute standard
procedures for reliance on professional expertise in task accomplishment. According to Salancik's [1983] theory, reduced responsibility may lead to reduced commitment. A professional faced with a high degree of formalization may experience reduced professional responsibility for task accomplishment which may lead, according to the theory, to reduced professional commitment.

As indicated by Morris, Steers, and Koch [1979], structural properties, such as formalization, are used by organizations as a means of conveying formal, role-relevant expectations to the role incumbent. A high degree of formalization may communicate to the professional that reliance on rules and standard practices is expected rather than reliance on professional expertise and innovation. The presence of such an expectation in the organizational socialization system may lead to reduced professional commitment on the part of the professional.

Hall [1963, p. 33] describes two of the dimensions of bureaucracy as: (1) "a system of rules covering the rights and duties of positional incumbents and (2) a system of procedures for dealing with work situations." Therefore, formalization may be viewed in part as the bureaucratization of the organization. Scott [1966] identifies the professional's resistance to bureaucratic rules and procedures as a major source of role conflict for professionals in the bureaucratic setting. Hall [1968] indicates a strong inverse relationship between professional autonomy and bureaucratic rules and procedures. Organ and Greene [1981] and Greene [1978] both report a positive relationship between formalization and role conflict where professionals are involved.
Jackson and Schuler [1985] reason that these results are due to the differences between the behaviors encouraged by professional norms and the behaviors being encouraged by formalized organizational norms. Organ and Greene [1981] argue that although formalization may reduce role ambiguity, formalization increases role conflict in cases where discrepancies exist between professional norms and organizational requirements.

In a study dealing with public practice CPAs, Senatra [1980] observed an inverse relationship between formalization of rules and procedures and the level of role conflict perceived by individual professionals. Senatra indicates that in the case of CPA firms, rules and procedures exist external to the organization which specify organizational behavior. He reasons that internal formalization, in writing, of these external rules and procedures would decrease the level of role conflict. In such circumstances, the collegial rules and procedures are being internalized by the organization as well as by the individual professional. Such dual internalization may account for the inverse relationship between formalization and conflict as reported by Senatra. However, in other cases the presence of a system of highly formalized rules, procedures, and practices may impinge upon the professional's autonomy, expertise, and objectivity. Such a situation may increase the circumstances under which role conflict will occur. The model specified here, therefore, anticipates a positive relationship between formalization and organizational-professional conflict.
These suggested relationships lead to the following hypotheses:

H22: There is an inverse relationship between the degree of formalization in the organization and the individual's level of professional commitment.

H23: There is a positive relationship between the degree of formalization in the organization and the individual's level of organizational commitment.

H24: There is a positive relationship between the degree of formalization in the organization and the individual's perceived level of organizational-professional conflict.

Centralization

According to one definition, centralization is "the locus of decision making authority within an organization" [Van de Ven and Ferry, 1980, p. 399]. Hall views centralization as "the power distribution in an organization that is determined in advance by the organization" [1982, p. 125]. Hall identifies the right to make decisions as the most obvious aspect of centralization. If decisions are made at the "top", the organization is considered to be centralized. A second aspect of centralization involves the evaluation of activities. In situations where "evaluation is carried out by people at the top of the organization, there is centralization, regardless of the level at which decisions are made" [1982, p. 115]. In Hall's view, "the degree of centralization of an organization indicates its view of its personnel" [1982, p. 115]. If the organization is centralized, "the personnel are not trusted to make decisions or evaluate themselves. Less centralized situations indicate a greater willingness to permit the
personnel to carry out their activities in a more autonomous way" [1982, p. 115].

Aiken and Hage [1966, p. 497] define centralization as "the degree to which members participate in decision making." Pugh et. al. define centralization as "the locus of authority to make decisions affecting the organization" [1963, p. 291]. Hage and Aiken [1967] view centralization as the manner in which power is distributed among social positions and operationalize the concept as: (1) participation in decision making regarding resource allocation and policy determination, and (2) the degree to which individuals are allowed to make their own work decisions without reliance upon superordinates.

Morris and Steers [1980] define decentralization (the antithesis of centralization) as the perceived participation by the individual in the decision making process. These authors suggest that "the literature on perceived decentralization or participative decision making consistently points to increased employee involvement and attachment resulting from decentralization" [1980, p. 55]. They also suggest, in accordance with Vroom's [1960] suggestions, that "greater participation in decision making leads to employees becoming more ego involved in their work and work related outcomes" [1980, p. 56]. These authors report a statistically significant positive relationship between organizational commitment and perceived decentralization.

Hage and Aiken [1967] report empirical support for a significant inverse relationship between the degree of centralization and the degree of complexity in the organization. In their study, however, the degree of complexity in the organization
was operationally defined as: (1) the number of occupational specialties in the organization, (2) the amount of professional activity on the part of organizational members, and (3) the professional training possessed by the members. Due to this operationalization of complexity as a function of professionalism, this finding lends support to the idea that professional activity and centralization are inversely related. This idea is supported by Lincoln and Zeitz [1980] who report that individual professionals desire and achieve participation in decision making (an achievement difficult under a centralized organization). Hage [1965] reports that a concentration of professionals generally leads to decentralization.

These suggestions of inverse relationships between professional commitment and organizational centralization are in keeping with Salancik's [1983] suggestions regarding reduced commitment in the presence of reduced responsibility. Centralization decreases the decision making responsibility of the individual professional. Such a reduction, according to Salancik's arguments, tends to lessen commitment. Therefore, an inverse relationship is expected between the individual's level of professional commitment and the degree of organizational centralization.

Centralization is an organizational attribute which is the antithesis of professional autonomy. For the professional who is a part of a highly centralized organization, the organizational socialization process described by Miller and Wagner [1971] may result in the lowering of the individual's desired level of
autonomy. In such cases professional commitment would be decreased.

As indicated by Hall [1982, p. 115], a decentralized situation allows the organizational member to carry out his or her activities in a more autonomous manner than will a highly centralized situation. Given that professional autonomy is "one of the most basic and valued characteristics of a professional occupation" [Lengermann, 1971, p. 665], professionally committed members of an organization would be expected to experience less conflict in a decentralized situation than in a centralized situation.

Fisher and Gitelson [1983] in a meta analysis of 43 studies of the relationships between role conflict, role ambiguity, and the eighteen most frequently researched correlates of these factors conclude that role conflict is negatively related to the degree of participation in decision making. They suggest that the negative relationship between conflict and participation in decision making is reasonably expected "if participation affords an opportunity to clarify expectations, negotiate away conflicting demands, and/or substitute self-supplied role expectations for possibly conflicting or ambiguous other-supplied expectations" [1983, p. 328].

Jackson and Schuler [1985], in their meta analysis of 96 studies of role conflict and role ambiguity, support this conclusion with their own conclusion that the research generally supports the hypothesis that higher levels of participation in decision making (decentralization) leads to lowered role conflict. Morris, Steers, and Koch [1979, p. 66] report a significant inverse relationship between participation in decision making and role conflict for professional employees. Therefore, if participation in decision
making is viewed as a major aspect and element of the concept of centralization (a viewpoint congruent with the previously discussed definitions of centralization), the expectation would be that centralization is positively related to conflict. Where professionals are involved in an organization, that conflict may be viewed as conflict between the professional's desire for autonomy and a highly centralized organization's attempt to control its members and would be manifest in organizational-professional conflict. The model proposed here, therefore, postulates a positive relationship between centralization and organizational-professional conflict.

These relationships between centralization, commitment, and conflict lead to the following hypotheses:

H25: There is an inverse relationship between the degree of organizational centralization and the individual's professional commitment.

H26: There is an inverse relationship between the degree of organizational centralization and the individual's organizational commitment.

H27: There is a positive relationship between the degree of organizational centralization and the individual's perceived level of organizational-professional conflict.

**Professional Criteria in Promotion**

A number of authors [Bartol, 1979; Blau and Scott, 1962; Hall, 1968; Kerr, von Glinow, and Schriesheim, 1977; Schein et. al., 1965; Stevens, Beyer, and Trice, 1978] suggest a relationship between the basis for organizational rewards and both types of commitment. Schein et. al. [1965, p. 347] suggest that the individual's commitment style "may reflect his perception of
whatever activity is rewarded by the organization, and that his latent identification may be a reflection of the organizational reward structure." Hrebeniak and Alutto [1972] report an inverse relationship between commitment and the degree of dissatisfaction with organizational reward and recognition policies. These authors suggest that their data indicate that an individual's commitment varies as a function of the organizational reward structure. Stevens, Beyer, and Trice [1978] report a significant positive correlation between the use of technical skills and performance as the basis for promotion and both organizational and occupational (professional) commitment.

Bartol [1979, p. 820] reports that her data indicate that for professionals "the extent to which the actual reward system was perceived as using professional criteria was positively related to organizational commitment." Both Bartol and Hrebeniak and Alutto suggest that professionals will have stronger organizational commitment in organizations where they perceive the reward system as giving significant weight to professional behavior. Stevens, Beyer, and Trice [1978] suggest that if non-professional criteria, such as seniority, is the basis for promotion, then the emphasis on professional achievement would be diluted and commitment would be weakened. Bartol [1979, p. 816] suggests that the compatibility between professionalism and the organization "may depend on the organization's willingness to reward professional behavior."

In cases where the organization rewards the individual for professional behavior, the concept of behavioral feedback [Tuma and Grimes, 1981] would suggest that both professional
commitment and organizational commitment would be strengthened by such a reward system. Professional commitment would be increased due to the anticipated rewards for exhibiting professional behavior. The professional would experience higher organizational commitment in such situations because the organization would be providing rewards based on professional criteria. Blau and Scott [1962] suggest that an organizational reward system which reinforces technical contribution and the values associated with commitment to professional skills will provide these positive associations.

Bartol [1979] reports that in situations where professionals perceive the reward system as utilizing professional criteria as the basis for rewards there is a significant inverse relationship between that perception and role conflict. The concepts of role theory suggest this relationship. If the sent-role places high value on professional behavior (as evidenced by a reward system which rewards professional behavior), then the individual professional would be less subject to conflict between professional and organizational norms and standards. Higher role conflict, in the form of organizational-professional conflict, is expected in cases where the organizational reward system utilizes non-professional criteria in rewarding professionals.

These expectations lead to the following hypotheses:

H28: There is a positive relationship between the organization's use of professional criteria in its promotion system and the individual's level of professional commitment.

H29: There is a positive relationship between the organization's use of professional criteria in its promotion system and the individual's level of organizational commitment.
H30: There is an inverse relationship between the organization's use of professional criteria in its promotion system and the individual's perceived level of organizational-professional conflict.
Table 2
Research Hypotheses

H1: There is an inverse relationship between the individual's level of professional commitment and the individual's level of organizational commitment.

H2: There is a positive relationship between the individual's level of professional commitment and the individual's perceived level of organizational-professional conflict.

H3: There is an inverse relationship between the individual's level of organizational commitment and the individual's perceived level of organizational-professional conflict.

H4: There is a positive relationship between the individual's age and the individual's level of professional commitment.

H5: There is a positive relationship between the individual's age and the individual's level of organizational commitment.

H6: There is an inverse relationship between the individual's age and the individual's level of organizational-professional conflict.

H7: There is a positive relationship between the individual's level of education and the individual's professional commitment.

H8: There is an inverse relationship between the individual's level of education and the individual's organizational commitment.

H9: There is a positive relationship between the individual's level of education and the individual's perceived level of organizational-professional conflict.

H10: There is a positive relationship between the individual's membership in professional organizations and the individual's professional commitment.

H11: There is an inverse relationship between the individual's membership in professional organizations and the individual's organizational commitment.
H12: There is a positive relationship between the individual's membership in professional organizations and the individual's perceived level of organizational-professional conflict.

H13: There is a positive relationship between the individual's professional certification and the individual's professional commitment.

H14: There is an inverse relationship between the individual's professional certification and the individual's organizational commitment.

H15: There is a positive relationship between the individual's professional certification and the individual's perceived level of organizational-professional conflict.

H16: There is a positive relationship between the individual's organizational tenure and the individual's professional commitment.

H17: There is a positive relationship between the individual's organizational tenure and the individual's organizational commitment.

H18: There is a positive relationship between the individual's organizational tenure and the individual's perceived level of organizational-professional conflict.

H19: There is an inverse relationship between the individual's position in the organizational hierarchy and the individual's professional commitment.

H20: There is a positive relationship between the individual's position in the organizational hierarchy and the individual's organizational commitment.

H21: There is an inverse relationship between the individual's position in the organizational hierarchy and the individual's perceived level of organizational-professional conflict.

H22: There is an inverse relationship between the degree of formalization in the organization and the individual's level of professional commitment.
H23: There is a positive relationship between the degree of formalization in the organization and the individual's level of organizational commitment.

H24: There is a positive relationship between the degree of formalization in the organization and the individual's perceived level of organizational-professional conflict.

H25: There is an inverse relationship between the degree of organizational centralization and the individual's professional commitment.

H26: There is an inverse relationship between the degree of organizational centralization and the individual's organizational commitment.

H27: There is a positive relationship between the degree of organizational centralization and the individual's perceived level of organizational-professional conflict.

H28: There is a positive relationship between the organization's use of professional criteria in promotions and the individual's level of professional commitment.

H29: There is a positive relationship between the organization's use of professional criteria in promotions and the individual's level of organizational commitment.

H30: There is an inverse relationship between the organization's use of professional criteria in promotions and the individual's perceived level of organizational-professional conflict.
CHAPTER IV

PROCEDURES UTILIZED FOR DATA MEASUREMENT, GATHERING, TESTING, AND ANALYSIS

The model of the relationships outlined in Chapter III was tested and analyzed using data gathered from internal auditors. The initial sections of this chapter contain discussions of how the variables were measured and how the data were obtained. The middle sections of this chapter contain a discussion of the procedure used to test the hypothesized relationships and identify those which are significant. The final sections of this chapter contain the discussions of the procedures utilized in order to analyze the relationships and eliminate non-significant effects. The actual results of the statistical tests, the analysis of the outcomes, and the revisions of the modeled relationships are discussed in detail in Chapter V.

Measurement of Variables

The following subsections discuss the procedures and methods used to operationally measure the variables included in the hypothesized relationships which were discussed in Chapter III.
Measurement of Organizational Commitment in Prior Studies

There are two scales which are the most used to determine the individual's level of organizational commitment. The first is a set of 15 questions developed by Porter, Steers, Mowday, and Boulian [1974]. This scale is based on the conceptualization of commitment as a state of identification with a particular organization and its goals and a desire to maintain membership in the organization in order to facilitate those goals [Mowday, Porter, and Steers, 1982]. This scale is widely used [Adler and Aranya, 1984; Angle and Perry, 1981; Arnold and Feldman, 1982; Dubin, Champoux, and Porter, 1975; Harrell, Chewning, and Taylor, 1986; Morris and Steers, 1980; Mowday, Porter, and Steers, 1982; Norris and Niebuhr, 1983; Porter and Steers, 1983; Steers, 1977]. For this scale, respondents are asked to express their agreement with various statements according to a seven point scale ranging from "definitely agree" to "definitely disagree." Ferris and Aranya [1983] in an evaluation of the scale indicate that the 15 items emphasize the respondent's moral involvement with the organization.

The other frequently used scale was developed by Hrebiniak and Alutto [1972]. That scale measures the individual's calculative involvement with the organization [Ferris and Aranya, 1983]. This scale requires the respondent to indicate his or her willingness to leave the organization under conditions of "no," "slight," or "large" increases in factors such as pay, freedom to be professionally creative, status, and co-worker friendliness [Ferris and Aranya, 1983]. This scale has been used in fewer

The alpha values for the Porter et. al. scale are consistently in the range of .90 to .92, and the alpha values for the Hrebiniak and Alutto scale are approximately the same. Ferris and Aranya, in their evaluation of the two scales, suggest that the Porter et. al. scale is "a more efficient measure of organizational commitment" [1983, p. 96]. Therefore, due to this suggested higher efficiency, the extensive use of the scale in the research relating to accounting, and the need to remain consistent with the measures of professional commitment (to be discussed subsequently), a modification and adaptation of the Porter et. al. scale, as subsequently discussed, is utilized in this study.

Measurement of Professional Commitment in Prior Studies

The measure of professional commitment most utilized in the literature [Adler and Aranya, 1984; Alutto, Hrebiniak, and Alonso, 1973; Aranya and Jacobson, 1975; Aranya, Pollock, and Amernic, 1981; Aranya and Ferris, 1984; Aranya, Lachman, and Amernic, 1982; Ferris and Aranya, 1983; Ritzer and Trice, 1969] involves a modification of the Porter et. al. organizational commitment scale to examine the profession rather than the organization. The Porter et. al. questions are modified by replacing the word "organization" with the word "profession." Aranya and Ferris [1984] argue for the validity of this modification based on the
idea that both organization and profession are commitment objects, and the concept of commitment is independent of any particular object. Therefore, the two commitments can be measured on similar scales. By modifying the organizational commitment scale in this manner to produce a professional commitment measure, the scale thus developed will measure the respondent's moral involvement with the profession in terms of the respondent's willingness to remain in the profession and accept the profession's norms and goals.

Aranya and Ferris report a reliability coefficient (alpha value) for this scale of .88. Due to this high reliability and due to the fact that this method for scaling professional commitment has been extensively used in the research dealing with accountants, a modification of this procedure, as subsequently discussed, is utilized in the current study.

Measurement of Organizational Commitment and Professional Commitment in the Current Study

Questionnaire length was considered to present a problem in this study. Therefore, a nine item "short" form of the Porter et. al. scale is utilized for measuring each commitment. This results in 18 rather than 30 items being used to measure the two commitments. The nine items used to measure each commitment are shown in Appendix A.

Mowday, Porter, and Steers [1982, p. 229] report that the nine item scale (which includes only the positively worded items from the 15 item set) "may be an acceptable substitute for the longer scale in situations where questionnaire length is a
consideration." Curry et. al. [1986] utilized the nine item scale in a study of organizational commitment and report an alpha reliability of .89.

The reliability of both nine item scales used in the current study was examined by calculation of Cronbach's alpha [1951] for each of the two scales. The alpha value for the organizational commitment scale used in this study was .92 which compares favorably to the .90 to .92 range for the 15 item scale reported by Ferris and Aranya [1983]. The alpha reliability for the professional commitment scale used in the current study was .89 which slightly exceeds the reliability of .88 reported for the 15 item scale by Aranya and Ferris [1984]. The actual responses for each category of the nine items in each scale are shown in Appendix A.

Measurement of Organizational-Professional Conflict

In studies which have specifically addressed the concept of organizational-professional conflict [Aranya, Pollock, and Amernic, 1981; Aranya and Ferris, 1984; Arnold and Feldman, 1982; Ferris and Aranya, 1983; Harrell, Chewning, and Taylor, [1986] the level of conflict is measured primarily by asking the respondent to assess the degree of conflict between organizational work standards and procedures and his or her ability to act according to professional judgment. Therefore, the concept is measured in terms of organizational procedures versus professional autonomy. In three of the studies [Aranya, Pollock, and Amernic, 1981; Ferris and Aranya, 1983; Harrell,
Chewning, and Taylor, 1986] a second question concerning the respondent's opportunity to fully express himself or herself as a professional is asked in order to provide further validation of the first assessment. The correlation between the responses to the two questions was reported in the earlier studies as .40 (p < .001).

In order to remain consistent with the previous research, the current study utilizes the two previously developed questions in order to assess the degree of organizational-professional conflict perceived by the respondent. Those two questions are shown in Appendix A. The correlation between the two questions in the present study is .44 (p < .01). The actual responses to each of the two questions are shown in Appendix A.

**Measurement of Exogenous Variables**

The exogenous variables in the current study are those personal and organizational characteristics which are considered to be independent of the relationships between the two commitments and conflict.

The organizational characteristic of the degree of formalization in the organization is measured through a series of questions suggested by Hage and Aiken [1969] and House and Rizzo [1972]. Measures developed using the concepts discussed and suggested by these two studies have been utilized in a number of studies addressing formalization as a variable [Aiken and Hage, 1966; Bluedorn, 1982; Greene, 1978; Mautz, Tiessen, and Colson, 1984; Organ and Greene, 1981; Senatra, 1980]. A
scale consisting of four questions is used to measure the degree of formalization in the current study. The four questions are shown in Appendix A. The internal consistency, in the current study, of this scale as measured by Cronbach’s [1951] coefficient alpha is .74. The responses to the four questions are shown in Appendix A.

The degree of centralization in the organization is measured through a series of five questions in this study. These questions are based on the suggestions made or measures used in a number of studies [Aiken and Hage, 1966; Jans, 1985; Mautz, Tiessen, and Colson, 1984; Ruh, White, and Wood, 1975; Vroom, 1964]. The questions are designed to determine the degree of decision making authority possessed by the respondent, the degree of the respondent’s participation in decision making, and the respondent’s satisfaction with his or her degree of participation in decision making. The series of five questions utilized in the current study produced an alpha reliability coefficient of .81. The five questions are shown in Appendix A. The responses to each question are also shown in Appendix A.

As indicated in Appendix A, age, tenure, educational level, professional certification, active professional membership, the use of professional promotion criteria, and hierarchical position are measured through background and demographic questions. In the cases where the data is purely objective such as age, organizational tenure (in years), and number of certificates and degrees held, the individual is simply asked to indicate the appropriate numeric response.
In the cases of active professional membership, the use of professional promotion criteria, and one's hierarchical position the questions require the individual to give his or her perception of a state of affairs or a condition rather than providing quantified information concerning the specific state or condition. For example, the individual is asked to assess his or her own degree of participation in one or more professional organizations rather than asking an objective question such as how many meetings were attended in the past twelve months. Asking this latter question would require subjective opinions by someone other than the respondent as to how many meetings constitute "active" participation and would not reveal how the respondent perceived his or her own professional organization participation.

This procedure of requesting the respondent's own opinion regarding his or her condition or perception of the states of the world is consistent with the measurements of commitment and conflict used in this study. The measurements of both commitments and conflict call for the perceptions of the individual concerning those factors. The relationships being examined in this study are based on human perceptions of reality. Therefore, questions requiring a response based on those perceptions are not only usable but may be necessary in order to provide understanding of the relationships of concern in the present study.

Commitments and conflict involve human feelings, emotions, and behaviors. Those factors may differ in degree from individual to individual but may be assumed to be consistent within the given individual at a given point in time. This is the essence of
cognitive congruence as discussed by Tuma and Grimes [1981]. Therefore, the factors of interest when one examines commitment and conflict involve human perceptions and beliefs rather than purely objective, quantified conditions such as number of meetings attended, professional organization positions held, number of professional standards incorporated into promotion guidelines, etc.

Data Gathering

Three chapters of the Institute of Internal Auditors were contacted concerning chapter participation in the study. Representatives of each chapter agreed to encourage the participation of the chapter membership in the study. The chapters are located in the southwest, midwest, and Rocky Mountain areas of the United States. In addition, the audit manager of a Fortune 500 multinational electronics firm headquartered in the southwest United States agreed to seek the participation of the internal audit staff of that firm.

The instrument was administered by mail to all non-academic members of the three Institute of Internal Auditors chapters and to the members of the electronics firm's internal audit staff. As indicated by Table 3, the overall response rate was 65.8%. However, because the membership of the three chapters of the Institute of Internal Auditors included individuals who were not currently involved in the internal audit function, the instrument included a question asking whether the respondent was currently involved in internal auditing. Only if the individual responded
positively to this question was that response included in the
analysis of data in this study. Therefore, only responses from
individuals currently, directly involved in the internal audit
function are included in the analysis of the data. Therefore, from
the total 242 responses, 205 are from individuals currently
serving in some capacity within the internal audit function of their
firm.

Table 3
Questionnaire Responses

<table>
<thead>
<tr>
<th></th>
<th>Total Members/Staff</th>
<th>Incorrect Addresses</th>
<th>Returned Replies</th>
<th>Returns as a % of Correct</th>
<th>Replies Not Used</th>
<th>Replies Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter A</td>
<td>55</td>
<td>5</td>
<td>30</td>
<td>56.6%</td>
<td>5</td>
<td>25</td>
</tr>
<tr>
<td>Chapter B</td>
<td>79</td>
<td>3</td>
<td>62</td>
<td>81.6%</td>
<td>8</td>
<td>54</td>
</tr>
<tr>
<td>Chapter C</td>
<td>225</td>
<td>13</td>
<td>131</td>
<td>61.8%</td>
<td>24</td>
<td>107</td>
</tr>
<tr>
<td>Firm A</td>
<td>27</td>
<td>0</td>
<td>19</td>
<td>70.4%</td>
<td>0</td>
<td>19</td>
</tr>
<tr>
<td>Totals</td>
<td>386</td>
<td>18</td>
<td>242</td>
<td>65.8%</td>
<td>37</td>
<td>205</td>
</tr>
</tbody>
</table>

The 205 usable responses included 59 internal audit directors
and 146 staff members. The responses for each category of
response (agree, disagree, strongly agree, etc.) for each
question are shown in Appendix A. The mean response for each
variable included in the hypothesized models is also shown in
Appendix A.
Procedure for Model Testing and Revision

This study utilizes the general path analytic procedure for testing the proposed model and the development of revised models. Path analysis was selected as the procedure for model testing and revision in this study not only because of the use of the procedure in prior studies involving accountants [Aranya, Lachman, and Amernic, 1982; Harrell, Chewning, and Taylor, 1986] but also because the procedure provides a vehicle for the identification of both the direct and indirect effects of variables.

Identification, measurement, and statistical testing of direct relationships are necessary in order to develop models of the relationships involved in commitment and conflict. Identification of indirect effects and the determination of the nature of those effects permit increased analysis of the models and provides greater understanding of all relationships present.

Path Analysis

The models utilized in order to test the hypothesized relationships in this study conform to the special case models described by Duncan [1966]. Such special case models meet the following criteria: (1) there are no unmeasured variables, (2) the residuals are uncorrelated, and (3) each of the dependent variables is directly related to all preceding variables in the assumed causal sequence. In such special cases "path analysis amounts to a sequence of conventional regression analyses" where "the path coefficients are nothing more than the 'beta coefficients' in a regression setup, and the usual apparatus for
regression calculations may be employed" [Duncan; 1966, p. 6].
Heise [1969, p. 56] describes the process to be employed in this
special case as treating "each line of the model as a separate
regression problem, in which the standardized partial regression
coefficients [standardized beta coefficients] are the best
estimates of the path coefficients of that line."

In the path analysis procedure, the path coefficients
(standardized beta coefficients) produced through the series of
regression analyses are examined for statistical significance. The
presence of a statistically significant path coefficient indicates a
direct relationship between the two variables related through that
path when the effects due to all other variables are controlled
[Harrell, Chewning, and Taylor, 1986]. A path coefficient is,
according to Land [1969, p. 8], a number that "measures the
fraction of the standard deviation of the endogenous variable
(with the appropriate sign) for which the designated variable is
directly responsible." This results in statistically significant path
coefficients being indicative of significant direct relationships
between variables.

For example, in Chapter III, Hypothesis 10 proposes a direct
positive relationship between the individual's age and his or her
level of professional commitment. A statistically significant
positive path coefficient (standardized beta) between age and
professional commitment would indicate that as the individual
grows older, that increase in age is directly related to an increase
in the level of professional commitment, independent of any other
effects which age might have in the modeled relationships. The
direct relationships hypothesized in Chapter III are tested for
statistical significance through this test of the statistical significance of the appropriate path coefficient.

Direct effects, however, are not the only effects which one variable may have on another. Hanushek and Jackson [1977, p. 217] point out that "there are many instances where it is likely that changes in one explanatory variable result in changes in other explanatory variables as well as in the dependent variable." When this situation occurs, the total expected change in the modeled behavior due to a change in one exogenous variable is not limited to the direct effect estimated by the coefficients. The effect also "must include the changes resulting from the changes in the other explanatory variables brought about by the first variable" [Hanushek and Jackson, 1977, p. 217]. These latter changes are referred to as the "indirect effects" of a variable and may either reinforce or negate a part of the direct effect of the variable. For example, age may have an indirect effect on professional commitment which acts through another variable such as one's hierarchical position in the organization. That indirect effect would be in addition to the direct effect which age has on professional commitment, and the two effects together would account for the total effect which age has on professional commitment. Whether that indirect effect enhances the overall effect of age on commitment or detracts from that effect should be identified in order to determine the overall effect of age. In order to fully understand the total effect which one variable may have on another, some means must be utilized for analysis which permits the identification and examination of both direct and indirect effects.
Duncan [1966, p. 7] states that as a statistical technique, path analysis adds nothing "to conventional regression analysis as applied recursively to generate a system of equations rather than a single equation." The value of the method, according to Duncan, is as a system of interpretation which makes explicit the causal assumptions as to the ordering of variables and the effects of unmeasured variables in the model. Path analysis does, however, as Duncan indicates, provide a procedure for the examination of the indirect effects of variables. Asher [1983] identifies the capability of dealing with both direct and indirect effects as one of the main advantages of path analysis. Cohen and Cohen [1983] suggest that examining both direct and indirect effects increases the analytical yield available for theory construction and testing. As indicated by Heise [1969, p. 41], the structural models necessary for systems analysis must be capable of permitting "predictions of how a change in any one variable in the system affects the values of the other variables in the system." Path analysis provides the procedure through which both the direct and indirect effects of a change in one variable may be examined. Such an examination is essential if the model is to help increase the understanding of the totality of relationships involved.

Regression Procedures for Path Analysis

As indicated in the previous discussions, the actual procedure through which path analysis is conducted is identical to the procedures of linear regression. Like the standard
regression procedures, path analysis requires a specification of the order in which independent variables are to be entered into the model as well as the specification of the dependent variable. The following sections discuss the strategy used in order to specify that order in the current study and the means used in order to specify the dependent variable.

Hierarchical Strategy for Conducting the Path Analysis

Hierarchical regression is the procedure used in the current study through which the order of entry for the independent variables in the path analysis is determined. That procedure requires some basis for the particular entry order for the variables. The current study bases the order of entry of independent variables on time of occurrence, logical causal relationships, and degree of impact on the dependent variable. Cohen and Cohen [1983, p. 121] state that "an appropriate conservative sequencing would include all variables that may contribute to them causally before adding the focal variables to the equation" and that

likely candidates for causal priority in behavioral studies are status variables--age, sex, ethnicity, education, and socioeconomic status--because these are temporally prior and unlikely to be affected by more transitory states or traits [Cohen and Cohen, 1983, p. 121].

Therefore, the overall approach utilized in this study is based on the concept that in the ideal situation, the ordering of the variables would reflect their causal priority with no variable entering later being a presumptive cause of a variable entered
earlier. Figure 2 indicates the order of entry for the variables in this study with age being entered first and the other variables following in the indicated sequence.

As indicated in Figure 2 which follows, the organismic variables of age and organizational tenure are the initial exogenous variables entered in each of the regression equations in this study. These two variables are considered temporally prior to the other individual and organizational variables in the models. In the case of age, there is no logical causal flow from latter added variables to age, i.e., tenure does not "cause" age.

Figure 2
Hierarchical Order for Variable Entry

<table>
<thead>
<tr>
<th>Entered at Step</th>
<th>Variable</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Age</td>
</tr>
<tr>
<td>2</td>
<td>Organizational Tenure</td>
</tr>
<tr>
<td>3</td>
<td>Active Professional Membership</td>
</tr>
<tr>
<td>4</td>
<td>Number of Degrees Held</td>
</tr>
<tr>
<td>5</td>
<td>Number of Professional Certifications</td>
</tr>
<tr>
<td>6</td>
<td>Hierarchical Position in the Organization</td>
</tr>
<tr>
<td>7</td>
<td>Degree of Organizational Centralization</td>
</tr>
<tr>
<td>8</td>
<td>Degree of Organizational Formalization</td>
</tr>
<tr>
<td>9</td>
<td>Use of Professional Criteria in Promotions</td>
</tr>
<tr>
<td>10</td>
<td>Individual's Professional Commitment</td>
</tr>
<tr>
<td>11</td>
<td>Individual's Organizational Commitment</td>
</tr>
</tbody>
</table>

Age and tenure are followed by the class of variables which relate directly to or are under the control of the individual. The variables which are principally under the control or influence of the individual are being considered in this study as temporally prior to those factors which are determined either jointly between the individual and the organization or totally by the organization.
These "personal" variables which relate solely to the individual include active professional membership, number of college degrees held, and number of professional certifications held. The order within this group is based on the logic discussed in the next paragraph.

Neither a college degree nor a professional certification is required in order to be a member of the Institute of Internal Auditors, Inc. (the most prevalent professional organization represented in the sample). Because neither a degree nor certification is required for such membership, neither of those variables is considered here to be causally prior to membership. For this reason, membership is entered first. A college degree is, however, usually a prerequisite for professional certification. A college degree may thus be considered causally prior to certification. For this reason, the number of degrees held by the individual is the next variable entered. The final variable added which is related solely to the individual is the number of professional certifications held by the individual. The addition of that variable completes the set of variables which are primarily determined or influenced by the individual.

The second broad category of variables included in the hierarchy may be classified as the organizational characteristics. The first of these entered is the individual's position in the organizational hierarchy. Hierarchical position is jointly determined by the organization and the individual. The individual can seek promotion, work for such promotion, or even decline a promotion if he or she so desires. Due to these factors, the organization does not have absolute control of this factor. Traits
of the individual or conditions which are at least in part determined by the individual may be considered causally prior to the purely organizational traits or states in accordance with the suggestion by Cohen and Cohen. For this reason, hierarchical position is the first organizational characteristic entered into the hierarchy.

The next variable entered is the degree of centralization in the firm. This variable is considered to be causally prior to the degree of formalization. In accordance with the definitions discussed earlier, centralization can exist in the absence of formalization. Formalization, however, requires a degree of centralization in that a central authority must determine what the formalized (written) policies of the firm will be. Therefore, centralization is being considered here as causally prior to formalization and is entered prior to formalization. The final organizational variable entered is the degree to which professional criteria is used in the promotion and reward system of the firm.

Professional commitment is considered temporarily prior to organizational commitment because commitment to a profession precedes commitment to a particular organization. This idea has been discussed at length in prior research [Aranya, Pollock, and Amerinic, 1981; Aranya and Ferris, 1984; Goode, 1957; Greenwood, 1957; Larson, 1977; Wilensky, 1964]. As indicated by Aranya and Ferris [1984], the "professionalization" literature suggests the development of professional commitment during the professional socialization into the chosen field. This process usually occurs temporarily prior to organizational socialization,
and "the development of professional commitment can be assumed to precede the development of commitment to any particular organization."

Orthogonalization of Dependent Variables

A potential problem arises when multiple, multiple regressions are accomplished in which \( p \) regressions are performed one at a time for each dependent (\( Y \)) variable. The problem is due to the possibility that the sequential dependent variables may be related. Cohen and Cohen indicate that substantive conclusions about \( Y_j \) and \( Y_f \) may be quite incorrect if, for example, \( Y_f \) is merely an effect (or epiphenomenon) of \( Y_j \). Relationships of the \( X \) variables to \( Y_f \) are then "spurious" in the sense that they would not hold for the partialled variable \( Y_f \cdot Y_j \) [1974, p. 440].

When there are correlations among the \( Y \) dependent variables, failure to take into account those relationships may produce spurious findings. Cohen and Cohen state that the analyst will be misled in his or her interpretations when the various \( Y \) variables are correlated. In such cases, relationships which are not valid may be accepted as significant, or significant relationships may not be evident. If, for example, organizational-professional conflict and organizational commitment are in essence providing the same information concerning an individual's condition or state, then a regression with one of these variables as the dependent variable is in essence identical to a regression using the other as the dependent variable. The conclusion may be reached that some explanatory variable such as age is related to organizational-
professional conflict. However, there is no assurance that what is actually being observed is the relationship between age and organizational commitment due to the possibility that organizational-professional conflict and organizational commitment are in essence identical. If the two dependent variables are identical, then any conclusions reached regarding the relationships between any variable and either of the dependent variables are suspect. The problem is compounded when organizational commitment is first used as an independent variable in the regression with organizational-professional conflict as the dependent variable and is then used as the dependent variable in a second regression including all of the same variables as the initial regression except conflict.

The path analytic procedure as discussed by Duncan [1966], Heise [1969], Asher [1983], and as utilized by Harrell, Chewning, and Taylor [1986] does not consider the possibility of correlations among the dependent variables. The procedure utilized by Harrell, Chewning, and Taylor [1986] is similar to that suggested by the earlier sources and involves several steps. The first step involves regressing conflict on a set of independent variables including organizational commitment and professional commitment. In a second step, conflict is dropped from the model, organizational commitment becomes the dependent variable, and all other variables, including professional commitment, are utilized as independent variables. The final step in this process involves dropping organizational commitment from the regression, the utilization of professional commitment as the
dependent variable, and the use of the remaining variables as independent variables.

Under the procedure utilized by Harrell, Chewning, and Taylor, no attempt is made to address the potentially strong relationship between the three sequential dependent variables. The assumptions in that procedure are that organizational commitment in the second step of the process is independent of organizational-professional conflict and that professional commitment, the dependent variable in the third step of the process, is independent of the two variables earlier used as dependent variables. These assumptions are questionable in light of the strong theorized relationships between organizational-professional conflict and both professional commitment and organizational commitment, as well as the strong relationship theorized between professional commitment and organizational commitment.

The procedure discussed in the previous paragraphs is that which is criticized by Cohen and Cohen [1974] as not incorporating potential relationships between the various dependent variables in the series of regressions. Organizational-professional conflict, organizational commitment, and professional commitment (the respective Y variables) are theorized in the literature as being related. Conducting the series of regressions without recognizing those relationships may lead to "spurious" conclusions [Cohen and Cohen, 1974]. By assuming that the dependent variables in the series of regressions are independent, invalid conclusions may be reached based on those regressions due to possible dependent variable correlations.
A procedure through which the correlations among the dependent variables in a series of regressions can be eliminated may be used so as to orthogonalize those variables. In cases where the Y variables possess a hierarchical structure the following procedure may be utilized:

After analyzing \( u (= Y_1) \) in an MRC analysis, one computes \( v-u (= v - \hat{v}_u) \), the residuals of \( v \) from which \( u \) has been partialled, which then serves as \( Y_2 \) in a second MRC analysis. \( w-uv (= w - \hat{w}_{uv}) \) is then determined and MRC analyzed. And so on. These \( Y \) variables are necessarily zero correlated, and each MRC analysis is independently and unambiguously interpretable, given, of course, the validity of the causal model implicit in the hierarchy [Cohen and Cohen, 1974, p. 444].

Due to the strong theorized relationships examined in the current study between organizational-professional conflict and both organizational commitment and professional commitment, failure to recognize those relationships in the methods used to examine the data may lead to "spurious" or invalid conclusions. For this reason, an alternative procedure, which provides for the orthogonalization of the respective dependent variables, is utilized in this study.

The procedure followed in this study initially utilizes organizational-professional conflict as the dependent variable in the path analysis (regression). All other variables, including both commitments, are considered as independent variables in that regression. The model produced by this regression is tested and analyzed and revised by the procedures discussed in subsequent sections and is referred to as the organizational-professional conflict model. The detailed examination of that model is found in Chapter V.
The second regression utilizes as the dependent variable the residuals of a regression involving organizational commitment as the dependent variable and organizational-professional conflict as the lone independent variable (the v·u as suggested by Cohen and Cohen). Those residuals have all of the correlations between the two variables removed. The "residualized" organizational commitment variable is used as the dependent variable with all other variables, except conflict, serving as independent variables. The model provided by this regression is tested and analyzed using the procedures discussed subsequently. This model is referred to as the organizational commitment model. The detailed examination of that model is located in Chapter V.

The third and final regression procedure utilized in this study involves using as the dependent variable the residuals of a regression involving professional commitment as the dependent variable and both organizational-professional conflict and organizational commitment as independent variables. The residuals (w·uv) resulting from that regression provide a professional commitment variable which is independent of the other two dependent variables. The remaining variables, excluding conflict and organizational commitment, are utilized as independent variables in this third regression. The model produced in this third step is referred to as the professional commitment model and is discussed in detail in Chapter V.

The procedure as outlined above involves the examination of three uncorrelated dependent variables in three separate regressions. In the latter two cases, variables previously considered as independent are utilized as dependent. Due to this
orthogonalization of the dependent variables, this study involves
the testing and analysis of three models as opposed to the
examination of only one model as in previous studies.

Hypotheses Tests

In order to test the statistical significance of the relationships
hypothesized in Chapter III, the standardized beta weights (path
coefficients) are estimated in a series of ordinary regressions run
in accordance with the procedures previously discussed. Asher
[1983, p. 30] described this process as regressing each
endogenous variable on those variables "that directly impinge
upon it."

The series of regressions utilize the previously discussed
hierarchical strategy. Each of the three endogenous variables, in
turn according to the hierarchy, serves as the dependent
variable. This results in the hypotheses related to
organizational-professional conflict being tested through the
organizational-professional conflict model, the hypotheses
relating to organizational commitment being tested through the
organizational commitment model, and the hypotheses related to
professional commitment being tested through the professional
commitment model.

Due to the directionality expressed in the research
hypotheses (alternate hypotheses) in Chapter III, a one-tail
significance test of each beta coefficient is conducted. The .05
level is considered the appropriate level of significance for this
test. A "protected t" test [Cohen and Cohen, 1983] is utilized in
order to ensure that a particular "t" significance does not occur purely by chance.

The test for the direct effect of a path coefficient is the test of the partial coefficient in the final (complete) equation, as opposed to the coefficient present when the variable in question first enters the hierarchy. Thus the test for the direct relationship postulated in each research hypothesis is a test of the beta weight for the variable in the full (final) equation containing all hypothesized variables [Cohen and Cohen, 1983]. Those variables which indicate a significance level of .05 or less are considered to have a statistically significant direct effect upon the dependent variable in question. The results of using this procedure for testing the thirty hypothesized direct relationships are discussed in Chapter V.

Theory Trimming and Model Revision

The models examined in the tests of the hypotheses described in the previous sections may be classified as "full" or "most elaborate" or "least parsimonious." Heise argues that once such a model is developed and valid estimates of the path coefficients are obtained, one is in the position "to go beyond his limited theoretical knowledge" [1969, p. 59] in order to determine a parsimonious model. He states that the potential for refining or trimming a theory, and thus making the theory more parsimonious, clearly is one of considerable significance and could be listed along with the issues of explanation and simulation as a basic gain to be acquired from the construction of linear models [1969, p. 59].
Duncan [1966] states that in the case where a path coefficient is non-significant, the related path should be deleted from the model and the regressions rerun with the remaining paths. Aranya, Lachman, and Amernic [1982] describe this technique of elimination of paths for which path coefficients are not significant as the process of "theory trimming" described by Heise [1969] which leads to more parsimonious models and theories. Therefore, in order to provide clearer, more parsimonious models which are based on theory but are also empirically grounded, the current study utilizes the procedure described as "theory trimming."

In essence, the theory trimming procedure involves the elimination of a variable from the model if that variable does not exhibit a significant relationship with the dependent variable. One motivation for this procedure is for the sake of clarity. For example, in the organizational-professional conflict model there are 11 hypothesized direct relationships between organizational-professional conflict and the other variables included in this study. There are also 55 indirect effects in that model. The total effect of a variable such as degree of formalization in the firm on organizational-professional conflict is the single direct effect plus the indirect effect which formalization has through each of the other independent variables. In order to understand the relationships involved in a model, an analysis must be made of all such direct and indirect effects. This would result in the analysis of 66 relationships in the organizational-professional conflict model.
In the hypothesized model of organizational commitment there are ten direct and 45 indirect relationships between variables. In the hypothesized model of professional commitment, there are nine direct and 36 indirect effects of relationships between variables. Therefore, analysis of a relationship which is not significant would contribute nothing to understanding and in all likelihood would, due to the confusion fostered by the numerous direct and indirect effects, detract from the understanding of the significant relationships.

A second reason for accomplishing theory trimming is to empirically verify the theory-based models. The models are based on theorized direct relationships between variables. All of these theorized direct effects, however, are not significant. Retaining a direct effect which is not significant would result in models based on theory but with no link to the empirical data relating to the models. Theory trimming is accomplished in order to provide more parsimonious models which do not include non-significant relationships and to link those models to the observed conditions.

**Determining the Significant Paths for Theory Trimming**

Duncan outlines a procedure for determining which paths may be eliminated from a path model without significant loss of information. The procedure calls for the elimination of the paths of non-significant betas and completing the regressions "retaining only those independent variables found to be statistically and substantively significant" [1966, p. 7].
Heise argues that it is possible to "trim a theory down to a parsimonious version by deleting causal linkages associated with zero path coefficients" [1969, p. 59]. However, "rarely will an estimated path coefficient be precisely equal to zero" thus introducing the problem of dealing with the question: how "small" must the coefficient be in order to be considered the same as zero? It is noted that "there are no objective standards or even established conventions to guide one" in making the decision that a path coefficient is sufficiently "small" to be considered zero [Heise, 1969, p. 59].

Land [1969, p. 34] argues that for "just-identified" path models (where all possible paths of one-way causation have been postulated) the "decision to delete a postulated path must be based on a statistical test of significance or on an arbitrary criterion of size of the retained path."

As indicated above, Duncan argues for statistical significance but does allow for the inclusion of variables which are "substantively" significant also. Heise argues for statistical significance but points out that there are no objective standards or conventions available for determining what constitutes a "small" coefficient. Land argues for statistical significance but allows for an arbitrary criterion for size of path coefficient to be utilized. The decision to retain a variable (and the related path) in a model may not necessarily be made totally on a statistical basis. Other substantive criteria, such as the purpose for development of the model, may provide additional criteria for variable (path) retention or rejection decisions.
One major purpose of the present research is to hypothesize relationships between variables and test those relationships using empirical data. This is done in order to provide more parsimonious models which may be utilized in further research in this area. The "theory trimming" process as described in the previous section is accomplished in such a manner as to permit the analysis of total, indirect, and direct effects or relationships. That procedure also permits the identification of suppressive or redundant relationships between the model variables.

Prior research studies [Aranya, Lachman, and Amernic, 1982; Harrell, Chewning, and Taylor, 1986] utilizing path analysis to analyze the relationships among conflict, commitment, and exogenous variables for accountants do not accomplish an analysis of total, indirect, and direct effects or the analysis of redundancy and suppression. Investigating and understanding relationships would be better accomplished through an analysis of all such effects. Identification of the indirect effects in addition to the direct effects which independent variables have on the dependent variables may bring new insight and understanding of a given variable's overall effect in the system. By moving beyond the estimation of direct effects only, one is able "to examine the causal processes underlying the observed relationships and to estimate the relative importance of alternative paths of influence" [Asher, 1983, p. 37].

One of the main advantages of path analysis is to enable one "to measure the direct and indirect effects that one variable has
on another" [Asher, 1983, p. 33]. Direct effects are "causal effects that are not mediated by any other variable in the model" [Cohen and Cohen, 1983, p. 93].

Indirect effects arise when there is at least one intervening variable in the relationships outlined in a model. For example, the individual's position in the hierarchy may intervene in the relationship between the individual's active professional membership and his or her professional commitment. That intervention may result in the enhancement or the degeneration of the relationship between the original two variables. In cases where there is enhancement, the intervening variable is said to be a suppressor. In cases where the intervention results in degeneration, the intervening variable is said to be redundant. Due to these factors, the indirect effect which a variable has through another variable may be analyzed as to its redundant or suppressive nature.

Redundancy between two independent variables occurs when each explanatory variable is "at least partly carrying information about Y that is being supplied by the other" [Cohen and Cohen, 1983, p. 94]. For example, one's tenure with the organization may be providing the same information concerning his or her level of organizational commitment as is the number of degrees held by that individual. Both tenure and college degrees may be reflecting the same common underlying factor. If the only relationship being examined is that between tenure and organizational commitment, the observed effect of tenure on that commitment is overstated. Due to the redundancy between tenure and degrees held, part of the relationship being exhibited between tenure and
organizational commitment is the effect of the unmeasured variable of number of degrees held. However, if degrees held is included in the equation being used to examine relationships, the effects of tenure and degrees held are separated and the proper, lesser effect of tenure on organizational commitment is observed. Such redundancy is characterized as "the plague on our efforts to understand the causal structure that underlies observations in the behavioral and social sciences" [Cohen and Cohen, 1983, p. 94]. Redundancy, however, is not the only relationship between explanatory variables which can "plague" efforts at understanding.

Suppression occurs "when the relationship between the independent or causal variables is hiding or suppressing their real relationship with Y" [Cohen and Cohen, 1983, p. 95]. If the suppressor variables are included in the regression equation, then the suppression effect is eliminated and the true relationship between the explanatory variable and the dependent variable will emerge. For example, one's hierarchical position in the firm may be suppressing the relationship between his or her level of professional commitment and level of organizational-professional conflict. This may be due to the theorized opposite effect which hierarchical position and professional commitment have on organizational-professional conflict. By examining both hierarchical position and professional commitment in the regression equation, the effects of each on conflict may be separated and examined.

In Chapter V, the various redundant and suppressive relationships between the model variables are examined. As an exploratory effort, this study has as a main focus the
identification of relationships between the various variables and the explanation, to the extent possible, of those relationships. That identification and explanation may lead to a framework for further testing and also aid in systematic thinking about the problems which may arise due to the existence of organizational-professional conflict. In order to better understand and explain the relationships which are present in the various models, the redundant or suppressive nature of each relationship should be determined and the reasons for the particular type of relationship examined.

Only through examination of the redundancy and suppression in the relationships between variables will knowledge be gained of how the total effect of a particular variable is derived. For example, if age is significantly redundant with tenure in relation to organizational commitment, examining changes in age levels of professional employees will not necessarily provide an accurate indication of the relationship between age and organizational commitment for this group. If age is being considered, then tenure must also be considered if tenure has a significant redundant relationship with age. Unless tenure is also examined in such a case, the effect of age on organizational commitment will be overstated. In order to understand the impact of a given variable on a particular dependent variable, any significant redundant and/or suppressive relationships which are present must be identified and explained. The latter sections of Chapter V identify and explain the possible reasons for the redundant and suppressive relationships observed in the models developed in this study.
Procedures Used for Identification of Direct Effects, Indirect Effects, Redundancy, and Suppression

When the hierarchical procedure is utilized to conduct a path analysis, the total effect of a variable is indicated by the standardized regression coefficient (beta) when the variable first enters the hierarchy. The direct effect is indicated by the standardized regression coefficient (beta) of the variable in the final model containing all explanatory variables. Utilizing this relationship, Cohen and Cohen [1983] outline a process through which the indirect effects of a variable through the other explanatory variables may be determined and analyzed. These authors indicate that the test of the statistical significance of the total effect of a variable is the test for the partial coefficient done when the variable first enters the hierarchy. The test for the statistical significance of the direct effect of the variable is the test of the coefficient in the final equation. Cohen and Cohen [1983] indicate, however, that there is no formal test for the significance of indirect effects.

The procedure for examining the total, indirect, and direct effects involves the calculation of the indirect effect of a variable by subtracting the variable's direct effect (beta in the final equation) from the variable's total effect (beta when the variable first entered the hierarchy). This total indirect effect "can be further partitioned in a hierarchical analysis by determining the change in each coefficient as a new variable is added to the equation" [Cohen and Cohen, 1983, p. 361]. The nature of the change in the coefficient may then be examined in order to
determine if the relationship is one of redundancy or one of suppression.

If the coefficient for a given independent variable decreases in absolute value when another independent variable is brought into the regression, the relationship between those two variables is redundant. In the cases where the absolute value of a particular independent variable’s beta increases or changes sign with the addition of a subsequent independent variable, the relationship is one of suppression. As indicated by Marascuilo and Levin [1983, p. 81], when suppressor variables are included in the equation, the beta will "move further from zero" or change sign.

In order to "trim" the model, as discussed earlier, while retaining the capability to examine the total, indirect, and direct effects as well as analyze the relationships for suppression and redundancy, an iterative process of variable elimination is performed. Under this process, a regression is run for each endogenous variable (conflict, "residualized" organizational commitment, and "residualized" professional commitment) utilizing the hierarchy of variables previously discussed. The output of each regression is examined and each variable having either a significant direct effect or a significant total effect on the dependent variable is identified.

The next step in the strategy involves using these identified variables as independent variables in a second regression on the particular dependent variable. That second regression provides the set of relationships which are examined in detail for total, indirect, and direct effects. In this manner variables without either
a significant total or significant direct effect are eliminated. This procedure is followed in order to permit the examination of the significant total, direct, and indirect effects of each explanatory variable on the dependent variable and the examination of suppression and redundancy. The models which are the output of this "trimming" process are referred to as "reduced" models and are analyzed and discussed in detail in Chapter V.
CHAPTER V

ANALYSIS OF DATA AND EXPLANATION OF RELATIONSHIPS

Data were gathered from internal auditors using the procedures described and discussed in Chapter IV. The current chapter reports the results of the statistical tests of the hypotheses using that data and the results of the "theory trimming" procedure previously discussed. These are the two testing and analysis steps found in the prior research in this area involving accountants. This study, however, contains in the final sections of this chapter the identification and explanation of the suppressive or redundant relationships found in the indirect effects present in the models.

Results of the Statistical Tests of the Hypothesized Relationships

Table 4 indicates the results of the statistical test of the hypotheses described in Chapter III utilizing the procedures discussed in Chapter IV. The table indicates which variables exhibit a statistically significant relationship to organizational-professional conflict (OPC), organizational commitment (OC), and/or professional commitment (PC). The "Beta Value" column of the table indicates the standardized beta for the respective variable in the equation with all hypothesized
variables included (the direct effect as described in Chapter IV). The significance level shown in the table is the one-tail significance of the standardized beta. In the cases where the relationship is not statistically significant or the relationship is opposite from that expected based on theory (the hypothesized relationship from Chapter III), the "Reject Null" column of the table contains a "no" entry. This entry signifies that the null hypothesis (no relationship between the postulated variables) cannot be rejected at the .05 level. For example, the data do not indicate a significant relationship between professional commitment and organizational commitment; therefore, the null hypothesis of no relationship between these two variables cannot be rejected. This results in the "no" entry in the "Reject Null" column of the table. In the cases where there is a significant statistical relationship between the variables in the direction postulated, there is a "yes" entry in the "Reject Null" column. For example, there is a statistically significant inverse relationship between the number of degrees held by the individual and that individual's level of organizational commitment. This is indicated in the table by "yes" in the "Reject Null" column.
### Table 4
Results of Research Hypotheses Tests

<table>
<thead>
<tr>
<th>Hypothesized Direction and Direction</th>
<th>Beta</th>
<th>Significance Level</th>
<th>Reject Null</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1 PC and OC</td>
<td>(-)</td>
<td>+.970</td>
<td>.12</td>
</tr>
<tr>
<td>H2 PC and OPC</td>
<td>(+)</td>
<td>-.151</td>
<td>.01</td>
</tr>
<tr>
<td>H3 OC and OPC</td>
<td>(-)</td>
<td>-.447</td>
<td>.00</td>
</tr>
<tr>
<td>H4 Age and PC</td>
<td>(+)</td>
<td>+.178</td>
<td>.01</td>
</tr>
<tr>
<td>H5 Age and OC</td>
<td>(+)</td>
<td>-.083</td>
<td>.17</td>
</tr>
<tr>
<td>H6 Age and OPC</td>
<td>(-)</td>
<td>-.006</td>
<td>.47</td>
</tr>
<tr>
<td>H7 Number of Degrees and PC</td>
<td>(+)</td>
<td>+.018</td>
<td>.39</td>
</tr>
<tr>
<td>H8 Number of Degrees and OC</td>
<td>(-)</td>
<td>-.125</td>
<td>.04</td>
</tr>
<tr>
<td>H9 Number of Degrees and OPC</td>
<td>(+)</td>
<td>+.017</td>
<td>.37</td>
</tr>
<tr>
<td>H10 Active Prof. Membership and PC</td>
<td>(+)</td>
<td>+.410</td>
<td>.00</td>
</tr>
<tr>
<td>H11 Active Prof. Membership and OC</td>
<td>(-)</td>
<td>+.120</td>
<td>.07</td>
</tr>
<tr>
<td>H12 Active Prof. Membership and OPC</td>
<td>(+)</td>
<td>+.133</td>
<td>.01</td>
</tr>
<tr>
<td>H13 Prof. Certification and PC</td>
<td>(+)</td>
<td>+.147</td>
<td>.01</td>
</tr>
<tr>
<td>H14 Prof. Certification and OC</td>
<td>(-)</td>
<td>-.118</td>
<td>.05</td>
</tr>
<tr>
<td>H15 Prof. Certification and OPC</td>
<td>(+)</td>
<td>-.097</td>
<td>.03</td>
</tr>
<tr>
<td>H16 Organizational Tenure and PC</td>
<td>(+)</td>
<td>-.003</td>
<td>.48</td>
</tr>
<tr>
<td>H17 Organizational Tenure and OC</td>
<td>(+)</td>
<td>+.117</td>
<td>.08</td>
</tr>
<tr>
<td>H18 Organizational Tenure and OPC</td>
<td>(+)</td>
<td>+.072</td>
<td>.12</td>
</tr>
<tr>
<td>H19 Hierarchical Position and PC</td>
<td>(-)</td>
<td>-.170</td>
<td>.01</td>
</tr>
<tr>
<td>H20 Hierarchical Position and OC</td>
<td>(+)</td>
<td>+.157</td>
<td>.03</td>
</tr>
<tr>
<td>H21 Hierarchical Position and OPC</td>
<td>(-)</td>
<td>-.032</td>
<td>.30</td>
</tr>
<tr>
<td>H22 Degree of Formalization and PC</td>
<td>(-)</td>
<td>+.136</td>
<td>.02</td>
</tr>
<tr>
<td>H23 Degree of Formalization and OC</td>
<td>(+)</td>
<td>+.123</td>
<td>.04</td>
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<tr>
<td>H24 Degree of Formalization and OPC</td>
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<td>+.046</td>
<td>.19</td>
</tr>
<tr>
<td>H25 Degree of Centralization and PC</td>
<td>(-)</td>
<td>-.033</td>
<td>.33</td>
</tr>
<tr>
<td>H26 Degree of Centralization and OC</td>
<td>(-)</td>
<td>+.096</td>
<td>.13</td>
</tr>
<tr>
<td>H27 Degree of Centralization and OPC</td>
<td>(+)</td>
<td>+.242</td>
<td>.00</td>
</tr>
<tr>
<td>H28 Prof. Criteria in Promotion and PC</td>
<td>(+)</td>
<td>+.064</td>
<td>.19</td>
</tr>
<tr>
<td>H29 Prof. Criteria in Promotion and OC</td>
<td>(+)</td>
<td>+.060</td>
<td>.23</td>
</tr>
<tr>
<td>H30 Prof. Criteria in Promotion and OPC</td>
<td>(-)</td>
<td>-.190</td>
<td>.00</td>
</tr>
</tbody>
</table>

* OPC = Organizational-Professional Conflict  
OC = Organizational Commitment  
PC = Professional Commitment

As shown in Table 4, in 18 of the 30 cases, the null was not rejected at the .05 level, but in 12 cases the data indicate a significant relationship between the variables in question.
However, of the 18 cases in which the null hypothesis was not rejected, in three instances the failure to reject the null was due to the fact that the observed relationship was of the opposite nature (positive or inverse) from that which had been hypothesized, rather than due to lack of statistical significance. The presence of the three counter-directional relationships is not, however, an unexplainable condition.

**Actual Results Which Are Opposite in Nature from Those Hypothesized**

Due to the exploratory and developmental nature of the current study, the three relationships mentioned above which are statistically significant but opposite in nature from that hypothesized are included in subsequent models. As indicated in the following discussions, there are valid alternative explanations for the particular relationships and/or previous empirical support for the nature of the relationships found in the current study. Therefore, the inclusion of the three variables in order to provide greater understanding of relationships has both theoretical and empirical support.

The data in this study indicate an inverse relationship between professional commitment and organizational-professional conflict. This is an opposite relationship to that postulated in the research hypothesis stated in Chapter III. As discussed in detail in Chapter III, that research hypothesis is based primarily on the suggestions of role theory and the assumption of inherent conflict between professional commitment and organizational commitment. However, Aranya and Ferris [1984, p. 10] found that
"a combination of high organizational and professional commitment is associated with lower conflict, whereas a combination of lower commitments increases conflict." In the current study, if the observed relationship between professional commitment and conflict is considered in light of the observed relationship between organizational commitment and conflict, the particular combinations suggested by Aranya and Ferris may be applicable. Both commitments in the current study are high. According to Aranya and Ferris, this condition leads to lower conflict.

Harrell, Chewning, and Taylor [1986] report a similar inverse relationship between professional commitment and organizational-professional commitment for internal auditors. These authors suggest that membership in the Institute of Internal Auditors (a factor which may reasonably be related to professional commitment) may make internal auditors more aware of potential conflict. Such professional membership might also "provide internal auditors with a readily available peer group which provides information and advice about how to resolve such conflicts" [1986, p. 119].

The results reported in the two studies discussed above suggest that the relationship between professional commitment and organizational-professional conflict in the accounting profession may not follow those suggested in the role theory and professionalization literature. As indicated by Aranya and Ferris [1984], Goode [1957] suggests that accounting is a "technical-scientific" profession which may lead to more compatibility between organizational commitment and
professional commitment thus reducing conflict between the two. The findings of Hastings and Hinings [1970] and Tuma and Grimes [1981] support this contention. Therefore, the finding of an inverse relationship between professional commitment and organizational-professional conflict in the present study is indeed opposite from the research hypothesis and the theory from which that hypothesis was developed. The finding does, however, follow the findings of previous research dealing with accountants and may be explained by the technical-scientific nature of accounting as a profession.

The observed inverse relationship between the number of professional certifications held by the respondent and the reported level of organizational-professional conflict is contrary to the relationship postulated in the research hypothesis in Chapter III. Due to the lack of prior research concerning the relationship between certification and conflict, the research hypothesis dealing with this relationship is derived from the concepts of professionalism versus bureaucracy, the theory of side bets, and the assumption of conflict between professional commitment and organizational commitment. These theories suggest that professional certification, as outward evidence of professional commitment, would have a positive relationship to organizational-professional conflict.

The observed inverse relationship between certification and conflict, however, may be explained by the previously discussed comments of Aranya and Ferris [1984] and Harrell, Chewning, and Taylor [1986] concerning their observed relationship between professional commitment and organizational-professional conflict.
In the field of accounting, professional commitment may not be inversely related to conflict. Professional certification, as a factor related to professional commitment, may act to reduce conflict by increasing the individual's awareness of potential conflict and providing the individual with a peer group capable of suggesting means with which to deal with conflict.

The remaining significant relationship which is opposite in nature to the hypothesized relationship is the observed positive relationship between the degree of formalization in the firm and the level of professional commitment reported by the individual. The professional commitment of individuals in more formalized organizations is higher than that reported by individuals in less formalized organizations. The hypothesized condition that professional commitment would be lower in more formalized organizations is based primarily on the concept that written rules and procedures are contrary to the professional's desire for professional autonomy and self-direction. This concept leads to the expectation that in organizations with highly formalized rules and procedures, the individuals present in such organizations would have lower levels of professional commitment. The results of this study indicate the opposite condition to be the case.

Based on the suggestions by Senatra [1980], one might argue that in cases where the formalized rules and procedures of the organization are the same as or reflect the written rules and procedures of the profession, formalization may have a positive relationship to professional commitment.

The relationships shown in Table 4 which are statistically significant in the hypothesized "direction" and the three
relationships discussed above which are significant but opposite in nature from those which were hypothesized are the relationships which are included in the "theory trimming" procedure. For the reasons discussed in Chapter IV, the reduced models produced by the "theory trimming" procedure are the objects of the detailed analyses which follow in the subsequent sections of this chapter.

Theory Trimming and Model Reduction

Following the procedures discussed in Chapter IV, the process of "theory trimming" was performed in order to reduce the number of relationships and provide empirically grounded models. The following sections describe the results of this process and discuss each reduced model. Unlike the procedure for hypothesis testing for statistical significance, the trimming procedure tests both total and direct effects rather than only the direct effects. Therefore, the beginning points for procedure are the 30 hypothesized relationships shown in Table 5.

Reduced Model of Organizational-Professional Conflict

Seven of the 11 explanatory variables in the original organizational-professional conflict model exhibit either a statistically significant total or direct effect on organizational-professional conflict. Four of these variables (centralization, professional criteria in promotion, professional commitment, and organizational commitment) indicate both a
significant total and a significant direct relationship. Table 5 indicates which variables were found to be significant in either total or direct effect.

The "Total Effect" column of Table 5 indicates the beta and one-tail significance of that beta when the given variable first enters the hierarchical regression equation. The "Direct Effect" column indicates the beta and related significance of the variable in the final regression equation containing all of the variables. For example, when active professional membership first enters the equation (as the third independent variable entered) it has a significance of .11 and is therefore not statistically significant. However, after all 11 independent variables are added to the regression, active professional membership is statistically significant at .01. Therefore, the total effect of active professional membership on organizational-professional conflict is non-significant, but the direct effect is significant.

As described in detail in Chapter III, any variable with either a total effect or a direct effect which is statistically significant is retained in the model. That retention permits, as discussed earlier, the determination and analysis of indirect effects and the examination of redundancy and suppression.
Table 5
Organizational-Professional Conflict Model:
Significant Total and Direct Effects

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Effect</th>
<th>Direct Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta Significance</td>
<td>Beta Significance</td>
</tr>
<tr>
<td>Age</td>
<td>-.018864 .41</td>
<td>-.005533 .47</td>
</tr>
<tr>
<td>Tenure</td>
<td>-.014463 .43</td>
<td>+.072217 .12</td>
</tr>
<tr>
<td>Professional Membership</td>
<td>-.090707 .11</td>
<td>+.138733 .01</td>
</tr>
<tr>
<td>Number of Degrees</td>
<td>+.019845 .39</td>
<td>+.017032 .37</td>
</tr>
<tr>
<td>Professional Certification</td>
<td>-.099199 .09</td>
<td>-.097012 .03</td>
</tr>
<tr>
<td>Hierarchical Position</td>
<td>-.326164 .00</td>
<td>-.032091 .30</td>
</tr>
<tr>
<td>Degree of Centralization</td>
<td>+.464736 .00</td>
<td>+.242233 .00</td>
</tr>
<tr>
<td>Degree of Formalization</td>
<td>-.098285 .06</td>
<td>+.045630 .19</td>
</tr>
<tr>
<td>Prof. Promotion Criteria</td>
<td>-.344602 .00</td>
<td>-.190412 .00</td>
</tr>
<tr>
<td>Professional Commitment</td>
<td>-.256365 .00</td>
<td>-.151083 .01</td>
</tr>
<tr>
<td>Organizational Commitment</td>
<td>-.447174 .00</td>
<td>-.447174 .00</td>
</tr>
</tbody>
</table>

In accordance with the theory trimming procedure discussed in the previous chapter, the four variables from the original model which were found to be non-significant were eliminated from the model. This resulted in the elimination from the model of age, tenure, the number of degrees held, and the degree of formalization in the organization. In a regression completed with the remaining seven variables, the statistically significant total and/or direct effects of these seven variables remained as they were in the original model where all 11 variables were included. The total and direct effects of the seven variables on conflict are shown in Table 6.
Table 6
Reduced Organizational-Professional Conflict Model: Significant Total and Direct Effects

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Effect Beta</th>
<th>Total Effect Significance</th>
<th>Direct Effect Beta</th>
<th>Direct Effect Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Membership</td>
<td>-.090263</td>
<td>.10</td>
<td>+.150342</td>
<td>.00</td>
</tr>
<tr>
<td>Professional Certification</td>
<td>-.088478</td>
<td>.11</td>
<td>-.102359</td>
<td>.02</td>
</tr>
<tr>
<td>Hierarchical Position</td>
<td>-.267658</td>
<td>.00</td>
<td>-.013816</td>
<td>.40</td>
</tr>
<tr>
<td>Degree of Centralization</td>
<td>+.463315</td>
<td>.00</td>
<td>+.249208</td>
<td>.00</td>
</tr>
<tr>
<td>Prof. Promotion Criteria</td>
<td>-.352350</td>
<td>.00</td>
<td>-.192732</td>
<td>.00</td>
</tr>
<tr>
<td>Professional Commitment</td>
<td>-.253904</td>
<td>.00</td>
<td>-.138109</td>
<td>.01</td>
</tr>
<tr>
<td>Organizational Commitment</td>
<td>-.441350</td>
<td>.00</td>
<td>-.441350</td>
<td>.00</td>
</tr>
</tbody>
</table>

Reduced Model of Organizational Commitment

Five of the ten explanatory variables in the original model of organizational commitment exhibit statistically significant direct or total effects on that commitment. Three of these five variables (number of degrees held, hierarchical position, and the degree of formalization in the organization) exhibit both significant direct and significant total effects on organizational commitment. The variables and their respective relationships are shown in Table 7. The "Total Effect" column of Table 7 indicates the beta and related significance when the variable initially enters the hierarchical regression equation. The "Direct Effect" column indicates the beta and the significance of the variable when all ten independent variables are included in the equation.
Table 7
Organizational Commitment Model:
Significant Total and Direct Effects

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Effect Beta</th>
<th>Total Effect Significance</th>
<th>Direct Effect Beta</th>
<th>Direct Effect Significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>+.105946</td>
<td>.06</td>
<td>-.082765</td>
<td>.17</td>
</tr>
<tr>
<td>Tenure</td>
<td>+.158843</td>
<td>.03</td>
<td>+.116989</td>
<td>.08</td>
</tr>
<tr>
<td>Professional Membership</td>
<td>+.159775</td>
<td>.02</td>
<td>+.120278</td>
<td>.07</td>
</tr>
<tr>
<td>Number of Degrees</td>
<td>-.157327</td>
<td>.02</td>
<td>-.124856</td>
<td>.04</td>
</tr>
<tr>
<td>Professional Certification</td>
<td>-.159775</td>
<td>.09</td>
<td>-.117722</td>
<td>.05</td>
</tr>
<tr>
<td>Hierarchical Position</td>
<td>+.129076</td>
<td>.05</td>
<td>+.156591</td>
<td>.03</td>
</tr>
<tr>
<td>Degree of Centralization</td>
<td>+.059728</td>
<td>.21</td>
<td>+.094592</td>
<td>.13</td>
</tr>
<tr>
<td>Degree of Formalization</td>
<td>+.152722</td>
<td>.02</td>
<td>+.122985</td>
<td>.04</td>
</tr>
<tr>
<td>Prof. Promotion Criteria</td>
<td>+.079877</td>
<td>.16</td>
<td>+.060324</td>
<td>.23</td>
</tr>
<tr>
<td>Professional Commitment</td>
<td>+.097117</td>
<td>.12</td>
<td>+.097117</td>
<td>.12</td>
</tr>
</tbody>
</table>

In accordance with the theory trimming procedure discussed in Chapter IV, six variables were included in a reduced model which was tested for statistical significance. Five of those variables retained either a significant direct or indirect effect in that reduced model. Three of the variables in the reduced model (active professional membership, number of degrees held, and degree of formalization) indicate both significant total and significant direct effects. The variables and their respective total and direct effects are shown in Table 8. The five variables which retain either a significant total or a significant direct effect are the variables included in the analysis of the reduced model of organizational commitment.
Table 8
Reduced Organizational Commitment Model: Significant Total and Direct Effects

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Effect</th>
<th></th>
<th>Direct Effect</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>Significance</td>
<td>Beta</td>
<td>Significance</td>
</tr>
<tr>
<td>Tenure</td>
<td>+.167571</td>
<td>.02</td>
<td>+.083747</td>
<td>.12</td>
</tr>
<tr>
<td>Professional Membership</td>
<td>+.160012</td>
<td>.01</td>
<td>+.147910</td>
<td>.02</td>
</tr>
<tr>
<td>Number of Degrees</td>
<td>-.157279</td>
<td>.01</td>
<td>-.143331</td>
<td>.02</td>
</tr>
<tr>
<td>Professional Certification</td>
<td>+.094105</td>
<td>.09</td>
<td>-.085687</td>
<td>.11</td>
</tr>
<tr>
<td>Hierarchical Position</td>
<td>+.116222</td>
<td>.06</td>
<td>+.124411</td>
<td>.05</td>
</tr>
<tr>
<td>Degree of Formalization</td>
<td>+.155889</td>
<td>.01</td>
<td>+.155889</td>
<td>.01</td>
</tr>
</tbody>
</table>

Reduced Model of Professional Commitment

Of the original nine explanatory variables in the model of professional commitment, five indicate statistically significant total or direct effects on that commitment. As indicated in Table 9, for all five variables both the direct and the total effects are significant. For these variables, the total effect when each is first entered into the regression and the direct effect when all variables are included in the equation are both statistically significant.
Table 9
Professional Commitment Model:
Significant Total and Direct Effects

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Effect</th>
<th></th>
<th>Direct Effect</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>Significance</td>
<td>Beta</td>
<td>Significance</td>
</tr>
<tr>
<td>Age</td>
<td>+.163898</td>
<td>.01</td>
<td>+.178246</td>
<td>.01</td>
</tr>
<tr>
<td>Tenure</td>
<td>+.058817</td>
<td>.24</td>
<td>--.003266</td>
<td>.48</td>
</tr>
<tr>
<td>Professional Membership</td>
<td>+.430089</td>
<td>.00</td>
<td>+.409897</td>
<td>.00</td>
</tr>
<tr>
<td>Number of Degrees</td>
<td>+.026913</td>
<td>.38</td>
<td>+.017629</td>
<td>.39</td>
</tr>
<tr>
<td>Professional Certification</td>
<td>+.143678</td>
<td>.02</td>
<td>+.146772</td>
<td>.01</td>
</tr>
<tr>
<td>Hierarchical Position</td>
<td>--.147365</td>
<td>.02</td>
<td>--.169509</td>
<td>.01</td>
</tr>
<tr>
<td>Degree of Centralization</td>
<td>--.047727</td>
<td>.24</td>
<td>--.032738</td>
<td>.33</td>
</tr>
<tr>
<td>Degree of Formalization</td>
<td>+.147951</td>
<td>.01</td>
<td>+.135974</td>
<td>.02</td>
</tr>
<tr>
<td>Prof. Promotion Criteria</td>
<td>+.063526</td>
<td>.19</td>
<td>+.063526</td>
<td>.19</td>
</tr>
</tbody>
</table>

Table 10 indicates the total and direct effects of the five variables when they are the only variables included in the model. These relationships are analyzed in the reduced model of professional commitment.

Table 10
Reduced Professional Commitment Model:
Significant Total and Direct Effects

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total Effect</th>
<th></th>
<th>Direct Effect</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta</td>
<td>Significance</td>
<td>Beta</td>
<td>Significance</td>
</tr>
<tr>
<td>Age</td>
<td>+.163898</td>
<td>.01</td>
<td>+.158737</td>
<td>.01</td>
</tr>
<tr>
<td>Professional Membership</td>
<td>+.424729</td>
<td>.00</td>
<td>+.419225</td>
<td>.00</td>
</tr>
<tr>
<td>Professional Certification</td>
<td>+.143462</td>
<td>.01</td>
<td>+.151687</td>
<td>.01</td>
</tr>
<tr>
<td>Hierarchical Position</td>
<td>--.148251</td>
<td>.02</td>
<td>--.135829</td>
<td>.03</td>
</tr>
<tr>
<td>Degree of Formalization</td>
<td>+.140180</td>
<td>.01</td>
<td>+.140180</td>
<td>.01</td>
</tr>
</tbody>
</table>
Examination of Indirect Effects

Tables 6, 8, and 10 indicate that there are differences between the total effect which an independent variable has on a particular dependent variable and the direct effect of that independent variable.

For example, in Table 6 (showing the reduced model of organizational-professional conflict) the total effect of centralization on organizational-professional conflict is +.463315. However, as indicated in that table, the direct effect of centralization on conflict is only +.249208, a reduction of .214107. This reduction indicates that the effect of centralization on conflict is mediated by other variables which are entered into the model subsequently to centralization. The reduction is due to the indirect effects which centralization has through the other variables. In order to understand the relationships involved, this overall reduction in effect must be partitioned into its component parts and analyzed. The degree to which each subsequently added variable mediates the relationship between centralization and organizational-professional conflict must be determined and explained.

Table 11, which follows, indicates the indirect effects present in the reduced model of organizational-professional conflict. For example, as previously discussed, the degree of centralization in the organization has a total effect on conflict of +.463315 when only centralization and those variables entered hierarchically prior to centralization are present in the regression equation. However, when professional criteria in promotions is
subsequently brought into the equation, the effect of centralization on conflict is reduced by .151546. As professional commitment and organizational commitment are brought into the model, the effect of centralization on conflict is reduced, respectively, by .023575 and .038986. Therefore, the net result of including these three variables subsequently to centralization in the model is to reduce the effect of centralization on conflict from +.463315 to +.242908 (the reduction of .214107 discussed earlier). The indirect effects which centralization has through these three variables reduces by approximately one-half the effect of centralization on conflict. Failure to include these three variables would, therefore, lead to an overstatement of the effect which centralization has on organizational-professional conflict. The partitioning of the reduction in effect into the component parts indicates that the use of professional criteria in promotion accounts for the majority of the overall difference between total effect and direct effect.

(Table 11 follows on the next page.)
Table 11
Organizational-Professional Conflict: Direct and Indirect Relationships of Significant Variables

<table>
<thead>
<tr>
<th>Significant Variable</th>
<th>Total Effect</th>
<th>Indirect Effect</th>
<th>Direct Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Professional Membership</td>
<td>-.090263</td>
<td>+.014026 via # of prof. certifications</td>
<td>+.079810 via hierarchical position</td>
</tr>
<tr>
<td>Number of Professional Certifications</td>
<td>-.088478</td>
<td>+.012683 via hierarchical position</td>
<td>+.032591 via degree of centralization</td>
</tr>
<tr>
<td>Hierarchical Position</td>
<td>-.267658</td>
<td>+.160889 via degree of centralization</td>
<td>+.024555 via prof. promotion criteria</td>
</tr>
<tr>
<td>Degree of Centralization</td>
<td>+.463315</td>
<td>-.151546 via prof. promotion criteria</td>
<td>-.023575 via professional commitment</td>
</tr>
<tr>
<td>Professional Promotion</td>
<td>-.352350</td>
<td>-.038986 via organizational commitment</td>
<td>+.054607 via professional commitment</td>
</tr>
<tr>
<td>Professional Commitment</td>
<td>-.253904</td>
<td>+.115795 via organizational commitment</td>
<td>+.105011 via organizational commitment</td>
</tr>
<tr>
<td>Organizational Commitment</td>
<td>-.441350</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>


Tables 12 and 13, which follow, indicate the indirect effects present in the models of organizational commitment and professional commitment, respectively. For each of these tables, as was the case for Table 11, the sum of the values in the indirect effects column accounts for the total change in the beta value of the "Significant Variable" from its total effect when first entered to its direct effect in the full, final equation. Table 12 shows the total and direct effects of the variables which significantly affect organizational commitment.

**Table 12**

**Organizational Commitment:**
Direct and Indirect Relationships of Significant Variables

<table>
<thead>
<tr>
<th>Significant Variable</th>
<th>Total Effect</th>
<th>Indirect Effect via Xi</th>
<th>Direct Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenure</td>
<td>+.167571</td>
<td>-.012742 via number of degrees +.036302 via hierarchical position +.005934 via degree of formalization</td>
<td>+.160012</td>
</tr>
<tr>
<td>Active Professional Membership</td>
<td>+.160012</td>
<td>+.026062 via number of degrees -.023596 via hierarchical position +.014567 via degree of formalization</td>
<td>-.157279</td>
</tr>
<tr>
<td>Number of Degrees</td>
<td>-.157279</td>
<td>-.006543 via hierarchical position +.020491 via degree of formalization</td>
<td>-.143331</td>
</tr>
<tr>
<td>Hierarchical Position</td>
<td>+.116222</td>
<td>+.008189 via degree of formalization</td>
<td>+.124411</td>
</tr>
<tr>
<td>Degree of Formalization</td>
<td>+.155889</td>
<td></td>
<td>+.155889</td>
</tr>
</tbody>
</table>
Table 13 indicates the total and direct effects of the variables which significantly affect professional commitment.

Table 13

Professional Commitment:
Direct and Indirect Relationships of Significant Variables

<table>
<thead>
<tr>
<th>Significant Variable</th>
<th>Total Effect</th>
<th>Indirect Effect via Xj</th>
<th>Direct Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>+.163898</td>
<td>-.079766 via professional memberships +.019316 via professional certification +.060823 via hierarchical position -.005534 via formalization</td>
<td>+.158737</td>
</tr>
<tr>
<td>Professional Memberships</td>
<td>+.424729</td>
<td>-.026369 via professional certification +.031498 via hierarchical position -.010633 via formalization</td>
<td>+.419225</td>
</tr>
<tr>
<td>Professional Certification</td>
<td>+.143462</td>
<td>+.001079 via hierarchical position +.007146 via formalization</td>
<td>+.151687</td>
</tr>
<tr>
<td>Hierarchical Position</td>
<td>--.148251</td>
<td>+.012442 via formalization</td>
<td>--.135829</td>
</tr>
<tr>
<td>Formalization</td>
<td>+.140180</td>
<td></td>
<td>+.140180</td>
</tr>
</tbody>
</table>

All three of these tables indicate that indirect effects may either increase or decrease the effect which an independent variable has on the dependent variable in question. As discussed in detail in Chapter IV, a reduction is due to the presence of redundancy in the relationships, and an increase is due to suppression. In order to better understand and explain the indirect effects as indicated in the tables, the following sections of this chapter break the indirect effects into their redundant
and/or suppressive components and offer explanations of why the redundancy or suppression is present.

*Analysis of Significant Relationships*

As previously indicated, the mathematical difference between the total effect and the direct effect which an explanatory variable has on a dependent variable is due to indirect effects arising from the explanatory variable's relationship with other explanatory variables. The amount of this difference attributable to the indirect effects arising due to each of the "other" explanatory variables can be determined and categorized as redundant or suppressive. Once these quantitative steps have been taken, an analysis and explanation of the reasons for the redundancy or the suppression is necessary to provide understanding of the relationships involved. In the sections of this chapter which follow, the redundant or suppressive nature of each indirect effect present in each of the models is determined, and possible explanations of why the particular redundancy or suppression is present are provided.

*Analysis of the Organizational-Professional Conflict Model*

In the following sections, each significant variable affecting conflict is examined in relation to the suppression or redundancy which the variable has in relation to other model variables. These relationships are shown in Table 14.
### Table 14

**Analysis of Variable Relationships:**
**Reduced Model of Organizational-Professional Conflict**

<table>
<thead>
<tr>
<th>Variable Analyzed</th>
<th>Beta</th>
<th>Variable Added</th>
<th>Beta</th>
<th>Beta Change</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>-.090263</td>
<td>P. Certification</td>
<td>+.076237</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td>Professional</td>
<td>+.003573</td>
<td>Hier. Position</td>
<td>+.003573</td>
<td>Sign Chg</td>
<td>Suppression</td>
</tr>
<tr>
<td>Membership</td>
<td>+.022943</td>
<td>Centralization</td>
<td>+.022943</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td></td>
<td>+.047528</td>
<td>Prof. Promotion</td>
<td>+.047528</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td></td>
<td>+.151738</td>
<td>Org. Commit.</td>
<td>+.151738</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td>Number of Professional Cert.</td>
<td>-.088478</td>
<td>Hier. Position</td>
<td>-.101161</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td>Professional Cert.</td>
<td>-.133752</td>
<td>Centralization</td>
<td>-.133752</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td></td>
<td>-.095578</td>
<td>Prof. Promotion</td>
<td>-.095578</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td>-.065270</td>
<td>Org. Commit.</td>
<td>-.065270</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td>Hierarchical Position</td>
<td>-.267658</td>
<td>Centralization</td>
<td>-.106769</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td>-.106769</td>
<td>Prof. Promotion</td>
<td>-.08214</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td>-.082214</td>
<td>Prof. Commit.</td>
<td>-.089130</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td></td>
<td>-.089130</td>
<td>Org. Commit.</td>
<td>-.013816</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td>Degree of Centralization</td>
<td>+.463315</td>
<td>Prof. Promotion</td>
<td>+.311769</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td>+.311769</td>
<td>Prof. Commit.</td>
<td>+.288194</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td>+.288194</td>
<td>Org. Commit.</td>
<td>+.249208</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td>Professional Promotion</td>
<td>-.352350</td>
<td>Prof. Commit.</td>
<td>-.297743</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td>-.297743</td>
<td>Org. Commit.</td>
<td>-.192732</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td>Professional Commitment</td>
<td>-.253904</td>
<td>Org. Commit.</td>
<td>-.138109</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td>Organ. Commitment</td>
<td>-.441350</td>
<td></td>
<td>-.441350</td>
<td>Direct Effect</td>
<td></td>
</tr>
</tbody>
</table>

In Table 14 the "Beta 1" column indicates the beta value for the relationship between the "Variable Analyzed" and organizational-professional conflict prior to the entry of the next
variable into the regression. The next variable to be added is shown in the "Variable Added" column. The "Beta 2" column indicates the beta of the relationship between the "Variable Analyzed" and conflict after the "Variable Added" enters the model. The "Beta Change" column indicates the change in absolute value of the beta as an "Increase", a "Decrease", or a "Sign Chg." (when the beta changes sign). The "Relationship" column indicates the redundant or suppressive nature of the relationship between the "Variable Analyzed" and the "Variable Added" when both are considered in relation to organizational-professional conflict.

For example, when the number of professional certifications held by the individual is the only independent variable present in the model, that independent variable has a beta value of --.088478. However, when the individual’s hierarchical position is added to the model, the beta for professional certifications increases in absolute value to --.101161. This increase in the beta of certifications when hierarchical position is added to the model is indicative of a suppressive relationship between certification and position when both are being related to organizational-professional conflict. If the absolute value of the beta increases or the sign of the beta changes when an additional variable is added, suppression is present. In the cases where the absolute value of the beta decreases, there is a redundant relationship present.

In the sections which follow, each of the suppressive or redundant relationships shown in Table 14 is discussed and explanations are given for the occurrence of those relationships.
The redundant relationship, as indicated in Table 14, between active professional membership and the number of professional certifications held by the individual is expected. Each is an outward sign of professionalism and may be expected to be partly carrying the same information about organizational-professional conflict as is the other.

Active professional membership and hierarchical position are in a suppressor relationship. Hierarchical position provides the individual with a set of role expectations based on his or her position in the organization. Active professional membership may provide a set of role expectations based on the norms and objectives of the professional organization. The two sets of role expectations may differ due to their differing sources. In such a case, professional expectations derived from active membership may be suppressed by organizational expectations due to the influence of one's hierarchical position. The overall positive relationship between active professional membership and organizational-professional conflict is mitigated to an extent by the inverse relationship between hierarchical position and conflict. When the effects of position are partialled from the active professional membership-conflict relationship, that relationship changes sign indicating the removal of the mitigating effects of position. The removal of the suppressive effect of position on professional membership reveals the positive relationship between such membership and organizational-professional conflict.
The degree of centralization in the organization and one's active professional membership are in a cooperative suppression relationship when both are considered in relation to organizational-professional conflict. Each variable has a positive relationship with conflict but each also has an inverse relationship with the other. When centralization is partialled from active membership, the relationship between membership and conflict is enhanced. Centralization has a positive relationship to conflict due to the "clash" between centralization and the professional's desire for autonomous decision making. Active professional membership increases conflict by making the individual professional more aware of potential conflict between the goals and values of the organization and those of the profession. Centralization and active professional membership are inversely related due to the differing perceptions of the individual upon which each is based. As discussed in Chapter III, personnel in centralized organizations are not trusted to make decisions. However, active professional membership is related to and enhances the idea that professionals are capable of and required to make autonomous professional decisions. These differing perceptions of the individual account for the inverse relationship between the two variables.

Active professional membership has an overall positive relationship with organizational-professional conflict. Active professional membership may make the individual more sensitive to areas of conflict between the organization and the profession and thereby foster a positive relationship. The use of professional criteria in promotion, however, has an inverse relationship with
conflict. Professional criteria used as the basis for promotion in the organization provides a set of role expectations for the individual which lessens organizational-professional conflict. As a result, the effects of the use of professional criteria in promotion mitigates or suppresses the effects of professional membership on conflict. When the suppressing effects of professional promotion criteria are partialled from the professional membership-conflict relationship, the strength of that relationship is enhanced.

The suppressor relationship, shown in Table 14, between active professional membership and professional commitment may initially appear as an anomaly. However, the relationship may be considered valid if one considers that commitment involves attitudinal factors such as internalization of goals and objectives which may be of far greater scope than does simple active membership. Mautz, Tiessen, and Colson [1984] raise the question of a difference between commitment to professional institutions (active membership) and commitment to professional standards. Kidron [1978] suggests that commitment may be separated into calculative commitment and moral commitment. The measure of professional commitment utilized in the current study is a measure of moral commitment to the profession [Ferris and Aranya, 1983]. The measure of active professional membership utilized in the current study involves the respondent's own perception of his or her level of active participation. Such a self-perception may be more related to calculative commitment as opposed to moral commitment. Therefore, the suppressive relationship between active
professional membership and professional commitment observed in the current study may be the manifestation of the potential difference between types of commitment (moral versus calculative) as suggested by Kidron.

The redundancy relationship between active professional membership and organizational commitment may possibly be due to the fact that both factors involve the "joining" of a group and participation in the activities of that group. Organizational commitment, as used in this study, requires active membership in the employing organization which may be of a similar nature to active membership in a professional organization. The two variables, therefore, may be carrying the same type of information concerning "joining" in relation to organizational-professional conflict.

**Professional Certification - Conflict**

Table 15, which follows, repeats that portion of Table 14 showing the relationships present when professional certification is considered in relation to organizational-professional conflict.
The hierarchical position of the individual is a suppressor of the relationship between the number of professional certifications held by the respondent and conflict. Hierarchical position may be providing a set of relevant role expectations which is different from that provided by professional certification. One of the two sets is suppressing the other possibly due to their potentially opposite effect on the individual. Professional certification is considered to represent an outward sign of professional commitment. Holding a higher position in the organizational hierarchy may well be an outwardly visible sign of the result of organizational commitment. When the effects of the two variables are partialled from one another, they are no longer reducing each other's effect on conflict. Due to the contradictory nature of these two variables, the partialling procedure results in the enhancement of the relationship between each variable and organizational-professional conflict.
The organizational attribute of degree of centralization appears as a suppressor in the certification-conflict relationship. When this variable is considered, the inverse relationship between certification and conflict increases. This is in keeping with the theory discussed in Chapter III that centralization is contradictory to the attributes of professionalism, of which professional certification is an outward sign. Such an organizational variable may provide a set of role expectations which are opposite in effect or contradictory to those provided by the profession and internalized through the certification process. This organizational attribute, however, may impact the individual on a more constant basis in his or her organizational activities. The effect of centralization, therefore, may be to "hide" part of the relationship between the number of certifications held by the individual and the individual's level of organizational-professional conflict. The potentially greater impact on role expectations and side bets of this organizational variable may account for this suppressor relationship.

The use of professional criteria in promotions exhibits a redundant relationship with the number of professional certifications held by the individual. Individuals who hold certifications may seek environments where professional attributes are utilized in the promotion system. Also, professional certification may be one of the most important professional criteria being used in the promotion system. Therefore, these two variables may be partly carrying the same information concerning the relationship between professionalism, as evidenced in certification, and conflict.
There is a redundant relationship between professional certification and professional commitment in relation to organizational-professional conflict. Both variables may be carrying, in part, the same information about conflict. This is logically consistent with the theorized relationship between professional certification and professional commitment in which professional certification is generally considered to be an outward sign of professional commitment.

Organizational commitment serves as a net suppressor of professional certification in relation to conflict. According to the theories discussed in previous chapters, professional certification and organizational commitment should have opposing effects on conflict. Such an inverse relationship between these two independent variables may suppress the relationship between certification and conflict until organizational commitment is entered into the model. When that entrance occurs, the beta for professional certification increases revealing the enhanced inverse relationship between certification and conflict.

*Hierarchical Position - Conflict*

Table 16 below repeats that section of Table 14 dealing with the relationships present when the variable being analyzed is one's hierarchical position in the organization in relation to one's level of organizational-professional conflict.
In the conflict model the degree of centralization in the organization is redundant with the individual's hierarchical position. This is reasonable in that both are attributes of the organization and may be carrying the same type of information about conflict. Both factors contribute, from an organizational perspective, to the sent-role expectations being communicated to the individual. Also, hierarchical position may be considered an attribute of centralization and therefore redundant with centralization.

Hierarchical position has a redundant relationship with the use of professional criteria in promotion when both variables are considered in relation to conflict. Both variables are providing the individual with sets of expected role behaviors. There may be a set of organizationally-based role behaviors established for each position in the organizational hierarchy. The use of professional criteria for promotions may also be providing a set of expected role behaviors. Even though the criteria being used in promotion may be based on professional standards, only the organization
can promote the individual to a higher position. Therefore, even though the promotion criteria may be professional in origin, the individual is being confronted by the criteria as organizational expectations. The organization may communicate desired behaviors through positional role expectations or through the criteria used to promote individuals to those positions. In such a case, there would be redundancy between hierarchical position and the use of professional criteria in promotion decisions when both are considered in relation to conflict.

As indicated in Table 16 above, there is a suppressor relationship between professional commitment and hierarchical position in the model. When the effect of professional commitment is partialled from hierarchical position, the negative beta for position increases. Hierarchical position and professional commitment both provide the individual with sets of role expectations. Because they arise from different sources with potentially differing objectives each variable may confound the relationship between the other variable and conflict. When the effects of professional commitment are partialled from the hierarchical position-conflict relationship, that relationship is enhanced. Hierarchical position is a basic element of bureaucracy and involves authority based on position. Professional commitment may involve the advocacy of authority based on expertise. Hierarchical position, therefore, may provide a set of role expectations which is in conflict with professional commitment. These independent variables have a contradictory effect on each other. When that opposing effect is partialled, the effect each has on commitment is enhanced.
In the model, organizational commitment is redundant with hierarchical position in relation to conflict. Individuals in higher positions of authority are more organizationally committed to the organization than are individuals in lower positions. This may be due to either past actions, which represent an "investment" in the organization, or due to current circumstances, in which the side bets in place are associated with the particular organization and cannot be easily replaced. Therefore, hierarchical position may be providing the same information regarding conflict as is organizational commitment. This would account for the observed redundant relationship between hierarchical position and organizational commitment.

*Centralization - Conflict*

Table 17, following, repeats that part of Table 14 indicating the relationships present when centralization in the organization is considered in relation to the individual's level of conflict.

Table 17

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>Variable</th>
<th>Beta</th>
<th>Beta</th>
<th>Change</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyzed</td>
<td></td>
<td>Degree of</td>
<td>.463315</td>
<td>.311769</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Centralization</td>
<td>+.311769</td>
<td>+.288194</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prof. Commit.</td>
<td>+.288194</td>
<td>+.249208</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
</tbody>
</table>
The redundant relationship between centralization and the use of professional criteria in promotion may be due to the fact that promotion decisions generally involve a high degree of centralization. These two variables may be reflecting this common attribute in relation to conflict.

The degree of centralization in an organization provides the individual members of that organization with a set of expectations as to their roles. These role expectations impact the degree of organizational-professional conflict experienced by the individual. An individual's degree of professional commitment also contributes to a set of role expectations for the individual. These latter role expectations may be self-generated but impact conflict in a manner similar to the expectations of the organization communicated through centralization. The redundancy indicated between centralization and professional commitment may be reflecting this common underlying attribute of the impact of role expectations on conflict.

Organizational commitment involves a belief in and support of the goals and objectives of the organization. It also involves a willingness on the part of the individual to work toward the attainment of the goals and objectives of the organization. Organizational centralization is one means through which an organization attempts to reach its goals. Centralization is one means of organizing so that efforts may be channeled toward goal attainment. In this manner, organizational commitment and centralization share a common concern with the goals and objectives of the organization. The redundancy between these
variables in relation to conflict may be an artifact of that shared orientation toward organizational goals and goal achievement.

**Professional Criteria in Promotion - Conflict**

Table 18 repeats that section of Table 14 addressing the relationships present when the use of professional criteria in promotions is being considered in relation to organizational-professional conflict.

<table>
<thead>
<tr>
<th>Variable Analyzed</th>
<th>Beta</th>
<th>Variable Added</th>
<th>Beta</th>
<th>Beta Change</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of Professional Criteria</td>
<td>-.352350</td>
<td>Professional Commit.</td>
<td>-.297743</td>
<td>-.054607</td>
<td>Decrease Redundancy</td>
</tr>
<tr>
<td>Org. Commit.</td>
<td>-.297743</td>
<td>Org. Commit.</td>
<td>-.192732</td>
<td>-.105011</td>
<td>Decrease Redundancy</td>
</tr>
</tbody>
</table>

The data indicate that professional commitment is redundant with the use of professional criteria in promotions when conflict is considered. The inverse relationship between use of professional criteria and conflict is reduced when professional commitment enters the model. The use of professional criteria in promotion has, as expected, an inverse relationship with organizational-professional conflict. By utilizing professional criteria for promotion, the organization may be signalling the professional that organizational goals and objectives are
compatible with professional goals and objectives. Under such conditions, conflict would be reduced and the expectation would be for an inverse relationship between use of professional criteria and conflict. The data support this expectation. The expectation would also be that in organizations where professional criteria is being used for promotion, the individuals present in such organizations would exhibit a high degree of professional commitment. Therefore, the information being provided by the use of professional criteria in promotion would be expected to be somewhat redundant with professional commitment on the part of the individuals in the organization. As indicated by the data, both variables may be carrying the same information concerning conflict in the organization.

Organizational commitment and the use of professional criteria in promotion are providing some of the same information regarding organizational-professional conflict. This redundancy is to be expected. The present study deals with professionals in organizations. The professional who is in an organization which utilizes professional promotion criteria will most likely be committed to that organization. In such cases, both variables, organizational commitment and professional promotion criteria, may be indicating in part the same information concerning organizational-professional conflict.
**Professional Commitment - Conflict**

Table 19 deals with the relationships present when professional commitment is related to organizational-professional conflict.

Table 19

<table>
<thead>
<tr>
<th>Variable Analyzed</th>
<th>Beta</th>
<th>Variable Added</th>
<th>Beta</th>
<th>Beta Change</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Commitment</td>
<td>-0.253904</td>
<td>Org. Commit.</td>
<td>-0.138109</td>
<td>-0.138109</td>
<td>Decrease Redundancy</td>
</tr>
</tbody>
</table>

Organizational commitment exhibits a redundant effect on professional commitment when entered into the model of organizational-professional conflict. Either the organization or the profession may be the object of commitment. Therefore, these two variables may be reflecting the same underlying factor related to commitment. In such a case the expectation would be that both organizational commitment and professional commitment would be supplying some common information concerning the relationship of commitment to conflict. In addition, the organization may be the vehicle through which the individual performs as a professional. Therefore, professional commitment and organizational commitment may be redundant in relation to conflict due to the necessity of professional performance within
an organization. Without a certain degree of organizational commitment, the professional is not able, in such cases, to pursue his or her professional activities.

Analysis of the Organizational Commitment Model

In the sections that follow, the direct and indirect effects of the variables which affect organizational commitment are examined and explained. These relationships are summarized in Table 20. The meanings of the various columns in Table 20 and the relationships between the columns are similar to those explained earlier for Table 14. For example, when tenure is the variable being analyzed and is the only explanatory variable present in the regression, the beta value (Beta 1) for the relationship between tenure and organizational commitment is +.167571. However, when active professional membership is added to the equation, the beta for tenure (Beta 2) falls to +.126857. This decrease in absolute value is indicative of redundancy between tenure and active professional membership when both are considered in relation to organizational commitment.

Tenure - Organizational Commitment

As indicated in Table 20, tenure and active professional membership exhibit a redundant relationship in the model of organizational commitment. Both tenure and active professional membership involve an individual in a relationship with an
organization. The individual with longer tenure may be more "involved" in the employing organization than are new arrivals.

Table 20

Analysis of Variable Relationships:
Reduced Model of Organizational Commitment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>Variable</th>
<th>Beta</th>
<th>Beta</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyzed</td>
<td>1</td>
<td>Added</td>
<td>2</td>
<td>Change</td>
<td></td>
</tr>
<tr>
<td>Tenure</td>
<td>+.167571</td>
<td>Prof. Member.</td>
<td>+.126857</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td>+.126857</td>
<td>Num. of Degrees</td>
<td>+.114115</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td>+.144115</td>
<td>Hier. Position</td>
<td>+.077813</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td>+.077813</td>
<td>Formalization</td>
<td>+.083747</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td>Active Professional Membership</td>
<td>+.160012</td>
<td>Num. of Degrees</td>
<td>+.186074</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td>Professional</td>
<td>+.186074</td>
<td>Hier. Position</td>
<td>+.162478</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td>+.162478</td>
<td>Formalization</td>
<td>+.147910</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td>Number of Degrees</td>
<td>-.157279</td>
<td>Hier. Position</td>
<td>-.163822</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td></td>
<td>-.163822</td>
<td>Formalization</td>
<td>-.143331</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td>Hierarchical</td>
<td>+.116222</td>
<td>Formalization</td>
<td>+.124411</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td>Position</td>
<td>Degree of Formalization</td>
<td>+.155889</td>
<td></td>
<td></td>
<td>Direct Effect</td>
</tr>
</tbody>
</table>

The individual who is an active member of a professional organization also is "involved" in the professional organization. Tenure and active membership each may be partly carrying information about organizational commitment which concerns the individual's propensity, ability, or willingness to "invest" his or her energy, time, resources, and/or interests in an organization. The factor being exhibited in the relationship between these variables may be the "investment" by the individual
in either his or her employment organization or in a professional organization.

The individual's tenure in the organization has a redundant relationship with hierarchical position in the firm when both are considered in relation to organizational commitment. Both tenure and hierarchical position are providing the same information, in part, concerning commitment. This may be due to the probability that the individuals with longer tenure may be in higher positions in the organization than are less tenured individuals. Tenure and hierarchical position are usually correlated positively and therefore serve a somewhat redundant role. The individual who has been with the organization for a long period of time is usually, due to the presence of side bets, committed to that organization. The individual who is in a higher position in the organization is usually, also due to side bets, committed to that organization. Therefore, tenure and hierarchical position may be providing the same information concerning those side bets and their relationships to organizational commitment.

There is a redundant relationship between tenure and the number of degrees held by the individual when both are considered in relation to organizational commitment. Both variables, tenure and degrees held, represent an investment by the individual of time and/or other resources in some investment "object". Each variable may be supplying similar information about the individual in terms of his or her ability or desire to "invest" in some object. Both tenure and attainment of degrees involve the individual's willingness to invest a great deal of effort and/or time into some activity. The redundancy being exhibited
between these two variables may be the result of that common aspect.

The degree of formalization in the organization has a suppressor relationship on tenure in the model of organizational commitment. When formalization is entered into the model, the positive relationship between tenure and organizational commitment increases. Tenure and formalization both have a positive relationship with organizational commitment but have inverse relationships to each other. As previously indicated, tenure may lead to greater organizational commitment due simply to a higher "investment" in the organization due to the passage of time. As indicated by Morris and Steers [1980], formalization may increase the individual's concept of organizational dependability and therefore lead to increased organizational commitment. These explanations account for the positive relationships between each of these two variables and commitment. However, the inverse relationship between the two may be explained by the possibility that the individual may come to do things his or her own way after a period of time. The individual who has been long in the organization may have developed his or her own guidelines as to how the task should be performed. Those guidelines are based on the individual's long experience in the organization and may not be in accordance with written guidelines. Formalization provides a similar set of guidelines, but those guidelines may have been developed from factors other than personal experience. The "personal" guidelines based on experience and the organizational guidelines based on other factors may have a contradictory relationship. This would explain the inverse
relationship between tenure and formalization in relation to organizational commitment.

Active Professional Membership - Organizational Commitment

Table 21 below repeats that portion of Table 20 which addresses the relationships involved between active professional membership and organizational commitment.

Table 21
Variable Relationships:
Active Professional Membership - Organizational Commitment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>Variable</th>
<th>Beta</th>
<th>Change</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyzed</td>
<td>1</td>
<td>Added</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Active Professional Membership</td>
<td>.160012</td>
<td>Num. of Degrees</td>
<td>.186074</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Hier. Position</td>
<td>.162478</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Formalization</td>
<td>.147910</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
</tbody>
</table>

According to Kidron [1978], commitment may take two forms: calculative and moral. Active professional membership and the number of degrees held by the individual may be exhibiting these two forms in relation to commitment to the organization. As shown above, those two variables are in a suppressor relationship in the model of organizational commitment. Active professional membership has a positive effect on organizational commitment while the number of degrees held has an inverse effect. An individual who is an active member of a professional
organization presumably has internalized the norms and values of the profession. A reasonable assumption, however, is that the individual who has had longer exposure to the professional socialization process (through attainment of more or advanced degrees) would exhibit an even greater level of such internalization. Therefore, active membership may involve less commitment to the norms of the profession than does the attainment of higher degrees. In accordance with Etzioni's [1964] classification scheme, active professional membership may be revealing calculative commitment involving an exchange relationship between the organization and the individual. The inverse relationship between the number of degrees and organizational commitment may, however, be due to moral involvement based on interactions of goals, values, and norms. Using the Cohen and Cohen [1974, 1983] characterization of suppression, the number of degrees held by the individual represents a cause that is correlated with active professional membership but acts on organizational commitment in a direction opposite from that membership. The potential difference in forms of commitment (calculative or moral) may account for this opposite effect.

Hierarchical position in the organization has a redundant effect on active professional membership when both variables are considered in relation to organizational commitment. Active professional membership and hierarchical position are both, to an extent, providing the same information regarding organizational commitment. The individual who is an active member of a professional organization is indeed a member of an organization
and has "invested" his or her time and effort into that organization. That which is being highlighted by the observed positive relationship between organizational commitment and active membership may be the individual's ability or desire to commit to some type of organization, either professional or employment related. The individual in a higher position of authority within the organization is usually more organizationally committed than are individuals in lower positions. The fact that the individual has risen to a higher position may be evidence of his or her higher level of organizational commitment or willingness to commit to the employment organization. Therefore, active professional membership and hierarchical position may both be providing information concerning the individual's willingness to commit his or her time, effort, and resources to some type of organization. In such a case, the observed redundant relationship between the two variables would be expected.

Active professional membership and the degree of formalization in the organization are redundant in their relationship to organizational commitment. This relationship is possibly due to both variables dealing with sent-role expectations. Active professional membership involves the individual with a set of role expectations provided by the professional organization. Formalization within the employing organization also provides the individual with a set of identified role expectations. In cases where the written policies and procedures of the employing organization reflect the norms and standards of the professional organization, the expectation would
be for a redundant relationship between professional membership and formalization. This would possibly account for the redundant relationship observed between these two variables in the current study.

*Number of Degrees Held - Organizational Commitment*

Table 22 repeats the section of Table 20 indicating those relationships which are related to the number of degrees held by the individual and that individual's level of organizational commitment.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>Variable</th>
<th>Beta</th>
<th>Beta</th>
<th>Change</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyzed</td>
<td>1</td>
<td>Added</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of</td>
<td>-.157279</td>
<td>Hier. Position</td>
<td>-.163822</td>
<td>Increase</td>
<td>Suppression</td>
<td></td>
</tr>
<tr>
<td>Degrees</td>
<td>-.163822</td>
<td>Formalization</td>
<td>-.143331</td>
<td>Decrease</td>
<td>Redundancy</td>
<td></td>
</tr>
</tbody>
</table>

The individual's hierarchical position in the organization suppresses the effect of the number of degrees held by the individual on organizational commitment. When hierarchical position is included in the model, the inverse relationship between the number of degrees held and organizational commitment increases. This may be due to the potentially opposite effects which these two variables have on organizational
commitment. A higher number of degrees leads the individual to be less committed to the current organization possibly due to having a greater number of alternative employment opportunities. Hierarchical position, however, may increase commitment to the present organization due to the increased side bets involving higher positions. Hierarchical position may be overriding the relationship between degrees and commitment due to its more immediate impact on the individual. The individual’s current slate of side bets may be more immediately affected by position in the firm than by the number of degrees held. Therefore, until the effects of hierarchical position are partialled in the model, the effect of degrees held on commitment is suppressed by the individual’s position in the hierarchy.

The number of degrees held by the individual and the degree of formalization in the organization have a redundant relationship when both are considered in relation to organizational commitment. Each of the variables may be supplying information concerning the effect on commitment of the presence of two different sets of role expectations. The individual with a high number of degrees has presumably been exposed to a longer period of professional socialization than has the individual with a lesser number of degrees. That longer exposure may provide the individual with a well defined set of role expectations based on professional norms and standards. Formalization in the employing organization accomplishes the same task by providing employees with a set of role expectations in the form of written guidelines and procedures. In the case where the written guidelines of the organization are compatible with the norms and standards of the
profession, there would be a redundancy between formalization and the number of degrees when both are considered in relation to organizational commitment. This may explain the redundant relationship found between the two variables in the present study.

*Hierarchical Position - Organizational Commitment*

The following table, Table 23, shows that portion of Table 20 which applies to the relationship between hierarchical position and organizational commitment.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>Variable</th>
<th>Beta</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyzed</td>
<td>1</td>
<td>Added</td>
<td>2</td>
<td>Change</td>
</tr>
<tr>
<td>Hierarchical</td>
<td>+.116222</td>
<td>Formalization</td>
<td>+.124411</td>
<td>Suppression</td>
</tr>
<tr>
<td>Position</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The degree of formalization in the organization acts as a suppressor of the relationship between hierarchical position and organizational commitment. The relationship between formalization and hierarchical position is "hiding" or suppressing a portion of each variable's relationship with organizational commitment until both variables are included in the model. Hierarchical position and the degree of formalization have an inverse relationship with each other, but each, however, has a
positive relationship to organizational commitment. The inverse relationship between the two may be due to the fact that both hierarchical position and formalization involve the exercise or ability to exercise authority or power. The individual in a higher position in the organization may be able to exercise great authority. That authority, however, may be limited by the written rules, procedures, and policies of the firm. Formalization, therefore, may have a counteractive effect on positional power. High position in the firm may provide the potential to override written procedures. Therefore, the two variables are suppressing one another possibly due to their conflicting attributes and outcomes.

Analysis of the Professional Commitment Model

In the sections which follow, the direct and indirect relationships which affect organizational commitment are examined. These relationships are summarized in Table 24. Table 24 follows the same logic as earlier discussed for Tables 14 and 20. For example, when age is the only explanatory variable in the regression (with professional commitment as the independent variable) the beta (Beta 1) for age is +.163898. However, as active professional membership is added to the regression, the beta (Beta 2) for age decreases to +.084132, indicating a redundant relationship between age and active professional membership.
Table 24
Analysis of Variable Relationships:
Reduced Model of Professional Commitment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>Variable</th>
<th>Beta</th>
<th>Beta</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyzed</td>
<td></td>
<td></td>
<td>Added</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>+.163898</td>
<td>Prof. Member.</td>
<td>+.084132</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td></td>
<td>+.084132</td>
<td>Prof. Certif.</td>
<td>+.103448</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td></td>
<td>+.103448</td>
<td>Hier. Position</td>
<td>+.164271</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td></td>
<td>+.164271</td>
<td>Formalization</td>
<td>+.158737</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td>Active</td>
<td>+.424729</td>
<td>Prof. Certif.</td>
<td>+.398360</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td>Professional</td>
<td>+.398360</td>
<td>Hier. Position</td>
<td>+.429858</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td>Membership</td>
<td>+.429858</td>
<td>Formalization</td>
<td>+.419225</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td>Professional</td>
<td>+.143462</td>
<td>Hier. Position</td>
<td>+.144541</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td>Certification</td>
<td>+.144541</td>
<td>Formalization</td>
<td>+.151687</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td>Hierarchical Position</td>
<td>-.148251</td>
<td>Formalization</td>
<td>-.135829</td>
<td>Decrease</td>
<td>Redundancy</td>
</tr>
<tr>
<td>Degree of Formalization</td>
<td>+.140180</td>
<td></td>
<td>+.140180</td>
<td>Direct Effect</td>
<td></td>
</tr>
</tbody>
</table>

Age - Professional Commitment

As indicated by Table 24, age has a total positive effect on professional commitment. This is to be expected in light of the concept that the older professional has "placed" or has had "placed" for him or her a greater number of side bets in relation to the profession. The older professional may be less likely to change professions due to his or her age. The older professional may have a high degree of professional commitment simply due to the fact that he or she possibly has been a member of the profession for a long period of time. However, when active
professional membership is added to the model, the effect of age is reduced.

As indicated by Table 24, age and active professional membership are redundant in relation to professional commitment. Age, as previously discussed, is a side bet in itself in relation to commitment to the profession. The older individual may have more "at stake" in the profession than does the younger individual solely due to age. Active professional membership also involves side bets in relation to time and resources devoted to professional organizations. Therefore, age and active professional membership may each be, in part, providing the same side bet information concerning professional commitment. Both variables may be indicating higher "investment" by the individual in the profession through either the passage of time or the active engagement in professional activities.

The relationship between age and the number of professional certifications held by the individual is what Cohen and Cohen [1974, p. 90] classify "cooperative suppression." The correlation between age and professional certification is negative but both variables have a positive relationship to professional commitment. In such cases the variables are mutually enhancing. The inverse relationship between age and certification may be due to the relatively recent advent of certification for internal auditors. Older internal auditors may have begun their careers at a time at which certification was held to be less important and subsequently may not have obtained certification. Older internal auditors also may derive their professional commitment from experience. Younger internal auditors may have become committed to the profession
as the result of the professional socialization process associated with the attainment of certification. Therefore, age and certification may be expected to each individually have a positive relationship with professional commitment while being inversely related due to the circumstances surrounding their relationship.

Hierarchical position serves as a suppressor variable of age in relation to professional commitment. As indicated in earlier sections, Sorensen and Sorensen [1974] suggest a downward revision of professional expectations in relation to increases in rank. It is possible that it is this downward revision of professional expectations at higher levels in the organization which "hides" or suppresses part of the relationship between age and professional commitment until position is partialled from age. In this case, as characterized by Cohen and Cohen [1974], net suppression occurs even in the presence of positive coefficients due to hierarchical position suppressing a portion of the variance of age that is uncorrected with professional commitment. Controlling for the effects of hierarchical position and its associated downward revision of professional expectations results in the enhanced relationship between age and professional commitment.

Age and formalization are redundant when both are considered in relation to professional commitment. The older individual may, due to longer life experience, possess a well defined set of expectations for his role as a professional. Organizational formalization provides the individual with a set of well defined, written guidelines which set out the role expectations for the individual. In cases where the individual's set
of professional role expectations based on experience are congruent with the role expectations as expressed in organizational formalization, the two variables, age and formalization, would be redundant in relation to professional commitment. This would account for the redundant relationship found in the current study.

Active Professional Membership - Professional Commitment

Table 25 below repeats that portion of Table 24 which deals with the relationship between active professional membership and professional commitment.

Table 25

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>Variable</th>
<th>Beta</th>
<th>Beta Change Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active</td>
<td>+.424729</td>
<td>Prof. Certif.</td>
<td>+.398360</td>
<td>Decrease Redundancy</td>
</tr>
<tr>
<td>Professional</td>
<td>+.398360</td>
<td>Hier. Position</td>
<td>+.429858</td>
<td>Increase Suppression</td>
</tr>
<tr>
<td>Membership</td>
<td>+.429858</td>
<td>Formalization</td>
<td>+.419225</td>
<td>Decrease Redundancy</td>
</tr>
</tbody>
</table>

As indicated by the preceding table, active professional membership has an overall positive relationship with professional commitment. This is to be expected due to active professional membership being an outward sign of professional commitment. However, when the number of professional certifications held by the individual is considered in the model, the effect of active
professional membership on professional commitment is reduced due to redundancy.

The redundant relationship between active professional membership and professional certification in relation to professional commitment is expected. Professional certification is an expected attribute of professional commitment as well as a contributor to that commitment through the socialization process. Active professional membership is also a sign of professional commitment by the individual. Attainment of certification and active professional membership both involve the "investment" by the individual in a course of action which may, due to behavioral feedback and cognitive congruence, lead to increased professional commitment. Therefore, this redundancy in the model is expected due to both certification and active professional membership providing the same information concerning the individual's professional commitment.

Hierarchical position is a suppressor of the relationship between active professional membership and professional commitment. This is to be expected due to the different nature of each of the two independent variables. Hierarchical position is inversely related to professional commitment due to a number of factors such as reduced professional responsibility at higher levels, the downward revision of professional expectations at higher levels, and the receipt of power and status from position in the hierarchy rather than from professional expertise. Active professional membership, however, may lead to increased professional commitment due to behavioral feedback, internalization of professional goals and standards, and the
individual seeking the approval and recognition of the professional peer group. Therefore, due to the different effects which active professional membership and hierarchical position have on professional commitment, the suppressive relationship shown in Table 25 is expected. The opposite effect of hierarchical position offsets or reduces the effect of active professional membership on professional commitment unless the effect of position is partialled from membership. When the effects of the two independent variables are separated, the expected relationship of each with professional commitment is strengthened.

As indicated by Table 25, there is a redundant relationship between organizational formalization and active professional membership in relation to professional commitment. Professional organizations may have written objectives, policies, and procedures for the conduct of their members in their professional activities. The particular business organization in which the professional is employed may also have written guidelines covering the same activities. Therefore, the evidence that active professional membership and formalization in the organization have a redundant relationship is expected. Both variables may be supplying, in part, similar information concerning the role of written guidelines on that commitment. This would especially be the case when the written guidelines of the organization are the same as or based on the written guidelines of the professional organization.
Professional Certification - Professional Commitment

Table 26 shows the portion of Table 24 dealing with the relationship between professional certification and professional commitment.

Table 26
Variable Relationships:
Professional Certification - Professional Commitment

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>Variable</th>
<th>Beta</th>
<th>Beta Change</th>
<th>Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyzed</td>
<td>1</td>
<td>Added</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional Certification</td>
<td>+.143462</td>
<td>Hier. Position</td>
<td>+.144541</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Formalization</td>
<td>+.151687</td>
<td>Increase</td>
<td>Suppression</td>
</tr>
</tbody>
</table>

The number of professional certifications held by the individual indicates a positive relationship with professional commitment. This is expected due to professional certification being a visible indication of professional commitment. That relationship, however, becomes stronger as the effects of other modeled variables are removed from the professional certification - professional commitment relationship.

The individual's hierarchical position serves as a suppressor of the relationship between the number of professional certifications held and the individual's level of professional commitment. Hierarchical position is inversely related to professional commitment due to such factors as reduced professional responsibility at higher levels, the downward revision...
of professional expectations at higher levels, and the receipt of power from position as opposed to professional expertise. All of these factors are contrary to the factors associated with professional certification. Therefore, until the effect of hierarchical position is partialled or removed from professional certification, part of the effect of professional certification on professional commitment is being negated by the opposing effects which position and certification have on that commitment. Hierarchical position, due to the opposite effect which it has on professional commitment, is negating or suppressing a portion of the effect of professional certification on professional commitment.

The degree of formalization in the organization and the number of professional certifications held by the individual are in a cooperative suppression relationship when both are considered in relation to professional commitment. The two independent variables are negatively correlated with each other but each has a positive correlation with professional commitment. The negative correlation is to be expected. Professional certification presumably involves the internalization of the norms, standards, and procedures of the profession. Organizational formalization involves the written rules and procedures of the organization which may differ from those of the profession. Even if the written organizational policies and standards are not contradictory to those of the profession, the individual professional may view their presence as an unwelcomed intrusion on his or her professionalism. Formalization provides the professional with a set of role expectations from the organization. Professional
certification provides a set of role expectations from the profession. These two sets of expectations may be inversely related to one another but positively related to professional commitment. This would account for the suppressor relationship which they exhibit.

Hierarchical Position - Professional Commitment

Table 27 deals with the relationship between hierarchical position and professional commitment.

Table 27

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>Variable</th>
<th>Beta</th>
<th>Beta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Analyzed</td>
<td>1</td>
<td>Added</td>
<td>2</td>
<td>Change Relationship</td>
</tr>
<tr>
<td>Hierarchical Position</td>
<td>-1.48251</td>
<td>Formalization</td>
<td>-1.35829</td>
<td>Decrease Redundancy</td>
</tr>
</tbody>
</table>

As indicated in the preceding table, the total effect of hierarchical position on commitment is negative. This inverse relationship is in keeping with the suggestions and findings of earlier research [Kerr, VonGlinow, and Schriesheim, 1977; Sorensen, 1967; Sorensen and Sorensen, 1974]. Being in a higher position in the hierarchy may involve having less professional and more bureaucratic responsibilities. According to Salancik [1983], such a reduction in professional responsibility
would lead to a decrease in professional commitment. The degree of formalization in the organization may also lead to reduced professional responsibility. Written guidelines may replace reliance on professional expertise resulting in less professional responsibility and decreased professional commitment. The redundant relationship between hierarchical position and degree of formalization may be the result of this effect of reduced professional responsibility in relation to professional commitment.
CHAPTER VI

SUMMARY MODEL, CONCLUSIONS, AND SUGGESTIONS FOR FUTURE RESEARCH

In the sections of this chapter which follow, the summary, comprehensive model of the relationships found in this study is presented. The limitations of this study which affect the interpretations and conclusions based on that summary model are also discussed. The overall conclusion reached from the analysis of the modeled relationships is presented. A number of specific findings are discussed due to their implications for internal auditing and/or accounting in general. The chapter concludes with a series of suggestions for future research based on this study.

Summary Model

As discussed in prior chapters, this study analyzes three models: the organizational-professional conflict model, the organizational commitment model, and the professional commitment model. The detailed examination of each of these models is included in Chapter V. Prior research studies, however, have presented single models in discussions of findings. In order to remain consistent with the previous studies, Figure 3 presents a combined model which includes all of the significant direct
relationships found in this study. Figure 3 is the synthesis of the three "reduced" models discussed in Chapter V and represents a graphic combination of the variable relationships in those models.

Figure 3
Summary Model of Relationships

The relationships shown in this model are either positive (indicated by the +) or inverse (indicated by the --). Only direct
relationships are contained in this figure. Each relationship shown is discussed in the Chapter V analysis of the three models represented in this combined, summary model. A number of the relationships, however, are commented on here in relation to the conclusions and findings which they support. These comments follow the discussion of the limitations of this study.

Limitations of the Study

As is the case with any research effort, there are limitations which affect the interpretation of the research findings. The limitations of this study are discussed at this point so that interpretation of the findings can be made with an awareness of these limitations.

The sample used to test the hypothesized relationships and to build the comprehensive model was not a true random sample from the universe of internal auditors. There is potentially an inherent self-selection bias which may be present due to the non-randomness of the sample. This bias may mean that the findings of this study may be applicable only to the population from which the sample was drawn. Even though the individual respondents represent a large number of organizations located in diverse types of business and geographical locations, they may not be representative of the total population of internal auditors. In addition, because the majority of respondents are members of the Institute of Internal Auditors, any generalizability of the findings may be limited to members of that group.
This study is affected by the general limitations which affect survey research. These limitations generally stem from the inability of survey research to provide for experimental manipulation of variables in a controlled environment. Survey research is ex post facto and cross-sectional in nature. Therefore, the implications based on such research are tentative until supported through replication, repetition, and other research approaches.

A third limitation of this study is that only those variables which could feasibly be measured through the survey instrument are included in the model. Also, only those variables suggested by theory and prior research were included. There may be additional variables which, if included in the modeled relationships, would change the complexion of the findings and conclusions. The absence of these variables may limit the scope of the findings of this study to situations exhibiting the same set of variables as those which are included in the modeled relationships.

This research is general in nature in that the relationships which might be present in a particular type of organization or industry or in a particular company are not examined or addressed. Differences in the organizational structures and environments in different industries or firms may provide different sets of relationships than those in the general model developed in this study. Examination of those differences would require a different research approach than the descriptive approach accomplished here.
The limitations discussed above do not negate the value of the findings of this study. This research is descriptive and explanatory in nature. As a descriptive and explanatory effort this study does generate structured hypotheses for testing and provides a framework for that testing. The major limitations of the study stem from the procedure and sample used to test the hypotheses rather than from limitations of the hypotheses or of the framework from which they were drawn. By building a framework for the examination of relationships this study serves to aid in the systematic examination of the problem of organizational-professional conflict. The discussions and explanations provided by this study of the relationships associated with conflict provide the basis for a common understanding of the problem. These factors of providing structured hypotheses for testing, a framework for testing, a basis for systematic examination, and a basis for common understanding of the problem are the major contributions of descriptive and explanatory research in accounting as outlined by Abdel-khalik and Ajinkya [1979]. Therefore, the relationships identified and discussed in the findings of this study are important steps in understanding even in light of the limitations of the study.

Conclusions and Findings

The primary objective of this study, as stated in Chapter I, is to build and test a more comprehensive model of the relationships involved in organizational-professional conflict than
has been suggested or tested in prior studies. Meeting that objective necessitated the specification of a large number of hypothesized relationships based on a number of theoretical and conceptual constructs. However, in some cases prior empirical studies have indicated that some of the hypothesized relationships are not significant. Nevertheless, in order to systematically examine the relationships which might be relevant to conflict and commitment, variables with theoretical support were included in the hypothesized model even though they did not have strong empirical support. The inclusion of those variables is necessary when the objective is model building in order to further understanding.

A systematic approach to model building dictates examination of as full a spectrum of relationships as theoretically necessary. Once that set has been specified one can eliminate those relationships which are not significant. Such a systematic approach acknowledges the possibility that understanding can be furthered as much by knowing which relationships or variables were eliminated from a model as by knowing which variables or relationships remain in the model. If relationships are initially included in a model based on theoretical considerations but then are either retained or eliminated from the model based on empirical findings, one has greater confidence in the final model. Therefore, given the limitations previously discussed, an implicit finding of this study resulting from the model building effort is that the relationships eliminated from the hypothesized model do not impact the organizational-professional conflict,
organizational commitment, or professional commitment of internal auditors.

The synthesis of theoretical considerations into a more comprehensive model and the subsequent elimination of non-significant relationships is the major contribution of this study. That process leads to a summary model which is less subject to criticisms concerning the effects of "unincluded" variables than are the models presented by prior studies. A large number of variables which theoretically should have an impact on commitment and conflict was examined but only those relationships which are significant are included in the final model. This reduces the "what if" questions concerning the inclusion of other theoretically relevant variables and permits utilization of the model for inference and explanation. The model which results from the model-building effort allows one to examine significant relationships and reach conclusions and inferences based on both the relationships present and those which were eliminated. The findings and conclusions discussed below are the result of that examination.

The findings of this study indicate that in the field of internal auditing, an assumption of inherent conflict between the profession and the organization is not necessarily warranted. This conclusion is similar to those reached in prior studies [Aranya and Ferris, 1984; Harrell, Chewning, and Taylor, 1986; Norris and Niebuhr, 1983] but is based on the particular findings of this study as shown in the modeled relationships in Figure 3. The analysis of those relationships yields the overall conclusion.
Aranya and Ferris [1984] conclude that conflict between the profession and the organization is not inherent in the case of public accountants. These authors offer the idea that this situation is due to the "technical-scientific" nature of accounting as a profession. That nature results in accounting being less prone to professional and organizational conflict than are other professions. Norris and Niebhur [1983] reach the conclusion that their data do not support the contention of inherent conflict between professionalism and organizational commitment. These authors base their conclusion on an observed positive correlation between professional attributes and organizational commitment. Harrell, Chewning, and Taylor [1986] report a theoretically contradictory inverse relationship between professional commitment and organizational-professional conflict in their study of internal auditors. These authors suggest that this unexpected relationship is due to the presence of an external professional peer group (the Institute of Internal Auditors, Inc.) which helps to alleviate conflict.

The overall conclusion of this study, that conflict is not automatically to be expected, concurs with the earlier research. The basis for reaching that conclusion is, however, different. The relationships modeled in Figure 3 provide the basis for the conclusion reached here.

The majority of the relationships shown in Figure 3 follow the suggestions and expectations of the "professionalism" literature and the concepts of role theory. A few of the relationships, however, contradict the expected. The presence of those theoretically contradictory relationships in the data are the
primary basis for the conclusion reached in this study. If conflict were inherent between the profession and the organization, then the relationships found between some of the attributes modeled would not be possible.

As shown in Figure 3, one finding of this study is that commitment and organizational-professional conflict are inversely related. Role theory and the concepts of professionalism suggest a positive relationship between these factors. Under an "inherent conflict" assumption, an individual with a high level of professional commitment would be expected to exhibit a high level of conflict (hence, the positive relationship). The data, however, indicate the opposite to be true. This logically leads one to question the validity of the "inherent conflict" assumption.

Figure 3 indicates an inverse relationship between professional certification and organizational-professional conflict. Under an "inherent conflict" assumption, a positive relationship between these two variables is expected. The individual who holds a professional certification has supposedly internalized to a high degree the values and norms of the profession. In the case where the organization and the profession are in conflict, such an individual would be expected to exhibit high levels of organizational-professional conflict. This would lead to a positive relationship between certification and conflict. As illustrated in the model, the data support an opposite finding. This finding also leads one to question the validity of the "inherent conflict" assumption.

Formalization is an attribute of the organization which may improve control of activities within the organization. However, the
presence of written rules and procedures (formalization) may contradict the professional attributes of autonomy and self-directedness. Due to this contradiction, the individual who is functioning in a formalized organization would be expected to be less professionally committed than is the individual in a less formalized environment. This would be the case under an "inherent conflict" assumption. The data in this study, however, indicate a positive rather than the expected inverse relationship between the degree of organizational formalization and the individual's level of professional commitment.

Another theoretically contradictory relationship shown in Figure 3 is the observed positive relationship between active professional membership on the part of the individual and the individual's level of organizational commitment. The expectation under an "inherent conflict" assumption would be that active membership in a professional organization would be inversely related to organizational commitment. The "conflict" between the role expectations of the profession and those of the organization would be the basis for such an inverse relationship. The data, however, do not support this expectation.

The effect of two variables not on each other but on a third variable also supports the conclusion questioning the "inherent conflict" assumption. As shown in Figure 3, there is an inverse relationship between professional commitment and organizational-professional conflict. There is also an inverse relationship between organizational commitment and organizational-professional conflict. Under an assumption of inherent conflict between the profession and the organization, the
expectation would be that these attributes (professional commitment and organizational commitment) would have relationships with conflict which are opposite from each other.

As indicated in Figure 3, there is an inverse relationship between professional certification and organizational-professional conflict. There is also a positive relationship between professional certification and professional commitment. Under an assumption of inherent conflict, one would expect that an attribute which has a positive effect on professional commitment would have a positive relationship to organizational-professional conflict. The data do not support this expectation.

As discussed in the previous paragraphs, an analysis of the observed relationships shown in Figure 3 leads to the conclusion that the assumption of inherent conflict between the profession and the organization is not necessarily valid. This conclusion is based on the presence of relationships which are "opposite" from those which would be expected under an "inherent conflict" assumption. When "opposite" relationships are found among variables, the cause of those observed relationships may be inadequate or inaccurate measurement. However, in the present study, the presence of a number of "opposite" relationships reduces the odds that what is being observed is a function of measurement as opposed to that which exists. Because this is an initial, descriptive effort, any conclusions must serve as suggestions for future avenues of research and investigation. That subsequent examination will support or invalidate, through repetition and/or triangulation, the conclusions reached in this research.
Figure 3 may be viewed as a dynamic model which allows manipulation of the relationships shown. This permits an interesting manipulation which leads to the conclusion that the primary factor of interest in addressing organizational-professional conflict may be different from that which is addressed in prior research. According to the model, if an individual, for whatever reason, experiences increased professional commitment when the effects of all other variables are held constant, then that individual experiences reduced conflict. On the other hand, if the individual experiences increased organizational commitment with all other variables held constant, there will also be a reduced level of conflict. Because each of these manipulations would produce the same outcome, the question must be asked: Is it commitment itself (rather than commitment to a particular "object") that is related to the reduced conflict?

If commitment in general rather than a particular type of commitment (organizational or professional), is the factor of importance, then the complexion of the commitment-conflict problem changes. Rather than being concerned with the attributes which affect a particular type of commitment, the concern would be with those factors or attributes that enable the individual to commit himself or herself to any line of activity. If such were the case, then future research should address the attributes and factors which affect the individual's ability, desire, or propensity to become committed to some "object."

When the relationships shown in Figure 3 which affect organizational commitment are examined, all of the relationships
are intuitively and theoretically plausible. However, when the relationships which affect professional commitment are each examined individually, one relationship is intuitively surprising and agrees with questions raised in prior studies regarding the nature of accounting as a profession and the effect of the presence of written rules on accountants.

As shown in Figure 3 there is a positive relationship between the degree of formalization in the organization and the individual's level of professional commitment. As previously discussed, this finding is similar to the findings of Norris and Niebhur [1983] which lead those authors to suggest that public accountants do not associate professional attitudes or organizational commitment with autonomous rights to make independent decisions. Norris and Niebhur [1983] suggest that the promulgation of rules in the accounting profession fosters reliance on standard procedures rather than on professional judgment based on autonomy.

Formalization as defined and measured in this study involves the presence and required utilization of written rules and procedures in carrying out professional tasks. Conceptually one would expect formalization to be inversely related to professional commitment. The attributes and outcomes of formalization would "clash" with the professional desire for autonomy. However, the positive relationships observed between professional commitment and organizational formalization raises the question of just how ingrained is the utilization of, and reliance upon, written directives in the accounting profession.
Accounting professionals may have come to expect the presence of written directives as guidelines for their professional activities. While such written procedures provide standardization and permit evaluation of performance in accordance with written procedures, they may lessen the role of autonomous professional judgment. There are two potentially detrimental effects of such an outcome. One is that the individual professional who is trained in following procedures may become incapable of dealing with new situations which are not covered by a written procedure. In this sense formalization would limit innovation and creativity. The second ill-effect is that the professional may be overly concerned with following written procedures at the expense of accomplishing the professional task. Performance evaluation would deal with how well the individual followed the rules rather than how well the professional task was accomplished. In such cases the rules and procedures would become the objects of importance. Whether or not a profession desires these situations to exist is a matter for debate and further investigation. As suggested by Norris and Niebhur [1983], the accounting profession may be faced with this situation. The finding in this study of the positive relationship between professional commitment and formalization raises the question for internal auditing.

Suggestions for Future Research

This research supports some of the findings of earlier research and contradicts others. This study does, however, incorporate a larger number of pertinent variables than do many
of the earlier studies of the subject. There are, nevertheless, limits to the information which can be provided by one research effort. The efforts of extension, repetition, and triangulation are the means through which the results of a given study can be fully validated and a full contribution to knowledge in a given field be made. The current study addresses a limited subject area and utilizes a limited set of respondents as the test bank in that area. However, the findings of this study provide a basis from which other studies may be conducted which expand both the scope and the validity of this study. The descriptive nature of the present study dictates that further research is required in order to validate the described relationships. The following suggestions for future research are some of the efforts which will be required to fully validate or refute the framework developed in the current study.

The research effort described here should be repeated utilizing a truly random sample of internal auditors. Such an effort would provide for increased generalizability of the model and lend support to the relationships described.

Future research utilizing the basic model and concepts described in this study should, to the extent possible, include a measure of the differences which may arise in the modeled relationships due to a number of factors not addressed in this study. Factors such as the organizational structure of the company, the particular industry in which the company operates, the attitude of top management toward internal auditing, and the attitudes of auditees toward internal auditing and internal auditors are a few of the factors which may affect the relationships
discussed in this study. Inclusion of such factors may require utilization of a field study method of inquiry in order to better comprehend the many variables which may be salient to the relationships.

The presence, in this study, of suppression between active professional membership and professional certification in relation to organizational-professional conflict suggests the need to explore different types of commitment on the part of internal auditors and other accounting professionals. As discussed at length in Chapter V, commitment may be considered to be of two types: moral or calculative. Future research should address the propriety of each type of commitment and the effects and outcomes of each in both internal auditing and public accounting.

The finding of compatibility between organizational formalization and professional commitment should be examined to determine the nature and the basis for this relationship. As discussed previously in this chapter, there are potential ill-effects for both the profession and the individual professional if following formalized procedures replaces professional, autonomous judgment as the basis for professional task performance and performance evaluation.

As discussed earlier in this chapter, future research possibly should address the question of commitment in general in addition to commitment to a particular "object" such as profession or organization. A future research study should address whether or not it is the attributes of commitment in general which are affecting the level of conflict experienced by the individual.
The relationship between organizational-professional conflict and potential undesirable outcomes such as job dissatisfaction, turnover, and absenteeism should be addressed utilizing the framework developed in this study. Prior studies which do address these outcomes of conflict have not included as full a set of exogenous variables as that which is included in this study. Including such a more complete set of variables in an examination of the outcomes of commitment and conflict may provide different insights and conclusions than those provided by earlier studies.

One of the assumptions of this study is that organizational-professional conflict is in essence the person-role conflict discussed at length in the role theory literature. While this assumption is logically valid, research should establish the empirical validity of the assumption. If that validity were established, then role theory could be fully explored in order to provide conceptual bases for future organizational-professional conflict research.

If the framework outlined in this study were applied in a longitudinal examination of a randomly selected set of internal auditors, the models presented here could be validated in the strongest terms. Such a longitudinal study would provide dynamic data upon which a dynamic model could be developed. As the attributes of the individual and his or her situation change, the individual's commitment levels and conflict levels could be measured. Observations at one point in time could be compared to observations at earlier times in order to determine the degree of change in the modeled variables and their relationships.
APPENDIX A
Following are the questions used to measure the various variables of interest to this study. Responses to all questions utilized the following scale.

1. Strongly Disagree
2. Disagree
3. Slightly Disagree
4. Neither Disagree nor Agree
5. Slightly Agree
6. Agree
7. Strongly Agree

ORGANIZATIONAL COMMITMENT MEASUREMENT:

1. I am willing to put in a great deal of effort beyond that normally expected in order to help this organization be successful.
2. I talk-up this organization to my friends as a great organization to work for.
3. I would accept almost any type of job assignment in order to keep working for this organization.
4. I find that my values and the organization's values are very similar.
5. I am proud to tell others that I am part of this organization.
6. This organization really inspires the very best in one in the way of job performance.
7. I am extremely glad that I chose this organization to work for over others I was considering at the time I joined.
8. I really care about the fate of this organization.
9. For me, this is the best of all possible organizations for which to work.

* Based on Mowday, Porter, and Steers, 1982.
PROFESSIONAL COMMITMENT MEASUREMENT:**

1. I am willing to put in a great deal of effort beyond that normally expected in order to help the internal audit profession be successful.

2. I talk-up internal auditing to my friends as a great profession in which to work.

3. I would accept almost any type of job assignment in order to keep working in internal auditing.

4. I find that my values and the internal audit profession's values are very similar.

5. I am proud to tell others that I am part of the internal audit profession.

6. Internal auditing really inspires the very best in me in the way of job performance.

7. I am extremely glad that I chose the internal audit profession in which to work over others I was considering at the time I joined.

8. I really care about the fate of the internal audit profession.

9. For me, internal auditing is the best of all possible professions in which to work.

** Based on Mowday, Porter, and Steers, 1982.

ORGANIZATIONAL-PROFESSIONAL CONFLICT MEASURE:

1. In your organization there is conflict between the work standards and procedures of the organization and your own ability to act according to your professional judgment.

2. The type and structure of your employment framework gives you the opportunity to fully express yourself as a professional.
MEASUREMENT OF THE DEGREE OF ORGANIZATIONAL
FORMALIZATION:

1. I am expected to follow a detailed audit manual for all assignments.
2. My department makes extensive use of written rules and procedures.
3. I prefer a job for which there are written procedures describing how to do a particular job.
4. I am required to utilize formal procedures rather than my own initiative in carrying out my job tasks.

MEASUREMENT OF DEGREE OF ORGANIZATIONAL CENTRALIZATION:

1. I participate in the determination of the methods and procedures used in the internal audit department.
2. There can be little action taken in this department until a supervisor approves.
3. In general, I have a great deal of "say" or influence concerning how I do my job.
4. I am satisfied with the degree to which I participate in the decision making process in this department.
5. I am satisfied with the degree to which I am allowed to use my own initiative in carrying out my job tasks.
The number in the blank for each category of response represents the number of responses received in that category for each individual question. The categories were assigned values ranging from 1 to 7 in order to perform the necessary calculations. The column titled "MEAN" indicates the average response in accordance with that 1 to 7 scale.

### Professional Commitment:

<table>
<thead>
<tr>
<th>Response</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Would accept almost any type of job assignment in order to remain in internal audit profession</td>
<td>3</td>
<td>17</td>
<td>28</td>
<td>28</td>
<td>21</td>
<td>74</td>
<td>34</td>
<td>3.0</td>
</tr>
<tr>
<td>Individual really cares about fate of the internal audit profession</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6.1</td>
</tr>
<tr>
<td>Individual proud to tell others he/she is a part of the internal audit profession</td>
<td>83</td>
<td>82</td>
<td>20</td>
<td>11</td>
<td>5</td>
<td>2</td>
<td>2</td>
<td>6.0</td>
</tr>
<tr>
<td>For this individual, internal audit is the best of all possible professions in which to work</td>
<td>19</td>
<td>62</td>
<td>47</td>
<td>27</td>
<td>18</td>
<td>27</td>
<td>4</td>
<td>4.7</td>
</tr>
<tr>
<td>Individual glad he/she chose internal audit profession over others he/she was considering at the time profession was entered</td>
<td>38</td>
<td>94</td>
<td>36</td>
<td>21</td>
<td>6</td>
<td>8</td>
<td>1</td>
<td>5.5</td>
</tr>
<tr>
<td>Individual finds personal values and those of the internal audit profession to be similar</td>
<td>58</td>
<td>110</td>
<td>25</td>
<td>7</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>6.0</td>
</tr>
<tr>
<td>Individual willing to forth effort beyond that normally expected in order to help the internal audit profession be successful</td>
<td>36</td>
<td>88</td>
<td>54</td>
<td>15</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>5.6</td>
</tr>
<tr>
<td>Individual &quot;talks up&quot; internal auditing as a great profession in which to work</td>
<td>25</td>
<td>81</td>
<td>55</td>
<td>26</td>
<td>8</td>
<td>9</td>
<td>1</td>
<td>5.3</td>
</tr>
<tr>
<td>The internal audit profession inspires one's very best in the way of job performance</td>
<td>14</td>
<td>77</td>
<td>64</td>
<td>31</td>
<td>12</td>
<td>8</td>
<td>2</td>
<td>5.1</td>
</tr>
</tbody>
</table>

### Organizational-Professional Conflict:

<table>
<thead>
<tr>
<th>Response</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>In individual's company there is conflict between the work standards and procedures of the company and my his/her own ability to act according to professional judgment</td>
<td>7</td>
<td>12</td>
<td>25</td>
<td>22</td>
<td>34</td>
<td>82</td>
<td>23</td>
<td>3.0</td>
</tr>
<tr>
<td>The type and structure of the individual's employment framework provides opportunity for full professional expression</td>
<td>31</td>
<td>87</td>
<td>47</td>
<td>9</td>
<td>9</td>
<td>16</td>
<td>6</td>
<td>5.2</td>
</tr>
</tbody>
</table>
### Organizational Commitment:

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual proud to tell others he/she is a part of this company</td>
<td>82 (20)</td>
</tr>
<tr>
<td>For this individual, this is the best of all possible companies in which to work</td>
<td>16 (20)</td>
</tr>
<tr>
<td>Individual would accept almost any type of job assignment in order to remain with this company</td>
<td>7 (20)</td>
</tr>
<tr>
<td>Individual glad he/she chose this company over others he/she was considering at the time joined</td>
<td>35 (20)</td>
</tr>
<tr>
<td>Individual willing to put forth a great deal of effort beyond that normally expected in order to help this company be successful</td>
<td>43 (20)</td>
</tr>
<tr>
<td>This company really inspires one's very best in the way of job performance</td>
<td>10 (20)</td>
</tr>
<tr>
<td>Individual finds his/her personal values and company's values are very similar</td>
<td>13 (20)</td>
</tr>
<tr>
<td>Individual really cares about the fate of this company</td>
<td>57 (20)</td>
</tr>
<tr>
<td>Individual &quot;talks up&quot; this company as a great company for which to work</td>
<td>39 (20)</td>
</tr>
</tbody>
</table>

### Exogenous Variables:

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual expected to follow a detailed audit manual for all assignments</td>
<td>14 (10)</td>
</tr>
<tr>
<td>The department makes extensive use of written rules and procedures</td>
<td>25 (10)</td>
</tr>
<tr>
<td>Individual prefers job for which there are written rules and procedures describing how to do a particular task</td>
<td>6 (10)</td>
</tr>
<tr>
<td>Individual required to utilize formal procedures rather than own initiative in carrying out job tasks</td>
<td>2 (10)</td>
</tr>
</tbody>
</table>
CENTRALIZATION:

There can be little action taken in this department until a supervisor approves

In general the individual has a great deal of "say" or influence concerning how he/she does the job

Individual is satisfied with the degree of participation in the decision making process in the department

Individual satisfied with the degree to which he/she is allowed to use own initiative in carrying out the job tasks

Individual participates in the determination of the methods and procedures used in the internal audit department

PROFESSIONAL CRITERIA IN PROMOTION:

The promotion and reward system in the department utilizes professional criteria to evaluate and reward individuals

ACTIVE PROFESSIONAL MEMBERSHIP:

Individual considers himself an "active" member of one or more professional organizations

AGE:

Individual's age, in years, at last birthday

ORGANIZATIONAL TENURE:

How long, in years, the individual has been employed by present company

COLLEGE DEGREES:

The number of college degrees held by the individual

PROFESSIONAL CERTIFICATIONS:

The number of professional certifications held by the individual
Hierarchical Position:

On a scale of one to ten, with one being an entry level position and ten being the director of internal audits, the individual would place his/her current position at the point indicated.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>7</td>
<td>5</td>
<td>13</td>
<td>13</td>
<td>14</td>
<td>18</td>
<td>22</td>
<td>23</td>
<td>31</td>
<td>59</td>
</tr>
</tbody>
</table>

Mean = 7.3
Brief Explanations of Redundant and Suppressive Relationships

Organizational-Professional Conflict Model
Explanation of Indirect Effects

Variable Analyzed = Active Professional Membership

<table>
<thead>
<tr>
<th>Related Variable</th>
<th>Relationship</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professional Certification</td>
<td>Redundancy</td>
<td>Each variable carrying same information about relationship between professionalism and conflict</td>
</tr>
<tr>
<td>Hierarchical Position</td>
<td>Suppression</td>
<td>Each variable reflects role expectations from differing sources; position mitigates membership-conflict relationship</td>
</tr>
<tr>
<td>Centralization</td>
<td>Suppression</td>
<td>Membership fosters autonomous decisions, centralization reduces autonomy and mitigates membership-conflict relationship</td>
</tr>
<tr>
<td>Professional Promotion</td>
<td>Suppression</td>
<td>Membership promotes conflict, professional promotion reduces conflict</td>
</tr>
<tr>
<td>PC</td>
<td>Suppression</td>
<td>Membership involves calculative commitment, PC involves moral commitment, each type of commitment mitigates effect of other</td>
</tr>
<tr>
<td>OC</td>
<td>Redundancy</td>
<td>Each variable supplying same information concerning ability of individual to &quot;join&quot;</td>
</tr>
</tbody>
</table>

Variable Analyzed = Professional Certification

<table>
<thead>
<tr>
<th>Hier. Position</th>
<th>Suppression</th>
<th>Certification and position provide different sets of role expectations which offset in conflict relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centralization</td>
<td>Suppression</td>
<td>Each related to set of role expectations which are contrary</td>
</tr>
<tr>
<td>Prof. Promotion</td>
<td>Redundancy</td>
<td>Certification a major attribute of professional promotion, both providing common information related to conflict</td>
</tr>
<tr>
<td>PC</td>
<td>Redundancy</td>
<td>Professional certification and outward sign of professional commitment</td>
</tr>
<tr>
<td>OC</td>
<td>Suppression</td>
<td>Net suppression due to similar effect each has on conflict in presence of inverse relationship with the other</td>
</tr>
</tbody>
</table>
Variable Analyzed = Hierarchical Position

<table>
<thead>
<tr>
<th>Related Variable</th>
<th>Relationship</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Centralization</td>
<td>Redundancy</td>
<td>Each providing sent-role expectations based on organizational criteria</td>
</tr>
<tr>
<td>Prof. Promotion</td>
<td>Redundancy</td>
<td>Each providing set of organizationally-based role expectations; both strengthen professional’s tie to organization</td>
</tr>
<tr>
<td>PC</td>
<td>Suppression</td>
<td>Conflicting role expectations from opposing sources results in mitigation of relationship to conflict; authority based on expertise vs based on position</td>
</tr>
<tr>
<td>OC</td>
<td>Redundancy</td>
<td>Each providing information concerning “investment” by individual</td>
</tr>
</tbody>
</table>

Variable Analyzed = Centralization

<table>
<thead>
<tr>
<th>Related Variable</th>
<th>Relationship</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Promotion</td>
<td>Redundancy</td>
<td>Each reflecting information concerning effect of central decisions on conflict</td>
</tr>
<tr>
<td>PC</td>
<td>Redundancy</td>
<td>Both communicating sets of role expectations and are carrying information concerning the effect of role expectations on conflict</td>
</tr>
<tr>
<td>OC</td>
<td>Redundancy</td>
<td>Variables share common orientation toward organizational goals and organizational goal achievement</td>
</tr>
</tbody>
</table>

Variable Analyzed = Professional Promotion

<table>
<thead>
<tr>
<th>Related Variable</th>
<th>Relationship</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>PC</td>
<td>Redundancy</td>
<td>Common set of role expectations being communicated by individual and by organization</td>
</tr>
<tr>
<td>OC</td>
<td>Redundancy</td>
<td>Professionals in organization using professional promotion criteria committed to that organization, both variables thus reflecting professional expectations</td>
</tr>
</tbody>
</table>

Variable Analyzed = Professional Commitment

<table>
<thead>
<tr>
<th>Related Variable</th>
<th>Relationship</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC</td>
<td>Redundancy</td>
<td>Variables share information concerning relationship of commitment itself rather than to a particular &quot;object&quot;</td>
</tr>
</tbody>
</table>
Organizational Commitment Model
Analysis of Indirect Relationships

**Variable Analyzed = Tenure**

<table>
<thead>
<tr>
<th>Related Variable</th>
<th>Relationship</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Professional Membership</td>
<td>Redundancy</td>
<td>Each reflecting the ability or actions of individual to &quot;invest&quot; in some organization or body and be involved</td>
</tr>
<tr>
<td>Degrees Held</td>
<td>Redundancy</td>
<td>Both exhibiting common factor of individual being willing to &quot;invest&quot; time and effort in some activity</td>
</tr>
<tr>
<td>Hier. Position</td>
<td>Redundancy</td>
<td>Both reflecting high levels of side bets by the individual in regard to continued association with the organization</td>
</tr>
<tr>
<td>Formal-  ization</td>
<td>Suppression</td>
<td>Variables may be reflecting opposing sets of guidelines as to task accomplishment and decision making: personal experience vs central authority</td>
</tr>
</tbody>
</table>

**Variable Analyzed = Active Professional Membership**

<table>
<thead>
<tr>
<th>Related Variable</th>
<th>Relationship</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degrees Held</td>
<td>Suppression</td>
<td>Each reflecting different form of commitment: moral vs calculative and differing degrees of professional goal internalization</td>
</tr>
<tr>
<td>Hier. Position</td>
<td>Redundancy</td>
<td>Each reflecting underlying ability, propensity, or desire of individual to &quot;invest&quot; or commit time, effort, and resources to some type of activity</td>
</tr>
<tr>
<td>Formal-  ization</td>
<td>Redundancy</td>
<td>Both employing organizations and prof. organizations provide written rules and standards, variables may be reflecting this common factor</td>
</tr>
</tbody>
</table>

**Variable Analyzed = Number of Degrees Held**

<table>
<thead>
<tr>
<th>Related Variable</th>
<th>Relationship</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hier. Position</td>
<td>Suppression</td>
<td>Opposing role expectations provided by each variable mitigate the effect of the other variable on commitment</td>
</tr>
<tr>
<td>Formal-  ization</td>
<td>Redundancy</td>
<td>Each reflecting the presence of well defined set of role expectations which may be similar</td>
</tr>
</tbody>
</table>
Variable Analyzed = Hierarchical Position

<table>
<thead>
<tr>
<th>Related Variable</th>
<th>Relationship</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formal-</td>
<td>Suppression</td>
<td>Positional power limited by written rules and procedures; formalization has a counteractive effect on position which mitigates position-commitment relationship</td>
</tr>
</tbody>
</table>

Professional Commitment Model
Explanation of Indirect Effects

Variable Analyzed = Age

<table>
<thead>
<tr>
<th>Related Variable</th>
<th>Relationship</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active Professional</td>
<td>Redundancy</td>
<td>Age a side bet reflecting &quot;investment&quot; in line of activity in same manner that membership reflects &quot;investment&quot;</td>
</tr>
<tr>
<td>Membership</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prof. Certification</td>
<td>Suppression</td>
<td>Certification and age inversely related due to certification being a recent development in internal audit area</td>
</tr>
<tr>
<td>Hier. Position</td>
<td>Suppression</td>
<td>Downward revision of professional expectation mitigates increased commitment due to age</td>
</tr>
<tr>
<td>Formal-</td>
<td>Redundancy</td>
<td>Each variable reflecting presence of well defined sets of role expectations from either experience or central authority</td>
</tr>
<tr>
<td>ization</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Variable Analyzed = Active Professional Membership

<table>
<thead>
<tr>
<th>Related Variable</th>
<th>Relationship</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prof. Certification</td>
<td>Redundancy</td>
<td>Both membership and certification are outward signs of PC and are providing same information concerning PC</td>
</tr>
<tr>
<td>Hier. Position</td>
<td>Suppression</td>
<td>Position and membership provide strong opposing sets of role expectations for the individual; membership involves internalization of prof. goals while position involves internalization of org. goals and objectives</td>
</tr>
<tr>
<td>Formal-</td>
<td>Redundancy</td>
<td>Prof. organization and employing organization provide written guidelines as to role expectations, reflects commonality of the presence of written directives</td>
</tr>
<tr>
<td>ization</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Variable Analyzed = Professional Certification

<table>
<thead>
<tr>
<th>Related Variable</th>
<th>Relationship</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hier. Position</td>
<td>Suppression</td>
<td>Certification involves adherence to professional expectations whereas position may call for lessening of those expectations, suppression arises due to opposing effects of variables.</td>
</tr>
<tr>
<td>Formalization</td>
<td>Suppression</td>
<td>Certification involves belief in autonomous professional judgment and role expectations from the profession, formalization provides a contrary set of expectations and involves written procedures.</td>
</tr>
</tbody>
</table>

Variable Analyzed = Hierarchical Position

<table>
<thead>
<tr>
<th>Related Variable</th>
<th>Relationship</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Formalization</td>
<td>Redundancy</td>
<td>Higher position leads to reduced PC, formalization also leads to reduced PC due to reduced professional responsibility, this common factor results in redundant relationship.</td>
</tr>
</tbody>
</table>
BIBLIOGRAPHY


Brink, Victor Z., and Herbert Witt, Modern Internal Auditing: Appraising Operations and Controls (John Wiley and Sons, 1982).


Graen, George B., Rene V. Dawis, and David J. Weiss, "Need Type and Job Satisfaction Among Industrial Scientists," *Journal of Applied Psychology* (1968), pp. 286-289.


Kerr, Steven, Mary Ann Von Glinow, and Janet Schriesheim, "Issues in the Study of 'Professionals' in Organizations: The Case of Scientists and Engineers," *Organizational Behavior and Human Performance* (1977), pp. 329-345.


---

The Management of Organization Design Volume II


"Reflections on Directions and Opportunities," The Internal Auditor (June 1984), pp. 36-41.


Sheldon, Mary E., "Investments and Involvements as Mechanisms Producing Commitment to the Organization," Administrative Science Quarterly (June 1971), pp. 143-150.


Some Personality Determinants of the Effects of Participation (Prentice-Hall, 1960).


