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ROLE AMBIGUITY AND CONFLICT IN AN ALIEN AUDIT
ENVIRONMENT

City University of New York

PH.D.

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ROLE AMBIGUITY AND CONFLICT IN AN
ALIEN AUDIT ENVIRONMENT

by

NATHAN S. SLAVIN

A dissertation submitted to the Graduate
Faculty in Business in partial fulfillment
of the requirements for the degree of
Doctor of Philosophy, The City University
of New York.

1980

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1980

This manuscript has been read and accepted for the Graduate Faculty in Business in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

April 21, 1980

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Abstract

ROLE AMBIGUITY AND CONFLICT IN AN ALIEN AUDIT ENVIRONMENT

by

Nathan S. Slavin

Adviser: Martin Mellman

This study was undertaken to ascertain what factors comprising the independent auditor's working environment contributed to his perceptions of role ambiguity and conflict. A conceptual model was developed where role ambiguity and conflict were positioned as intervening variables between ten antecedent constructs and four personal outcomes. Any independent variable that was unfavorably evaluated by the auditor was indicative of an alien audit environment.

Auditors from various national and local accounting firms responded to a research questionnaire. The final sample consisted of 307 auditors who were employed in three organizational positions. Using a series of parametric correlation and regression procedures, various observations were found. Contrary to what was anticipated but consistent

with the general role theory literature, conflict, and not ambiguity, had a larger number of significant relationships. This was particularly evident at the lower organizational positions. Both role ambiguity and conflict were significant contributors to personal outcomes even after all of the independent variables were considered. When examining all of the auditors as a single sample, only ten role strain interaction terms had significant relationships with the personal outcomes. There were forty-one significant interactions where each organizational level was analyzed separately, suggesting that information was lost when the single sample was used. Depending on the personal outcome and organizational position that were investigated, role ambiguity and conflict did not always lead to dysfunctional results. This indicated that general patterns of role strain were not evident across all organizational levels. Another explanation offered was that public accountants, particularly at the lower positions, are extremely tolerant of role ambiguity and conflict regardless of their working environment.

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Turning to my Professors and friends at Baruch College, appreciation is expressed to Martin Mellman, Chairman of the Accounting Department, for his continual encouragement, guidance and friendship. I am also grateful to Martin Benis of the accounting faculty who monitored my academic performance during the past few years. I will always be indebted to Dean Sidney Lirtzman, Director of the Ph.D. Program, and Jack Shapiro, Chairman of the Management Department, for cultivating my interest in Organizational Behavior. I feel extremely fortunate to have Sid Lirtzman, a pioneer in the role theory literature, and Randall Schuler of Ohio State University serve on my dissertation committee. Appreciation is also expressed to Jerry Hunt of Southern Illinois University and Ahmed Abdel-Halim of Illinois State University for their suggestions regarding the statistical analysis. Sam Ryan, a member of the Statistics Department at Baruch College,

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A final expression of gratitude for this group of mentors is reserved for Abe Briloff, the Emanuel Saxe Distinguished Professor of Baruch College. He has always been my role model and has instilled within me the fervor to pursue standards that I initially believed were beyond my capacity.

My final thoughts and feelings are reserved for the members of my family. First, to my wife's parents, Dr. and Mrs. Mortimer Burdman, for their love, understanding and loyalty, particularly during the most difficult periods of completing the dissertation. Special thanks is expressed to my brother-in-law, Louis Burdman, for cheerfully completing many clerical tasks that were required. Prominent recognition is given to my father, Abraham Slavin who, with great personal sacrifice, supported my educational and professional development.

Most of all, special affection and love is reserved to my dearest wife and friend, Bat-Sheva. She has and always will be my inspiration and whatever present and future achievements I may obtain are dedicated to her.

Nathan S. Slavin

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CHAPTER I

INTRODUCTION

The primary purpose of this study is to apply a role theory model in explaining the behavior of the public accountant where he perceives he is working in an "alien audit environment." An alien audit environment, a construct developed from the perceived organizational climate literature, is the suggested cause of role ambiguity and conflict. Consistent with the role theory literature, role ambiguity and conflict are characterized as dysfunctional problems that may cause adverse effects for auditors of a public accounting firm.

Role theory is a relatively recent conceptual framework that examines the interaction of the organizational environment with the behavior of the individual. The recent proliferation of empirical studies and role theory models that will be reviewed in this project attests to the prominence of this area of inquiry. The term "role" has been borrowed from the theater and is used to characterize the conduct of players who perform the necessary requirements of an established script or position. Whether this role is for the drama of the stage or the everyday drama of an organizational position the role or part has inherent

responsibilities or duties that must be performed. Katz and Kahn considered the role as the "major means of linking the individual and organizational levels of research and theory, it is the building block of social systems and the summation of the requirements with which such systems confront their members as individuals" (Katz and Kahn, 1966, p. 197).

Because this is an interdisciplinary study, contributions to both the accounting and role theory literature will be evident. The role theory model provides the necessary framework for enhancing our understanding of the manner in which the auditor performs his craft. Although the presence of role ambiguity and conflict are not unique in a public accounting firm, they have been reported to be a major source of adverse organizational and personal outcomes (Sorensen, 1967; Senatra, 1976). Briefly, the auditor experiences role ambiguity where he lacks the necessary information to satisfy the requirements of his job. Role conflict exists where the auditor receives contradictory demands during the process of the audit engagement. The role episode model will attempt to show how audit environments that are undesirable and classified as alien are the major sources of role ambiguity and conflict. Accounting firms are excellent organizations for the role theorists for examining the presence of role ambiguity and conflict. Few organizations require their employees to have the multiplicity of supervisors and interactions with client personnel as the public accounting firm.

RESEARCH OBJECTIVES

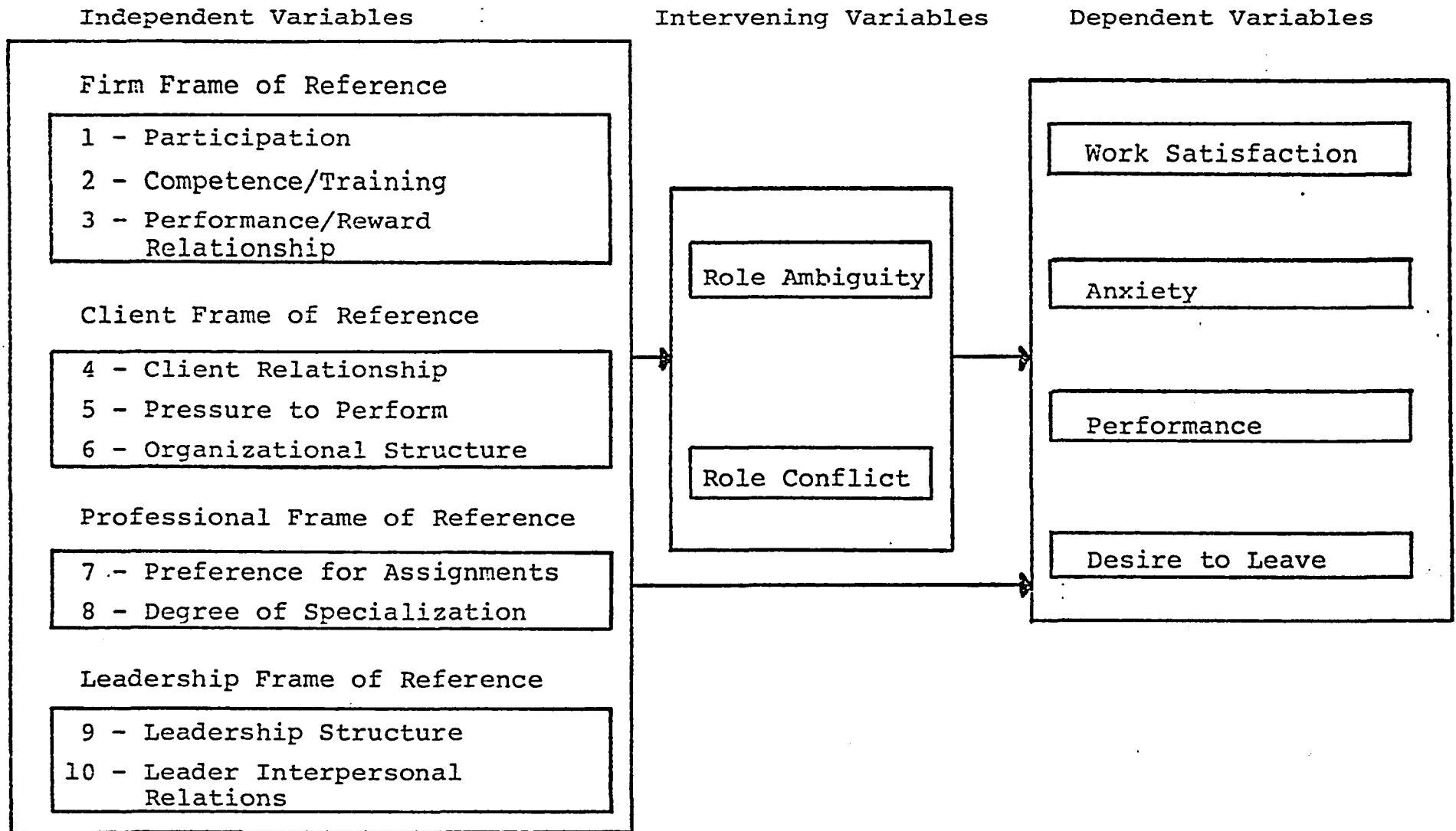
The reader is referred to the Role Ambiguity and Conflict Model in Figure 1.1 which will serve as the conceptual framework for analyzing the role set of the independent auditor. The model will be completely developed in Chapter IV, but is presented at this point to familiarize the reader with the finished product and the primary objectives of the study.

RESEARCH OBJECTIVE 1: EMPHASIS ON THE ANTECEDENTS OF ROLE AMBIGUITY WITHIN A PUBLIC ACCOUNTING FIRM

The major contribution of this study is that it focuses on the antecedents of role ambiguity within a unique organization: a public accounting firm. The study will attempt to show how an alien audit environment, a construct developed from the organizational climate literature, is the primary cause of role ambiguity. An audit environment as depicted in Figure 1.1 consists of four perceptual sets or frames of reference that are most important to the public accountant. Depending on the presence or absence of these organizational and personal attributes, the audit environment may be perceived as alien or undesirable by the auditor. This construct which will be developed in Chapter IV is similar to the frame of reference used in the organizational climate literature. Briefly, one is able to explain and predict an individual's behavior from the descriptions and perceptions of his firm's

FIGURE 1.1

ROLE AMBIGUITY AND CONFLICT MODEL



characteristics. It differs from the organizational climate models in that the auditor is not exclusively located in one specific area of the organization. His perception of an audit environment is the collective perceptions of all his client engagements and relationship with his firm.

Following the conceptual model, an alien audit environment is depicted as a potential source of two intervening variables (role ambiguity and role conflict) and four dependent variables (job satisfaction, job anxiety, job performance and the desire to leave the public accounting firm). Because of the directional flow of the constructs and the positioning of role ambiguity and conflict as intervening or moderating variables, analyses of interactions will be examined. This is consistent with the most recent role theory literature which emphasizes that role ambiguity and conflict should be analyzed as interaction variables (Abdel-Halim, 1979). All hypotheses regarding these relationships will be presented in Chapter IV.

The reader should be cautioned that the alien audit environment construct was initially developed in order to analyze the potential sources of role ambiguity. Because many, if not all, of the perceptual sets of an alien audit environment are seen as potential sources of role conflict, the latter construct was eventually added to the model. The early studies by Rizzo, House and Lirtzman (1970) found role ambiguity to be more prevalent than role conflict in explaining organizational behavior. This was the

initial impetus for the development of the alien audit environment construct and the reason why role ambiguity precedes role conflict in all titles, captions and discussions.

RESEARCH OBJECTIVE 2: EFFECTS OF ORGANIZATIONAL LEVEL ON ROLE AMBIGUITY AND CONFLICT

The purpose of this objective is to determine what influence the auditor's organizational position has with the sources and consequences of role ambiguity and conflict. Most of the studies in the role theory literature have focused on specific organizational or individual attributes without considering the interactions of the organization level. In the only two accounting studies, one examined how audit managers resolved conflict situations (Schultz, 1974), and the other examined senior accountants' perceptions of role ambiguity and conflict. Of the few role theorists who have studied the interaction of organizational level, some have concentrated only on the consequence of role ambiguity and conflict without considering any antecedent variables (Schuler, 1975; Szilagyi, Sims and Keller, 1976). Other studies have used heterogeneous role positions and it was difficult to determine whether results reported were due to one's position in the hierarchy of the organization or his distinct occupational role (Miles, 1976; Szilagyi, 1977; Morris, Steers and Koch, 1979). Schuler reported some interactions between the individual's degree of

participation in decision making in the organization but nowhere was the nature of the role positions described (Schuler, 1977).

Because independent auditors occupy relatively homogeneous positions even though they may be located at different levels in the organization avoids the possible confounding of different occupational positions. It is difficult to compare administrators to research scientists and/or clerical workers because they occupy heterogeneous organizational positions. Public accountants, however, although the nature of the functions and skills differ, are essentially performing the identical task of evaluating the fairness of their clients' financial statements.

RESEARCH OBJECTIVE 3: CONFIRMATION OF PREVIOUS STUDIES ON THE RELATIONSHIPS OF PERSONAL OUTCOMES WITH ROLE AMBIGUITY AND CONFLICT

Evidence from three role theory studies (Kahn, et al., 1964; House and Rizzo, 1972; Miles, 1974) and one accounting study (Senatra, 1976) suggest that the experience of role ambiguity and conflict is related with adverse personal outcomes. The four personal outcomes that will be compared are reported in Figure 1.1. The purpose of this objective is to determine how pervasive these outcomes are across different occupations. Referring to Figure 1.1, role ambiguity and conflict are depicted as potential sources for the absence of work satisfaction and job performance and the presence of job anxiety and the desire to

leave the public accounting firm. Specific objectives are deferred until Chapter III.

JUSTIFICATION FOR STUDY

As indicated in the previous sections, the multi-disciplinary aspects of this study should increase our understanding of dysfunctional behavior in a large public accounting firm and expand our knowledge of the role theory literature. There have only been two studies that have extensively examined the auditor's behavior using the role episode model. Schultz (1974) used a case study methodology in examining how managers resolve role conflict. Senatra (1976) is the only study that used standardized measurements in examining the effect various organizational practices had on role ambiguity and conflict. Both of these studies focused on only one organizational position and could not generalize their conclusions across all organizational levels. Another major limitation of the Senatra study is that it did not consider those organizational attributes regarding the unique nature of public accounting. This study attempts to focus on those personal-organizational factors that are perceived as most important for a career in public accounting.

Although there has been some controversy regarding the severity of turnover in the public accounting profession, it has generally been considered costly and undesirable (Sorensen, Rhode and Lawler, 1973; Benke and Rhode, 1979).

Accounting firms would certainly prefer to increase the performance of their employees and would not hesitate to increase their job satisfaction. They are certainly concerned with reducing the high levels of anxiety that already exist, as evidenced by the participation in various tension reducing seminars prepared by behavioral psychologists.

Role theorists should welcome the organizational setting of a large public accounting firm as ideal for studying role ambiguity and conflict. These reasons were described earlier but they are reiterated again.

1. Multiplicity of Supervisors -- Unlike most organizations where the unity of command may be occasionally violated, accountants particularly at the manager position must function with many supervisors simultaneously.
2. Excessive Degree of Ambiguity -- Accountants are often assigned to client engagement with which they are unfamiliar and often resent.
3. Homogeneous Profession -- Although accountants perform different functions, depending on their position in the organization, their role positions are generally identical. Comparisons between a staff accountant as compared to a manager avoids some of the confounding that exists due to different occupations. Once individual attributes are controlled, all

other differences in perceptions may be attributed to the influence of the organizational position.

SEQUENCE OF RESEARCH OVERVIEW

The sequence of the research overview of this study will be developed in six chapters. Chapter I briefly introduces the reader to the conceptual model that will serve as the framework for analyzing role ambiguity and conflict in a large public accounting firm. Several objectives are presented and the justification for the study is described.

Chapter II introduces the reader to the vernacular of role theory and how it may be applied to the role of the independent auditor. Various role theory models are presented as well as a general orientation of the organizational structure and operations of a public accounting firm.

Chapter III is an extensive literature review of the empirical studies that have been completed in role theory. Included in this chapter is a review of the behavioral accounting literature that is related to role theory.

Chapter IV covers the research methodology. The conceptual model is developed and all of the related hypotheses are presented. The research instruments that are used to measure all of the constructs are presented. There is also a discussion on the validity and reliability of the measurements as well as the statistical techniques

used to test the hypotheses. Correlation and multiple regressions are the primary statistical applications used.

Chapter V presents the results of the research study. Hypotheses are either confirmed or rejected and comparisons are made with other related studies.

Chapter VI presents the conclusions of the research study and provides recommendations for future research.

CHAPTER II

ROLE THEORY AND ITS APPLICATION TO THE BEHAVIOR OF THE INDEPENDENT AUDITOR

Role theory, according to Biddle and Thomas (1966), is not a universally recognized specialization because scholars have not agreed upon a general taxonomy as to a domain of study, perspective language, body of knowledge, theory and method of inquiry. It is similar to other social sciences such as psychology and sociology in that it attempts to comprehend, predict and control the particular phenomena included in its field of study. It is unique in its approach of integrating the behavioral disciplines of psychology and sociology. Role is the largest possible research unit that may be studied by psychologists and the smallest by sociologists. Unlike some psychological theories, role theory bridges the gap between the individual and the group, between personal history and the social organization (Sarbin and Allen, 1968). Because modern organizations, including professional accounting firms, must create various hierarchical and lateral positions in order to solve complex problems, role theory provides an excellent framework in understanding organizational behavior.

THE TAXONOMY OF ROLE THEORY

Biddle and Thomas (1966) have documented the dissensus that exists in regard to the definition of role. From this diversity appears some agreement in that role denotes the prescription, description, evaluation and action of human behavior usually observed within a group (Biddle and Thomas, 1966, p. 29). Linton was one of the first theorists to report a classification scheme of the various roles that may exist in an industrial society. An individual has ascribed roles which he was endowed with at birth such as sex and age. These roles required no effort on his part. Gradually the individual acquires achieved roles such as marriage and occupation. The focus of this research study is the achieved organizational roles. Individuals who occupy various organizational positions are conditioned to expect recurring and standardized behavior patterns. If one were to enter a school he would expect three role occupants: teachers, administrators and students. One would not expect to find role positions that did not contribute to the process of education and that were alien to such an environment. Law enforcement officers and assembly-line workers are examples of roles that one would not expect to find in a school. Similarly, role behavior would conform to preconditioned rules where one group within limits would not infringe and interfere with duties and obligations of another group. Administrators would not dictate how a

Shakesperian play should be mastered in the classroom nor would teachers interfere with administration policy.

It is important to note the distinction between role which is characterized as the total behavior of an individual fulfilling a task as opposed to his status. Ralph Linton was the first to make this observation:

A status, as distinct from the individual who may occupy it is simply a collection of rights and duties ...A role represents the dynamic aspects of status. The individual is socially assigned to a status and occupies it with relation to other statuses. When he puts the rights and duties which constitutes the status into effect, he is performing a role. Roles and status are quite inseperable, and the distinction between them is only of academic interest. There are no roles without statuses or statuses without roles. Just as in the case of statuses, the term role is used with a double significance. Every individual has a series of roles deriving from the various patterns in which he participates and at the same time a role, general, which represents the sum total of these roles and determines what he does for his society and what he can expect from it (Thomas and Biddle, 1966, p. 7).

This process of performing the function and duties of the role has also been referred to as role enactment (Sarbin and Allen, 1968, p. 489). In evaluating whether a person is properly executing his role or role enactment, we consciously develop role expectations. This is a cognitive concept where individuals accumulate beliefs, subjective probabilities and elements of knowledge. A judge is not only expected to wear robes while he is presiding in court, but his behavior should be dignified, impartial and calm. Parents are expected to perform overt acts such as tenderness, love, and discipline in maintaining the physical and psychological health of their children. Role expectations

may be plotted on a continuum from a high degree of specificity to generality. Certain bureaucratic organizations such as the military or penal institutions regiment their members' daily behavior to the smallest detail without the slightest modification by the role members. Penalties are immediately implemented for nonadherence to these role expectations. Other positions such as a division manager or college president require broad general behavior and allow their role occupants to execute their functions within a broad range of acceptable behavior patterns.

ROLE THEORY MODELS

Although a comprehensive literature review of the various empirical studies is deferred until Chapter III, three models are presented at this time in order to discuss the application of role theory to organizational behavior. All of the models were selected because of their central focus of role ambiguity and conflict as potential precursors to unfavorable organizational outcomes and personal stress.

The first model developed by Kahn, Wolfe, Quinn, Snoek and Rosenthal (1964) has had the most influence on the empirical role theory literature. The second model reported by House, Rizzo and Lirtzman has had the most influence on standardizing the instruments used to measure role ambiguity and conflict. It was also the model essentially adopted by Senatra (1976) in his study of senior

accountants. The third model, developed by Gross, McEachren and Mason (1958), attempted to predict how individuals resolved role conflict in an organization. Although the study of conflict resolution is not one of the objectives of this project, the model is introduced because of its influence on Schultz's work on manager accountants (Schultz, 1974). He was the first to apply a role theory model in explaining behavior in a professional accounting firm.

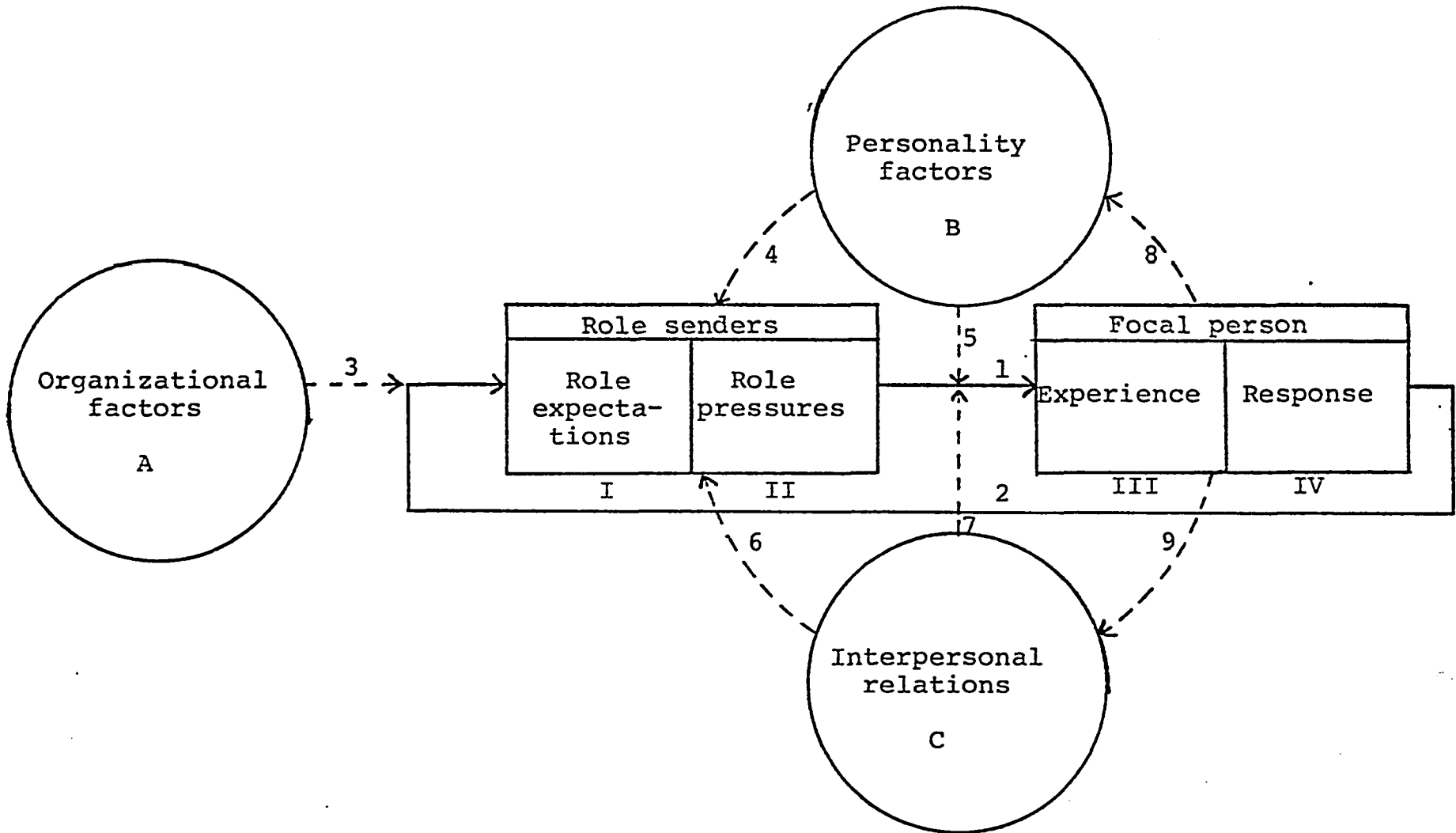
THE KAHN ET AL. MODEL

The model developed by Kahn, Wolfe, Quinn, Snoek and Rosenthal (1964) and presented in Figure 2.1 has had the most influence on role theory. The core of the model represents the "role episode" depicting the interactions between the person being analyzed and other members of the organization. Kahn suggested that the three encircled constructs had the most significant influence on the role episode.

Most of the empirical studies that will be presented in Chapter III have used variations of Kahn's model depending upon the focus of their research. Role theorists may often concentrate on a single personality factor such as need for achievement, while ignoring the other constructs in the model. Virtually all of the research studies use the "role episode," the core of the model in analyzing the sources and outcomes of role ambiguity and role conflict.

FIGURE 2.1

A THEORETICAL MODEL OF FACTORS INVOLVED IN ADJUSTMENT
TO ROLE CONFLICT AND AMBIGUITY

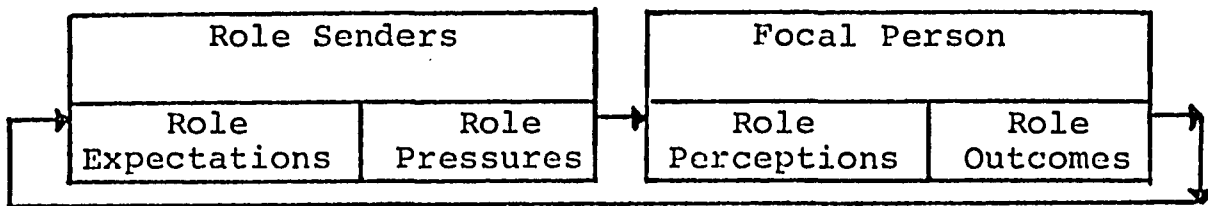


Source: Robert L. Kahn, et al., Organizational Stress: Studies in Role Conflict and Ambiguity (New York: John Wiley & Sons, Inc., 1964), Figure 2-2, p. 30.

A modified version of the role episode as reported by Miles (1974) is illustrated in Figure 2.2 below and will serve as a springboard for discussing the interactional process of the theory.

FIGURE 2.2

MODIFIED ROLE EPISODE MODEL



The four boxes in the figure represent events and the arrows connecting them indicate a causal sequence. Every member of an organization is assumed to have a role set where he is expected to have many roles (Merton, 1957). To reiterate the lexicon, a status is an organizational position such as a manager, supervisor or vice president. A role as distinguished by Linton is one of many relationships that an individual experiences with other members of his organization. Finally a role set is the multiple relationships or roles that an individual is expected to assume. Merton (1957) uses the example of the medical student who must not only interact with his teacher but has an array of other roles relating to his fellow students, social workers, nurses, physicians and medical technicians. The distinction is minor and is only necessary when comparing

the vernacular of models as presented by different theorists. Continuing with the episode model, role theory is predominantly concerned with the behavior of an individual within the organization who is referred to as a focal person. A focal person occupies an organizational position such as division manager and may have to interact with various role senders. Role senders may be the focal person's superiors, subordinates or colleagues. Role senders have definitive perceptions or role expectations regarding the correct manner in which focal persons are performing their jobs. Whenever the focal person's behavior is not conforming to the image perceived by the role sender, pressure will be exerted in an effort to make his performance congruent with that expectation. During the process of exerting this pressure, the focal person will have definitive role perceptions as to the requirements of his job. Depending on whether his perception of his role is congruent with his role senders' expectations, different personal outcomes and responses can occur. Some of these personal outcomes and responses which will be explored in this research study as they relate to the practice of public accounting are job tension, work dissatisfaction, turnover and performance. In the remaining part of this section, the antecedents of various organizational strains that may be experienced by the focal person, such as role conflict, role ambiguity, and role overload, will be presented.

Role Conflict

Role conflict is simply the differences in perception between the role sender and the focal person regarding the proper behavior that is necessary to complete the requirements of the job. It is important to note that the unit of analysis is the focal person and any pressures that he may receive may result in psychological conflict.

Sent role conflict is defined as the simultaneous occurrence of two (or more) sets of pressures such that the compliance with one would make more difficult compliance with the other. This often occurs where the focal person receives two mutually conflicting demands. A foreman may be pressured by his superiors to adhere to an ambitious production schedule demanding continuous surveillance of the production process whereas his subordinates may demand a relaxed supervisory style lest they sabotage the production quotas. The first line supervisor has often been referred to as "the man in the middle" because of the frequency of these role conflict experiences. Kahn categorizes four types of role conflict. They are: intra-sender conflict, inter-sender conflict, inter-role conflict and person-role conflict.

Intra-sender conflict. This occurs where the prescriptions and the proscriptions from the single member of a role set are incompatible. An example would be to purchase materials from a competitor where such transactions are prohibited by company policy.

Inter-sender role conflict. This is where the focal person receives contradictory instructions or expectations from two or more members in his role set. The example of the foreman as the man in the middle illustrated this point.

Inter-role conflict. This conflict is experienced where a focal person is a member of two or more groups that have philosophies which are diametrically opposed to each other. A junior accountant may be asked to work excessive hours of overtime in order to complete his assignment. This will be contrary to the members of his family who desire his presence during the evening and weekend hours.

Person-role conflict. This results where the behavior demanded on the job may be contrary to the moral consciousness of the focal person. A supervisor may be asked to discharge one of his subordinates who may be an excellent performer but failed to make a token appearance at the company picnic.

Role Overload

Kahn considered role overload as a form of inter-sender role conflict where the focal person's resources were critically strained. An individual may receive compatible instructions from two members of his role set where it may be impossible to satisfy both demands in a short time span. Role overload may also exist where there is only one role sender. This may occur where a supervisor

accountant is asked to complete an audit engagement under an impossible deadline.

Role Ambiguity

A focal person experiences role ambiguity when he lacks adequate information that is necessary for completing the requirements of his job. Kahn categorizes role ambiguity into objective ambiguity and subjective (experienced) ambiguity. Objective ambiguity is a state of the environment and is independent from the perception and cognitions of any perceiver. If a company fails to provide an instruction regarding the performance requirements of a specific task, every employee would be cognizant of this absence of information. Subjective ambiguity is the different cognitions and perceptions that people have when responding to ambiguous or unambiguous stimuli from the environment. Thus, a company may provide adequate information with unambiguous instructions to complete an assignment but the focal person may still experience subjective ambiguity in evaluating his responsibilities. Objective ambiguity is therefore the unclear stimulus within the environment whereas subjective ambiguity is the focal person's response to the stimulus.

It is important to note that in most modern industrial or professional organizations, a certain amount of ambiguity must always exist. Research scientists and engineers perhaps encounter the most ambiguity on their

jobs. To eliminate ambiguity by standardizing each task could result in excessive technical boredom. In addition, people will react differently to ambiguous situations depending on their needs for a structured environment. Frenkel-Brunswick and Budna (1962) developed measurement scales referred to as intolerance for ambiguity which examined one's response to ambiguous stimuli. A similar measurement known as need for cognition was developed by Cohen, Stotland and Wolfe (1951).

In any organization, role ambiguity may result from the following:

1. There is a lack of information throughout the organization.
2. Information exists within one role set but it is not available to a focal person of another role set.
3. Information may be communicated too rapidly or transmitted by two or more senders simultaneously creating confusion and uncertainty for the recipient.
4. Information that is available may be intentionally suppressed by a sender in order to retain power. This frequently occurs where a subordinate will withhold information from an untrusted superior.

Some of the possible consequences of experiencing role ambiguity such as stress, job dissatisfaction, turnover

and job performance will be similar to the reactions to role conflict. These consequences will be further developed in Chapter IV.

RESEARCH RESULTS OF THE KAHN ET. AL. STUDY

As alluded to earlier, the Kahn study has been one of the most ambitious attempts in using the role model in understanding organizational behavior. Two research approaches were used. In a series of two intensive interviews, case studies were developed from fifty-three supervisory role positions in six industrial companies. Information was obtained regarding the focal person's expectations and feelings regarding his job requirements. Complementing the case studies was a national survey of 725 persons who were employed in the labor force during 1961. Persons who reported incidents of role conflict and ambiguity on the job experienced various forms of organizational strain, such as tension, reduced job satisfaction and decreased confidence in superiors. Individuals who experienced these effects were found to suppress information needed within their organizations. There were three primary causes of role conflict and ambiguity suggested by the study. One was where an individual occupied a boundary role within the organization. These positions require their occupants to cross several organizational levels in order to complete the demands of the job. People who are not familiar with the pressures and demands of the focal person's job are more likely to have unreasonable expectations.

Hypothetical expectations for the stressfulness of boundary crossing are available primarily from case materials. It appears that the person who must frequently deal with people outside the company usually has limited control over these outsiders. He cannot strongly influence their demands and the resources which they supply to him. Moreover, a person in a boundary position is likely to be blamed by people in his own company for what his outside contacts do or fail to do. They in turn may blame him for shortcomings in his own company. The difficulties of being at the boundary of an organization are intensified when the boundary dweller must coordinate his extra-organizational activities with people in other departments within the company (Kahn et al., 1964, p. 381).

An environment that requires innovative solutions to complex problems was the second cause of role conflict and ambiguity. Conflict was particularly prevalent where focal persons attempted to bypass standardized organizational procedures. Routine administrative tasks were disruptive because they retarded any creative work within the organization. Another factor that contributed to role conflict and ambiguity was supervisory responsibility. Kahn found a curvilinear relationship between organizational level and job-related tension. Tension increased with organizational level up to the middle management level and then declined at the higher status levels.

Kahn also investigated the interaction of various personality characteristics such as introversion-extroversion and flexibility-rigidity on role conflict and ambiguity.

An introvert is a person who is introspective and self-oriented whereas the extrovert is seen as being close-in-touch with his environment. Introverts were more

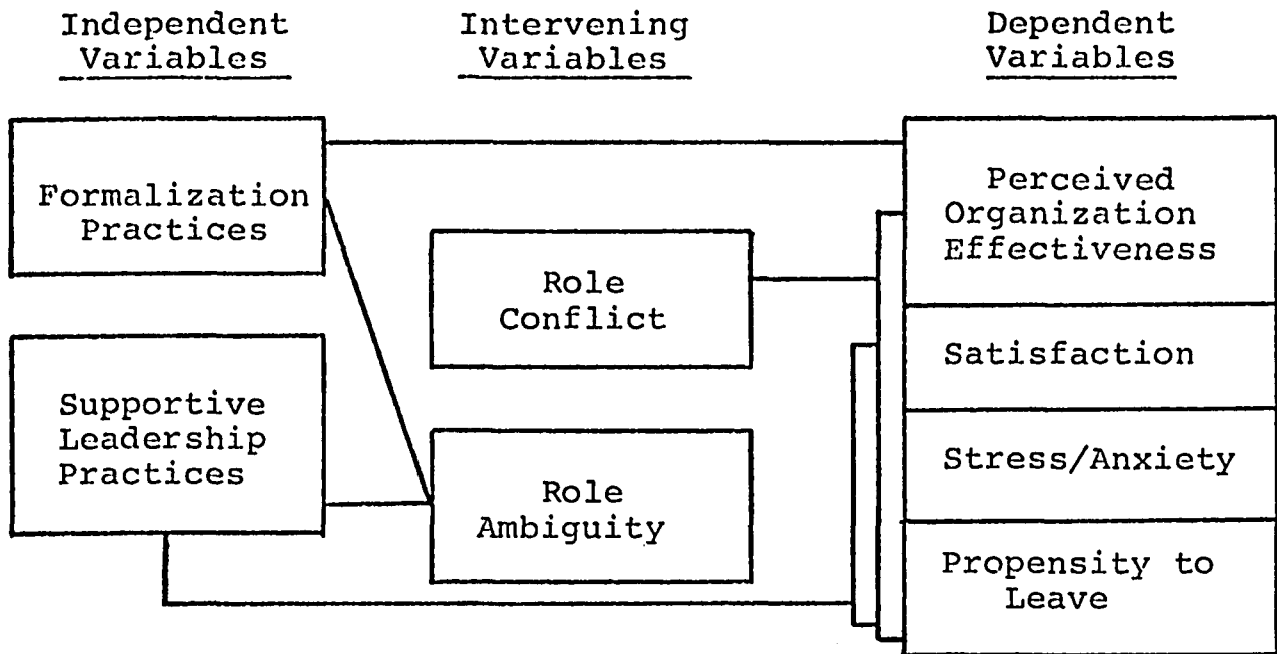
likely to suppress information during periods of stress. Persons who are rigid are seen to be stable, systematic, and exhibit a high degree of self-control. He will tend to be dogmatic and oriented toward authoritarianism. Flexibility is defined as the ability to adjust to new stimuli from the environment. The flexible individual is open-minded and prefers an environment that emphasizes interpersonal relationships. The flexible individual was found more likely to experience conflict and higher degrees of anxiety. The rigid person was more apt to reject his role senders when experiencing role conflict.

THE HOUSE, RIZZO AND LIRTZMAN MODEL

This study has perhaps made the greatest contribution to the empirical analysis of role theory if for no other reason than its development of a standardized measurement of role ambiguity and role conflict. Referring to the abridged model in Figure 2.3, the authors were interested in the mediating effects role conflict and role ambiguity had on the relationships between principles of classical organization theory and various dependent variables (House and Rizzo, 1972). Some of the principles examined were: chain of command, unit of command, and single accountability. Under the chain of command principle, organizations have various hierarchical relationships which are supposed to result in the most efficient method of achieving objectives. It is a top-to-bottom control device where each ascending

FIGURE 2.3

THE HOUSE, RIZZO AND LIRTZMAN MODEL



position occupies a higher level of authority. Related to this concept is the corollary principle of unity of command which requires each employee to have only one superior in carrying out an organizational objective. "The essence of this principle is that the structure of an organization should keep a member from being caught in the crossfire of incompatible orders or incompatible expectations from more than one superior" (House, Rizzo and Lirtzman, 1970, p. 150).

Similarly, single accountability requires that a subordinate must be held responsible for the performance of his task by only one superior. The benefits of these procedures are the prevention of role ambiguity and conflict. Each position under the classical organization theory has a set of responsibilities and duties regardless of the occupant of that position. Presumptively, there should be little or no episodes of role ambiguity and role conflict within such an organization because individuals have all the necessary information to complete their tasks without interference from two or more superiors.

In the development of their role conflict and ambiguity measurement, thirty questionnaire items relating to incidents of role conflict and role ambiguity were administered to 200 (a 30 per cent sample) professional and managerial employees at a corporate and domestic division of a heavy equipment manufacturing company. Using factor analysis, eight items were used to measure role conflict and six items were used to describe role

ambiguity. The psychometric properties of these scales have recently been validated and are the most popular measurements used by empirical researchers in evaluating incidents of role ambiguity and conflict.

Some of the conclusions of the Rizzo study found the following relationships:

1. Both role conflict and role ambiguity had strong negative correlations with measures of satisfaction, particularly in regard to self recognition. Role ambiguity had the higher relationship which caused the authors to suggest that it may be a more dysfunctional force within an organization. This finding was a significant reason why the alien audit environment construct which will be presented in Chapter IV was initially developed to study role ambiguity.
2. Employees who had superiors who were task-oriented and provided structure and operating standards, experienced the least amount of role conflict and ambiguity.
3. Organizational practices that were patterned under the principles of classical management, as predicted, had the lowest incidents of role conflict and role ambiguity.
4. Role ambiguity and role conflict showed a negative but weak relationship with organizational stress and anxiety.

THE GROSS, McEACHREN AND MASON MODEL

This study was the first empirical attempt to predict how an individual would resolve two conflicting alternatives. One hundred and five school superintendents responded to a questionnaire regarding their perception as to how various members within their school districts expected them to handle four job-related areas. These were: (1) the hiring and promoting of teachers, (2) the superintendent's allocation of his after-office hours, (3) salary increases for teachers, and (4) the priority the superintendent gives financial or educational needs in preparing the school budget. It was shown that an issue such as salary increases of teachers, superintendents perceived that teachers would have opposing views to members of the taxpayers' association and parents. The authors developed a model of conflict resolution which was dependent on the presence of legitimate expectations and sanctions. A legitimate expectation is where the focal person (superintendent) perceives the views and actions of other persons as being the proper mode of behavior. This may occur where a superintendent perceives the salary structure for teachers in his school as being too low compared to other schools in his district. He concurs with his teachers' demands for an increase in salary as a legitimate expectation.

A sanction is either an award or punishment that is conditioned on how the superintendent resolves these critical situations. Superintendents may be fired or promoted by the

school board which may be controlled by the taxpayers' association. Sanctions may also be exercised by teachers in the form of uncooperative behavior that may interfere with the superintendent's administrative duties.

From the responses to a questionnaire, superintendents were classified as moralists, expedients and moral-expedients. A moralist is an individual who would resolve his experienced role conflict in favor of the aggrieved party regardless of the possible consequences or sanctions. The expedient would resolve any conflict in favor of the party that may exercise the greatest sanctions in responding to his decision. The moral-expedient evaluates both sanctions and legitimacy when resolving conflict.

Superintendents, after being coded as a moralist, expedient or moral-expedient, were required to respond to: (1) their perceptions regarding the legitimacy or illegitimacy of the parties who were in conflict, (2) the perceived sanctions for non-compliance with each expectation, and (3) how the conflict would be resolved. It was successfully predicted that moralists would favor the party with the legitimate claims even if he were to receive greater sanctions by the party with the illegitimate claims. Superintendents who were expedients were found to favor the party who provided the greatest amount of rewards or punishments regardless of the legitimacy of their claims. Those who were moral-expedients vacillated as to how they resolved conflict episodes. This type of person would balance the

effects of both sanctions and legitimacy before reaching any conclusion. The Gross, McEachren and Mason study is important because it was the first role model used in analyzing role behavior within a public accounting firm. Discussions of this application will be deferred until Chapter III.

THE UNIQUE ROLE OF THE CERTIFIED PUBLIC ACCOUNTANT

Scott (1965) has reported three categories of professional organizations. The first type, which is the focus of this paper, is the "autonomous" professional organization such as the medical clinic, law firm, and the large public accounting firm. Workers in these organizations are generally subject to the professional's jurisdiction with little involvement in administrative tasks. The second type is the "heteronomous" organization where professional employees are controlled by an administrative jurisdiction. Public schools, libraries, social work agencies, and accountants working for the Government Accounting Office or the Internal Revenue Service are some examples. The "professional department," such as the accounting department of a manufacturing firm, represents the last category.

Most of the research that has used the role theory framework was conducted in organizations that provided a valuable consumer product or service. Except for the role of nurses in a hospital setting, the behavior of accountants

or lawyers who work in an "autonomous" professional organization has been limited. Two reasons are offered as to why the organizational setting and practice of a large professional accounting firm would interest organizational and role theorists. First is the unique nature of the accountant's service and role to society, particularly in regard to his professional standards and legal obligation. Second is the organizational environment in which the accountant performs his craft. Of particular interest to this study is the use of the audit project team as the operating unit employed by all public accounting firms.

Auditors, as perhaps no other professional group, must provide a necessary, but often unappreciated and misunderstood, service to society. Although public accountants serve in an advisory role with their clients, particularly with respect to tax and management services, their primary function has been to complete the audit mission (Roy and MacNeill, 1967). The final product of this service has been the auditor's opinion often referred to as the "Good-Housekeeping Seal" with regard to the accuracy and fairness of the client's financial statements. Accountants within large professional organizations adhere to various rules and regulations from at least four sources. Their primary obligations are interpreted by the standards promulgated within their profession. According to the American Institute of Certified Public Accountants,

The objective of the ordinary examination of financial statements by the independent auditor is the expression of an opinion on the fairness with which they present financial position, results of operations, and changes in financial position in conformity with generally accepted accounting principles (AICPA, 1972, Section 110.01).

Accountants must also adhere to a secondary source of rules and procedures prepared by their professional accounting firms. Most of these regulations are usually codified in what is referred to as the auditor's manual. The organization's influence is also found in the auditing program -- a compilation of questionnaires and procedural functions required on each assignment. The third source of standards are statutory reporting requirements such as the Securities Act of 1933 and the Securities Exchange Act of 1934. They are administered by governmental agencies such as the Securities and Exchange Commission. The last source defining the requirements of the audit mission has evolved from a collective history of court cases, often referred to as the accountant's common law liability.

The aforementioned sources provide a common thread or theme with regard to the auditor's primary responsibility. Although he is often hired directly by the organization's management, his services communicated through the auditor's report are directed to third parties whose identity is often unknown. Management, particularly within large multinational corporations that have elaborate internal control systems, find little utility with regard to the auditor's annual examination.

As indicated by the recent Cohen Commission (1978), audit examinations are necessary in order for a firm to function in our capital markets.

...An independent audit is necessary because of the inherent potential conflict between the entity's management and the users of its financial information. Since financial statements are one of the means used to evaluate management's performance in operating the entity, management could have an incentive to bias the measurement. This bias could range from unconsciously presenting performance in a better light to outright misrepresentation (AICPA, 1978, p. 5).

Although the auditor is admonished not to be an advocate or adversary of management, he is required to maintain a skeptical demeanor during the process of his examination.

In addition to the auditor's precarious relationship with management, accountants have not been successful in communicating the limitations of the attest function to third parties. All of the surveys conducted by the Cohen Commission found that users of financial statements experienced greater expectations than that intended by the accounting profession.

Specifically, knowledgeable investors perceived the auditor's function as a guarantee against fraud and illegal behavior by management. Although these expectations are contrary to accountants' professional standards, they have been supported by recent court decisions and the Securities and Exchange Commission. With regard to the profession's standard, it is reported that

...In view of those other limitations on the effectiveness of auditing procedures, the subsequent discovery that errors or irregularities existed during the period covered by the independent auditor's examination does not in itself indicate inadequate performance on his part. The auditor is not an insurer or guarantor; if his examination was made in accordance with generally accepted auditing standards, he has fulfilled his professional responsibility (emphasis added, AICPA, 1977, Section 327.13).

Prior to concluding this section it is important to underscore that we have been referring to the accountant's primary role within our economic society. Auditors are also involved in many secondary roles where they often advise their clients regarding unlimited business decisions. They are usually instructed to be alert during the process of the engagement for any constructive comments they may contribute regarding the client's business. This writer recollects the following remark made by a "Big Eight" partner during the course of an audit engagement: "Anybody can audit, but it requires a businessman's attitude in order to provide the client some tangible evidence of service."

In summary, the auditor's role is embedded in a profession that has often been confused and misunderstood. He must develop a congenial exterior and harmonious relationship with management while continuously being alert to possible irregularities. The contractual relationship with the company requires that he exercise due care and submit an opinion to third parties regarding the fairness of the organization's financial statements. Embedded within this charge is in reality an evaluation regarding management's performance. This is particularly evident where a firm's

earnings per share improves and withstands any possible adjustment that might have occurred during the audit engagement. Unlike other organizations that either manufacture products or provide consumers with services of individual intrinsic value, accountants provide a professional service that has little utility for those paying their fee -- the client's organization. Too often this writer has heard the following remark upon beginning an audit engagement. "You're not going to find anything anyway, so why don't you just give us your certification right now." This is in no way to imply that audits and the accountant's services are not necessary. They provide an aggregate benefit to investors and creditors operating within our capital markets. The purpose of this first section was to develop the environment that often exists for independent auditors and the experiences he may have internalized. In summary, his role is fraught with potential conflict with management. His auditor's report has been misunderstood even by knowledgeable investors regarding its significance and representation. Finally, the multiple sources of authority are often contradictory.

ORGANIZATIONAL SIZE OF PUBLIC ACCOUNTING FIRMS

This study examines the behavior of independent auditors across three organization levels within various public accounting firms, with the exception of one firm, all of the organizations are located in the northeastern region of the United States.

Referring to Table 2.1, there were 82,141 practicing public accountants who were members of the American Institute of Certified Public Accountants as of July 31, 1979 (AICPA, 1979). A large proportion of these auditors (31.6 per cent) are employed by the twenty-five largest firms in the profession.

Most of the auditors who participated in this study are employed in firms from the last category of the table. Within this group, eight firms (referred to as the "Big Eight") dominate the profession in total accounting fees earned, number of accountants employed, number of clients registered with the Securities and Exchange Commission, and total number of offices. Public accounting firms in general and the Big Eight firms in particular are extremely secretive about their operations. As a result, it is often difficult for a researcher to gather any meaningful data. Table 2.2 presents some statistics regarding the Big Eight firms that were prepared from the 1976 Senate Subcommittee on The Accounting Establishment. There were 26,101 accountants who were employed with the largest twenty-five firms and who were members of the AICPA as of July 31, 1976 (AICPA 1976 Annual Report). As indicated in Table 2.2, 14,395, excluding Peat, Marwick and Mitchell, were employed with the Big Eight. The remaining 11,706 accountants were from the remaining firms in this group. Assuming Peat, Marwick and Mitchell had an average of 32.8 per cent of their employees who were members of the AICPA or 2,987

TABLE 2.1

SOURCES OF AICPA MEMBERSHIP
IN PUBLIC PRACTICE

<u>Firm Size</u>	<u>Number of Auditors</u>	<u>Per cent</u>
Firms with one member	19,302	23.5
Firms with 2 to 9 members	26,532	32.3
Firms with 10 or more members except 25 largest firms	10,350	12.6
25 largest firms	<u>25,957</u>	<u>31.6</u>
	82,141	100.0

TABLE 2.2

EMPLOYMENT STATISTICS OF BIG EIGHT ACCOUNTING FIRMS FOR 1975

<u>CPA Firm</u>	<u>Number of Domestic Offices</u>	<u>Number of Partners</u>	<u>Number of Employees Excluding Partners</u>	<u>Number of Employees Including Partners</u>	<u>Number of Members of AICPA</u>	<u>Ratio of AICPA Members to Nonmembers (per cent)</u>
Arthur Andersen	48	763	8,554	9,317	2,352	25.2%
Arthur Young	64	464	4,800	5,264	2,140	40.7
Coopers & Lybrand	81	565	6,189	6,754	2,280	33.8
Deloitte Haskins & Sells	93	455	4,798	5,253	1,235	23.5
Ernst & Whiney	112	504	5,795	6,299	2,730	43.3
Peat, Marwick & Mitchell	100	881	8,227	9,108	not reported	----
Price Waterhouse	67	366	5,933	6,299	2,200	34.9
Touche Ross	<u>76</u>	<u>484</u>	<u>4,219</u>	<u>4,709</u>	<u>1,458</u>	<u>31.0</u>
Total	641	4,482	48,515	52,997	14,395	32.8%*

* Average ratio was computed excluding Peat, Marwick and Mitchell.

auditors, then approximately 8,719 accountants were employed with the non-Big Eight firms. These employment statistics will be reviewed in the data analysis section in Chapter IV in an attempt to generalize the conclusions of this study.

ORGANIZATIONAL STRUCTURE OF PUBLIC ACCOUNTING FIRMS

The organizational structure of accounting firms may be described as professional bureaucracies. In a series of articles, Hall (1968) compared the degree of professionalism and bureaucratization that professional groups experienced with twenty-seven different organizations. There have been two approaches in developing the attributes of a professional model. First is the structural elements which have included such attributes as a code of ethics, a recognized professional organization, an essential service to society and entry-level requirements (Hall, 1968). Second is the attitudinal attributes used in the Hall study. They include (1) using the professional organization as a frame of reference, (2) a belief of service to the public, (3) a belief in self-regulation, (4) a feeling of dedication, and (5) a high degree of autonomy in making decisions (Hall, 1968, p. 93). A "bureaucracy" has been defined by Victor Thompson (1961) as an organization that has an elaborate division of labor. Hall was able to develop six dimensions of a bureaucratic model from the works of Merton, Friedrich, Udy, Heady, Parsons, Berger and Litwak.

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Included were (1) a well-defined hierarchy of authority, (2) a division of labor based upon functional specialization, (3) a system of rules covering the rights and duties of positional incumbents, (4) a system of procedures for dealing with work situations, (5) impersonality of interpersonal relationships, and (6) selection for employment and promotion based upon technical competence (Hall, 1962).

Two large CPA firms were represented in Hall's data base and were found to exhibit high degrees of professionalization and low to moderate degrees of bureaucratization in comparison with other professional groups. Unfortunately, the response rate was low and no indication was made regarding the respondent's rank within the organization. He found these CPA firms to have few rules and procedures and almost no division of labor. Consistent with this finding, Montagna (1968) found that accountants expressed anxiety as to the increasing amount of rules and procedures within large CPA firms.

Table 2.3 presents the organizational hierarchy that is found in most accounting firms. Montagna (1968) found that approximately 50 per cent of the employees are staff and semi-senior accountants, 30 per cent are seniors, 10 per cent are managers, and the remaining 10 per cent hold the highest position of partner. Unlike the employment statistics reported in Table 2.2, Montagna did not include employees who may be working in management services.

What makes the service operations of accounting

TABLE 2.3

ORGANIZATIONAL HIERARCHY OF A LARGE CPA FIRM

<u>Role Position</u>	<u>Approximate Number of Years Employed with Firm</u>	<u>Responsibilities</u>
Staff Accountant or Junior Accountant	0 - 1	Routine areas of audit activity, such as verifying inventories and reconciling bank statements.
Semi-Senior Accountant	1 - 3	Complex areas of the audit engagement such as the conformity of the client's reporting of lease transactions to the profession's standards. Some supervisory responsibility may exist over a staff accountant.
Senior Accountant	3 - 6	Supervision of the entire audit engagement. Generally responsible for one client until the successful completion of the engagement. The senior performs his task requirements at the client's premises.
Manager	6 - 12	Supervision of several engagements simultaneously. The majority of responsibilities are duties conducted at the office of the auditing firm.
Partner	12 - retirement	Duties and responsibilities parallel that of the manager.

firms unique is unlike most other organizations; auditors must develop a complex network of role sets within their firm and their client engagements. This will be discussed in the following section.

AUDITING PROJECT TEAMS WITH MULTIPLE ROLE SETS

As depicted in Figure 2.4, the operating unit for providing professional auditing services is the project team. Project teams usually have the following characteristics:

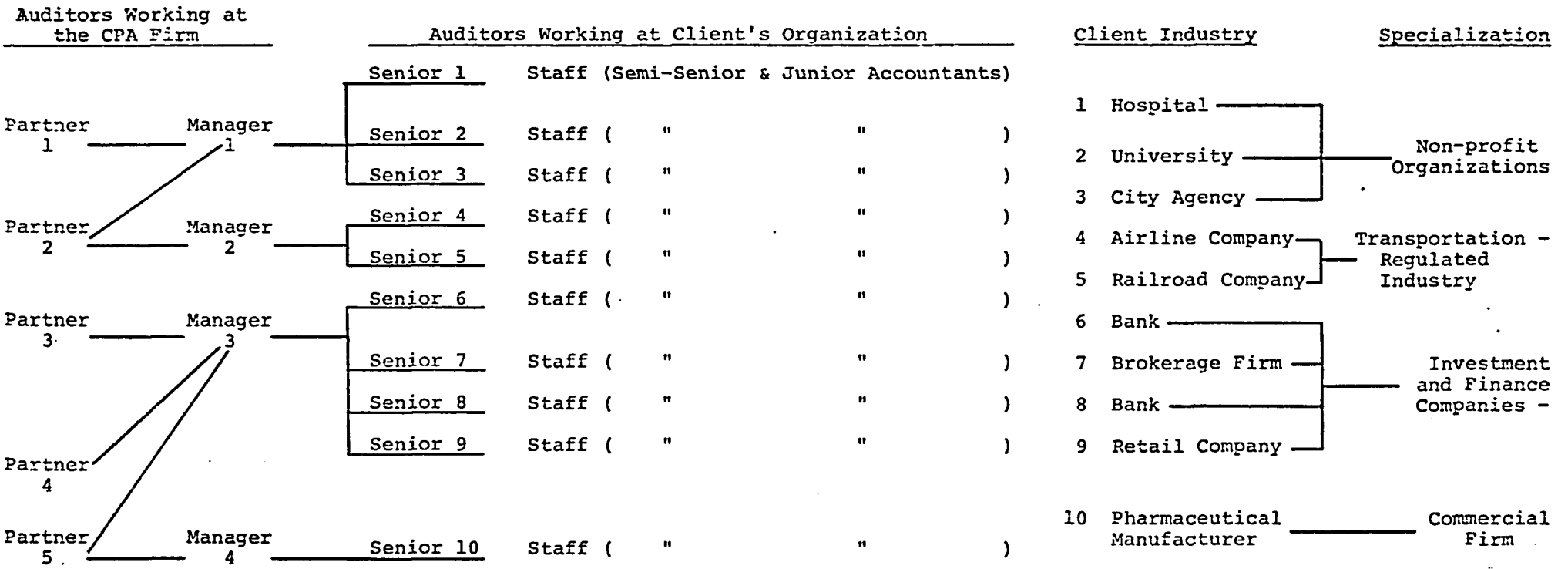
(1) Representation of All Role Occupants -- Each project team consists of at least one member from each level of the organization.

(2) Multiple Assignments for All Role Occupants -- Each role occupant is usually assigned to several engagements throughout the year. Junior and Senior accountants could have a range of anywhere from one to ten client engagements. Project teams have a very temporary time span where they are continuously being assembled and disassembled.

(3) Multiple Membership for Role Occupants at the Higher Levels of the Organization -- During the year, a manager or a partner could belong to fifteen to twenty different project teams. They are often required to participate in many project teams simultaneously. The manager's role has been described as the most difficult because he must satisfy the demands of multiple supervisors.

FIGURE 2.4

AUDITING PROJECT TEAMS



There are 10 teams, although there are only 5 partners and 4 managers. Note that Manager 1 is responsible for 3 client engagements, two of which are supervised by partner 1 and one by partner 2. Manager 2 has two client engagements and is responsible to partner 2. Manager 3 has four client engagements and is responsible to 3 partners. Manager 4 has only one engagement and is responsible to only one partner. Note the type of audit engagements that have been assigned to the role occupants.

Manager 1 specializes in non-profit organizations. Manager 2 is specialist in the transportation industry. Manager 3 is primarily a specialist in the finance and investment industry even though he has one client who is a retail company. Manager 4 is a specialist in the pharmaceutical industry. The other role members develop their client specializations as they advance through the organization.

(4) Assignment by Client Specialization -- During the early part of the auditor's tenure at the firm he develops an expertise for client engagements with certain industries. Carey (1965) underscores the need for specialization but warns of the problems that are often encountered.

As he gains experience, the CPA may deal more and more with problems involved in one or another phase of practice.

But within each field there are opportunities for more intensive specialization. In some firms for example, there are groups which specialize in the audit of financial institutions, banks, insurance companies, savings and loan associations and brokerage firms. Other partners and staff are specialists in SEC registrations....

Within the firm, specializations can work against the objective of providing each client with an integrated professional service, embracing all his problems involving measurements and communication of data for both external and internal purposes. Each specialist is intensely interested in his own narrow area of knowledge and skill, but he may not be able to see the forest for (sic) the trees (Carey, 1965, pp. 454-455).

POTENTIAL SOURCES OF ROLE AMBIGUITY AND CONFLICT FOR THE INDEPENDENT AUDITOR

An auditor's participation with the number of role sets as represented by the project teams in Figure 2.4 will influence the degree of experienced role ambiguity and conflict. Staff and semi-senior accountants seldom interact with more than one supervisor and there would be infrequent violations of unity of command. As a result, role conflict should be lower at this level of the organization. This is not to say that entry-level accountants will not experience any role conflict. They must interact with the

client's personnel and may be confronted with practices that are opposed by the CPA firm. This would contribute to experiencing inter-person role conflict described in an earlier section of this chapter. Staff accountants may also have a greater allegiance to the profession rather than the CPA firm's organization (Sorensen, 1973) which would lead to person role conflict.

Similar to entry-level employees in other organizations, staff accountants often perform routine and repetitive tasks. This is significant reason why role ambiguity has been predicted to have a lower effect on this level of an organization. Unlike other organizations, however, entry-level accountants are often assigned to unfamiliar and/or undesirable client engagements. This is the "alien audit environment construct" which will be developed in Chapter IV. Auditors at this level of the organization are more prone to suffer from role ambiguity.

Turning to the highest organizational position that is examined in this study, the manager should suffer the most from role conflict because of his membership in many role sets. He often must operate under several supervisors (partners) simultaneously and may experience violations of unity of command. He must also resolve any conflict that exists between the client's policies and his firm's auditing procedures. Role ambiguity is not anticipated to have the same effect as it does for the entry-level auditor because of the manager's many years of training and specialization of clients within the same industry.

The middle position of the senior accountant is expected to experience more role conflict than his subordinates but much less than his superiors. Senior auditors occasionally work for more than one supervisor but not as often as the audit manager. Role ambiguity is expected to occur to the extent that the senior accountant describes his audit environment as alien. The following chapter will discuss the empirical role theory literature. Included will be a general discussion of accounting behavioral research and a presentation of the four empirical studies that used a role theory model in a public accounting firm.

CHAPTER III

BEHAVIORAL ACCOUNTING RESEARCH AND EMPIRICAL STUDIES ON ROLE THEORY

BEHAVIORAL ACCOUNTING RESEARCH

Hofstede and Kinard defined behavioral accounting research as the "study of the behavior of accountants or the behavior of non-accountants as they are influenced by accounting functions and reports" (Hofstede and Kinard, 1970, p. 43). Research in this area has been further delineated into three areas. One involves the influence of the accountant's technical functions on his behavior during the progress of an audit. A second area involves the behavior of the accountant with regard to his perceptions and cognitions during the process of the audit. The first area focuses on the impact of environmental influences such as the client organization and professional standards on the auditor's behavior. This area mostly resembles sociological research. The second area examines the influence of the auditor's personality on an audit engagement and parallels the study of psychology. Role theory appears to have an

interface between the aforementioned two areas of study.

A third area of behavioral accounting research which will not be examined is the influence that accounting information has on decision makers.

Under a different classification scheme, Hofstede (1975) reviewed five modules of study within behavioral accounting research from 1964 until 1975. These five classifications were:

1. Information and Decision Making
2. Organization Theory
3. Adoption Behavior
4. Review and Methodological
5. Budgeting and Leadership

More than 50 per cent of the research conducted during this period was concerned with the impact that alternative accounting information models had on a decision maker.

Included were research on human-resource accounting, socio-economic accounting, current cost and price level financial statements. The remaining fifty per cent of research activity had equal representation in the other four areas. Hofstede concludes that most of the research in these areas are too individualistic. There is little, if any, recognized body of knowledge as well as a lack of any generalizability because of the researcher's failure to predict human behavior across many organizations. As ineffective as these efforts have been, Hofstede recommends the need for further research in the behavioral area.

EDUCATIONAL TRAINING IN ORGANIZATIONAL BEHAVIOR

The failure of college curricula to provide training in behavioral accounting is viewed by some as the cause of unnecessary stress between the auditor and client. Blakney, Holland and Matteson (1976) found internal auditors in a governmental agency evoked feelings of hostility and resentment from line supervisors when they received evaluation reports. They attributed this to the auditors' preoccupation with negative and salutary feedback and a lack of training in organizational behavior.

This brief case is not atypical of problems faced in many organizations, and we have found managers and auditors involved in similar situations in which it was clear that the causes of conflict were behavioral rather than technical.

Our stance is clearly that the human or 'people' part of the auditor-auditee relationship is of major importance to the successful discharge of the auditor's responsibility. However, this focus is neither new nor documented. It is, in fact, quite fashionable to speak in terms of various behavioral considerations in accounting and accounting education and, specifically, to address the nature of human relationships. Where there does seem to be room for further constructive action, however, is in integrating some of these behavioral considerations into auditing courses. Though this idea is not novel, it is far from being an accepted part of auditing education (Blakney, Holland and Matteson, 1976, p. 903).

Bruns (1972) offered three approaches to incorporating behavioral information in the accounting curriculum. One was the mandatory study of behavioral science courses in psychology and sociology without any interface with an accounting environment. A second approach was a new accounting course with a behavioral orientation. The last

approach involved the expansion of the auditing courses to include behavioral concepts with the aid of team teaching.

. . . the team technique can be managed rather easily in most colleges where behaviorally trained instructors may be quite willing to participate in one or two accounting class sessions to show the relevance of their discipline to actual problems in accounting. . . The authors' experience suggests that a combination of team teaching with the use of behaviorally oriented accounting cases provides the most effective means for incorporating at least a few behavioral concepts into the auditing education (Blakney, Holland and Matteson, 1976, p. 905).

The need for more intensive study of behavioral accounting in the auditing area was recommended by John C. Burton and A. Clarence Sampson (1976). Very little is known about the behavior of those who perform the attest function and what constitutes auditing ability. Although all audit engagements are performed by audit teams consisting of a partner, manager, senior accountant and various staff accountants, there has been little research as to whether this is an optimal organizational structure. The need for the proper administration of an audit staff is found in the following remarks:

. . . the behavior of the audit staff might be studied from the point of view of firm organization or incentives offered to achieve desired behavior patterns. For example, the traditional modus operandi for accounting firms is to throw all new hired staff members into one pot on the assumption that the 'cream will rise' and the outstanding auditor will soon (or eventually) stand out. It is not clear that this is the best approach or the one which will lead to the best results (Burton and Sampson, 1976, p. 222).

The purpose of the preceding section was to amplify the need for behavioral accounting research in general and

the need to study the behavior of auditors in particular. The following section will discuss the recent contributions that specific role episode models have had on the accounting profession.

EMPIRICAL STUDIES EXAMINING THE INDEPENDENT
AUDITOR'S BEHAVIOR USING
ROLE THEORY MODELS

To this writer's knowledge, there have been only four empirical studies that have used the role theory model in examining the behavior of independent auditors. They are (1) Schultz (1974), (2) Senatra (1976), (3) Wilcox and Smith (1977), and (4) Cummings and DeCotiis (1973).

THE SCHULTZ STUDY

Using the Gross, McEachren and Mason model discussed in Chapter II, John Schultz (1974) was able to predict how audit managers would resolve experienced role conflict. A questionnaire measuring the presence of legitimacy, sanctions and a personality variable was sent to eighty new managers of two Big Eight accounting firms. Two case studies were presented to the audit managers depicting two different conflict situations. The first case study required the manager to decide whether he should submit to his partner's request not to pursue additional auditing procedures that were necessary to complete an engagement. The manager had to resolve the conflicting pressures of professional independence versus the bureaucratic demands of his firm. The

second case involved the placement of the most qualified staff member on an audit assignment that conflicted with the subordinate's family obligations. This was a conflict between the short-run performance of an audit as opposed to the long-run morale of the staff member.

The results of this study substantially supported the conflict resolution model. Managers were found to resolve conflict in favor of those situations that they perceived as legitimate and correct regardless of the possible sanctions that would result from such a decision. This contradicted the Gross, McEachren and Mason study where superiors resolved conflict in favor of those parties that were able to cause the most sanctions regardless of the legitimacy of the issues. Schultz attributes his results to the morale conditions and training of auditors to make the right decisions.

. . . The auditor, much like the policeman, is conditioned to do what is right. The Code of Professional Ethics of the American Institute of Certified Public Accountants is an integral part of every introductory auditing course with which the author is familiar. Central to this code is the concept of independence, which asserts that the auditor must not subordinate his judgments of a situation to anyone else's judgment and that he should decide on the basis of propriety -- regardless of the consequences (Schultz, 1974, p. 234).

Although the Schultz model was an important contribution to the role theory model of examining the audit environment, it had the following limitations:

1. Because of its reliance on hypothetical case studies it could not incorporate the Rizzo, House and Lirtzman standardized measurements of role conflict to actual work experiences.

2. The study predicted the resolution of conflict but it did not specify the causes of conflict other than in two hypothetical situations.
3. Only intersender role and interrole conflict was examined.
4. Only one organizational level was examined. Senior and staff accountants might not be as secure as the manager in resolving conflict in favor of the legitimate alternative.
5. Role ambiguity, often cited as a greater predictor variable than role conflict (House and Rizzo, 1972-b), was not included in the study.
6. Only one personality variable of authoritarianism was examined.

THE SENATRA STUDY

Senatra (1976) overcame many of these shortcomings by using the Kahn et al. role model in examining role conflict and role ambiguity of senior accountants. Under the Senatra model, role conflict and role ambiguity are caused by five factors and are further moderated by the senior accountant's need for clarity and his bureaucratic orientation. Many of the sources of role ambiguity and conflict were borrowed from House and Rizzo's (1972) organizational climate variables. Three organizational consequences were further presented as a result of experienced role conflict and role ambiguity. These were

job-related tension, job satisfaction, and the senior accountant's intention of leaving the accounting firm. Questionnaires were mailed to senior accountants in eight different offices of a "Big Eight" accounting firm. Unlike the case study approach this empirical work had more construct validity because of the authors' use of standardized measurements. It also measured the causes and effects of role conflict and role ambiguity of the role of the senior auditor. All of the adverse consequences of role conflict and role ambiguity were supported. Most of the causes of role conflict and role ambiguity were supported. Characteristics that measured organizational complexity such as violations in chain of command and experienced conflict with supervisors' instructions had a significant direct relationship with role conflict and role ambiguity. The two intervening variables of the accountant's bureaucratic orientation and the need for clarity moderated the relationships of some causes of role ambiguity and role conflict.

The Senatra study was the first to use the standardized measurements and a modified version of the Kahn model in analyzing the auditors' behavior. The author calls for areas of future research in expanding the explanatory sources of the role theory model. Some of these other areas are the objectives of this research study. Specifically, the effect of organizational levels has not been examined. Do managers and senior auditors and staff accountants perceive the same degree of role conflict and

role ambiguity within the same auditing firm? Another shortcoming of the Senatra study is that it did not consider many constructs that are important to an auditor. One example is his application of the degree of autonomy an auditor had with regard to selecting the accounting procedures necessary to complete an engagement. Most auditing procedures are excessively standardized by the accounting firm and the profession and participation in this area is not that important. The most significant factor expressed by the auditors interviewed by this writer is the freedom of auditors to select engagements of their choice. The final limitation is the manner in which Senatra uses correlations between subgroups of various moderating variables in order to derive interaction effects. Although this is probably more a matter of statistical taste, a more powerful approach would have been the use of moderated regression analysis (Cohen, 1968; Zedeck, 1971; Hunt, Osborn and Larson, 1975). This approach is adopted in this study where examining all interaction effects.

THE WILCOX AND SMITH STUDY

Unlike the previous studies, Wilcox and Smith (1977) examined the client's perceptions regarding the role of the independent auditor. Employees of six different business firms were administered questionnaires, that evaluated the image of the independent auditor and the value of his services. Respondents generally viewed the auditor as

occupying the role of a consultant or judge. This was contrary to previous research findings where members of an organization perceived the firm's internal auditors as policemen (Churchill and Cooper, 1965; Institute of Internal Auditors, 1972). Employees were asked if there was any conflict in their relationships with the independent auditor. Those respondents who perceived conflict had the lowest regard for the audit services and portrayed the auditor as a policeman. This was not the case for employees who reported the existence of no conflict.

The impact of role theory and perceptions of people who interact with the auditor has also been evident in England. Watson (1974) examined the role requirements of a chartered accountant in job regulation, with particular reference to collective bargaining, disclosure and interaction with unions.

. . . To the outsider it seems clear that accountants have had a role in job regulation for a long time, but they may have lacked awareness of it. . . It is hoped that an appreciation that what is expected and possible in a role depends on the perceptions, not only of the role holder, but of the other role holders with whom he interacts, will help accountants to reconsider their contribution to industrial relations and to suggest how it might most usefully be developed (Watson, 1974, p. 123).

THE CUMMINGS AND DECOTIIS STUDY

This was an exploratory study which examined the organizational climate factors that were related to stress. It is included in this section because (1) the participants were 133 accountants that worked in eight regional offices

in an accounting firm, and (2) factors similar to role ambiguity and conflict were found to be factorially independent and related to stress factors.

The limitations of the study are summarized by the authors:

The results obtained in the present study should not be construed as a test of the model presented. Rather, the emphasis has been on exploration and content development of two of the model's components: antecedents of stress (stressors) and stress (Cummings and Decotiis, 1973, p. 281).

EMPIRICAL STUDIES IN THE ACCOUNTING LITERATURE
RELATED TO ROLE THEORY

Table 3.1 presents a topical analysis of various empirical studies found in the accounting literature related to role theory models. The following discussion will follow this outline.

PROFESSIONALISM, BUREAUCRACY AND
ORGANIZATIONAL STRUCTURE

Montagna (1968), as indicated earlier, was the first sociological study on public accounting firms. Unlike other professional organizations, the Big Eight CPA firm was reported to have a high centralized organizational structure. As auditing firms increase in size and become complex, they begin to limit the auditor's judgment by standardizing the work procedures necessary for completing audit engagements.

. . . what was once unwritten rule or mystique is now rationalized; in the process of formalizing its rules, the profession transforms that knowledge from an intellectual to a mechanical technique. As one senior

TABLE 3.1

EMPIRICAL STUDIES IN THE ACCOUNTING LITERATURE
RELATED TO ROLE THEORY

<u>Research Topic</u>	<u>Researchers</u>
Professionalism, Bureaucracy, and Organizational Structure in a Public Accounting Firm	Montagna (1968, 1974)
Bureaucratic vs. Professional Orientation in a Public Accounting Firm	Sorensen (1967); Sorensen, Rhode and Lawler (1973); Sorensen, Sorensen, Rhode and Lawler (1976); Rhode, Sorensen and Lawler (1977); Schroeder and Imdieke (1977)
Role of the Management Accountant	Stoddard (1978)
Accountant's Perception of Goal Clarity and Performance	Todd, Thompson and Dalton (1974); Ansari (1976)
Structure of Audit Teams and Teams Facing Differentiated Environments	Watson (1973, 1975); Lengermann (1971)
Role of the Independent Auditor from an Observational Methodology	Baker (1977)

partner put it, 'the client asks not what to do but how to do it, as the body of knowledge becomes detailed and easier to interpret.' The power of the expert disappears as soon as the area of uncertainty (professional judgment) can be translated into rules and programs (Montagna, 1968), p. 143).

Montagna attributes the increased participation in the tax and management service areas as the firm's need to provide professional assistance in areas of high risk and uncertainty.

BUREAUCRATIC VERSUS PROFESSIONAL ORIENTATION

Sorensen (1967) began the first series of studies which reported that public accountants occupying different organizational positions experienced different degrees of loyalty and identification to their firm and profession. Auditors at the manager position expressed more feelings of loyalty with their firm and less identification with the profession than senior and staff accountants. This "generation gap" was attributed to the cultural shock experienced by entry-level accountants when joining the CPA firm immediately after college. Eight critical issues were listed where the accounting student was forced to abandon one set of values he received in the academic environment for the policies and procedures of the firm. The most significant causes were the monotony of routine audit tasks and the infrequency of performance evaluations. In the most recent report of a longitudinal research project sponsored by the AICPA, turnover was attributed to uncertainty regarding the requirements of the job, a variable resembling role ambiguity.

Three other items emphasize the lack of clear understanding for work requirements and deficiencies in the organizational system. Being unclear about scope and responsibilities (variable 2), being in a situation where you cannot get needed information (variable 8) and not having understanding and sympathetic support (variable 35) all reinforce these potential problem areas in CPA personnel administration (Rhode, Sorensen and Lawler, 1977, p. 170).

The authors suggest improved avenues of communication between the accounting firm and their employees with particular emphasis on supervisory relationships. Although the role theory model was not used, the following reasons attributed to causing turnover are familiar episodes encountered in role ambiguity.

. . . staff accountants are not being incorporated into the CPA firms as full members of the family, and, despite the extensive formal evaluations, they are placed in a position of having to prove themselves without sufficient tools, clear job descriptions, and reasonable job demands. This suggests that CPA firms can reduce turnover -- particularly that occurring because staff accountants are poor performers -- by concentrating on improving the work and supervisory relationships. . . .

Measuring a construct comparable to the work reported by Sorensen, Shroeder and Imdieke (1977) were able to discern different degrees of company loyalty depending on the auditor's local-cosmopolitan orientation and organization level. The local-cosmopolitan construct was first introduced by Gouldner in evaluating the behavior of professionals within an organizational setting. Locals are individuals who express extreme loyalty to the employing organization and have a low commitment to specialized role skills. Cosmopolitans have an outer reference group, such as professional organizations like the American Accounting

Association and the AICPA. They are low in loyalty to the employing organization and have high commitments to specialized role skills. As predicted, auditors were more organizationally oriented as they advanced to higher levels within the firm. The authors call for further research in order to "determine whether such perceptions actually influence the practice of public accounting, and the nature of the role of internally and externally oriented individuals within the public accounting firm" (Schroeder and Imdieke, 1977, p. 44).

ROLE OF THE MANAGEMENT ACCOUNTANT

In analyzing the role of the management accountant, Stoddard (1978) offers five strategies for successfully completing the requirements of the job. They are:

1. Give management what it wants and not what you think it should have.
2. Delegate everything you can except for final control over and responsibility for results.
3. Establish and adhere to a proper balance between timeliness and accuracy.
4. Improve your communication skills by becoming a good listener.
5. Maintain and expand your skills to avoid technological obsolescence.

ACCOUNTANT'S PERCEPTION OF GOAL CLARITY AND PERFORMANCE

The fourth strategem of communication skills reported in the previous section relates directly to the Todd, Thompson and Dalton (1974) study. Using interviews and

questionnaires with 650 people in the audit, tax and management advisory service departments of a CPA firm, the authors were able to develop a clarity index on the firm's management control system. Three factors were identified as leading to increased performance. They were:

1. The individual's perception of the clarity of the firm's evaluation system.
2. The employee's perceived control and influence over activities in his job.
3. The perception of a strong performance-reward relationship.

All of the relationships were significant. Those accountants who had a clear understanding as to how they were evaluated had the highest performance. Similarly, the most productive accountants were those who had the most control over their job assignments and who were able to influence their rewards through performance. The authors' recommendations on improving auditing performance resemble the tenets of preventing role ambiguity.

One of the best ways to meet the challenges of the 1970's in managing the professional accountant is to pay more attention to the management control process . . . These systems must take into account not only task characteristics but also the characteristics of individual staff members. This multidimensional approach will require the cooperation of accountants and behavioral scientists in integrating the technical and behavioral aspects of the management control system.

STRUCTURE OF AUDIT TEAMS

Watson (1973), the last study in this group, examined the organizational structure of project teams within the auditing and management services departments. Using the Lorence and Lorch (1967) organizational model, he was able to predict the degree of rules and formalization of organizational structure. Because the sub-environment faced by management project teams was susceptible to greater uncertainty, the supervising manager of the management services department was found to exercise more functional authority than his auditing counterpart. The auditing manager had to operate under a more formalized structure because of the repetitiveness and certainty of the client engagement.

Lengermann (1971) compared the effect organizational levels had on the degree of autonomy experienced by accountants with CPA and non-CPA firms. As expected, independent auditors had greater opportunities for autonomy and they varied directly with the organizational level. When controlling for the occupants' position, no differences in opportunity for autonomy were found. A manager of a small or medium size accounting practice had the same degree of independence as his counterpart with a national firm.

ROLE OF THE INDEPENDENT AUDITOR FROM AN OBSERVATIONAL METHODOLOGY

Concluding with the last study in this section, Baker (1977), through an observational methodology, was able to develop a strategy model of a national CPA firm. Through a series of interviews with a limited number of auditors from all organization levels, Baker found the accountant's role to consist of three strategies, "Doing, Representing and Being." Doing was considered the service function provided by the firm such as tax planning, consulting and review of registration statements. Representing involved the firm's interaction with organizations such as banks, governmental agencies, and the FASB (Financial Accounting Standards Board). Being involved the image the firm projected to its clients.

BEHAVIORAL FACTORS RELATED TO ROLE THEORY

Table 3.2 presents various constructs that have been reported in the accounting literature related to role theory. Although none of the studies applied a role theory model, they are generally concerned with many of the potential sources and effects of role strain.

ACCOUNTANT'S IMAGE IN SOCIETY

The Institute's bulletin on the Economics of Accounting Practice was the first empirical attempt to examine the client's attitudes regarding his auditor's services. A team

TABLE 3.2

BEHAVIORAL FACTORS RELATED TO ROLE THEORY

<u>Behavioral Factor</u>	<u>Source</u>
Accountant's Image in Society	AICPA Bulletin (1957); Churchill and Cooper (1965); DeCoster and Rhode (1971); Institute of Internal Auditors (1972)
Accountant's Job Satisfaction, Motivation, and Performance	AICPA (1964); Ivancevich and Strawser (1969); Strawser, Ivancevich and Lyon (1969); Kreiser and Willis (1977); Ferris (1977); AICPA Cohen Commission (1977); Abraham (1978)
Selection of Accounting Firms by Entry-Level Accountants	Zweig (1969); Carpenter and Strawser (1970); Barnhart (1971); Brenner, Dasher and Strawser (1973); Ford and Harris (1974); Kohler (1974); Lawler, Kuleck, Rhode and Sorensen (1975); Benke and Rhode (1979); Defatta and Johnson (1979)
Psychological Testing of Accountants, Professional Turnover and Staff Assignments	Ellyson and Shaw (1970); Istvan (1973); Bedingfield (1974); Bailey (1974); Welker (1974); Coker (1975); Axline (1976); Blocher (1979); Vasarhelyi (1979)
Ambiguity in Processing Information	Dermer (1973); McGhee, Shields and Bernberg (1978)
Audit-Client Conflict	Sterling (1973); Goldman and Earlev (1974); Nichols and Price (1976)

of trained researchers from the Psychological Corporation was contracted to administer interviews and questionnaires from 149 companies. Most of the clients in the study regarded the auditor as an adviser performing valuable auditing and tax services. Churchill and Cooper (1965) reported similar favorable perceptions of the internal auditor's services from interviewing other members of the organization. These attitudes were found to be influenced by the person's status within his organization and the degree of contact he had with the internal auditing department. This was not the case in a study by The Institute of Internal Auditors, where internal auditors perceived unfavorable relationships with the people they audited (Institute of Internal Auditors, 1972). DeCoster and Rhode administered the California Psychological Inventory (CPI) to public accountants and eight other professional groups. The results indicated "that CPA firm employees possessed higher personality profiles when compared to samples of salesmen, bank managers, business executives, city school superintendents, architects and military officers -- partially denying the validity of the accountant's stereotype as dull, wary, cold and aloof" (DeCoster and Rhode, 1971).

JOB SATISFACTION, MOTIVATION AND PERFORMANCE

In 1964, the AICPA published a bulletin (AICPA, 1964) on staff motivation using the recommendations of Herzberg's (1959) two-factor theory. Accounting firms

were urged to make auditing assignments more interesting in order to enhance job satisfaction. Organizational theorists have found conflicting results regarding the relationship of job satisfaction and performance. Using Lyman Porter's need satisfaction questionnaire, Strawser, Ivancevich and Lyon (1969) found no reported differences in experienced satisfaction between "Big Eight" and smaller CPA firms. Junior and senior accountants were found to experience satisfaction in the ascending order of Maslow's hierarchical level of needs. This was not the case for managers and partners. In another research study, Kreiser found auditors employed in smaller size CPA firms as being more satisfied with the fulfillment of job needs than respondents in larger firms.

Using the Porter and Lawler (1968) model of job satisfaction, Ferris (1977) was able to report an inverse relationship between environmental uncertainty and auditors' satisfaction. The author's measurement of uncertainty was similar to many of the incidents found in role ambiguity.

The instrument measured perceived uncertainty along three dimensions:

1. The lack of information regarding the environmental factors associated with a given decision making situation;
2. The inability to assign probabilities with any degree of confidence with regard to how environmental factors are going to affect success or failure; and
3. Not knowing the outcome of a specific decision in terms of how much the organization would lose if the decision were incorrect.

Ferris concluded that perceived uncertainty may be a causal factor of diminished employee performance.

One of the conclusions reached by the Cohen Commission (AICPA, 1977) was that substandard performance was mainly attributable to what may be regarded as role overload. As shown in the first question on Table 3.3, 37.7 per cent of those auditors responding to a questionnaire indicated that they had deliberately misrepresented the amount of work performed due to pressures from the engagement time budgets or reporting deadlines.

In carefully examining some of the responses, one might conclude that many of the auditors misunderstood the nature of their task assignments or role positions. In addition, there may have been a response bias to criticize the time budgets where the underlying reasons may have been unstructured task assignments. The second question reported in the table provides additional evidence supporting the theory that role ambiguity was a significant source of substandard auditing performance. The majority of the auditors (66.1 per cent) reported incidents of role ambiguity as a significant factor in their responses.

Abraham (1978) is the last researcher in this discussion who reported on the need of accountants to expand and crystallize their role in areas other than the attest function. Auditors are urged to become more involved in the government and the political process. Unless this is done, the accountants' profile will remain low, and their skills underutilized.

TABLE 3.3

RESPONSES TO THE COHEN COMMISSION LINKING
ROLE AMBIGUITY TO SUBSTANDARD PERFORMANCE

What is the primary motivating factor for individuals to sign off required audit steps not covered by another audit step without completing the work or noting the omission of procedures?

	<u>Number of Responses</u>	<u>Per cent</u>
1. Time budget pressure	533	37.7%
2. Client or regulatory reporting deadline	120	8.4
	<u>653</u>	<u>46.1%</u>
3. Step considered immaterial, audit program improperly tailored including insignificant steps	329	23.3
4. Misunderstood procedures due to inexperience or poor supervision	200	14.1
5. Laziness, boredom, and disdain for detailed audit work	119	8.11
6. Speed is the most important standard to measure auditor ability	80	5.7
7. Inadequate technical ability to perform step in allotted time	19	1.3
8. Lack of integrity	15	1.1
	<u>1,415</u>	<u>100.0%</u>

What do you consider to be the primary cause for substandard audit performance by audit personnel?

	<u>Number of Responses</u>	<u>Per cent</u>
1. Lack of experience, knowledge, and training	788	41.3%
2. Improper review and supervision	474	24.8
Responses supporting role ambiguity as a contributing source	1,262	66.1
3. Time pressure or time budget pressure	474	24.8
4. Carelessness or boredom of repetitive assignments	192	10.0
	<u>1,910</u>	<u>100.0%</u>

THE SELECTION OF ACCOUNTING FIRMS BY
ENTRY-LEVEL ACCOUNTANTS

Researchers have studied the criteria accounting students and CPA firms use in the employment process. Carpenter and Strawser (1970) have reported that the best accounting students choose the largest CPA firms. Zweig (1969) examined the advantages of joining a smaller size accounting firm. Some of the benefits cited were the frequency of directly working with managers and partners and the greater opportunity of making independent contributions. Barnhart (1971) found from post-employment interviews of hired students that opportunity for advancement and not starting salaries was the most important criterion for choosing a CPA firm. The college interviewed was reported to have the most influence, particularly the impressions that were made by the recruiting members of the firm (Ford and Harris, 1974; Brenner, Dasher and Strawser, 1973). Students who participated in an internship program experienced superior academic performance when returning to college than students who were not interns (Foehler, 1974). Some predictions were possible by using Lawler's expectancy model in examining the reasons for selecting employment. Students were often disillusioned after a year of employment and were found to downgrade other CPA firms who had made them offers (Lawler, Kuleck, Rhode and Sorensen, 1975).

PSYCHOLOGICAL TESTING OF ACCOUNTANTS

Psychological assessment of a firm's personnel has been recommended both as an aid for recruitment and staff assignments (Ellyson and Shaw, 1970; Axline, 1976). By using the Predict Index on 210 accountants, a test that measures six personality variables, Istvan (1971, 1973) was able to develop seven psychological profiles. An accountant's personality varied with his position in the firm. The author found that the psychological profile of an entry-level accountant who excels at routinized work procedures would not function successfully as a manager or partner. Istvan recommended the use of paraprofessionals for completing the clerical responsibilities of the audit engagement. A statistical procedure known as linear multiple discriminant analysis was recommended by Walker (1974) to process the most important information regarding a prospective job applicant. The use of psychological tests has been suggested as additional screening devices for promoting members of a firm to partnership (Coker, 1975).

PROFESSIONAL TURNOVER AND STAFF ASSIGNMENT

Research in the area of staff assignment on client engagements has been limited to recommendations of using operations research techniques (Summers, 1972). Little is known as to what influence auditors have in selecting audit engagements. Recent litigation has focused on the inadequate training and supervision of auditors and Bedingfield

(1974) has criticized the profession for refusing to modify its staff assignment policies.

In one of the two studies related to staff assignment strategies, Blocher (1979) found audit seniors experienced a decline in performance where they worked on sequence of client engagements in the same industry. No decline in performance was reported where the auditor was assigned to the same client or a client in a different industry. In a related study, Vasarhelyi (1979) implies that CPA firms do not consider their employees' preferences regarding assignments to client engagements. A procedure is recommended that accommodates the needs of the auditor and the firm.

Turnover within the public accounting firms has been studied by various accounting researchers. Istvan Wollman (1976) found twenty-seven per cent of public accountants leaving the firm before three and one-half years of employment. Forty-one per cent left the firm before six years. Leathers (1971) found over fifty per cent leaving within three years and eighty-four and ninety-six per cent leaving within a ten-year period.

Other accounting researchers have studied the potential sources of employee turnover in CPA firms. Benke and Rhode (1979) found that accountants' desire to leave the public accounting firm was influenced by the service function he performed. Using the Job Description Index (Smith, Kendall and Hulin, 1969), they found that satisfaction with

the job was the most important factor regarding turnover for audit specialists. Those accountants who worked in the firm's tax department were more conscious of their relationship with their co-workers. In a similar study, DeFatta and Johnson (1979) were able to attribute various organizational climate factors that related to auditors who left the accounting profession. The limitation of their study was the small sample size ($n = 39$) of the turnover group and no behavioral model was suggested.

Loeb and Gannon (1976) found professional activities and educational factors related to turnover. Accountants who had left the firm were not as interested in the professional literature as those who had remained with the organization. Earlier studies attempted to investigate the causes of turnover by simply surveying the responses of terminated employees (Grossman, 1967; Capin, 1969; Leathers, 1971). Turnover and its antecedents will be one of the dependent variables studied in this research project.

AMBIGUITY IN PROCESSING INFORMATION

Dermer (1973) examined the effect intolerance of ambiguity had on processing accounting information. Intolerance of ambiguity (Budner, 1962) measures the individuals' ability to respond to unstructured situations within their environments. A person who is intolerant of ambiguity will perceive unclear information and novel situations as sources of threat. Dermer found that sales managers valued additional information where they were intolerant of ambiguity. They had

a preference for well-defined information such as current financial reports as opposed to soft information such as employee motivation.

In a later study, McGhee, Shields and Birnberg (1978) found no relationship between ambiguity and the manner in which individuals process information. The authors concluded that personality factors alone will not predict human behavior. What must also be considered is the task to be performed and its interactive effects on the individual's personality.

AUDITOR-CLIENT CONFLICT

Other researchers characterize interactions with their clients as a relationship inherent with conflict. Unlike the Wilcox study cited earlier, behavior models other than role theory have been used to explain this adversary relationship.

Sterling (1973) attributed this problem to the accountant's lack of power in the face of overwhelming responsibility. The auditors' primary weapons are persuasion and diplomacy when resolving conflict with their clients. The auditor's ultimate recourse is resigning from the engagement which is tantamount to issuing no opinion and no resolution.

Goldman and Barlev (1974) reported an inequitable distribution of power and resulting conflict in those situations where the client did not value the services of his accountant. Three areas of conflict were identified:

1. Auditor-Firm Conflict of Interest -- The auditor has an adversary role with both the company's management and shareholders where an unfavorable report may be necessary.
2. Shareholders-Management Conflict of Interest -- This occurs where the shareholders are relying on the auditor's report regarding management's performance.
3. Self-Interest-Professional Standards Conflict -- This conflict is common to all professions. The auditor must resolve conflict between his financial self-interest in retaining the client and the standards promulgated by his profession.

Both the client and the auditor have three different sources of power. The client can (1) hire and fire the auditor, (2) determine the audit fee, and (3) determine work conditions. The auditor can (1) solve routine or non-routine problems, (2) provide services directly beneficial to the client or to other third parties, and (3) rely on the strength and uniformity of the professional standards.

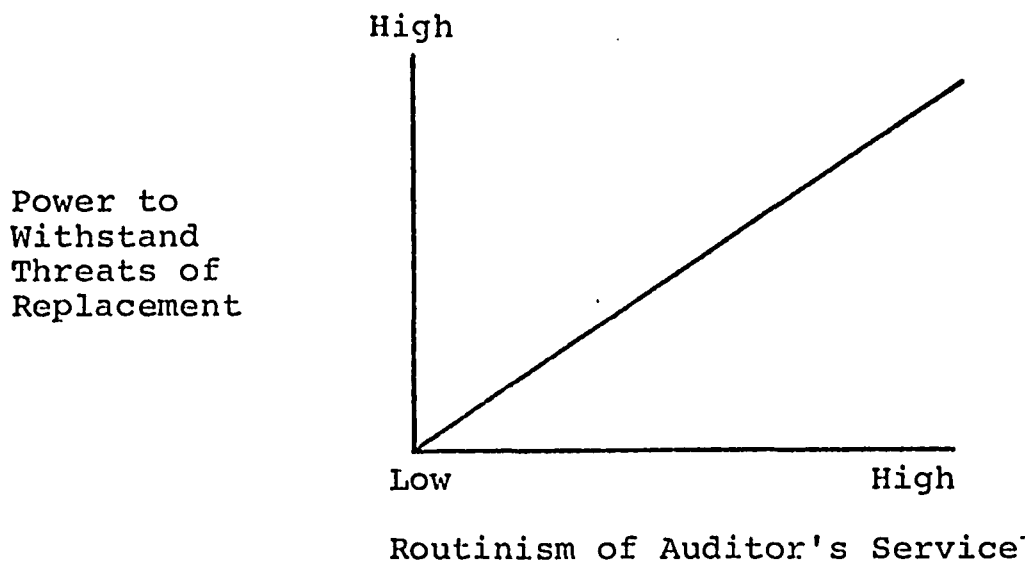
The traditional audit function has provided no direct benefit to the client because of its routine nature and its address to third parties. The auditor has a powerless role under this environment. This is not the case where the auditor may provide management services which are not routine and are directly beneficial to the client. One of the recommendations made by the authors to the increase the auditor's power was to modify his role by providing more non-routine services.

Using exchange theory in describing the presence of conflict in the auditor-client relationship, Nichols and Price (1976) disagreed with the Goldman and Barlev

model. Under this view, the auditor exercises the most power where he performs routine services. This model is represented in Figure 3.1.

FIGURE 3.1

POWER RELATIONSHIP BETWEEN AUDITOR AND CLIENT



The basis for their position is that where the auditing procedures and issues are routine, there will be an absence of ambiguity. The auditor will have no controversial issues to resolve even if he were to perceive some threat from his client. When resolving conflict, the accountant enters an exchange relationship by comparing the costs of professional compliance versus his client's sanctions. The authors recommend greater standardization of professional requirements in an effort to avoid ambiguity.

This concludes the review of the accounting literature related to role theory. The following section examines the various antecedent and moderating constructs

that have interested role theorists without limiting their findings to any specific organization.

EMPIRICAL STUDIES USING ANTECEDENT,
MODERATING AND DEPENDENT FACTORS
RELATING TO ROLE AMBIGUITY
AND CONFLICT

The purpose of this section is to briefly review substantially all of the constructs that have interested role theory empiricists. Over ninety research studies will be analyzed. In order to provide some structure to this review, the studies have been classified under the following framework:

1. Constructs related to the individual
2. Constructs related to the organization
3. Constructs related to leadership and co-worker relationships
4. Constructs related to the effects of role ambiguity and conflict.

Because many of the studies will overlap the aforementioned framework, a decision had to be made regarding the most salient feature of the researcher's study. An example would be Schuler's (1977) work on the effects of participation on job satisfaction and performance moderated by the focal person's position in the organization. Because the organizational level factor is the most significant finding of the study, it is reported under the section related to organizational constructs. Some of the studies may appear in more than one of four areas because of the difficulty of discerning the most significant variable investigated.

CONSTRUCTS RELATED TO THE INDIVIDUAL

Table 3.4 presents a topical framework regarding most of the variables that are related to the individual's personality. Each module will now be presented.

Participation in Organizational Policy

Although the participation construct is an interaction process between the individual and the organization, it is discussed in this section because it is often measured through the perceptions of the individual. Aiken and Hage (1966), the earliest study in this group, found that the individual's perception of his participation in job-related decisions was inversely related to alienation from work and expressive relations. The latter two variables are similar to the work and co-worker satisfaction measurements appearing on the Job Description Index. Allen and LaFollette (1977) used these measurements and found similar results for sixty-eight management trainees. Tosi and Tosi (1970) was one of the first studies that adopted Vroom's participation index and examined its effect on role ambiguity and conflict with sixty-eight elementary and secondary school teachers. Participation was found to be inversely related to role ambiguity and conflict. The same measurements were applied to 488 managers of various consumer loan offices (Tosi, 1971). Role ambiguity and conflict were analyzed as moderating variables and the personal outcome factors. Although there was no moderating effect

TABLE 3.4

SUMMARY OF PERSONALITY CHARACTERISTICS RELATED TO ROLE AMBIGUITY AND CONFLICT

<u>Personality Characteristics</u>	<u>Sample</u>	<u>Researchers</u>
Participation in Organizational Policy	Professional and Administrative Personnel in Social Welfare Agencies	Aiken and Hage (1966)
	Management Trainees	Allen and Lafollette (1977)
	Elementary and Secondary School Teachers	Tosi and Tosi (1970)
	Managers in Consumer Loan Offices	Tosi (1971)
	College Students	Korman (1971)
	Administrators, Engineers and Scientists	French and Caplin (1972)
	Managers	Hamner and Tosi (1974)
	Salesmen	Donnelly and Ivancevich (1974)
	Salesmen	Walker (1975)
	Clerical Workers	Beehr, Walsh and Taber (1976)
	Nurses	Alutto and Vredenburg (1977)
	College Faculty	Driscoll (1978)
	Skilled Technicians	Ivancevich (1977)
	Computer Programmers and Production Workers	James, Gent, Hater and Coray (1979)
	College Administrators, Clerical and Blue-Collar Workers	Morris, Steers and Koch (1979)
Need for Clarity	College Students	Cohen, Stotland and Wolf (1955)
	College Students	Shafer (1973)
	Nurses	Lyons (1971)
	Salesmen, Supervisors and Operating Personnel	Ivancevich and Donnelly (1974)
	Independent Auditors (Seniors)	Senatra (1976)
	Engineers and Managers	Harlow (1973)
	Managers, Scientists and Engineers	Miles (1975)
Higher Order Need Strength	Nursing Assistants	Brief and Aldag (1976)
	White-Collar Workers	Beehr, Walsh and Taber (1976)
	Correction Officers	Brief and Aldag (1975)
	Blue- and White-Collar Workers	Stone, Mowday and Porter (1975)

TABLE 3.4
(continued)

<u>Personality Characteristics</u>	<u>Sample</u>	<u>Researchers</u>
Need for Achievement	Military Officers	Johnson and Stinson (1975)
	Nonacademic College Employees	Morris and Snyder (1977)
	Blue- and White-Collar Workers	Stone, Mowday and Porter (1975)
Need for Autonomy	Operating Personnel in Four Organizations	Beehr (1976)
	Nonacademic College Employees	Morris and Snyder (1977)
	Blue- and White-Collar Workers	Stone, Mowday and Porter (1975)
Need for Independence	Military Officers	Johnson and Stinson (1975)
Self-Esteem	Operating Employees in a Telephone Company	Cohen (1959)
Locus of Control	U.S. Army Reservists	Duffy, Shifleet and Downey (1977)
	Scientists	Organ and Greene (1974a)
Perceived Purposefulness of Behavior	Scientists and Engineers	Organ and Greene (1974b)
Neurotism	Graduate Business Students	Organ (1971)
Dogmatism	College Students	Sanders (1975)
Ability	Municipal and County Employees	Seybolt (1976)
	Various Positions in a Manufacturing and Public Utility Company	Schuler (1977a)

for job satisfaction, the interactions were significant for measures of job threat and effectiveness. Korman (1971) found undergraduate students who experienced low control of their behavior and low ambiguity reported greater satisfaction than those students who had high ambiguity and low control. Self control, a variable similar to participation, was a greater determinant of satisfaction. French and Caplin (1972) found participation had a greater relationship with role ambiguity than role conflict for engineers who worked at a space center. They attribute their findings to the following:

We might expect that by participating in what is going on, a person reduces his ambiguity regarding relevant information for performing his work . . . As a result of lowered ambiguity, we would expect that people who participate a lot would utilize their skills and abilities more since they would have more information on how best to apply their talents (French and Caplin, 1972, p. 50).

These results were confirmed by Hamner and Tosi (1974) where role ambiguity related more to participation for sixty-one high-level managers than conflict. Using a clarity index, Donnelly and Ivancevich (1974) found that participation was important for salesmen but not for production workers. The Walker (1975) study also found innovative activity reduced conflict for salesmen and a non-participation measurement was related to role ambiguity for clerical white-collar workers (Beehr, Walsh and Taber, 1976).

A discrepancy index was developed by Alutto and Vredenburgh (1977) to measure the ideal amount of participation. Consistent with the literature (Vroom, 1964;

Aiken and Aiken and Hage, 1966), nurses from two hospitals reported greater feelings of dissatisfaction and anxiety where they perceived some deprivation of decision making. A similar methodology was used by Driscoll (1978) in his study of 109 college faculty members. Congruence between desired and actual participation in decision making had a strong relationship with many facets of satisfaction. In a longitudinal study, Ivancevich (1977) found the performance of skilled technicians to improve where they receive instructions on specific goals. Those workers who were instructed to "perform as best as you can" had inferior performance results.

In one of the most recent studies in this group, James, Gent, Hater and Coray (1979) found participation to be related to perceptions of supervisor behavior, personal outcomes, and the interaction of these two variables. The last study by Morris, Steers and Koch (1979) found participation to be significantly related to role ambiguity and conflict across three different occupational groups in one organization.

Need for Clarity

Need for clarity or need for cognition has been defined as the desire to structure relevant situations in a meaningful and integrated manner (Cohen, Stotland and Wolf, 1955). Most of the research studies have examined the moderating effects of this construct with regard to role ambiguity and conflict. Cohen, Stotland and Wolf

(1955) found college students experienced greater frustration when receiving ambiguous instructions where they had a strong need for clarity. Shaffer, et. al. (1973) found similar effects for low and high effort tasks. Need for clarity moderated various independent variables with anxiety for 156 nurses (Lyons, 1971) and salesmen, supervisors and operating employees in a medium size electronic manufacturing firm (Ivancevich and Donnelly, 1974).

The construct was not a good moderator for senior auditors in the Senatra (1976) study nor was it for non-supervisor scientists in the Miles (1975) report. Harlow (1973) also found engineers to be more tolerant of ambiguity than managers. The following section discusses another personality construct that has been examined for its moderating effects.

Higher Order Need Strength

Higher order need strength is derived from Maslow's self-actualization need which is defined as the desire for personal growth and development (Brief and Aldag, 1976). Beehr, Walsh and Taber found higher order need strength of union white-collar workers moderated their perception of role ambiguity with two out of three stress variables. There was a significant correlation between role ambiguity with fatigue ($r = .30$) and tension ($r = .44$) for individuals perceiving high levels of higher order need strength. These results were in contrast to the Brief and Aldag (1976) study where

no moderating effects were found for role ambiguity, role conflict and other organizational dimensions. Differences in the results may be attributed to the fact that nursing aids and assistants were the participants in the latter study and the construct would generally not be relevant for this group. Similar inconsistent results were found in a previous study by Brief and Aldag (1975), where few moderating effects were found for 104 corrections officers. A study using job characteristics to measure higher order need strength found no moderating relationships with need for achievement, need for autonomy, and satisfaction with work (Stone, Porter and Mowday, 1975).

Need for Achievement, Autonomy and Independence

These variables are similar to the higher order need strength construct presented in the previous section (Stone, Mowday and Porter, 1977). Johnson and Stinson (1975) found need for achievement moderating role ambiguity and conflict with job satisfaction; need for independence was significant only for ambiguity. Beehr (1976) found similar results for need for autonomy. Contrary to these findings, Morris and Snyder (1977) found no interactions for need for achievement and autonomy moderated only four out of twenty hypothesized relationships. Both of these factors were significantly related to ambiguity and conflict as independent predictor variables. The Stone, Mowday and Porter (1977) study found these factors to have insignificant

moderating influence between job-oriented variables and satisfaction.

The conflicting results may be attributed to the different organizations that were analyzed and perhaps to the statistical techniques that were employed. Excluding the Morris and Snyder study, the subgroup correlation method was utilized in analyzing the hypothesized relations. Morris and his colleagues used moderated regression analysis, a methodology adopted by this writer. Discussion on these statistical tools is deferred until the research methodology presentation in Chapter IV.

Other Constructs Related to the Individual

All of the remaining factors reported in Table 3.4 are summarized in this section.

In one of the earliest empirical studies on role ambiguity, Cohen (1959) found self-esteem to be a significant moderator between role ambiguity and personal outcomes. Self-Esteem is "the evaluation that a person places on whatever aspects of his self are relevant to him at a given time" (Cohen, 1959, p. 38). The author found the same relationship between ambiguity and perceptions of insecurity (threat) whether a person perceived high or low levels of self-esteem.

Locus of control, a construct somewhat analogous to participation, has been another personality variable examined by role theorists. This variable essentially classifies individuals as "internals" where they believe

they are able to control the events in their lives.

"Externals" attribute the situational forces of the environment as the most significant determinants of their behavior. Duffy, Shifleet and Downey (1977) found strong relationships between "external" individuals and role ambiguity. These results were confirmed in the Organ and Greene (1974b) study. Using the same respondents, these researchers developed a model between perceived purposefulness of behavior, locus of control and job satisfaction (Organ and Greene, 1974a). Perceived purposefulness measures the individual's ability to see a relationship between his behavior and some objective. Role ambiguity was found not to be related to job satisfaction unless the worker was able to perceive a sense of purpose in his job-related activities.

Dogmatism and neurotism were other variables examined specifically with role ambiguity. The former construct measures the individual's ability to adapt to novel stimuli. Neurotism has been defined as the individual's threshold in responding to pressure (Organ, 1975, p. 397). Sanders (1975) found a marginally significant relationship between dogmatism and intolerance for ambiguity. A stronger relationship was reported by Organ (1975) for the dogmatism scale.

The focal person's ability is the last variable in this group. Schuler (1977a) used two sets of regressions for the employee's educational background and his tenure with the organization as surrogates for ability. No interactions

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were found for the respondent's educational background for job satisfaction and performance. Ability as measured by the worker's tenure in the organization did interact with role ambiguity and satisfaction but not for performance. Seybolt (1976) found some interactions using education with job characteristics and satisfaction.

CONSTRUCTS RELATED TO THE ORGANIZATION

The purpose of this section is to review the empirical studies involving organizational factors with role ambiguity and conflict. Four topical areas are suggested in Table 3.5 and each will now be presented.

INTERACTION OF THE ROLE PERSON'S ORGANIZATION POSITION

Until recently, few empirical studies have examined the effects of the role member's organization position with regard to the potential sources and consequences of role ambiguity and conflict. Schuler (1975, 1977) and Morris, Steers and Koch (1979) indicate the suppression of significant information that may occur when treating all of the positions in the organization as one sample. This limitation was alluded to earlier in the presentation of the only two extensive role studies using independent auditors (Schultz, 1974; Senatra, 1976).

Lichtman (1970) was one of the earliest studies that examined organizational factors, although not specifically on role ambiguity and conflict. Managers holding

TABLE 3.5

SUMMARY OF ORGANIZATIONAL CHARACTERISTICS RELATED TO ROLE AMBIGUITY AND CONFLICT

<u>Organizational Characteristics</u>	<u>Sample</u>	<u>Researchers</u>	
Interaction of the Role Person's Organizational Position	Various positions in a manufacturing firm	Schuler (1975, 1977)	
	Administrators, Secretaries and Blue-collar Workers	Morris, Steers and Koch (1979)	
	Manager Accountants	Schultz (1974)	
	Senior Accountants	Senatra (1976)	
	Managers, Supervisors and Technical Employees	Lichtman (1970)	
	Research and Development Department	House, Rizzo and Gujarati (1971)	
	Supervisors and Subordinates	Bernardin and Alveres (1975).	
	Administrative, Professional and Service Employees	Szilagyi, Sims and Keller (1976); Szilagyi and Sims (1976); Szilagyi (1977)	
	Boundary-spanning Activities	National Survey and Selective Interviews	Kahn, Wolfe, Quinn, Snoek and Rosenthal (1964)
		Administrators, Engineers and Scientists	French and Caplin (1972)
Administrators, Engineers and Scientists		Miles (1974, 1975); Miles and Perreault (1976)	
Managers, Supervisors and Engineers		Keller, Szilagyi and Holland (1976); Keller (1978)	
Scientists and Engineers		Dailey (1977)	
Scientists and Engineers		Katz and Tushman (1979)	
Organizational Structure		Administrators and Engineers	House and Rizzo (1972)
	Administrators	Rogers and Molnar (1976)	
	Managers and Subordinates	Greene (1972); Greene and Organ (1973)	
	Manufacturing Firm	Renwick (1975a, b)	
	Bank Employees	Parkington and Schneider (1979)	
	U.S. Naval Officers	O'Reilly and Roberts (1975)	
	Conceptual Essay	Walton and Dutton (1969)	
	Public Utility	Schuler (1977)	

TABLE 3.5
(continued)

<u>Organizational Characteristics</u>	<u>Sample</u>	<u>Researchers</u>
Specific Job Characteristics		
Organizational Communication	Managers, Professionals and Clerical Workers	Schuler (1979)
	Nurses	Seybolt and Pavett (1979)
	Utility Company	Kim and Schuler (1979)
Job Enrichment	Managers	Abdel-Halim (1978)
Organizational Commitment	Teachers and Nurses	Hrebiniak and Alutto (1972); Alutto, Hrebiniak and Alonso (1973)

the highest position with the Internal Revenue Service experienced more job satisfaction, internal control and organizational knowledge than employees occupying lower positions in the organization. Tension was also less evident at this level. Although there was a small sample size in the Lichtman study, his conclusions challenged the findings of Kahn, et al. (1964).

The findings concerning rank differences in emotional adjustment were clearly not predictable from the findings of Kahn et al. (1964)...in organizations like the IRS, members of management have a great deal of freedom to define their own roles as well as the role of those below them. When this advantage is coupled with the job security provided by the civil service system, managers are, apparently, rendered less susceptible to the job related tensions characteristic of management in private, competitive enterprises, and their own subordinates (Lichtman, 1970, pp. 79-80).

House, Filley and Gujarati (1971) found no organizational interaction effect for leadership structure and consideration. Although role strain constructs were not examined, the methodology used in their study and adopted by this writer was a significant contribution to the literature.

Bernardin and Alvares (1975) found the strategies of role conflict resolution varied with organization level. Subordinates rated the forced resolution strategy as less effective than their superiors. The reverse evaluation was found for the confrontation strategy.

In a series of studies involving the same authors, role ambiguity, consistent with the Kahn (1964) model was inversely related with job satisfaction at the highest

organization level (Szilagyi, Sims and Keller, 1976; Sims and Szilagyi, 1976). Role conflict was the more significant predictor at the lowest organization level. Revisiting the same organization a year later, Szilagyi (1977), in a longitudinal study, was able to infer causality regarding these same relationships. Role ambiguity was only related to job performance however for the highest level of the organization.

Schuler (1975) initially analyzed the interaction effects of organization level with role ambiguity and conflict on job satisfaction and performance. Partial order correlations were compared and the findings were similar to the Szilagyi, et al. studies. It should be recognized that these results were "visually" inspected and no "t" statistic for Fisher's Z transformation of correlation coefficient was made. In a subsequent report, Schuler (1977) used three separate multiple regressions and found interaction effects for organizational level and satisfaction. It failed to moderate the relationship between the role strain constructs and job performance.

Morris, Steers and Koch (1979) is the last and most recent study in this section which found role ambiguity and conflict to be more influential with white-collar and professional workers. The perceptions of administrators, secretarial staff, and blue-collar workers were compared, using full and restricted models with the respondent's occupation code combined with dummy variables. The reader

is referred to the conclusions reported in the previous section on the effect of participation with the role strain constructs.

Boundary-Spanning Activities

Organizations must develop functional specializations while simultaneously integrating these activities (Lawrence and Lorsch, 1969). Kahn, et al. (1964) recognized the unique problems of the integrator's or boundary spanner's role. He would often have to operate without formal authority, interacting with many role members across several organization levels. Katz and Kahn (1969) summarize the potential of experiencing role conflict at this position:

In the studies of role conflict and ambiguity cited above (Kahn, et al., 1964) the location of positions within the organization was found to be related to the degree of objective conflict to which the occupant of the position was subjected. In general, positions contained deep within the organizational structure were relatively conflict-free; positions located near the skin or boundary of the organization were likely to be conflict-ridden (Katz and Kahn, p. 192).

Professional employees in an organization are often assigned to line supervisors or administrators and experience similar perceptions of boundary spanning behavior. French and Caplin (1972) have referred to these environments as being "alien" to the individual because he is interacting with members of a different occupation. Some of the authors' conceptual process was borrowed by this writer in developing the "alien audit environment" construct in Chapter IV. French and Caplin found that:

. . .men in an alien environment showed more stress and strain: (1) administrators in an engineering unit showed more quantitative overload, more qualitative overload, a larger percentage of time under great deadline pressure, higher systolic and diastolic blood pressure, and a faster pulse rate; (2) engineers in an administrative unit showed more incoming and outgoing phone calls, greater deadline pressure from their own branch, more contacts across organizational boundaries and less within their own unit, less opportunity for advancement, and lower self-actualization (French and Caplin, 1972, p. 47).

Miles (1974) developed a role-set configuration map in examining the boundary-spanning activities for various occupations in a research and development department. Using a cross-lagged correlational approach, various antecedent variables, prominent of which were boundary-spanning activities, were related to role conflict. Findings were not as conclusive for the exploratory analysis on role ambiguity (Miles, 1975, 1976; Miles and Perreault; Miles, 1977).

Keller, Szilagyi and Holland (1976) developed a four-item index measuring the boundary-spanning construct and contrary to the Miles and Kahn studies, found it related to favorable organizational and personal outcomes. Integrators experienced greater satisfaction with their job and relationships with their coworkers. No relationship was reported with role ambiguity and conflict. These authors attribute the attractiveness of the boundary-spanner's position to his access to various organizational resources.

. . .those individuals with high levels of BSA were able to obtain available organizational resource - power, in the form of information. Thompson (1967) and Galbraith (1973) also suggest that by permitting individuals to exercise discretion, boundary-spanning jobs enable individuals to reduce environmental uncertainties and contingencies, and to the extent that these aspects are important to the organization, the individual gains power, particularly in a bargaining process (Keller, Szilagyi and Holland, 1976, p. 708).

Using evaluations of the participants in a follow-up study, Keller was able to infer causality from this construct to various facets of job satisfaction. Except for job satisfaction, Dailey (1979) found similar relationships between the construct and favorable personal outcomes. Boundary-spanning related inversely with locus of control scored in the direction of internals (refer to section on individual constructs) and group cohesiveness. This indicated that integrators had a command of their environment and related well with their coworkers. Dailey attributed the single inconsistent finding for job satisfaction to the large number of organizations (sixteen) that participated in his study. All of the respondents from the Keller, et al. results were employed in the same organization.

Organizational Structure

This section reviews factors related to the organizational climate literature that have been applied to the role theory model. The House and Rizzo (1972) study discussed in Chapter II is classified within this module and will not be repeated.

Rogers and Molnar (1976) found interorganizational variables accounted for role conflict for 102 top-level county administrators. Intraorganizational factors, consistent with the Kahn study, were superior predictors for role ambiguity. In two related articles, Greene (1972) and Greene and Organ (1973) developed a mediating "compliance" variable between role accuracy and personal outcomes. Compliance measures the congruence between the subordinate and his superior regarding the requirements of the job. The authors concluded that both role accuracy and compliance were related to high evaluations of performance. In a similar study on role accuracy, Renwick (1975) found subordinates and their supervisors cited similar sources of role conflict. Some of the incidents reported were differences in organizational knowledge and individual attitudes. Sources of role conflict for directors of public agencies were analyzed by Whetten (1978). It was difficult for the director to meet the expectations of his staff, community leaders and meeting governmental performance requirements.

A study involving bank employees (Parkington and Schneider, 1979) used a discrepancy index to measure the amount of service the bank provided to its customers. Bank employees who perceived their management to be deficient in customer service experienced the most conflict and ambiguity.

Role theorists have often compared the influence of

organizational and personal factors as sources of ambiguity and conflict. O'Reilly and Roberts (1975) found organizational characteristics were more directly linked to job attitudes than personality variables. Walton and Dutton (1969), in a conceptual essay, attribute organizational growth rate as the most significant predictor of role ambiguity:

Role dissatisfaction and ambiguity are related to more basic organizational variables, including growth rate, organizational level and hierarchical differences. Organizational growth appears to have offsetting consequences. Slower rates of organizational growth and of opportunities for promotion increase role dissatisfaction, but also decrease ambiguities (Walton and Dutton, 1969, p. 76).

The last study in this section (Schuler, 1977b) found greater incidents of role ambiguity and conflict for individuals who perceived an incongruent environment. An incongruent environment exists where a complex task would be associated with a mechanistic structure or a simple task with an organic structure. The Organizational Practice Questionnaire (House and Rizzo, 1972a,b) was used to measure an organic-mechanistic environment. Schuler's incongruent environment is similar to the French and Caplin (1972) alien environment reported earlier.

Specific Job Characteristics

The last section in this module discusses specific job characteristics that are related to the role episode model.

Schuler (1979) developed a transaction approach

linking organizational communication to role perceptions, job satisfaction and performance. Four dimensions of communication were examined. They were:

- (1) Informative Communication -- Indicates the degree of relevancy of the information to the employee's task.
- (2) Integrative Communication -- Refers to the cooperative information showed by the members of the organization with each other.
- (3) Regulative Communication -- Represented the quality of information similar to the House and Rizzo (1972) study regarding the classic principles of management such as violations in chain of command, unity of command and directions flowing from supervisor to subordinate.
- (4) Distortive Communications -- This was the deliberate suppression and withholding of vital information to a member of the organization.

Using cross-lagged correlations in a longitudinal study, Schuler developed a bi-directional model of communication, role strain (ambiguity and conflict) and personal outcomes (job satisfaction and performance). Informative and integrative communications were related to favorable outcomes and the opposite situation generally occurred with regulative and distortive information.

The relationship of receiving feedback and performance evaluations were the focus of two other studies (Seybolt and Parett, 1979; Kim and Schuler, 1979).

Although the first study was concerned with the predictive power of Vroom's expectancy model, some of the conclusions were germane to this role episode model. Employees who received high feedback reported significantly less ambiguity and conflict than those individuals who had infrequent

performance evaluations. Feedback was a strong moderator regarding the expectancy theory predictions of performance but it failed to support predictions on the effort part of the model. The second study examined the moderating effects of the focal person's task with regard to feedback and personal outcomes (Kim and Schuler, 1979). . Receiving feedback was found to be significant for those tasks that were stimulating and required a high degree of skill variety and autonomy. Abdel-Halim (1978) analyzed the moderating effects of job enrichment characteristics with role ambiguity, conflict and overload. Role ambiguity and overload had the strongest relationship in that it was more aversive for individuals who perceived they had low enriched jobs.

Organizational commitment, the last construct in this module, was examined in two related studies (Hrebiniak and Alutto, 1972; Alutto, Hrebiniak and Alonso, 1973). Organizational commitment is primarily a function of personal choice and investment a person makes in a company. An employee invests in his organization by placing side-bets on factors he values. "The more side-bets at stake, the greater becomes the commitment to the organization and occupation" (Alutto, Hrebiniak and Alonso, 1973, p. 448). Role ambiguity and not conflict was found to be the most significant factor moderating organizational commitment to personal outcomes. The authors attributed this to the unique professional requirements of the teachers and nurses who participated in their study. Because there is generally

little interference from administrators, these professional groups did not perceive many episodes of role conflict in their organization. The influence of role ambiguity was explained under the inducements-contributions section of March and Simon's (1958) organization model.

Introduction of role tension and ambiguity increases the perceived costs of participation thus negatively affecting reward-costs ratios as well as the desirability of continued contribution to the organization. To some extent dissatisfaction with the bases for career advancement imply that inequities are perceived in the organizational reward structure. Such feelings of inequity or deprivation can negatively affect exchange ratios by effectively decreasing the level of actual or expected rewards in relation to a given level of costs (Hrebiniak and Alutto, 1972, p. 570).

CONSTRUCTS RELATED TO LEADERSHIP AND COWORKER RELATIONSHIPS

House's (1971) path-goal theory of leadership has been an important contribution to the role theory literature.

The path-goal model essentially states:

. . .the leader's strategic functions are to enhance subordinates' motivation to perform, their satisfaction with the job, and their acceptance of the leader; stated less formally, the motivational functions of the leader consist of increasing the personal pay-offs to subordinates for work-goal attainment, and making the paths to these pay-offs easier to travel by clarifying paths, reducing road blocks and pitfalls, and increasing opportunities for personal satisfaction en route (Filley, House and Kerr, 1976, p. 254).

The theory has been particularly important where the focal person may experience role ambiguity. The supervisor should attempt to clarify and structure the subordinates' path under such an environment.

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The earliest study on Table 3.6 (Graen, Dansereau and Minami, 1972) attempted to show the conflicting expectations of different role senders on a focal manager. The authors anticipated that the manager's superiors would evaluate attributes such as structuring and domineering as more important than consideration and interpersonal skills. The opposite expectations were hypothesized from the manager's subordinates. Structure was perceived as the most important factor by both groups. The conflicting expectations of the man-in-the-middle hypothesis was not confirmed.

Szilagyi and Sims (1974) found leadership structure to be significantly related to job satisfaction where the subordinate experienced role ambiguity. The relationship was not confirmed for job performance. Stinson and Johnson (1975) were able to partially support the path goal model with role clarity. Contrary to the theory, leadership structure with role clarity and satisfaction were more related for jobs that had high task structure, high repetitiveness and high autonomy. The relationship was negative for low-task conditions. The relationship between consideration and satisfaction was in the predicted direction. Consideration was more important for low-task jobs. The authors attribute their inconsistent findings to the professional occupations found in their sample. Inconsistent results were also reported by Dessler and Valenzi (1977) where supervisors showed a weaker relationship between

TABLE 3.6

LEADERSHIP AND COWORKER CHARACTERISTICS RELATED TO ROLE AMBIGUITY AND CONFLICT

<u>Leadership and Coworker Characteristics</u>	<u>Sample</u>	<u>Researchers</u>	
Initiating Structure and Consideration	Managers	Graen, Dansereau and Minami (1972)	
	Administrators, Nurses, Technical and Service Personnel	Szilagyi and Sims (1974)	
	Managers, Engineers and Blue-collar Workers	Dessler and Valenzi (1977); Valenzi and Dessler (1979)	
	Social Service Organization	Schriesheim and Murphy (1976)	
	Naval Officers	O'Reilly and Roberts (1978)	
	College Faculty	Katz (1977)	
	Salesmen	Walker, Churchill and Ford (1975)	
Coworker Characteristics	Salesmen	Badawy (1973)	
	Various Occupations in a Manufacturing Firm and Hospital	Beehr (1976)	
	Military Officers and Civil Service Employees	Stinson and Johnson (1975)	

structure and satisfaction than assembly line workers. Structure was also found not to be related to role ambiguity for both groups. The most perplexing observation was that assembly line workers actually experience more ambiguity than their supervisors! These same authors treated both groups as one sample in a subsequent study (Valenzi and Dessler, 1978) and found similar results. Satisfaction was related to high role ambiguity where there was a high degree of consideration. This difficulty of linking the ambiguity construct to a path goal model was also experienced by Schriesheim and Murphy (1976). Although unit size and job pressure moderated the relationship between structure and consideration with satisfaction, insignificant effects were found for role clarity.

Other theorists suggest the examination of more situational factors when using a path-goal model. O'Reilly and Roberts (1978) found the employee's mobility with the organization and perception of his supervisor's influence were important moderators. In a laboratory experiment Katz (1977) found initiating structure to be more related to performance under conditions of higher role conflict.

Consideration was also the dominant factor regarding its effect on role ambiguity for salesmen (Walker, Churchill and Ford, 1975). Various studies have found the role strain constructs related more to relationships with the focal person's coworkers. Badawy (1973) found scientists attributed more conflict experiences with their colleagues

than from factors related to the organization, while Arvey, Dewhirst and Boling (1976) found supervisors were only able to minimize role ambiguity. Beehr (1976) found group cohesiveness and supervisor support to be related to role ambiguity and satisfaction. Employees who had a congenial relationship with their coworkers experienced greater dissatisfaction under ambiguous conditions. The authors assert that this would be expected because these employees would communicate their feelings of frustration with each other.

CONSTRUCTS RELATED TO THE PERSONAL OUTCOMES
OF ROLE AMBIGUITY AND CONFLICT

This final module includes various studies describing the effects of role ambiguity and conflict as presented in Table 3.7. Unlike the previous sections, conclusions will be presented without discussing the details of the studies.

EFFECTS OF ROLE OVERLOAD

Sales (1970), in a laboratory study using college students, was able to simulate overload conditions. In general, high role overload led to increased productivity but at the cost of incurring more errors. Some of the unfavorable outcomes examined were moderated by personality variables. Sales (1969) suggests that the overloading of roles may contribute to coronary disease. Contrary to this finding was a five-year longitudinal study (Andrews and

TABLE 3.7

PERSONAL OUTCOMES OF ROLE AMBIGUITY AND CONFLICT

<u>Personal Outcomes</u>	<u>Sample</u>	<u>Researchers</u>
Role Overload and Pressure	Scientists and Engineers	Andrews and Farris (1972)
	College Students	Sales (1969)
	Conceptual Essay	Sieber (1974)
Tension, Performance, Satisfaction and Turnover	Small Business Owners	Anderson (1976)
	Corporate Executives	Dornstein (1977)
	Scientists and Engineers	Andrews (1972)
	Supervisors and Subordinates	Johnson and Graen (1973)
	Salesmen and Customers	Bagozzi (1978)
	Managers	Hammer and Tosi (1974)
	Nonacademic College Employees	Johnson and Graen (1973)

Farris, 1972) which reported increases in innovation and productivity for scientists who experienced role overload. Sieber (1974) also refutes the assertion that the multiplicity of roles cause aversive results. Four positive outcomes are attributed to role accumulation. They are "(1) role privileges, (2) overall status security, (3) resources for status enhancement and role performance, and (4) enrichment of the personality and ego gratification" (Sieber, 1974, p. 569).

RELATIONSHIP WITH TENSION, PERFORMANCE, SATISFACTION AND TURNOVER

Anderson (1976) found stress related to performance in a curvilinear manner. The initial exposure to stressful overload occurred. Dornstein (1977) found Israeli corporate executives experienced feelings of powerlessness when encountering role conflict. Keeley (1977) found no difference in unfavorable personal outcomes between objective stress conditions and subjective perception of stressful situations. Hamner and Tosi (1974) found different unfavorable outcomes related to role ambiguity and conflict and suggested that the focal person's position within the organization may be relevant. Using a series of stepwise multiple regressions, Bagozzi (1978) found role conflict a better predictor than role ambiguity with job performance and satisfaction for industrial salesmen. Role conflict was not significant for those salesmen who reported high levels of self-esteem. The last study in this section

found nonacademic employees who left the university experienced greater uncertainty with their supervisors than those individuals who remained (Johnson and Graen, 1973).

CHAPTER IV

RESEARCH METHODOLOGY

This chapter develops the conceptual model presented in Chapter I and all of the related hypotheses. This is followed with a discussion on the measurement instruments and the population that were chosen for the study. Details of the data collection procedures and efforts to establish validity and reliability of the constructs related to the analytical model are presented. The chapter concludes with a description of the statistical techniques used in confirming the research hypotheses.

AN ALIEN AUDIT ENVIRONMENT -- THE PRIMARY ANTECEDENT OF ROLE AMBIGUITY AND CONFLICT

The previous chapter described how accountants within large CPA firms must eventually specialize in a group of client industries. Specialization within the accounting profession is not atypical from other professional groups such as law or medicine. Attorneys may develop exclusive practices in SEC registrations or real estate contracts. Physicians may specialize in gynecology, obstetrics or

neurology. Because of the impossibility of developing an expertise in all areas of study, the need to specialize is self-evident. Where accountants differ from most other professions is in the development of the specialization. Physicians and lawyers generally select their areas of interest with some participation and influence from their respective organizations. This may not be the case with the career development of the professional accountant. An entry-level accountant may be assigned certain client engagements, such as a bank audit, without any participation in the selection. What frequently occurs is that he may be requested by management for similar assignments because of his recent experience and his "developing specialization" in the ranking industry. These observations should be qualified because they are a result of (1) the writer's personal work experience as an independent auditor, and (2) from interviews with other public accountants. Most of the larger CPA firms indicate in their recruiting brochures the effort they make to involve the entry-level accountant in his assignment to specific client engagements. Because of the administrative difficulty of often having to coordinate hundreds of client engagements simultaneously in one regional office, it is not unreasonable to conclude that such commitments may not be fulfilled. It is this phenomenon that has stimulated the research objectives of this study. Four sets of constructs representing the auditor's environment are presented in the following section. When

these factors are incongruent with the auditor's expectations, an alien audit environment is assumed to exist.

ATTRIBUTES OF AN ALIEN AUDIT ENVIRONMENT

The term alien audit environment is similar, but not identical to, the various studies on organizational alienation. Alienation has generally been defined as a feeling of powerlessness or anomie in determining one's destiny. Karl Marx was one of the first to discuss this construct where the individual's work was compared to a cog in a big machine and how he was unable to control or change the forces that affected his life. Two types of alienation that have been studied are alienation from work and alienation from expressive relations (Aiken and Hage, 1966). The former involves a feeling of disappointment with regard to one's career and professional development which is the concern of this paper. The latter involves dissatisfaction with one's fellow workers.

An audit environment is defined as those personal and organizational characteristics that influence the accountant's profession. It is when these factors are perceived to be absent or inadequate that determines the degree of alienation. The construct is similar to the frustrations experienced by administrators working in an engineering department as reported in the previous chapter by French and Caplin (1972). From the results of twenty extensive interviews with various members of different

public accounting firms, ten individual and organizational characteristics were found to be extremely important to the accountant's profession. Most of these characteristics have been examined by role theorists and were presented in the literature review. The design of this study has organized these constructs into the following sets or frames of reference.

Firm Frame of Reference

- (1) Participation -- The opportunity the auditor has in selecting his client engagements.
- (2) Competence and Training -- The degree of professional and technical competence achieved by the auditor from the firm's training programs.
- (3) Performance/Reward Relationship -- The degree the auditor perceives his performance will be recognized by the firm.

Client Frame of Reference

- (4) Client Relationship -- The rapport the auditor has developed with the client's employees.
- (5) Pressure to Perform -- The auditor's perception of pressure and high standards during an audit assignment.
- (6) Organizational Structure -- The auditor's perception of the client's organizational structure.

Professional Frame of Reference

- (7) Preference for Assignment -- The auditor's perception of the attractiveness and quality of his client engagements.
- (8) Specialization -- The degree of perceived specialization within specific industries.

Leadership Frame of Reference

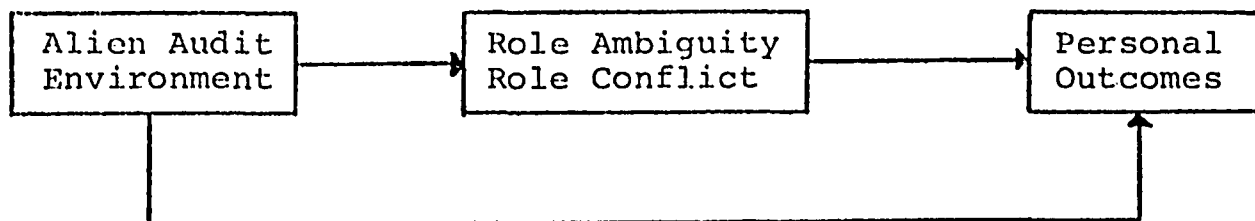
(9) Leadership Structure -- The auditor's perception of his supervisor's attempt to organize and structure the procedures necessary to complete the client engagement.

(10) Leadership Interpersonal Relations -- The auditor's perception of his trust and respect for his supervisor.

The abbreviated model presented in Figure 4.1 suggests the potential role strain and personal outcomes from experiencing an alien audit environment. Each of these constructs are developed in the forthcoming sections. The four personal outcomes that will be used to test the hypotheses are (1) job satisfaction, (2) desire to leave the firm, (3) perceived job anxiety, and (4) perceived job performance. The reason for selecting these specific constructs will be discussed in the section on research measurements.

FIGURE 4.1

ABBREVIATED ROLE AMBIGUITY AND CONFLICT MODEL



CONSTRUCTS USING THE AUDITOR'S FIRM
AS A FRAME OF REFERENCE

PARTICIPATION IN THE SELECTION OF
AUDIT ASSIGNMENTS

This is the only variable that resembles the alienation construct used to measure the employee's feelings of powerlessness with regard to his destiny. Auditors who are arbitrarily assigned to engagements that they would not have selected will experience frustration and anxiety regarding their career development. This is particularly evident where the firm's members collectively favor specific client engagements. An accountant may be assigned to a client engagement that is unpopular with the members of the firm. These feelings of frustration may continue throughout the auditor's assignment and may interfere with his responsibilities. An auditor may consciously consider the assignment as temporary and not maintain the professional attitude he would have had for an assignment of his choice. This manifestation of alienation may also occur even where the auditor is assigned to a client engagement of his choice. This will result where the auditor lacks confidence with the supervision of the assignment. Thus, auditors prefer engagements because (1) the assignment is within the role occupant's preferred area of specialization, and (2) he respects and trusts the supervision on the assignment. If the auditor is not consulted as to whether he has any objection with regard to the type of client engagement or the assigned supervision, he may

develop feelings of frustration even before the audit begins. Once the assignment commences the auditor may experience role ambiguity and conflict. This may result because the auditor is confused as to how he should perform and interpret his assignment. If he is very successful, he will develop a reputation as a specialist for the client industry and be "awarded" with similar assignments. If he chooses to treat the engagement as a temporary assignment without developing an interest for the job requirements, the auditor will jeopardize his progress and position with the firm. These perceptions are similar to the person role conflict that was presented in Chapter II.

This study takes the position that (1) most accounting practices have popular and unpopular audit engagements as perceived by their employees, (2) those auditors that are assigned to these engagements will develop feelings of frustration and experience role ambiguity, and (3) these feelings of alienation and role ambiguity will vary inversely with the firm's organizational level. The rationale for the last position is attributed to the "up or out" policy and high turnover rate in large CPA firms. It is assumed that auditors who advance to the management position will prefer those client engagements regardless of his specialization within the firm. Any auditor who is dissatisfied with his assignments would probably not remain with the firm long enough to advance to the manager position.

Participation in organizational policy appeared in the studies reported in Chapter III. The reader should note that the participation construct used in this study is more global and comprehensive than the measurements used in the reports that were cited. The conceptual focus is not on the auditor's opportunity to select specific accounting procedures but his influence in formulating the profile and pattern of his professional career.

AUDITOR COMPETENCE AND TRAINING

This variable measures the auditor's educational training for the engagements he has been assigned. Auditors receive their primary education from the colleges and universities prior to joining the CPA firm. Additional training is provided by most of the larger firms with their in-house professional development courses. Auditors are also required to devote a substantial amount of time for independent study with regard to the professional literature and newly enacted standards.

Accountants are occasionally assigned to engagements where they receive little or no training. Some of these assignments involve audits of organizations that do not have a profit motive, such as non-profit foundations, hospitals and governmental agencies. Other audit assignments involve organizations within specialized industries where the accountant is required to have an extensive knowledge of their operations in order for him to perform satisfactorily. Included would be what is known in the profession as

non-commercial audits such as brokerage and investment firms, banks and insurance companies.

The Cohen Commission (AICPA, 1978) reported that a "lack of knowledge of a client's business or industry was often a problem" involving the failure of an auditor to detect management fraud. Research conducted by Rhode, for the AICPA's study, indicated that forty-four per cent of public accountants surveyed indicated that the training they received in college did not prepare them to function in the role of an auditor.

An auditor may perceive that he is working in an alien audit environment even where he is assigned to a "commercial client." This will occur where the audited firm has unique and unfamiliar accounting practices. This was the case where a partner in a "Big Eight" firm was unfamiliar with a government-sponsored housing program.

PMM assigned a SEC reviewing partner from the New York office to the Stirling Homex audit who participated in several meetings where significant decisions were made concerning unresolved audit questions. However, the SEC reviewing partner was unfamiliar with the income recognition policies of Stirling Homex and the government housing programs being utilized by customers of Stirling Homex (emphasis added, Accounting Series Release, 1975, p. 326).

PERFORMANCE/REWARD RELATIONSHIP

Many of the auditors interviewed were critical regarding how their firms recognized and rewarded their performance. The Todd, Thompson and Dalton (1974) study presented in the previous chapter found many accountants

confused regarding the relationship between performance and reward in their firms. An absence of specific auditing objectives and infrequent performance evaluations were some of the reasons offered as the causes of this problem.

Reference was also made to the fact that the final product of the auditor's performance (the accountant's report) is often not appreciated by the client's personnel. Accountants are often confused between the conflicting demands of performing the audit mission and the need to leave the client with some tangible benefit.

CONSTRUCTS USING THE CLIENT'S FIRM AS A FRAME OF REFERENCE

AUDITOR-CLIENT RELATIONS

Audit assignments differ regarding the degree of cooperation they receive from the client's personnel. Certain organizations may have uncooperative and occasionally incompetent employees in their accounting departments. An auditor who lacks confidence in the responses he receives from client personnel may suffer from role ambiguity and not know how to complete his assignment. In addition, inter-sender role conflict would occur where the client's personnel objected to an auditing procedure that was required by the accountant's supervisor. This construct is similar to the focal person's relationship with his coworkers reported in Chapter III (Badaway, 1973; Beehr, 1976; Stinson and Johnson, 1976).

PRESSURE TO PRODUCE

This variable measures the degree of pressure found in meeting deadlines on client engagements. Although long hours of overtime have been associated with the job requirements of a public accountant, certain client engagements may have an intolerable amount of pressure to produce as compared to others. Unrealistic time-pressure demands are assured to be another cause of role ambiguity because it often confuses the auditor as to the priority of his task assignments. The Cohen Commission (AICPA, 1978) found unrealistic time budgets as a significant cause for not completing auditing procedures.

CLIENT'S ORGANIZATIONAL STRUCTURE

This last variable measures the degree of understanding that the accountant has with regard to the duties and functions of each member's role in the organization. Included are the functional and procedural requirements of the organization that is usually found in the client's manuals and organization chart. It is suggested that auditors who are resigned to client engagement will experience infrequent violation in unit and chain of command. Formalized organizational practices would prevent role ambiguity and conflict because the auditor would have a clear perception of which people held the authoritative positions in the client's firm.

CONSTRUCTS USING A PROFESSIONAL FRAME
OF REFERENCE

PREFERENCE FOR AUDIT ASSIGNMENTS

The purpose of positing this variable in the model was to determine some global evaluation of the auditor's preference for his client engagements. This construct may appear to be redundant to both the participation variable and the job satisfaction outcome in the model. Auditors may not have participated in the selection but may still be fortunate in obtaining the engagements of their choice. The construct differs from job satisfaction in that it elicits responses that measure one's preference for client engagements without analyzing specific job characteristics. It also attempts to obtain the auditor's perception of his colleagues' evaluation of his audit assignments. It is a reasonable expectation that auditors who prefer their assignments would make every effort to avoid role conflict and ambiguity.

SPECIALIZATION IN SPECIFIC INDUSTRIES

The construct is similar to the competence and training factor discussed previously. It has a longer time frame in that auditors would not be able to develop a specialization of specific client industries until they were employed in the firm for a considerable period. It is assumed with higher organizational positions in an accounting, specialization would lead to less role ambiguity and conflict.

CONSTRUCTS USING LEADERSHIP AS A FRAME OF REFERENCE

LEADERSHIP STRUCTURE

The empirical studies cited in the earlier chapter were the reason that examining this construct, leadership structure, has an obvious objective, using a path goal approach, of clarifying those auditing procedures that are ambiguous to the auditor. The reader is cautioned against the conflicting results, particularly job performance, that was reported in the literature review.

LEADERSHIP INTERPERSONAL RELATIONS

The Kahn, et al. (1964) and Miles (1974) studies provide the stimulus for employing this construct. Consistent with the first study's expectations, employees who experienced low degrees of role conflict and ambiguity had a better relationship with their supervisor. Using the same measurement of interpersonal relations developed by Kahn, et al., Miles reported relationships that were contrary to what was initially hypothesized. Focal persons who perceived strong interpersonal relations with their role senders experienced more role conflict than individuals who reported a weak relationship. The author attributed this result to the possibility that persons conscientiously get involved in conflict situations in an effort to please their role senders.

It appears that one who has them (strong bonds) is probably one who has worked very hard to achieve them. That is, persons who report strong bonds with their role senders are probably those who have attempted (sic) to meet the conflicting demands of their high-distance senders, whereas those who have pursued the expectations of some role senders while avoiding those of others may have achieved less experienced conflict but to the expense of bond strength (Miles, 1974, p. 134).

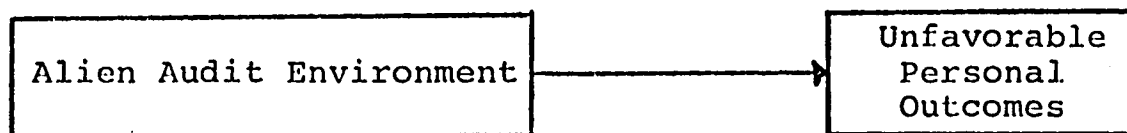
Most of the studies reported in the literature review found more consistent results with the leadership consideration construct than for leadership structure.

It is assumed in this study that auditors who have a poor interpersonal relationship with their supervisors will experience more role ambiguity and conflict. This will occur because auditors who lack confidence and trust with their superiors will hesitate to resolve uncertainties and problems that may arise during the audit engagement. As indicated by Kahn, et al. (1964, p. 90), "it is difficult to maintain close bonds with associates when confronted with an ambiguous environment."

HYPOTHESES TO BE TESTED

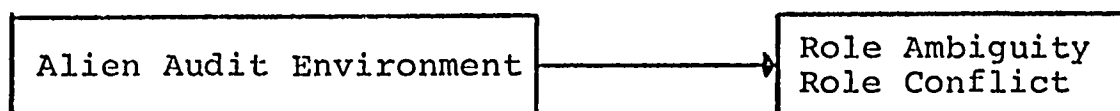
Each of the ten independent variables will be used to examine four sets of hypotheses. A fifth set will analyze the potential results of experiencing role ambiguity and conflict in order to replicate some of the results found in the literature review. Each of these sets has been arranged in order to achieve the following objectives:

HYPOTHESIS SET 1:



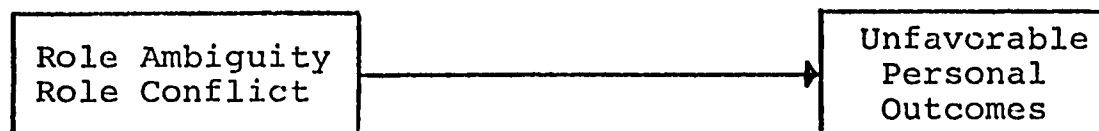
OBJECTIVE: To establish that these constructs, where perceived to be inadequate by the auditor, will be evaluated unfavorably.

HYPOTHESIS SET 2:



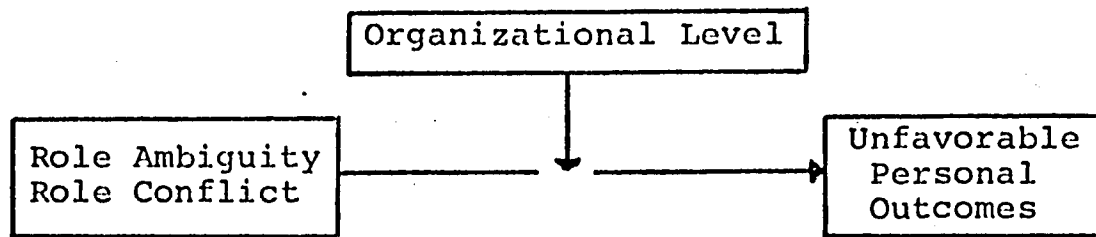
OBJECTIVE: To establish the potential sources of role ambiguity and conflict.

HYPOTHESIS SET 3:



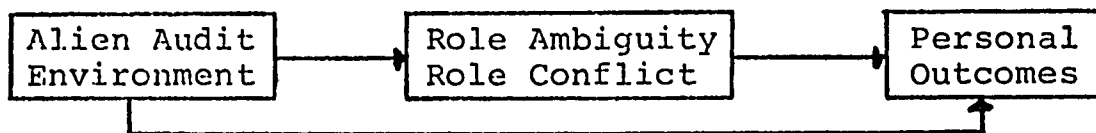
OBJECTIVE: To establish the potential unfavorable outcomes from experiencing ambiguity and conflict. This research objective attempts to replicate some of the conclusions found in the literature review.

HYPOTHESIS SET 4:



OBJECTIVE: To establish the interaction effect of the auditor's position in moderating the potential consequences of the role strain constructs. Specifically, role ambiguity is expected to be more significant for the lower-level positions of a CPA firm and role conflict is the dominant variable at the higher positions.

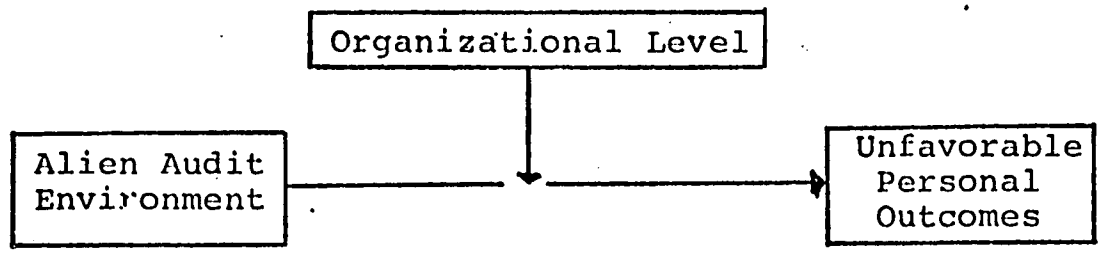
HYPOTHESIS SET 5:



OBJECTIVE: This is the abbreviated comprehensive model and the most significant objective of this research project. The intent will be to establish the interaction effects of role ambiguity and conflict between the alien audit environment construct and personal outcomes.

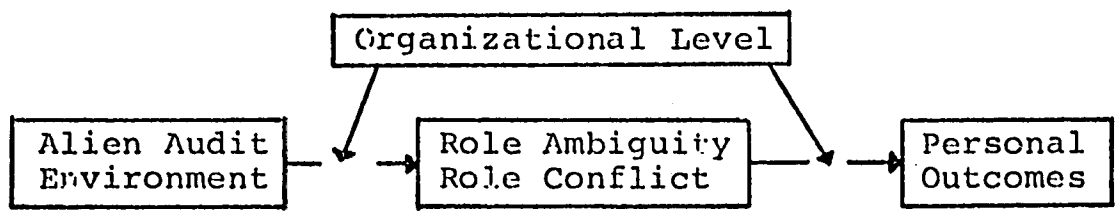
EXPLORATORY OBJECTIVES

Two models are presented and the results will be analyzed as an exploratory exercise. The first model attempts to identify whether the organization level moderates the auditor's perception of an alien audit environment.



The rationale for not stating any hypotheses for this model can be illustrated by using the participation construct. An auditor's perception of not participating in the selection of his engagements is assumed to be related with unfavorable outcomes. There is no a priori reason to suggest that this may be more detrimental to the second-year accountant (there are no auditors in this study who have achieved less than a year of experience) than the manager. A possible research hypothesis could be the expectation of finding no significant differences between the organizational positions.

The second model is the most complex in the study and suggests that the interaction effect of role ambiguity and conflict with constructs found in an alien audit environment is further moderated by the auditor's organizational position.



The underlying reason for not stating any research hypothesis is similar to the first exploratory model.

PARTICIPATION AS A MODEL FOR ALL OF THE FORMALIZED HYPOTHESES

Because there will be as many as sixteen variables analyzed in this study, a formal presentation of each construct would require an additional chapter in itself. Participation will serve as the model of the formal hypothesis statement for all the other constructs. These other variables will be presented on summary tables.

Four personal outcomes will be examined in this study. They were chosen because of their importance to the role theory literature as well as their significance to the public accounting profession. The auditor is assumed to perceive the following relationships where he encounters an alien audit environment:

<u>Personal Outcome</u>	<u>Predicted Relationship With an Alien Audit Environment</u>
Work Satisfaction (JDI)	Negative
Job Anxiety (Modified Taylor's Manifest Anxiety)	Positive
Perceived Job Performance (Porter and Lawler)	Negative
Desire to Leave the Firm	Positive

Using participation as a model for all of the ten independent variables presented in Table 4.1, the following relationship is suggested.

TABLE 4.1

SUMMARY OF HYPOTHESIS SET 1: RELATIONSHIP BETWEEN THE CONSTRUCTS OF AN ALIEN AUDIT ENVIRONMENT AND FOUR PERSONAL OUTCOMES

An alien audit environment will vary directly with willingness to leave and anxiety and inversely with job satisfaction and performance.

SPECIFIC HYPOTHESES: There is a relationship between the following measures of an alien audit environment and work satisfaction, anxiety, job performance and desire to leave the firm. These relationships will exist for each of the three organizational positions examined in this project. Specialization is not expected to vary with these dependent variables at the entry-level position.

<u>Hypothesis</u>	<u>Independent Variable</u>	<u>Personal Outcomes</u>			
		<u>Work Satisfaction</u>	<u>Anxiety</u>	<u>Leaving</u>	<u>Performance</u>
1	Participation	Positive	Negative	Negative	Positive
2	Competence/Training	Positive	Negative	Negative	Positive
3	Reward/Performance	Positive	Negative	Negative	Positive
4	Client Relationship	Positive	Negative	Negative	Positive
5	Pressure to Perform	Negative	Positive	Positive	Negative
6	Organizational Structure	Positive	Negative	Negative	Positive
7	Preference for Assignments	Positive	Negative	Negative	Positive
8-a	Specialization (Seniors and Managers)	Positive	Negative	Negative	Positive
8-b	Specialization (Staff Accountants)	No Relationship			
9	Leadership Structure	Positive	Negative	Negative	Positive
10	Leader Interpersonal Relations	Positive	Negative	Negative	Positive

HYPOTHESIS 1 -- There is a positive relationship between the level of an auditor's perceived participation in selecting client engagements with satisfaction with work and job performance. Perceived participation will be inversely related to the auditor's desire to leave the firm and experienced job anxiety.

Although no formal hypothesis is stated, these relationships are expected to occur at each of the organization positions examined in the study.

Table 4.2 provides a summary of the expected relationship between the constructs of an alien audit environment with role ambiguity and role conflict. Participation is used as a model for stating the formal hypothesis.

HYPOTHESIS 2A -- There is an inverse relationship between the level of an auditor's perceived participation in selecting client engagements with role ambiguity.

HYPOTHESIS 2B -- There is an inverse relationship between the level of an auditor's perceived participation in selecting client engagements with role conflict.

Again, no formal hypothesis is stated regarding the effects these relationships may have with the auditor's organizational position.

The following hypotheses attempt to replicate the literature regarding the unfavorable outcomes of experiencing role ambiguity and conflict:

TABLE 4.2

SUMMARY OF HYPOTHESIS SET 2: RELATIONSHIP BETWEEN THE CONSTRUCTS OF AN ALIEN AUDIT ENVIRONMENT WITH ROLE AMBIGUITY AND ROLE CONFLICT

HYPOTHESIS SET 2A -- Specific measurements of an alien audit environment will vary directly with role ambiguity.

HYPOTHESIS SET 2B -- Specific measurements of an alien audit environment will vary directly with role conflict.

SPECIFIC HYPOTHESES: There is a relationship between the following measures of an alien audit environment with role ambiguity and role conflict.

<u>Hypothesis</u>	<u>Independent Variable</u>	<u>Set 2A</u>	<u>Set 2B</u>
		<u>Role Ambiguity</u>	<u>Role Conflict</u>
1	Participation	Negative	Negative
2	Competence/Training	Negative	Negative
3	Reward/Performance	Negative	Negative
4	Client Relationship	Negative	Negative
5	Pressure to Perform	Positive	Positive
6	Organizational Structure	Negative	Negative
7	Preference for Assignments	Negative	Negative
8-a	Specialization (Seniors and Managers)	Negative	Negative
8-b	Specialization (Staff Accountants)	No Relationship Specified	
9	Leadership Structure	Negative	Negative
10	Leader Interpersonal Relations	Negative	Negative

HYPOTHESIS 3A -- There is an inverse relationship between the auditor's perceptions of role ambiguity with satisfaction with work and job performance. Perceived role ambiguity will be directly related to the auditor's desire to leave the accounting firm and experienced job anxiety.

HYPOTHESIS 3B -- There is an inverse relationship between the auditor's perceptions of role conflict with satisfaction with work and job performance. Perceived role conflict will be directly related to the auditor's desire to leave the accounting firm and experienced job anxiety.

The next set of hypotheses suggests that the auditor's position in the organization influences his perception of role ambiguity and conflict. In addition, his position in the firm will influence the intensity of these relationships with the four personal outcomes.

HYPOTHESIS 4A -- Auditors who hold lower positions in the public accounting firm will experience more role ambiguity and less role conflict than those accountants who hold higher positions.

HYPOTHESIS 4B -- The inverse relationship between role ambiguity with satisfaction with work and job performance will be more aversive for auditors who hold lower positions in the public accounting firm than those auditors who hold higher positions. The direct relationship between role ambiguity with the desire to leave the firm and job anxiety will be more prevalent for auditors who have lower organizational positions than those accountants who hold higher positions.

HYPOTHESIS 4C -- The inverse relationship between role conflict with satisfaction with work and job performance will be more aversive for auditors who hold higher positions in the public accounting firm than those auditors who hold lower positions. The direct relationship between role conflict with the desire to leave the firm and job anxiety will be more prevalent for auditors who have higher organizational positions than those accountants who hold lower positions.

The last set of hypotheses summarized on Table 4.3 examines the interactions between each of the ten independent variables with role ambiguity and conflict in predicting the four personal outcomes. Participation is once again used to formally state the research hypothesis.

HYPOTHESIS 5A -- Participation will vary directly with work satisfaction and job performance, inversely with job anxiety and desire to leave. This relationship will be greater for those auditors who perceive lower levels of role ambiguity.

HYPOTHESIS 5B -- Participation will vary directly with work satisfaction and job performance, inversely with job anxiety and desire to leave. This relationship will be greater for those auditors who perceive lower levels of role conflict.

All of the hypotheses presented on Table 4.3 are predicted in the same direction except for the pressure, organizational structure and leadership structure constructs. Pressure is the only variable that would be evaluated negatively by a focal auditor and its effect on personal outcomes are

TABLE 4.3

SUMMARY OF MODERATING EFFECTS OF ROLE AMBIGUITY AND ROLE CONFLICT
ON INDEPENDENT VARIABLES WITH PERSONAL OUTCOMES

HYPOTHESIS SET 5A -- Specific measures of an alien audit environment will interact with role ambiguity in effecting the personal outcomes of work satisfaction, performance, anxiety and willingness to leave the firm.

HYPOTHESIS SET 5B -- Specific measures of an alien audit environment will interact with role conflict in effecting the personal outcomes of work satisfaction, performance, anxiety and willingness to leave the firm.

<u>Hypothesis</u>	<u>Independent Variable</u>	<u>Effect on Dependent Variables</u>
1	Participation	Higher effect for <u>low ambiguity</u> and <u>low conflict</u> .
2	Competence and Training	Higher effect for <u>low ambiguity</u> and <u>low conflict</u> .
3	Reward/Performance Relationship	Higher effect for <u>low ambiguity</u> and <u>low conflict</u> .
4	Client Relationship	Higher effect for <u>low ambiguity</u> and <u>low conflict</u> .
5	Pressure to Perform	Higher effect for <u>low ambiguity</u> and <u>low conflict</u> .
6	Organizational Structure	Higher effect for <u>high ambiguity</u> and <u>low conflict</u> .
7	Preference for Assignments	Higher effect for <u>low ambiguity</u> and <u>low conflict</u> .

TABLE 4.3
(continued)

<u>Hypothesis</u>	<u>Independent Variable</u>	<u>Effect on Dependent Variable</u>
8	Degree of Specialization	Higher effect for <u>low ambiguity</u> and <u>low conflict</u> .
9	Leadership Structure	Higher effect for <u>high ambiguity</u> and <u>low conflict</u> .
10	Leader Interpersonal Relations	Higher effect for <u>low ambiguity</u> and <u>low conflict</u> .

expected to have more adverse effects where the accountant experiences higher degrees of role ambiguity and conflict. The other construct relating to leadership structure is expected not to be appreciated by auditors who experience low levels of ambiguity. Although no hypotheses are stated regarding the effects of the auditor's position within the firm, these relationships will still be explored.

DATA COLLECTION PROCEDURES

There were three data collection procedures that contributed to the final results of this study. All of these methods are outlined in the following sections.

SERIES OF SELECTED INTERVIEWS

Approximately twenty interviews with auditors occupying various positions within their accounting firm were conducted over a two-month period. Most of the interviews were completed by telephone averaging twenty to thirty minutes in length. Some of these exchanges were conducted in the writer's office at Hofstra University. There were two managing partners, representing regional offices of "Big Eight" accounting firms that participated in the exercise.

The purpose of the interviews was twofold. One was to determine the extent role ambiguity and conflict occurs in a public accounting firm. Two was to develop a collection of incidents that contributed to the potential

causes and results of this type of role strain in order to develop a research questionnaire. Most of the critical incidents that were disclosed in two interviews were similar to the constructs found in the role theory literature. Participation with selecting client assignments and the degree of preference regarding the profile of engagements were cited more frequently. Some of the disclosures were extremely interesting but had to be either eliminated or scaled down on the final questionnaire in order to examine more important constructs. In one of the two interviews with a managing partner, the accountant's relationship with his spouse was seen as the most important factor contributing to both role strain constructs. The partner indicated that much of the turnover in his firm was because of the spouse's interference with the auditor's career. This incident resembles interrole conflict where the auditor must often resolve the conflicting pressures from his professional and family obligations.

PRELIMINARY PILOT STUDY

After developing a research questionnaire which will be discussed in the following section, it was mailed to four different groups of auditors. Table 4.4 summarizes the characteristics of the sample.

Some of the frustrations of gathering data were first experienced during this stage of the study. Twelve accounting firms located in the New York metropolitan area

TABLE 4.4

SUMMARY OF CHARACTERISTICS AND RESPONSE RATE
OF PARTICIPANTS IN THE PILOT STUDY

<u>Sample</u>	<u>Number of Questionnaires Mailed</u>	<u>Number Returned</u>	<u>Percentage Returned</u>
Hofstra Intern	31	31	100
Small CPA Firm	15	12	80
CPA Review Course	25	13	52
Medium CPA Firm	<u>55</u>	<u>17</u>	<u>31</u>
Total	126	73	58

<u>Category of Respondent</u>	<u>Description</u>
(1) College Interns	This group included undergraduate students majoring in accounting who participated in the annual six-week internship program with various CPA firms on Long Island. The internship program occurred during the busiest part of the audit season, from the last week of December 1978 through the second week of February 1979.
(2) Small CPA Practice Firm	There were twenty professional people in this firm located on Long Island. Fifteen of the members received questionnaires and the remaining five held the position of partner and were not asked to participate.
(3) CPA Review Course	Twenty-five students in an evening CPA review course received the questionnaire. All of the students were college graduates and worked for various CPA firms located in the New York metropolitan area. Most of the participants had less than two years of auditing experience.
(4) National CPA Firm	Fifty-five members of a large CPA firm not from the "Big Eight" category were mailed questionnaires. The auditing experience ranged from one to eight years.

were asked to participate. All of them except the two presented in the table refused, giving the time limitations of the audit (January-March) season as their reason for not cooperating. This may have been a valid concern as indicated by the poor response rate of the two firms that did receive questionnaires. Another limitation was the use of college students with the minimum of auditing experience. Because of these shortcomings, the results of the pilot study were applied more toward eliminating weak items found in the measuring instrument rather than attempting to test the validity of the analytical model. Factor analysis was the most significant statistical method used and will be presented in the reliability discussion in this chapter.

FINAL STUDY

There are essentially two approaches researchers use in selecting populations to be sampled in order to accumulate a data base. One is to seek an organization's cooperation and obtain a representative sample from that firm. Two is to sample from available professional directories. Each of these methodologies has its limitation which may be viewed in terms of a trade-off between internal and external validity. Using a national directory has the advantage of generalizing the results across many accounting organizations, organizational positions and accounting services. The results are limited however if one wishes to

analyze only the auditing function of an accounting firm. Another limitation is the relatively poor response rate compared to sampling from specific organizations. The two studies discussed in the previous chapter that used national directories had response rates of 45.8 (DeFatta and Johnson, 1979) and 40 percent (Benke and Rhode, 1979). Some of the deficiencies of using a directory are (1) there is usually a time lag ranging up to two years from the time the information was collected and published, (2) it fails to designate the service function of the auditor, and (3) it includes members regardless of the size of their firm. As a result, questionnaires go unanswered often because the potential participant has left the public accounting profession or he is not employed in the service function that is being examined.

The response rates alluded to above are contrasted to the results obtained by the Schultz (1974) and Senatra (1976) studies. These researchers were able to obtain responses exceeding 70 per cent. Because the primary objective of this project was to analyze auditing behavior within relatively large CPA firms, the method of obtaining organizational participation was used. This is not to say that the results do not have external validity. This issue is deferred until the following section.

ADMINISTRATION OF RESEARCH QUESTIONNAIRE

Table 4.5 summarizes the populations that were selected in accumulating the data base. As indicated in the table, not all of the responses came from auditors with firms that encouraged them to participate. The administration of the research questionnaire was completed from the following populations and is discussed in the following sections.

<u>Group</u>	<u>Participants</u>
Firms that encourage participation	162
Firms that did not encourage participation	88
College alumni currently employed as auditors	<u>57</u>
Total	307

RESPONSES FROM FIRMS THAT
ENCOURAGED PARTICIPATION

Over twenty-five public accounting firms located in the New York metropolitan area were contacted with regard to participating in the research project. All of the organizations were asked to supply this writer with a mailing list of auditors who were employed with the firm for more than a year. In addition, a letter addressed to each employee and signed by the managing partner of the office was sought. This was to communicate to the potential respondent the firm's commitment to the research project. All of the "Big Eight" firms and most of the other national firms were included in these initial contacts.

TABLE 4.5

CLASSIFICATION OF AUDITORS PARTICIPATING IN THE STUDY

<u>Group</u>	<u>Firm's Endorsement of Study</u>	<u>Number</u>	<u>Percentage</u>	<u>Cumulative Group Percentage</u>
(1) Big Eight - Local Office	Yes	21	6.8	
(2) Big Eight - Local Office	Yes	12	3.9	
(3) Big Eight - Local Office	No	13	4.2	
(4) Big Eight - Local Office	No	17	<u>5.5</u>	20.4
(5) Big Eight - National Office	No	25	8.1	
(6) Big Eight - National Office	No	33	<u>10.7</u>	18.8
(7) Medium - National Office	Yes	28	9.1	
(8) Medium - National Office	Yes	38	12.4	
(9) Medium - National Office	Yes	45	<u>14.7</u>	36.2
(10) Small Practice	Yes	8	2.6	
(11) Small Practice	Yes	10	<u>3.3</u>	5.9
(12) College Alumni	No	<u>57</u>	<u>18.6</u>	<u>18.6</u>
Total		307	100.0%	100.0%

Responses for these requests were extremely disappointing. Only six firms agreed to cooperate and none of these organizations was from the "Big Eight" category that had large national offices. Most of the reasons provided varied from not wanting to burden their staff to the possibility that the research questionnaire would actually encourage their employees to leave the firm.

Exhibits VI.A through VI.C (Appendix VI) provide samples of letters from those firms that agreed to participate in the study. The organization logo and signature of the managing partner have been blanked out in order to preserve their anonymity. A sample of firms that wished not to cooperate appears on Exhibits VII.A through VII.C (Appendix VII).

Table 4.6 summarizes the response rate of those firms that endorsed the research project. It is interesting to note that two firms from the "Big Eight" category that had regional offices on Long Island were willing to participate in the project even though the New York office had objected to the project. The managing partners of these regional offices had extremely independent personalities and operated their offices as autonomous satellites from the national office. All of the auditors who were employed for more than one year with the firm received a

TABLE 4.6

SUMMARY OF RESPONSE RATE FROM FIRMS
THAT ENCOURAGED PARTICIPATION

<u>Firm</u>	<u>Classification</u>	<u>Approximate Number of Accountants Assigned to Office</u>	<u>Location of Office</u>	<u>Question- naires Mailed</u>	<u>Returned</u>	<u>Response Rate</u>
1	Medium	100 - 150	Manhattan	48	28	58%
2	Medium	100 - 150	Manhattan	50	38	76
3	Medium	150 - 200	Midwest	60	45	75
4	Big Eight	30 - 40	Long Island	22	21	95
5	Big Eight	25 - 35	Long Island	14	12	86
6	Small	15 - 25	Long Island	11	8	73
7	Small	15 - 25	Long Island	<u>15</u>	<u>10</u>	<u>67</u>
				220	162	73.6%

research package that included the following items: (1) a cover letter written and signed by the researcher encouraging the auditor to participate, (2) a letter written and signed by the managing partner asking for the person's cooperation, and (3) the research questionnaire. The auditor was also provided with a special response form which enabled the writer to mail as many as four additional requests without disclosing the identity of the respondent. All of these items are reported in the Appendix. Considering the length of the questionnaire, the overall 74 per cent response rate is impressive.

RESPONSES FROM FIRMS THAT DID NOT
ENDORSE THE RESEARCH STUDY

In an effort to increase the sample size, two "Big Eight" firms with New York offices were randomly selected from the AICPA's 1978 directory. Questionnaires were mailed to every member who was not a partner. Unlike the first group, no additional requests were mailed. The response rate for this group appears on Table 4.7. As alluded to earlier, there were three problems encountered. Many of the members sampled were employed in the firm's tax or management services department and the questionnaire therefore did not apply to them. Many of the questionnaires were returned unopened by the CPA firm stating that the person was no longer employed with them. Finally, the AICPA directory includes only those members who are certified, thus excluding most of the auditors who hold

TABLE 4.7

SUMMARY OF RESPONSE RATE FROM "BIG EIGHT" FIRMS THAT DID NOT
ENCOURAGE PARTICIPATION -- NEW YORK OFFICES

<u>Firm</u>	<u>Approximate Number of Accountants Assigned to Office</u>	<u>Questionnaires Mailed</u>	<u>Returned</u>	<u>Response Rate</u>
1	500 - 600	153	25	16.3%
2	500 - 600	<u>199</u>	<u>38</u>	<u>19.1</u>
		352	58	16.5%

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lower positions in the organization. Because of these limitations, the overall 16.5 per cent response rate is difficult to evaluate.

Through the aid of a former student, a list of those auditors who were employed at the Long Island offices of these same "Big Eight" firms was obtained. Questionnaires were mailed to all auditors who were employed with the firm for more than one year. The overall 42 per cent response rate reported on Table 4.8 indicates the importance of obtaining the firm's cooperation when administering this type of research questionnaire.

RESPONSES FROM COLLEGE ALUMNI
CURRENTLY EMPLOYED AS AUDITORS

In a final effort to increase the data base, over 1,000 University Alumni were mailed a one-page questionnaire (Exhibit 5 in the Appendix) regarding their employment status. Approximately 400 people responded, of which 100 indicated they were presently working as auditors. Research questionnaires were mailed to these accountants and 70 per cent were returned. After discarding some of the returns that were received from individual practitioners, fifty-seven remained. Within this group, thirty-four work for "Big Eight" firms, twenty for a medium size practice, and three were from small concerns. Table 4.9 summarizes various demographic statistics regarding all of the participants in the study.

TABLE 4.8

SUMMARY OF RESPONSE RATE FROM "BIG EIGHT" FIRMS THAT DID NOT
ENCOURAGE PARTICIPATION -- LONG ISLAND OFFICES

<u>Firm</u>	<u>Approximate Number of Accountants Assigned to Office</u>	<u>Questionnaires Mailed</u>	<u>Returned</u>	<u>Response Rate</u>
1	50 - 60	22	13	59%
2	90 - 110	<u>50</u>	<u>17</u>	<u>34</u>
		72	30	42%

TABLE 4.9

SUMMARY OF VARIOUS DEMOGRAPHIC CHARACTERISTICS FOR ALL RESPONDENTS

<u>Characteristics</u>	<u>Staff</u> (N = 114)	<u>Per cent</u>	<u>Seniors</u> (N = 118)	<u>Per cent</u>	<u>Managers</u> (N = 74)	<u>Per cent</u>
Average Age	24		28		32	
Sex: Male	87	76	101	86	65	88
Female	27	24	17	14	9	12
Certification: Yes	33	29	89	76	71	96
No	81	71	28	24	3	4
Marital Status						
Married	44	38	76	64	60	82
Single	67	59	37	31	8	8
Divorced or Separated	3	3	5	5	5	5
Educational Background						
Bachelors	97	85	93	79	53	72
Masters	17	15	23	19	21	28
Juris Doctor	0	--	2	1	0	--

LIMITATION OF THE STUDY

As indicated in the previous section, because none of the "Big Eight" firms representing large offices were willing to participate in the project, the final results appearing in Chapter IV must be interpreted with caution. In reviewing Table 4.6, most of the participants from firms that endorsed the study operated out of regional offices employing less than 200 accountants. In an effort to determine how many offices and accountants a typical "Big Eight" operated in the United States, the writer compiled a summary of personnel reported on Table 4.10. The compilation of the data was prepared from public records and an old directory retained by this writer while he was employed at a "Big Eight" firm in New York. The following is a sequence of the procedure that was used:

- (1) There were 455 partners and 4,798 additional auditors employed in this firm as of December 19, 1975. The source of this information was the responses on employment statistics submitted by the firm to the Senate Subcommittee and was reported in Table 2.2 in the second chapter.
- (2) There were ninety-six offices and 478 partners employed at this firm as of July 1, 1976. The information is almost identical to the figures found on the congressional report.
- (3) Using Montagna's (1969) rule of a 10-to-1 relationship between partners and staff, approximately 4,780 accountants, including partners, were employed at the firm. Again the results are close to the Senate report. The 10-to-1 ratio is similar to Baker's (1977) observational study.

TABLE 4.10

TOTAL NUMBER OF PARTNERS AND STAFF ASSIGNED TO ALL OF THE OPERATING OFFICES
OF A "BIG EIGHT" CPA FIRM

<u>Number of Partners Assigned to Office</u>	<u>Approximate Number of Auditors</u>	<u>Number of Offices</u>	<u>Total Number of Accountants Assigned</u>		<u>Cumulative Number of Accountants Assigned</u>	
			<u>Number</u>	<u>Percentage</u>	<u>Number</u>	<u>Percentage</u>
0	0	6	0	0.0	0	0.0
1	10	21	210	4.4	210	4.4
2	20	16	320	6.7	530	11.0
3	30	16	480	10.0	1010	21.1
4	40	5	200	4.2	1210	25.3
5	50	4	200	4.2	1410	29.5
6	60	9	540	11.3	1950	40.8
7	70	5	350	7.3	2300	48.1
8	80	2	160	3.3	2460	51.4
10	100	1	100	2.1	2560	53.5
11	110	1	110	2.3	2670	55.8
12	120	2	240	5.0	2910	60.8
13	130	2	260	5.4	3170	66.2
14	140	1	140	2.9	3310	69.1
15	150	2	300	6.3	3610	75.4
19	190	1	190	4.0	3800	79.4
47	470	1	470	9.8	4270	89.2
51	510	1	510	10.7	510	100.0
	Total	96	4780	100.0	4780	

As reported on Table 4.10, approximately 79.4% of the personnel of a "Big Eight" firm are employed in offices that have 190 or less auditors. This organizational environment is similar to the firms that are represented in this survey. Although the samples were not randomly drawn, the behavior patterns of auditors found in this project should be similar to accountants employed in other large firms with the exception of very large offices. Other limitations, such as reliance on attitudinal data, are discussed in the following chapter.

INFERENCES REGARDING NON-RESPONSES

Approximately 26 per cent (Table 4.6) of the auditors who were employed with firms that supported the study did not respond to the questionnaire. This was after receiving as many as three and four reminders with complete sets of instructions and questionnaires. In an effort to determine the perceptions of the non-respondents, a "t" test was prepared on Table 4.13 comparing auditors who responded after the third request to those accountants who completed the questionnaire at an earlier date. Oppenheim (1966, p. 34) has found that persons who "send in their questionnaires very late are roughly similar to non-respondents." One firm was used for this test in order to compare responses within a homogeneous group.

With the exception of two constructs, reported on Table 4.11, there was no distinction between the earlier

TABLE 4.11

t TEST COMPARING EARLY AND LATE RESPONSES AS A SURROGATE FOR NON-PARTICIPANTS

Independent Variables	Auditors Who Responded Before Third Request (N = 26)		Auditors Who Responded After Third Request (N = 19)		F Value	2-Tail Prob.	T Value	2-Tail Prob.
	Mean	S.D.	Mean	S.D.				
(1) Participation	15.50	2.98	14.21	2.78	1.15	.77	-1.47	.15
(2) Competence and Training	16.92	2.51	17.68	2.65	1.11	.80	.98	.33
(3) Performance/Reward Relationship	16.68	2.72	16.79	2.30	1.40	.47	.14	.89
(4) Client Relationship	16.92	2.31	18.37	2.36	1.04	.91	2.05	.05
(5) Pressure	21.12	3.04	20.74	2.83	1.16	.76	- .43	.67
(6) Organizational Structure	15.96	1.62	17.00	2.58	2.57	.03	1.66	.10
(7) Preference for Assignments	25.76	6.35	22.53	7.17	1.28	5.66	-1.58	.12
(8) Specialization	11.12	3.13	12.00	3.51	1.26	.58	.89	.38
(9) Leadership Structure	42.88	3.54	40.16	7.03	3.96	.00	-1.71	.10
(10) Leader Interpersonal Structure	11.75	1.51	11.32	2.24	2.19	.08	- .76	.45

TABLE 4.11
(continued)

<u>Dependent Variables</u>	<u>Auditors Who Responded Before Third Request (N = 26)</u>		<u>Auditors Who Responded After Third Request (N = 19)</u>		<u>F Value</u>	<u>2-Tail Prob.</u>	<u>T Value</u>	<u>2-Tail Prob.</u>
	<u>Mean</u>	<u>S.D.</u>	<u>Mean</u>	<u>S.D.</u>				
(11) Satisfaction with Work	35.27	8.43	34.50	10.76	1.63	.26	- .27	.79
(12) Desire to Leave	7.72	2.48	8.00	2.49	1.02	.96	.37	.71
(13) Job Anxiety	32.96	8.61	32.94	8.91	1.07	.85	- .01	1.00
(14) Job Performance	16.73	2.18	17.74	1.97	1.23	.66	1.59	.12
<u>Moderating Variables</u>								
(15) Role Ambiguity	15.85	3.81	15.28	4.06	1.13	.76	- .47	- .64
(16) Role Conflict	19.00	4.49	19.74	5.03	1.26	.59	.52	.61

and later group of respondents. Earlier respondents did perceive lower levels of organizational structure and more leadership structure. In general, the inference can be made that non-respondents would have similar characteristics as those auditors who participated in the study.

THE MEASUREMENT INSTRUMENTS

Table 4.12 summarizes the measurements used to examine the constructs found in the analytical model. With the exception of two variables, all of the items appearing on each construct are scored from 1 through 5. The work satisfaction variable has a scoring procedure of 0, 1 and 3 and perceived job performance has a range of 1 through 7.

The first construct is similar to Vroom's (1963) four-item psychological participation measurement. Some of the studies reported in the previous chapter have used this scale (Tosi, 1970; Tosi and Tosi, 1971; Hammer and Tosi, 1974). Two additional items were added in an effort to capture a comprehensive measure of participation in a public accounting firm. Although the auditor's role is the focus of this study, the next five constructs are borrowed from the organizational climate literature. Organizational climate, according to Campbell, et al. (1970), is one of four situational variables found in any organization. Included are (1) structural properties such as organizational size and levels of supervision,

TABLE 4.12

SUMMARY OF INSTRUMENTS USED, IN MEASURING THE CONSTRUCTS OF THE ANALYTICAL MODEL

<u>Independent Variables</u>	<u>Author or Influential Source</u>	<u>Number of Items</u>	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>	<u>Mean Weighted by Number of Items</u>	<u>Cronbach's Coefficient Alpha</u>
<u>Firm Orientation:</u>							
(1) Participation	Vroom (1963)	6	16.05	15.89	4.12	2.68	.78
(2) Competence and Training	Newman (1974)	5	17.89	18.08	2.69	3.58	.74
(3) Performance/Reward Relationship	Newman (1974)	5	18.12	18.33	2.70	3.62	.76
<u>Client Orientation:</u>							
(4) Client Relationship	Newman (1974)	5	17.91	17.88	2.84	3.58	.81
(5) Pressure to Perform	Newman (1974)	6	20.80	20.82	2.72	3.47	.61
(6) Organizational Structure	Litwin and Stringer (1968)	5	16.31	16.24	2.09	3.26	.64
<u>Professional Orientation:</u>							
(7) Preference for Assignments	Slavin	8	25.61	25.92	5.42	3.20	.89
(8) Degree of Specialization	Slavin	4	12.80	12.55	3.69	3.20	.82
<u>Leadership Orientation:</u>							
(9) Leadership Structure	LBDQ-Form 12 (1963)	10	17.10	16.20	5.28	1.71	.83
(10) Leadership Inter-personal Relations	Kahn, <u>et al.</u> (1964)	3	12.10	12.14	2.00	4.03	.79

TABLE 4.12
(continued)

<u>Intervening Variables</u>	<u>Author or Influential Source</u>	<u>Number of Items</u>	<u>Mean</u>	<u>Median</u>	<u>Standard Deviation</u>	<u>Mean Weighted by Number of Items</u>	<u>Cronbach's Coefficient Alpha</u>
(11) Role Ambiguity	Rizzo, House and Lirtzman (1970)	6	15.08	14.74	4.07	2.51	.85
(12) Role Conflict	Rizzo, House and Lirtzman (1970)	8	19.14	18.61	5.35	2.39	.79
<u>Dependent Variables</u>							
(13) Satisfaction with Work (JDI)	Smith, Kendall and Hulin (1969)	18	36.01	37.39	9.41	2.00	.77
(14) Job Anxiety	Taylor (1953); House and Rizzo (1972)	12	32.25	31.50	8.59	2.69	.90
(15) Desire to Leave	Senatra (1976); Rhode, Sorensen and Lawler (1977)	3	7.79	7.79	2.73	2.60	.71
(16) Perceived Job Performance	Porter and Lawler (1968)	3	17.28	17.60	2.37	5.76	.73

(2) industry characteristics such as growth, competitive labor markets, (3) formal role characteristics such as procedural rules, and (4) organizational climate. It is a perceptual and subjective construct in that it summarizes role members' descriptions of their organization. Hellriegel and Slocum (1974) use the following definition and implicit themes:

. . . Organizational climate refers to a set of attributes which can be perceived about a particular organization and/or its subsystems, and that may be induced from the way that organization and/or its subsystems deal with their members and environment. Several themes are implicit in this definition of organizational climate . . . (a) perceptual responses sought are primarily descriptive rather than evaluative; (b) the level of inclusiveness of the items, scales, and constructs are macro rather than micro; (c) the units of analysis tend to be attributes of the organization or specific subsystems rather than the individual, and (d) the perceptions have potential behavioral consequences (Hellriegel and Slocum, 1974, p. 256).

James and Jones (1974) prefer the term "psychological climate" which describes the interaction between the individual's attributes and the properties of the organization. Organizational climate is only concerned with properties of the organization which may be measured objectively or by aggregating the subjective descriptions of individuals.

BACKGROUND OF MEASUREMENT INSTRUMENT

The first measurement is similar to Vroom's (1963) four-item scale on participation in organizational policy. It has been used in some of the studies reported in the

literature review (Tosi, 1970; Hammer and Tosi, 1974) and has been found to have a test-retest reliability of .63 (Vroom, 1963). The next five variables were borrowed from two organizational theorists. Four scales were taken from Newman's (1977) Perceived Work Environment instrument which measures the employee's perception of his immediate working area and does not contain many of the global characteristics found with other climate measurements. Newman (1974) was able to establish high levels of validity and reliability for these scales. Four of these factors were adapted by this writer because (1) they represented organizational facets that were related to the accounting profession, and (2) they were anchored on the respondent's collective experience. Newman used four approaches in his attempt at obtaining construct validity. They were:

. . . (a) striving to include a comprehensive set of important work environment facets, (b) using items that had been rated descriptive (as opposed to evaluative), (c) affirming empirically a multidimensionality interpretation of perceived work environments (the dimensions being very similar to what was anticipated), and (d) acceptable internal consistent reliability estimates for principal component-derived scales (Newman, 1977, pp. 525, 526).

The other organizational climate factor was borrowed from the Litwin and Stringer (1968) Organizational Behavior and Description Questionnaire. The original organizational structure factor had eight items. Three of the items were eliminated because they had complex loadings after performing

a factor analysis procedure. Although two studies found "doubtful validity and reliability" (Sims and LaFollette, 1975; Muchinsky, 1976) with the Litwin and Stringer measurement, both found high internal consistency with the organizational structure dimension. The feasibility of using a climate measurement across many organizations is met with skepticism by Muchinsky:

. . . Since climate is typically defined as perceptions of work environment, it may well be that different types of organizations have relatively unique work environments. Thus it may be possible to develop a valid and reliable climate questionnaire for use in homogeneous organizations as medical centers or public utilities, but it appears unlikely that the validity and reliability of specific climate scales will stand up when applied across different types (or heterogeneous) organizations (Muchinsky, 1976, p. 387).

The two scales measuring the auditor's preference for his assignments and degree of specialization were developed by this writer. Attempts at validating these scales are presented in the next section.

The two measurements found in the leadership frame of reference were developed by Stogdill (1963) and Kahn, et al. (1964). The LBDQ-Form 12 has been found to be the best measurement of leadership behavior because it has few complex items and the questions are not oriented to production employees

(Schriesheim and Stogdill, 1975; Szilagyi and Keller, 1976). House and Rizzo (1972) used an eight-item scale in their study of role ambiguity and conflict. Szilagyi and Sims (1974a) found the Supervisory Behavior Description (SBD) questionnaire which contains similar items of leadership structure to be valid across various occupational positions. The three items on the other leadership interpersonal relations scale measure the focal person's trust, respect and affinity toward his supervisor. The measure was used in the Miles study (1974) and had a reliability of .83.

The role ambiguity and conflict scales were developed by Rizzo, House and Lirtzman (1970) and have been extensively used in the role theory literature. Similar to Newman, the scales were validated through a factor analysis procedure and had reliability scores of .78 for role ambiguity and .82 for conflict. Senatra found consistent results using senior accountants where reliability coefficients were .79 for role ambiguity and .81 for conflict. As indicated in Table 4.10, the coefficient alpha values for these constructs were .85 and .79. Schuler, Aldag and Brief replicated the construct validity of these measures across six different samples. They concluded that:

. . . role conflict and ambiguity are valid constructs in organizational behavior research and are usually associated with negatively valued states, e.g., tension, absenteeism, low satisfaction, low job involvement, low expectancies, and task characteristics with a low motivating potential (Hackman and Oldman, 1975). However, the concurrent and test-retest validities examined here suggest that within and across samples (sic) differences may exist and should be examined for each sample (Schuler, Aldag and Brief, 1977, pp. 125-126).

The four criterion variables were selected because (1) they have been anchored in other role ambiguity and conflict models, and (2) were the most valid measurements available. The five dimensions of the Job Description Index (Smith, Kendall and Hulin, 1969) were used because of its consistent validity and reliability reports in the literature. Only the satisfaction with work dimension is incorporated in the analytical model. The Job Anxiety Index was borrowed from House and Rizzo (1972) and incorporates some items from the Taylor's Manifest Anxiety Index. Miles (1974) and Senatra (1976) used this scale in their studies and reported respective reliability coefficients of .89 and .87. Three items were used to measure the auditor's desire to leave the firm. Two items were obtained from the Senatra (1976) study. One reported the auditor's overall intention on leaving the firm and the other asked the respondent to indicate how long he expected to remain with the firm. The third item completing this scale came from the Rhode, Sorensen and Lawler (1977) study on turnover in the accounting profession. The items attempt to determine the highest position the auditor expects to achieve in the firm. Using an intention to leave index has been considered an acceptable surrogate for measuring turnover (Porter and Steers, 1973) and has been used in other studies (Sorensen and Sorensen, 1974).

The last variable is probably the most important criterion factor in the study. Unfortunately it has the

largest limitation because of its reliance on the self ratings of the respondents. The scales and instructions were obtained from Porter and Lawler (1968). During the initial stage of the research project, this writer was hopeful of obtaining supervisor performance ratings. Due to the extreme difficulty encountered in obtaining the respondents for this study, this information was not requested from the participating firms for fear that they would withdraw from the project. Inconsistent results have been reported using a self-rating measurement. House and Kerr (1973) found self-rating evaluations did not correspond with those obtained from the employee's peers and supervisors. Miles (1974) experienced similar problems in obtaining performance data and had to rely on a single-item measure of perceived job evaluation. Reference was made to a study by Pruden and Reece (1972) where actual job performance of industrial salesmen was related to self-rated evaluations.

RELIABILITY OF CONSTRUCTS USED
IN THE ANALYTICAL MODEL

Reliability has been defined by American Psychological Association "as the degree to which results of testing are attributable to systematic sources of variance" (American Psychological Association, 1974, p. 48). It essentially measures the consistency and stability of a specific measurement. Because this was an attitudinal

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survey, all of the scales selected for the research questionnaire contained more than one item. Oppenheim warns against using single-item measurements.

Since attitudinal questions are more sensitive than factual questions to changes in wording, context, emphasis, and so on, it becomes almost impossible to assess reliability by 'asking the same question in another form'. It will no longer be the same question. For this reason, we should not rely on single questions when we come to measure these attitudes that are most important to our study; we should have sets of questions or attitude scales. . .sets of questions are more reliable than single opinion items; they give more consistent results, mainly because vagaries of question wording will probably apply to particular items (and thus any bias may cancel out), whereas the underlying attitude will be common to all of the items in a set or scale (Oppenheim, 1966, pp. 73-74).

Cronbach's Coefficient Alpha was used to test the reliability of the scales used in the questionnaire.

According to Nunnally, "coefficient alpha provides a good estimate of reliability in most situations, since the major source of measurement is because of sampling content"

(Nunnally, 1978, p. 230). Except for the organizational structure and pressures scales, all of the variables appearing on Table 4.10 had reliability scores in excess of 70 per cent. Nunnally considers such reliability scores as adequate for developing hypothesized relationships of constructs.

Efforts to obtain alpha values in excess of 80 per cent are considered to be wasteful of time and funds (Nunnally, 1978). Three items in the original organizational structure scale were eliminated in order to obtain the .61 alpha coefficient.

VALIDITY OF CONSTRUCTS USED
IN THE ANALYTICAL MODEL

Three types of validity were identified by Nunnally (1974) -- predictive, content and construct. Predictive validity measures the effectiveness of a construct to predict some criterion variable of performance. Measurements used in college entrance exams is an example. Since the primary objective of this study is the understanding of the auditor's behavior and not predicting personal outcomes, no tests for predictive validity were made.

Content validity measures the extent to which the measurement is a good representative of the specific area of study. In content validation, the instrument is usually evaluated by a panel of judges or experts. Norton (1975) used this procedure with his ambiguity-tolerance scale. Students were instructed to imagine they were either tolerant or intolerant of ambiguity and were then given the intolerance scale. The measurement was able to separate these two groups consistent with the original instructions. A similar procedure was used by Brayfield where students in a personnel psychology class were classified by occupations related to the psychology discipline and then administered a job satisfaction questionnaire. Students who were employed in their field of specialization reported greater job satisfaction. Keller, Szilagyi and Holland (1976) asked the management of a manufacturing firm to identify those members of the organization that were

boundary-spanners and found their perception to be congruent with their Boundary-Spanning Activity Scale.

The items appearing on this questionnaire that have not received extensive validation in the literature were reviewed by an expert panel consisting of two CPA partners and three accounting professors. The panel was given a randomized version of scale items without identifying the related constructs. Most of the items were successfully classified according to the a priori characteristics of the particular scale.

Construct validity involves examining the variable in some theoretical framework and is usually determined through hypotheses testing. This is emphasized by the American Psychological Association where:

. . . such hypotheses form at least a tentative theory about the nature of the construct of the test it is believed to be measuring. In a full investigation, the test may be the dependent variable in some studies and the independent variable in others. Some hypotheses may be 'counter hypotheses' suggested by competing interpretations or theories (American Psychological Association, 1974, p. 30).

Some of the methods advocated by Cronbach and Meehl (1955) for construct validation were the use of group differences and factor analytic procedures. Other methods used by House and Rizzo (1972) were convergent and discriminant validity procedures. Convergent validity involves measuring a specific trait with another related measurement. If two independent measures of a particular construct converge, evidence exists regarding the hypothesized relationship.

Discriminant validity examines the unique characteristics of a measurement compared to unrelated variables. Here, low correlations are expected where the two measurements are presumptively analyzing different constructs.

This study uses the group difference and factor analytic strategies for construct validation. An additional hypothesis had to be developed regarding the first procedure. Specifically, the following relationships are expected to occur regarding the ten constructs used in the alien audit environment:

Hypothesis 6: Certain constructs within an audit environment are related to the accountant's position in the organization. Specifically, auditors at the higher positions of the organization will perceive greater levels of participation, performance-reward relationship, competence and training, preference for assignments, and specialization. Differences in perception are not expected to occur for client relationship, pressure, organizational structure, leadership structure and leadership interpersonal relations.

The rationale for this hypothesis is that resources which are normally controlled by the organization would be disproportionately shared by its membership. Managers would participate in the selection of their audit engagements more frequently than seniors and staff accountants. In addition, the auditor's tenure in the CPA firm should influence his collective perceptions regarding these constructs. Managers would be expected to have had more training and developed a higher intensity of client specialization than auditors occupying lower positions in the firm.

The statistical methodology used to test this hypothesis was the one-way analysis of variance and the Newman-Keuls post-comparative test (Winer, 1971). Similar approaches have been recorded by Bare (1978) in analyzing group and supervisory performance, and Keller, Szilagyi and Holland (1976) in validating the boundary-spanning activity scale. Although the second study used the Duncan's Multiple Range Test, Winer (1971) suggests that there is a greater possibility of committing a Type-I error and is therefore less conservative than the Newman-Keuls procedure.

Table 4.13 summarizes the results of the analysis of variance and the post-comparative test. Four out of the five variables that were influenced by the organization confirm the hypothesized relationships. Participation, for example, was perceived to be more prevalent at the higher organizational positions. The reader should be aware that all significant differences are stated at the .05 level because of the default requirements of the SPSS (1977) computer program. Managers also experienced greater levels of training, performance-reward relationships, preference for assignments, and specialization. The preference for assignment construct was marginally significant from the ANOVA results. As predicted, auditors had similar perceptions in four out of five of the other constructs. The only exception was leadership structure, where staff accountants experienced more direction from their supervisor than seniors and managers. Even though this is not an

TABLE 4.13

ONE-WAY ANALYSIS OF VARIANCE (ANOVA) AND THE NEWMAN-KEULS MULTIPLE RANGE TEST
FOR CONSTRUCTS RELATED TO THE AUDITOR'S ENVIRONMENT

Independent Variables	One-Way ANOVA			Organizational Level			Number of Subsets
	F Ratio	d/f	Significance	Staff	Seniors*	Managers	
<u>Firm Frame of Reference</u>							
(1) Participation	33.72	2/298	.000				
Mean				14.08	16.42	18.69	
Standard Deviation				3.09	3.86	4.45	
Difference Between Groups				$\leftarrow P < .05 \rightarrow$ $\leftarrow P < .05 \rightarrow$ $\leftarrow P < .05 \rightarrow$			3
(2) Competence and Training	17.95	2/303	.000				
Mean				17.11	17.74	19.36	
Standard Deviation				2.57	2.46	2.66	
Difference Between Groups				$\leftarrow P < .05 \rightarrow$			2
(3) Performance/Reward Relationship	7.74	2/302	.001				
Mean				17.66	17.93	19.16	
Standard Deviation				2.80	2.50	2.63	
Difference Between Groups				$\leftarrow P < .05 \rightarrow$			2
<u>Client Frame of Reference</u>							
(4) Client Relationship	2.95	2/300	.054				
Mean				17.52	17.68	18.34	
Standard Deviation				2.37	2.40	2.09	
Difference Between Groups				$\leftarrow P < .05 \rightarrow$ $\leftarrow P < .05 \rightarrow$ $\leftarrow P < .05 \rightarrow$			2
(5) Pressure to Perform	0.74	2/300	.479				
Mean				20.55	20.97	20.89	
Standard Deviation				2.92	2.64	2.52	
Difference Between Groups				$\leftarrow P < .05 \rightarrow$			1

* This group is overlapped between the other organizational positions

TABLE 4.13
(continued)

Independent Variables	One-Way ANOVA			Organizational Level			Number of Subsets
	F Ratio	d/f	Significance	Staff	Seniors*	Managers	
(6) Organizational Structure	.39	2/299	.679				
Mean				16.21	16.29	16.49	
Standard Deviation				2.11	2.09	2.07	
Difference Between Groups				←—————→			1
<u>Professional Frame of Reference</u>							
(7) Preference for Assignments	2.61	2/300	.075				
Mean				24.93	25.51	26.77	
Standard Deviation				5.24	5.63	5.28	
Difference Between Groups				←P<.05→ ←P<.05→			
				←—————P<.05—————→			2
(8) Specialization	41.89	2/302	.000				
Mean				10.81	13.14	15.24	
Standard Deviation				3.36	3.08	3.45	
Difference Between Groups				←P<.05→ ←P<.05→			
				←—————P<.05—————→			3
<u>Leadership Frame of Reference</u>							
(9) Leadership Structure	4.18	2/303	.016				
Mean				43.99	42.30	42.08	
Standard Deviation				4.23	5.41	6.22	
Difference Between Groups				←—————→			1
(10) Leadership Interpersonal Relations	1.76	2/298	.174				
Mean				11.96	12.05	12.49	
Standard Deviation				1.97	2.09	1.72	
Difference Between Groups				←—————P .05—————→			2

* This group is overlapped between the other organizational positions

organizational-oriented variable, the relationship appears reasonable. Staff accountants, particularly near the entry level, are expected to have their performance monitored more frequently than at the higher position. In summary, the constructs do appear to separate the groups on an a priori basis.

The second construct validation procedure was the application of a factor analysis to determine whether the items appearing on the audit environment would represent ten distinct constructs. According to Spekman (1979, p. 111), "such a 'single common factor' approach has an implicit objective of construct validity." Table 4.13 presents the results of the factoring procedure. The Type-PA2 of SPSS (Nie, et al., 1977), a standard principal components analysis technique with Varimax rotation, was employed. The program uses an iterative procedure for estimating commonalities used in the main diagonals of the initial correlation matrix. This method has been used by other theorists with respect to determining the identification of single items and constructs (Kahn, et al., 1965; Lodahl and Mathilde, 1965; Rizzo, House and Lirtzman, 1970; Swieringa and Moncur, 1975; Miles, 1976; Beehr, 1976; Muchinsky, 1976; Abdel-Halim, 1978; Spekman, 1979; Jones and James, 1979). Four separate factor procedures were completed. The first analysis only examined the first eight constructs because of the previous reported validity of the two leadership scales (Schriesheim and Stogdill,

1975; Schriesheim, House and Kerr, 1976; Kahn, et al., 1964; Miles, 1976). Eleven factors were initially reported but only eight had eigenvalues exceeding 1.0. A second procedure was then completed with eight factors specified. All of the items on both procedures had similar loadings. In an attempt to have a comprehensive evaluation of all of the independent variables, a third factor procedure was completed. Fourteen factors appeared but only ten had eigenvalues exceeding 1.0 and represented 90.7 per cent of common factor variance. In the final procedure, ten factors were specified. All of the items which are found on Table 4.14 were essentially identical to the results obtained where no factors were specified. The table includes an identification number which permits the reader to locate the item in the research questionnaire reported in the Appendix. Items are underscored where they exceed .30. This appears to be a standard in the literature although the Kahn, et al. study used a .20 cut-off while the Rizzo, House and Lirtzman group had the additional criterion that an item also had to exceed any other question by at least ten per cent.

In general, the results were positive. Six out of the ten constructs had all of the items loaded on a unique factor. One item on the participation variable and two items on the structure construct appeared to be complex. The performance/reward relationship items appeared to be tapping two different perceptions. Two of the items were

TABLE 4.14

ITEM LOADINGS OF A TEN-FACTOR SOLUTION FOR ALL INDEPENDENT VARIABLES

Constructs			Factor	Factor	Factor	Factor	Factor	Factor	Factor	Factor	Factor	Factor
Item		Code No. on Questionnaire (Card 1, Question __)	1	2	3	4	5	6	7	8	9	10
Participation	1	15*	.21	-.02	.14	.05	.62	.15	-.11	.05	.11	-.08
	2	17*	.04	.03	.17	.08	.28	-.05	-.27	.06	.05	.08
	3	19	.15	.04	.02	.07	.59	.14	.01	.10	.16	.13
	4	21	.22	.04	.08	.10	.69	.09	-.06	.08	-.07	.11
	5	24	.21	-.02	.22	.06	.40	-.18	-.03	.07	.07	.06
	6	26	.26	.07	.09	.10	.78	-.00	-.06	.09	.02	.02
Competence	1	11	.08	.02	.44	.17	.00	.02	.08	.02	.14	.05
	2	14	.14	.16	.42	.17	.02	.14	.03	.01	.16	.18
	3	18	.12	.10	.48	.13	.23	.07	.11	.11	.05	.04
	4	22	.10	-.06	.74	.05	.17	.15	.07	.13	.12	-.00
	5	25	.05	-.06	.63	.02	.17	.07	.09	.25	.01	.06
Reward	1	12	.16	.09	.30	.10	.03	.06	.01	.04	.67	.06
	2	13	.19	.11	.13	.02	.10	.09	-.07	.06	.69	.13
	3	16	.06	.01	.28	.13	.22	-.10	-.01	.01	.52	.23
	4	20*	.14	.09	.06	.10	.19	.07	-.13	.08	.17	.77
	5	23*	.17	.08	.14	.08	.05	.06	-.22	.07	.18	.69
Relations	1	27	.08	.05	.23	.63	.09	.06	.06	.05	.01	.04
	2	29	.10	-.06	.06	.60	.12	-.04	-.06	.09	.05	.08
	3	31	.10	-.05	.22	.53	.01	.06	-.02	-.01	-.13	.24
	4	38	.11	-.03	.04	.70	.09	.06	-.06	.07	.11	-.10
	5	39	.10	.08	.18	.71	.11	.03	-.03	.09	.12	.05
Pressure	1	28	-.17	.01	-.02	-.12	-.05	-.01	.55	.02	-.14	-.07
	2	33	-.12	-.02	-.06	-.07	-.02	-.03	.79	.02	-.02	-.06
	3	37	.09	.05	-.04	-.11	-.16	.04	.48	-.14	.03	-.13
	4	40	.09	.13	.20	.13	.03	.17	.49	.09	.12	-.01
	5	41	-.06	.03	-.29	-.11	-.15	.06	.17	-.13	-.05	-.06
	6	44	.02	-.08	-.11	-.24	-.05	.02	.23	-.11	-.00	-.26
Organizational Structure	1	30*	.22	-.04	.36	.28	-.09	-.03	-.14	.03	.00	-.00
	2	36	.08	.08	.41	.23	-.03	.05	-.17	-.27	.20	-.02
	3	42*	.09	.03	.29	.28	-.02	-.02	-.13	-.18	.13	.06
	4	43	.09	.14	.34	.26	.09	-.02	-.14	-.22	.25	-.06
	5	45*	.03	-.02	.10	.12	-.09	.01	-.13	-.14	.09	.08

*Indicates reverse scoring

TABLE 4.14
(continued)

Constructs			Factor	Factor	Factor	Factor	Factor	Factor	Factor	Factor	Factor	Factor
Item		Code No. on Questionnaire (Card 1, Question __)	1	2	3	4	5	6	7	8	9	10
Preference	1	46	.71	.06	.04	.08	.15	-.05	.08	-.03	.01	-.02
	2	47	.77	.10	.04	.06	.15	.04	.05	.04	.04	.10
	3	48*	.46	.05	.09	.11	.06	-.01	-.11	.02	.05	-.06
	4	51*	.69	.03	.14	.06	.12	-.07	-.11	.08	.07	.13
	5	54	.67	.04	-.02	.10	.19	.13	.04	-.03	.04	.05
	6	55	.83	.08	.09	.04	.11	.05	-.01	.08	.09	.09
	7	56*	.63	.12	.14	.08	.07	.02	-.09	.13	.12	.01
	8	57*	.71	.06	.21	.06	.13	.11	-.07	.17	.07	.10
Specialization	1	49	-.05	-.05	.04	.14	.23	.79	.03	.00	.13	.01
	2	50	.06	-.03	.14	-.00	-.01	.78	.03	.00	-.03	.02
	3	52	.09	-.01	-.00	.12	.28	.73	.04	.02	.16	.03
	4	53	.04	.04	.06	-.09	.22	.62	.04	-.02	-.13	.06
Leadership Structure	1	65*	.19	.44	.21	-.01	.07	-.06	-.04	.34	.10	-.02
	2	66*	.08	.55	-.09	.03	-.03	.04	.01	.04	.05	.07
	3	67*	.15	.40	.01	.14	.10	.05	.08	.17	.04	.03
	4	68*	.15	.50	.07	.08	.08	.01	-.07	.33	.09	-.05
	5	69*	.03	.57	-.09	-.16	-.08	-.05	-.09	.01	-.01	-.09
	6	70*	.00	.61	.08	.09	.00	.08	-.09	.19	.16	-.06
	7	71*	.15	.61	.09	.09	.02	.06	.05	.19	.08	.07
	8	72*	.04	.63	.01	.03	.06	.09	.05	.00	.03	.07
	9	73*	-.06	.67	.06	-.12	-.00	-.20	.09	-.16	-.10	.10
	10	74*	-.06	.67	.06	-.13	-.00	-.27	.08	-.17	-.16	.07
Interpersonal Relationship	1	75	.21	.26	.15	.19	.18	.03	-.01	.67	.07	.12
	2	76	.17	.30	.18	.14	.14	.02	-.03	.68	.04	.12
	3	77*	.13	.12	.22	.10	.16	-.04	-.13	.33	.02	.10
Eigenvalue			9.37	3.65	2.72	2.51	1.88	1.68	1.55	1.23	1.12	0.96
Percent of Variance			35.1	13.7	10.2	9.4	7.0	6.3	5.8	4.6	4.2	3.6

*Indicates reverse scoring

loaded on the leadership interpersonal relations construct. In reviewing these questions, they appeared to have been referenced to someone occupying an influential position in the organization. For example, reward 4 and 5 asked the respondent to evaluate the following phenomena:

Rewards are based not so much on the quality or quantity of your work but on 'who you know'. Promotions are given on the basis of 'who you know' rather than on merit.

The organizational structure items had similar identification problems where only three questions loaded significantly on one factor. The difficulty of using this construct was discussed in a previous section. In general, the two procedures used to analyze the validity of the scales appear to be satisfactory. The final and perhaps only method of determining construct validation is to examine the relationship of the constructs in a specified framework or analytical model. This, of course, is the primary objective of the study and is reported in the following chapter. The next section concludes with a discussion on the statistical methods that will be employed in testing the hypotheses.

STATISTICAL TECHNIQUES EMPLOYED FOR TESTING THE RESEARCH HYPOTHESES

The first two sets of hypotheses examine relationships with each of the constructs found in the analytical model. Pearson product-moment correlations coefficients were used for this test. The coefficient measures the

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linear relationship between two variables and can range from -1.0 to +1.0. A correlation of 1.0 indicates that two variables are directly and perfectly related to each other whereas a -1.0 coefficient is a perfect inverse relationship. No relationship is found where $r = .00$. In testing the hypotheses, French and Caplin (1972, p. 35) have interpreted the following range of significant correlations:

$r = .20 - .29$ is a very weak relation

$r = .30 - .39$ is a weak relation

$r = .40 - .49$ is a moderate relation

$r = .50 - .59$ is a substantial relation

$r = .60 - .69$ is a strong relation

The two assumptions underlying the use of Pearson correlations were that the variables be linearly related and the distribution be bivariate normal. Extensive linearity tests were applied in the multiple regression procedures which include these constructs. The normality assumption is extremely robust where the degrees of freedom are greater than 30 (Welkowitz, Ewen and Cohen, 1976, p. 166) and is not important in this study.

The third research hypothesis examines the personal outcomes of role ambiguity and conflict and was tested with partial correlations. Partial correlation coefficients allow one to examine the relationship of two variables while controlling the influence of other variable. Significance tests are similar to Pearson product-moment correlations.

The fourth research hypothesis examined the interaction effect of the auditor's position in the organization. Correlation coefficients were determined for each organizational position and converted into Fisher's Z scores. Differences between the correlations were calculated (Guilford and Fruchter, 1978, pp. 163-164). The methodology has been used in many of the studies reported in the literature review chapter (Beehr, 1976; Beehr, Walsh and Taber, 1976; Katz, 1977; Miles and Petty, 1975; Ivancevich and Donnelly, 1974; Lyons, 1971; Schriesheim and Murphy, 1976; Szilagyi and Sims, 1974).

The last hypothesis on the interaction effects of role ambiguity and conflict was examined by a number of statistical applications. They were:

- (1) Moderated Multiple Regression
- (2) Chow Test of Differences in Groups
- (3) T Test on Differences in Slopes Using Gujarati's Dummy Variable Methodology.

MODERATED MULTIPLE REGRESSION

This method examined the interaction effects of a specific variable through a series of regression equations. Many of the studies cited in the literature review examined interaction effects by dichotomizing an intervening variable such as role ambiguity into high and low groups and then running Pearson product-moment correlations between the independent and dependent variables. According to

Cohen and Cohen (1975), moderated multiple regression (MMR) has many advantages over the subgroup technique. The most important difference is that it does not lose information that would otherwise be lost with the subgroup approach.

Using the strategy developed by Cohen (1968) and applied by other role theorists (Abdel-Halim, 1978, 1979; House, Filley and Gujarati, 1971; Hunt, Osbond and Larson, 1975; Morris and Snyder, 1979; Schuler, 1977a,b), four regressions were analyzed against each of the dependent variables outlined in the analytical model:

<u>Regression Model</u>	<u>Variables</u>
(1) Full Model Includes independent variable, two intervening variables and two interactions	Independent Variable (IV), Role Ambiguity (RA), Role Conflict (RC), Ambiguity Interaction (IV x RA), Conflict Interaction (IV x RC)
(2) Restricted Model Includes independent variable, two intervening variables and one interaction	Independent Variable (IV), Role Ambiguity (RA), Role Conflict (RC), Ambiguity Interaction (IV x RA)
(3) Restricted Model Includes independent variable, two intervening variables and one interaction	Independent Variable (IV), Role Ambiguity (RA), Role Conflict (RC), Conflict Interaction (IV x RC)
(4) Main Effects Includes independent variable and two intervening variables	Independent Variable (IV), Role Ambiguity (RA), Role Conflict (RC)

In determining whether the intervening variables have a moderating effect, the full model was compared to the main effects model. The full model was then compared to each of the restricted models in order to isolate the

interactions of role ambiguity and conflict. Comparisons were also made between the restricted models and the model containing the main effects. Kerlinger (1973) provides the following significant test for examining these interactions:

$$F = \frac{\left(R^2_{\text{full}} - R^2_{\text{restricted or main effects}} \right) / \left(\text{Number of IV's in full model} - \text{Number of IV's in restricted model} \right)}{\left(1 - R^2_{\text{full}} \right) / \left(\text{Number of variable} - \text{Number of IV's in full model} - 1 \right)}$$

All of these procedures were applied to the total sample of auditors and three additional computations were performed for each organizational position.

CHOW TEST OF SIGNIFICANCE BETWEEN GROUPS

Using a program reported in the BMDP manual (Dixon and Brown, 1979), a series of multiple regressions were completed for each of the ten independent variables and their interactions with role ambiguity and conflict. The procedure calculated the Chow Test which examined whether the regressions between the groups were different. The reader will recall that no hypotheses are stated for interactions between groups and the procedure is an exploratory exercise. The following was the formula of the Chow Test:

$$F = \frac{\text{Residual Sums of Squares Over Groups} / \text{Number of Variable}}{\text{Residual Sums of Squares Within Groups} / \left(\text{Number of Individuals} - \text{Number of Groups} - \text{Number of Variables} \right)}$$

T TEST ON DIFFERENCES BETWEEN SLOPES

The purpose of this procedure was to determine which groups differ from each other and evaluate its significance. According to Gujarati (1970b, p. 50), "The Chow Test is rather general in nature in that it merely tells whether two regressions are different or not without specifying whether the difference, if any, is due to differences in the intercept terms or due to differences in slope coefficients." The author recommended the use of dummy variable coding for groups in examining possible differences. The following regression equation was used for examining each of the ten independent variables and their relationships with role ambiguity and conflict:

$$\begin{aligned} Y &= a_1 + a_2 D_1 + a_3 D_2 + b_1 (IV) + b_2 (RA) + b_3 (RC) + \\ & b_4 (RA \cdot IV) + b_5 (RC \cdot IV) + b_6 (D_1 IV) + b_7 (D_2 IV) + \\ & b_8 (D_1 RA) + b_9 (D_2 RA) + b_{10} (D_1 RC) + b_{11} (D_2 RC) + \\ & b_{12} (D_1 RA \cdot IV) + b_{13} (D_2 RA \cdot IV) + b_{14} (D_1 RC \cdot IV) + \\ & b_{15} (D_2 RC \cdot IV) \end{aligned}$$

The D_1 and D_2 represented dummy variables for the auditor's organizational position. The a 's were the intercepts and the b 's were the beta coefficients for each of the constructs. Two sets of regressions were completed. One procedure used the manager's position as the reference group and the second used the staff accountant. This permitted comparisons between all of the positions. Differences between slopes and coefficients were subsequently examined through t-tests (Gujarati, 1978, p. 299).

ASSUMPTIONS OF MULTIPLE REGRESSION ANALYSIS

There are three underlying assumptions regarding multiple regressions. One requires that the measurement of the independent variable be randomly selected. Two is the homogeneity of variance requirement where the values obtained on the dependent variable must have equal variance for each of the independent variables. Three is the normal distribution requirement. This assumes that the values obtained from the dependent variable are normally distributed about each independent variable. Kerlinger and Pedhazur (1973) conclude that the F and t statistics are fairly robust regarding violations of these assumptions. A large F value (significant at the .01 level) was used in this study in an effort to minimize the effect of violating these assumptions. This was consistent with the following evaluation of hypothesis testing under regression analysis:

. . . inferences based on the F statistic are not seriously distorted by violations of assumptions 4 and 5 (normality and homoscedasticity of distributions of possible observations for cases around 'true' values for the case on that variable). Consequently, most of the distortion of the F statistic will ordinarily be produced by the imposition of false hypotheses. Thus, when F is large, we shall usually be safe in rejecting the hypotheses which we have imposed for test (Namboodiri, Carter and Blalock, 1975, p. 88).

Two final observations on regression analysis concern the potential presence of multicollinearity of the independent variables and the nonlinear relationships with the dependent variables. Each of these issues will be covered in the following chapter.

CHAPTER V

RESULTS OF EMPIRICAL STUDY

All of the research hypotheses related to the analytical model are tested in this chapter. Each research question will be reviewed prior to presenting the statistical results.

The first set of research hypotheses are directed to the auditor's collective perception of his environment. Where the auditor perceives a deficiency in any of the factors found in his perceptual environment, unfavorable outcomes are expected to occur.

HYPOTHESIS SET 1:



All of the statistical procedures used to support the hypotheses pertaining to this chapter are presented in Appendix VIII. This will allow the reader to follow

the discussion without being interrupted by the tabular presentations of the results. Tables 5.1.A and 5.1.B summarize the coefficients of correlation for all of the relationships. Each of the independent variables are correlated against four personal outcomes. The implicit null hypothesis is either the occurrence of no relationship or an outcome in the opposite direction. With few exceptions, the relationships are significant and in the predicted direction. Participation corresponded with job satisfaction, job performance and inversely with desire to leave and anxiety across all organizational positions. The only insignificant relationship, but in the correct direction, is with job performance where the coefficient is .11 for staff accountants and .09 for managers. The auditor who perceives he has received adequate training is generally satisfied with his work and does not experience job anxiety. Except for the manager position ($R = -.02$), there is an inverse relationship with the desire to leave the firm. The correlations are not significant regarding job performance for two positions.

Table 5.2 summarizes the significance and direction of all of the correlations. Some of the constructs had four or more insignificant relationships. Leadership structure did not influence personal outcomes for

some organizational positions, particularly at the senior level. This may partially be explained by the transition that occurs from the staff to senior position. Senior accountants who are supervising client engagements for the first time in their careers and may not value the direction received from their superiors as they did prior to their superiors as they did prior to their promotion. Although none of the coefficients are significant, pressure is related directly to job performance. The sign is contrary to the direction hypothesized. Auditors probably relate their performance to the degree of pressure they experience on the job. The degree of specialization shows three insignificant but unexpected relationships for managers. Specialization is related directly to job anxiety and desire to leave and inversely to job satisfaction. This construct may not be an important factor in the manager's perceptual environment unless he experiences ambiguity and conflict. These interactions will be explored in a later section.

In general, the constructs of an audit environment influence personal outcomes for auditors at every position. Most of the insignificant relationships are reported with the job performance outcome. The possibility of a halo effect may exist in that accountants, particularly at the manager level, may rate their job performance favorably regardless of what factors are found in their

audit environment. It should be noted that all of the correlations are scored in the positive direction indicating an absence of an alien environment. For example, participation is directly related to satisfaction with work. Either construct could have been reverse scored indicating that an absence of participation is related to unfavorable outcomes. The results are identical in both cases.

POTENTIAL SOURCES AND PERSONAL OUTCOMES
OF ROLE AMBIGUITY AND CONFLICT

The next two sets of hypotheses will be examined in this section because they are referenced on the same tables. Sources of role ambiguity and conflict are attributed to the constructs of an alien audit environment.

HYPOTHESIS SET 2:



Table 5.3 presents zero order correlations for role ambiguity with all independent and dependent variables. This is followed with partial correlations

controlling for the effects of role conflict. The identical procedure is found for role conflict while controlling for the effects of ambiguity. One of the purposes of a partial correlation, as indicated in the previous chapter, is to eliminate a spurious relationship. Consistent with the role theory literature, role ambiguity has a .45 correlation ($P < .001$) with conflict. Only respondents that have no missing data on any of the constructs are included in this analysis.

With the exception of specialization, all of the zero order correlations for both role strain constructs are significant and in the hypothesized direction. Some of the ambiguity correlations become insignificant while partialing out the effects of role conflict. Although the correlation scores also diminished for conflict while controlling for ambiguity, all of the results remained significant. This may suggest that when examining auditors without regard to their position in the firm, role conflict is the more pervasive phenomenon.

Using another procedure, Table 5.4 present t tests between high and low perceptions of role ambiguity and all of the independent and dependent variables. Role ambiguity was split at the mean and a similar presentation was performed for role conflict (Table 5.5). Pressure and

leadership structure, which had the weakest correlations with role ambiguity, are not significantly different between the two groups. Except for specialization, all of the constructs are significantly different between the groups, as indicated in Table 5.5.

The third set of hypotheses suggests that role ambiguity and conflict are sources of personal outcomes.

HYPOTHESIS SET 3:



All of the zero order correlations in Table 5.3 are significantly related to both role strain constructs. Job anxiety becomes insignificant when the effects of conflict are partialled out. A similar result occurs with job performance and role conflict after controlling the effects of role ambiguity. All of the t tests are significant for both groups.

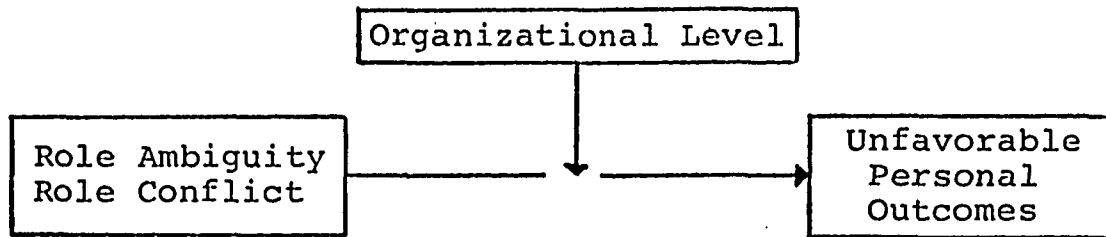
In general, unfavorable factors in an auditor's perceptual environment are seen to effect role ambiguity and conflict. These role strain variables also contribute to various unfavorable personal outcomes. The results, to this point, suggest that role strain may be a pervasive problem throughout a public accounting firm.

The following section examines the moderating effects the auditor's position may have with these relationships.

PERSONAL OUTCOMES OF ROLE STRAIN MODERATED
BY ORGANIZATIONAL POSITION

The fourth set of hypotheses considers role ambiguity to be more stressful to auditors closer to the lower end of the organization. Role conflict is expected to be more influential for the higher positions.

HYPOTHESIS SET 4:



There are essentially four research questions in this set.

They are:

- (1) The absolute amount of perceived role ambiguity is greater for lower organizational level in an accounting firm.
- (2) The absolute amount of perceived role conflict is greater for higher organizational levels in an accounting firm.
- (3) Role ambiguity is a greater source of unfavorable outcomes than role conflict for lower organizational positions.
- (4) Role conflict is a greater source of unfavorable outcomes than role ambiguity for higher organizational positions.

Table 5.6 presents a one-way analysis of variance for role ambiguity and conflict. Different perceptions by organizational level is reported only for role ambiguity. Using a Newman-Kuels post-comparative test, managers and seniors perceive similar levels of role ambiguity. Consistent with the hypothesis, the staff accountant's perception is significantly higher than these two groups.

A Newman-Kuels post-comparative test showed staff accountants perceive higher levels of role ambiguity ($\bar{X} = 16.12$) than senior accountants ($\bar{X} = 14.85$) and managers ($\bar{X} = 13.88$). These perceptions are not significantly different between these other two organization positions.

Thus one of the two hypotheses is confirmed where role ambiguity is more prevalent at the lower position of the organization. Role conflict, however, appears to be experienced equally throughout the organization. The next part of this hypothesis set determines what effect role strain has with personal outcomes.

Table 5.7 summarizes all of the zero order correlations for role ambiguity with independent and dependent variables for each organizational position. A second column reports the partial correlations controlling for role conflict. The reader should note that only the bottom part of the table is used for testing the hypotheses. Ambiguity appears to correspond with different personal outcomes, depending on the organizational position being studied.

Contrary to what was expected, role ambiguity appears to be more of a potential source of unfavorable job satisfaction for the manager accountant than for the other positions. Consistent with the direction of the hypothesis, role ambiguity is a greater source of job performance and desire to leave for the lowest level of the organization. In order to test the differences between organizational positions, the correlations are transformed into Fisher's Z scores and a t test is computed (Ferguson, 1976). The results are reported in

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Table 5.8. Only the differences for job anxiety are significant and they are contrary to the direction of the hypothesis. Thus, role ambiguity appears to be a greater potential for unfavorable outcomes at the higher levels of the organization but only one relationship is significant. The hypothesis set is essentially not confirmed.

Tables 5.9 and 5.10 summarize the same relationship for role conflict. Contrary to what was expected, conflict is a greater predictor of stress for staff accountants than for managers or seniors. Although not significant when partialing out the effect for role ambiguity, managers associate higher levels of conflict ($r = -.10$) with a desire to remain with the firm. Referring to the t values in Table 5.10, satisfaction with work and desire to leave are significantly higher for staff accountants than for the other groups. Senior accountants experience the largest amount of job anxiety ($r = .51$ and $.43$) but the differences are not significant. In general, conflict, contrary to the hypothesis in this study but consistent with role theory literature, is more pervasive at the lower levels of a CPA firm.

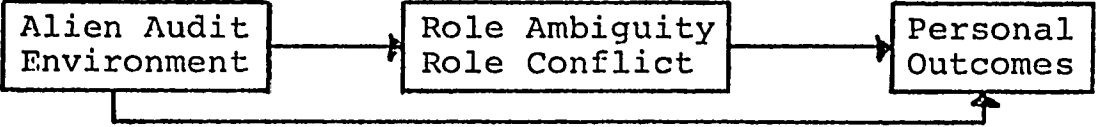
Although no hypotheses were previously stated regarding the moderating effects of the auditor's position with the independent variables, the relationships are similar to the results with the personal outcomes. Referring to Table 5.7, most of the constructs are more inversely related to role ambiguity at the higher organizational

positions. Consistent with the pattern, most of the independent variables show greater relationships with role conflict for staff accountants and seniors than for managers. The following section continues this analysis using multiple regressions.

INTERACTION BETWEEN THE CONSTRUCTS OF AN ALIEN AUDIT ENVIRONMENT WITH ROLE AMBIGUITY AND CONFLICT

The final set of hypotheses examines each independent variable with ambiguity and conflict and the effects it may have with the four personal outcomes. These relationships are not moderated by organizational position because all of the auditors, regardless of position, are treated as one sample.

HYPOTHESIS SET 5:



The hypotheses are tested with a series of multiple regressions for each independent variable (discussed in the previous chapter). They will be analyzed in topical order using the frame of reference approach that was developed in the analytical model. The reader will recall that four regressions will always be used. The first will be described as the "full model" and will include interactions between the independent variable with both role

ambiguity and conflict. The second regression is one of the two "restricted models" which includes the role ambiguity interaction. The third regression is the other restricted model and contains the conflict interaction. The fourth model describes the "main effects" of each model and contains no interactions.

CONSTRUCTS WITHIN THE FIRM
FRAME OF REFERENCE

Tables 5.11.A through 5.11.C report the regressions related to this frame of reference. Beginning with the participation construct in Table 5.11.A, the only significant interaction is with desire to leave. The difference in the R^2 between the restricted model containing the ambiguity interaction and the main effects is significant ($F = 6.49, P < .05$). The ambiguity interaction term explains 26 per cent of the variance compared to 24 per cent in the main effects model. The role conflict interaction term is not a significant moderator for this personal outcome. Referring to the competence construct on Table 5.11.B, the ambiguity interaction explains an additional two per cent of variance in job satisfaction compared to the main effects model ($F = 6.32, P < .05$). Conflict is a more significant factor with regard to job performance. The full model explains 14 per cent of the variance ($F = 8.37, P < .01$), compared to the restricted model which does not contain the ambiguity interaction. This suggests that role conflict is an important moderator between the training an auditor

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receives from his firm with his performance on a client engagement. The last construct in this group, reward/performance relationship, shows no interaction effects for any of the personal outcomes.

CONSTRUCTS WITHIN THE CLIENT FRAME OF REFERENCE

Five interactions are reported for these variables. In Table 5.11.D, the full model, containing client relations and two interaction terms, explains 19 per cent of the variance for desire to leave. This is significantly greater than the restricted model containing the role ambiguity interaction and indicates that role conflict has a significant effect ($F = 5.93, P < .05$). Ambiguity is the significant moderator with respect to job performance. The restricted model containing the ambiguity interaction explains an additional two per cent of variance compared to the main effects model ($F = 5.25, P < .05$). No interactions are reported on Table 5.11.E for the pressure construct and both role strain constructs moderate client organizational structure with job performance (Table 5.11.F).

CONSTRUCTS WITHIN THE PROFESSIONAL FRAME OF REFERENCE

No interactions are reported for the preference construct on Table 5.11.H but the auditor's degree of specialization is significantly moderated by role ambiguity with job performance (Table 5.11.H). The difference between

the 12 per cent variance explained in the full model compared to the 9 per cent in the restricted model with ambiguity is significant ($F = 8.28, P < .01$).

CONSTRUCTS WITHIN THE LEADERSHIP FRAME OF REFERENCE

Only one interaction is significant for the leadership structure construct (Table 5.11.I). The restricted model containing the conflict interaction explains an additional two per cent of variance in job performance compared to the main effects model ($F = 5.31, P < .05$). None of the interaction terms are significant for leader interpersonal relations (Table 5.11.J). The following section reviews the ten significant relationships that were found and offers an explanation as to why more interactions were not reported.

SUMMARY OF SIGNIFICANT INTERACTIONS USING ALL ACCOUNTANTS

Only ten interaction terms containing the role ambiguity and conflict variables are significant. Three possible explanations are suggested. One involves the potential influence the auditor's position may have on the predicted relationships. Schuler (1977a) found no interactions for job satisfaction and performance for the entire organization but found significant relationships when he examined each position as a separate sample. A second reason offered is the possibility that the interactions are

not linearly related to the personal outcomes. A third possibility for the few cases of significant interactions reported may be attributed to the unique nature of the public accounting profession. Accountants may be conditioned not to expect some of the factors of an ideal working environment. All of these possibilities will be examined as an exploratory exercise in the following sections.

In the cases that had significant interactions, the hypotheses suggest directionality of their effects. Figure 5.1 of Appendix IX examines some of the relationships by plotting the effects of high and low levels of role strain with the related values for the independent variable. The procedure used "b" weights from the full regression model and has been used by several role theorists (Hunt, Osborn and Larson, 1975; Schuler, 1977a; Abdel-Halim, 1978, 1979). According to Hunt, et. al. (1975, p. 484):

. . .Where there are continuous variables used in the multiple regression approach, there is potentially an infinite set of lines that could be plotted for high and low values for these vectors. Here, the plotted lines. . . are based on arbitrarily selected values at \pm one standard deviation from the mean. . . absolute values in the interaction diagrams are not as important as the general directions indicated.

Referring to Figure 5.1.a, auditors who experience high amounts of role ambiguity report approximately the same desire of leaving the firm regardless of the level of their participation. This is not the case where the auditors perceive low levels of ambiguity, where there is a greater desire to leave under conditions of low participation. The relationship is consistent with the hypothesis presented in the previous chapter. Participation is apparently desirable in preventing turnover, particularly under conditions of low role ambiguity. In Figure 5.1.b, the auditor's job performance is not effected by his training where he perceives high levels of role conflict. Training does improve performance ratings where there is low amounts of this role strain. The results are somewhat unexpected with regard to the perceptions of competence and training. Auditors reporting higher role conflict evaluate their performance more favorably compared to low perceptions of conflict. Because the performance measure is a self-rating scale, a halo effect may be present. Auditors who perceive inadequate training and experience high levels of conflict may evaluate their performance positively when confronted with such unfavorable circumstances.

Figure 5.1.c presents some conflicting results. Consistent with the predicted direction, auditors are

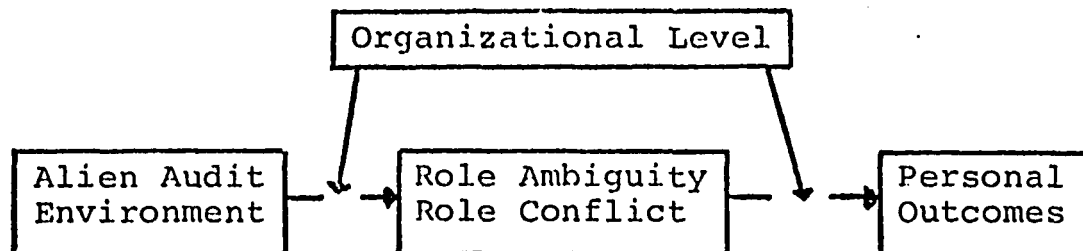
less likely to leave the CPA firm where they experience low amounts of role conflict and have good relationships with the client's employees. This is not the case with high levels of role conflict where auditors are more apt to leave with favorable client relations. The ambiguity interaction in Figure 5.1.d is consistent with the direction of the hypothesis presented in the previous chapter. There is essentially no difference in job performance between favorable and unfavorable client relations where the auditors experience high role ambiguity. Performance ratings are improved however under low perceptions of ambiguity and favorable client relations. The ambiguity interaction moderated the relationship between the client organizational structure with job anxiety (Figure 5.1.e) and job performance (Figure 5.1.f). The client's organizational structure is unimportant under low ambiguity. Anxiety is substantially diminished under conditions of high role ambiguity and high levels of structure. Similarly, performance is unaffected by low levels of ambiguity. Contrary to the direction predicted, high levels of role ambiguity are more aversive under higher structured environments.

Figure 5.1.g suggests that specialization contributes to favorable performance ratings, particularly under conditions of low role ambiguity. The auditor's performance is higher under low role conflict conditions regardless of the level of instruction he receives from his supervisor (Figure 5.1.h). The following sections explore the confounding effects the auditor's organizational position may have on these relationships.

THE EFFECTS OF ORGANIZATIONAL POSITION
WITH THE INTERACTION BETWEEN
ROLE STRAINS AND ALIEN AUDIT CONSTRUCTS

The purpose of this section is to add another dimension to the analytical model in order to examine the effect the auditor's organizational position may have on all of the personal outcomes.

EXPLORATORY MODEL:



Tables 5.12.A through 5.12.J of Appendix VIII present all of the sets of regressions for each organizational position. An additional column reports the results of the Chow test of differences between the groups (described in the previous chapter). Although there were 41 significant interaction terms as compared to the ten relationships reported in the previous section, the results are far from overwhelming. Most of the multiple correlations between each of the full models and the personal outcomes did not exceed 40 per cent. Because there were ten independent variables and four personal outcomes, each organizational position could have had a potential of 80 interaction terms for both role ambiguity and conflict. The reader will recall that Schuler (1977) reported mixed results for his interaction terms where all of the multiple correlations exceeded 40 per cent for job satisfaction but none were significant for the performance variable. As will be analyzed in the following sections, more than half of the significant interaction terms were reported at the manager position, suggesting that the absence of an ideal working environment for the lower organizational positions would not necessarily influence an auditor's role perceptions with the personal outcomes. Another possible explanation regarding the absence of many significant interaction terms may be attributed to the auditor's high tolerance for stress at the entry level positions. Auditors often tolerate role strain

regardless of their working conditions in order to achieve the minimum two-year employment experience required for the public certification.

The following sections describe those relationships that were significant. As will be evident in the graphical analysis reported in Appendix IX, there were no discernible patterns regarding the role ambiguity and conflict interaction terms with any of the personal outcomes. As in the previous section, each of the constructs will be presented within the frame of reference that was developed for the study.

CONSTRUCTS WITHIN THE FIRM
FRAME OF REFERENCE

Table 5.12.A presents all of the interactions for the participation construct for each organizational position. Apparently, the role strain constructs are significant moderators for specific personal outcomes depending upon the auditor's position in the organization. The conflict interaction term explains four per cent more variance with job satisfaction than the main effects model at the senior position ($F = 5.09, P < .05$). The Chow test ($F = 1.89, P < .05$) provides additional evidence that these variables are significantly different for the three organizational levels. The reader will recall that none of the interactions were significant where all of the positions were examined as one sample (Table 5.11.A). We now

discover that the conflict interaction is only related to the staff position. The full model explains an additional five per cent of variance compared to the best restricted model containing the ambiguity interaction term ($F = 5.75$, $P < .05$). No ambiguity interaction term is significant for any organizational position. This was not the case where all accountants were treated as one sample (Table 5.11.A) and indicates that the organizational position is an important factor in analyzing role perceptions. For manager accountants, ambiguity is a significant moderator of job anxiety ($F = 6.75$, $P < .05$) and performance ($F = 6.31$, $P < .05$).

Table 5.12.B indicates that only the job performance outcome is significantly moderated by the interaction terms for competence and training. The full model with conflict explains an additional 6 per cent of variance compared to the best restricted model for staff accountants ($F = 5.85$, $P < .05$). This relation is more significant for managers where conflict explains an additional 10 per cent of variance ($F = 7.50$, $P < .01$). The ambiguity interaction term is the significant moderator for the senior position ($F = 4.25$, $P < .05$).

Five significant interactions are found with regard to the performance/reward construct on Table

5.12.C. Ambiguity explains significant additional variance for staff accountants ($F = 4.87, P < .05$) and managers ($F = 4.29, P < .05$) with job anxiety. The conflict interaction is significant for the staff position for this personal outcome ($F = 5.85, P < .05$).

CONSTRUCTS WITHIN THE CLIENT
FRAME OF REFERENCE

Three interaction terms are significant on Table 5.12.D with regard to the performance/reward variable. Both the ambiguity ($F = 14.55, P < .01$) and the conflict ($F = 18.18, P < .01$) interaction terms are significant moderators of desire to leave for staff accountants. Conflict also moderates job anxiety ($F = 4.88, P < .05$) for this position.

Three of the four significant relationships with respect to the pressure construct are found with the manager position (Table 5.12.E). The full model containing both interaction terms explains an additional 8 per cent of variance in job satisfaction ($F = 6.03, P < .05$) compared to the main effects model. This indicates that both role ambiguity and conflict have a moderating effect but neither variable, by itself, is significant. Conflict moderated job performance for this position ($F = 4.16, P < .05$) as well as for staff accountants ($F = 4.70, P < .05$).

Five significant interactions are found with the organizational structure construct (Table 5.12.F). Conflict explains significant additional variance in job satisfaction for staff accountants ($F = 7.83$, $P < .01$) and managers ($F = 5.11$, $P < .05$). The full model compared to the best restricted model explains an additional four per cent of variance in desire to leave for staff accountants ($F = 4.60$, $P < .05$). Conflict and ambiguity are significant moderators for job performance at the manager position.

CONSTRUCTS RELATED TO THE
PROFESSIONAL FRAME OF REFERENCE

Three interactions are significant for the preference construct on Table 5.12.G. The ambiguity interaction term explains an additional three per cent of variance in job anxiety for senior and manager accountants ($F = 4.62$, $P < .05$; $F = 6.35$, $P < .05$). The full model compared to the second best restricted model shows an additional 6 per cent of variance for the staff position ($F = 9.24$, $P < .01$). This indicates that conflict was a significant indicator of job anxiety.

Table 5.12.H shows ambiguity to be a significant moderator of job satisfaction for senior accountants

($F = 16.17$, $P < .01$). No other interaction terms are significant.

CONSTRUCTS RELATED TO THE
LEADERSHIP FRAME OF REFERENCE

Only the anxiety personal outcome for the leadership construct had two significant interactions (Table 5.12.I). Both of these are at the manager position where ambiguity explains an additional 10 per cent of variance ($F = 9.82$, $P < .01$) and conflict 5 per cent ($F = 4.91$, $P < .05$).

The three significant interaction terms within the leader interperson relations construct are related to job anxiety (Table 5.12.J). Role ambiguity and conflict account for additional variance for senior accountants. The following section analyzes some of these relationships in an effort to explore the directions of the interaction terms.

ANALYSIS OF SELECTED INTERACTION TERMS
MODERATED BY ORGANIZATIONAL LEVEL

A previous section indicated that only ten interaction terms are significant when all of the auditors are analyzed as one sample. When the auditor's role perceptions are examined for each of the three organizational positions, 41 interaction terms are significant.

In addition, six of the ten interaction terms that were significant for the total sample are no longer relevant for any specific organizational level. One example is the interaction term of participation-ambiguity with the desire to leave criterion. The relationship is significant for all accountants but is not related to any of the organizational positions.

In an effort to analyze the interaction terms that are moderated by the auditor's organizational position, Figure 5.2 of Appendix IX presents a series of graphs replicating the procedure used in an earlier section. Because of the large number of interactions, only the job anxiety personal outcome will be examined for selective independent variables.

Referring to Figure 5.2.a, role ambiguity is an important moderator of participation for managers. Higher levels of job anxiety are experienced in an ambiguous environment where the manager perceives lower levels of participation. This is not the case where there are high perceptions of participation, where higher levels of role ambiguity contribute to less tension. It appears that role ambiguity does not have aversive effects as long as the manager is able to select his audit assignments and perceives he is not in an alien audit environment. Some unexpected results

are found in Figure 5.2.b with respect to the reward/performance construct. Consistent with the predicted direction, staff accountants who perceive a strong relationship between their performance and the organizational rewards experience less tension under low ambiguity. This is not the case for perceptions of low levels of this variable where higher degrees of role ambiguity result in less job anxiety. A possible explanation is that staff accountants were able to tolerate not knowing how they are evaluated by their firms only under ambiguous environments. This indicates that role strain factors do not have aversive effects for some organizational levels even under conditions of an alien audit environment. The direction of the relationship with this predictor variable is reversed for the role conflict interaction (Figures 5.2.c and 5.2.d). Both staff accountants and managers experience greater tension under high levels of role conflict when they perceive low levels of the performance/reward construct. Low levels of role conflict are more aversive where the auditors experience a strong relationship between their performance and organizational rewards. This indicates that the role strain constructs have different effects depending on the organizational level and predictor that are being analyzed. The

conflict interaction appears to have identical results for the lowest and highest levels of an accounting firm.

The relationship reported in Figure 5.2.e is consistent with the predicted direction where poor client relations have more aversive effects for perceptions of high levels of role conflict. The difference in experienced job anxiety is substantially attenuated by an improved relationship with the client's personnel. Both the ambiguity and conflict interaction terms appear to be important for the preference variable for senior accountants (Figures 5.2.f and 5.2.g). The ambiguity interaction is similar to the relationship found with staff accountants for the reward/performance construct (Figure 5.2.b). Seniors who do not prefer their client engagements (presence of an alien audit environment) experience greater job anxiety under low conditions of role ambiguity. The opposite situation is found for high levels of the preference construct indicating that role ambiguity does not contribute to aversive effects where the auditor does not prefer his choice of engagements. Perceptions of high levels of role conflict appear to have unfavorable outcomes, particularly where the senior accountant does not prefer his assignments (Figure 5.2.g). Referring to Figure 5.2.h, manager accountants are more tense under conditions of high levels of role ambiguity where they do not prefer their client engagements. Low

ambiguity has more aversive effects for high levels of the preference construct. The relationship is in complete contrast to the one found with the senior position (Figure 5.2.f). Using the dummy variable procedure, the difference between slopes of the two interaction terms has a t value of 2.49 and is significant at the .01 level.

Figure 5.2.i shows the same pattern of where high levels of role ambiguity do not have aversive effects in an alien audit environment. Senior accountants who do not have good relationships with their supervisors are less tense under ambiguous conditions. The opposite situation is found with a favorable interpersonal relationship where low levels of ambiguity contribute to less tension. High levels of role conflict appear to have more detrimental effects for senior accountants who have a good relationship with their supervisors (Figure 5.2.j). This is contrary to the predicted direction and suggests that a poor relationship with one's supervisor would induce less tension for frequent episodes of role conflict. Consistent with the predicted direction, low levels of role conflict produce less job anxiety where the accountant has a good relationship with his superior. Figure 5.2.k indicates that managers experience greater tension under conditions of low ambiguity where they perceive poor interpersonal relations with their supervisors. Differences in tension under perceptions of low ambiguity do not appear to fluctuate between low and high levels of the predictor variable.

A t test comparing the perceptions between the manager and senior positions for these relationships was found not to be significant ($t = 1.48, P < .10$).

In summary, role ambiguity and conflict appear to be moderated by the auditor's position in the firm. In addition, these role strain constructs appear to have different effects on personal outcomes depending upon the predictor variable that is being analyzed.

OVERALL CONTRIBUTION OF ROLE AMBIGUITY AND CONFLICT

In a final attempt to determine the overall significance of these two role strain constructs, three additional procedures are computed. The first is a series of hierarchical regressions where each frame of reference is entered as a group concluding with the role ambiguity and conflict variables. The procedure is computed for each criterion variable. The second procedure is a hierarchical regression for each predictor variable against one of the four criterion variables. The third procedure is a stepwise regression analysis using all of the predictor and criterion variables.

HIERARCHICAL REGRESSION USING EACH FRAME OF REFERENCE AS A SEPARATE STEP

The purpose of this procedure is to determine whether the role ambiguity and conflict variables make a contribution to the four personal outcomes after all of

the predictor variables have been considered. Table 5.13.A indicates that role conflict explains additional variance for all accountants as well as auditors at the staff position ($F = 7.17, P < .01$; $F = 15.52, P < .01$) for job satisfaction. Role ambiguity explains additional variance only for the senior position ($F = 4.08, P < .05$). These relationships were also found where the sequence of the role strain constructs were reversed before entering the regression equation. Table 5.13.B shows only role conflict to be related to the desire to leave criterion at the staff position ($F = 6.08, P < .05$). Neither conflict nor ambiguity explains additional variance in job anxiety for any organizational level (Table 5.13.C). Conflict is significant where all of the auditors are treated as one sample ($F = 5.92, P < .05$) indicating the moderating effect of the organizational position. Ambiguity is an important contributor to job performance for all accountants and auditors at the staff position ($F = 4.34, P < .05$; $F = 4.59, P < .05$). Conflict explains additional variance only for the senior position. In summary, role conflict and ambiguity are seen to be important factors with regard to specific personal outcomes even after all of the predictor variables are considered. These relationships are particularly prevalent for the staff and senior positions.

HIERARCHICAL REGRESSION FOR EACH PREDICTOR
VARIABLE WITH JOB SATISFACTION

The purpose of this section is to determine the behavioral patterns of all of the predictor and intervening variables. Because of the number of variables and organizational levels involved, only the job satisfaction criterion is analyzed. Referring to Table 5.14.A, both the participation and competence/training have significant Beta coefficients where all of the auditors are treated as a single sample. None of the client frame of reference variables are significant in the second step of the procedure. The preference construct contains a significant Beta coefficient at the third step and none of the leadership variables are significant in the fourth step of the regression equation. Role conflict is the only significant intervening variable that is entered in the next two steps. Conflict appears to account for much of the relationship between competence and training and job satisfaction. The competence construct drops to a insignificant Beta at the fifth step. No conclusions are to be drawn from this part of the exercise without examining the possible moderating effect of the auditor's organizational position.

Table 5.14.B repeats the same regression procedure for the staff position of the firm. Only the participation construct contains a significant Beta coefficient although the competence variable is significant at the .10 level. None of the client frame of reference variables are significant at the second step but the competence variables

now contain a significant Beta coefficient at the .05 level. This indicates that some of the variables in the second set may be acting as suppressors to the competence construct. The preference variable is significant at the next step and also appears to explain some of the relationship between competence and job satisfaction. None of the leadership constructs have significant Beta coefficients and only role conflict is significant for the conclusion of the procedure. In summary, participation, preference and role conflict appear to be important contributors to satisfaction with work for staff accountants.

Referring to Table 5.14.C, only the participation variable is significant in the first step for senior accountants. It becomes insignificant at the second step of the procedure where the pressure variable becomes the only factor related to job satisfaction. The preference factor and leader interpersonal relations contain significant Betas in the next two steps. Role ambiguity is the only intervening variable that is significant for the remaining part of the procedure. It appears that pressure, preference, leader interpersonal relations and role ambiguity are important factors with respect to senior accountants.

Participation and the reward/performance variables are significant variables for manager accountants as indicated in the first step of Table 5.14.D. None of the client or professional frame of reference variables are

significant in the next two steps. In addition, the participation and reward/performance variables are no longer significant. The remaining variables that are entered in the procedure are not significant but they appear to have suppressed part of the relationship between pressure and job satisfaction. The pressure variable contains a significant Beta coefficient for the last two steps of the regression.

STEPWISE REGRESSION FOR ALL PREDICTOR VARIABLES

Table 5.15 presents the significant standardized Beta coefficients from various stepwise regression procedures. It should be noted that the purpose of a stepwise regression is not for hypothesis testing (Kerlinger and Pedhazur, 1973). The procedure is essentially an exploratory exercise used to select a minimum set of predictor variables. The mechanics of the forward regression involve the selection of the predictor variable that has the highest correlation with the dependent variable. Variables that are subsequently chosen are those that cause the greatest increment in the R^2 after partialing out the effect of the equation. Two criteria are used for terminating the number of variables entering the equation. One is the incremental change in the R^2 and was discussed in the previous chapter. The second criterion requires the new variable entering the equation to possess a significant Beta coefficient.

As indicated in the table, different predictors are related to the personal outcomes depending upon the auditor's organizational position. With respect to satisfaction with work, participation, preference and role conflict are significant predictors for staff accountants. The pressure, preference and leader interpersonal relations are important for senior accountants whereas participation and the reward/performance factor are more significant for managers. There are more significant relationships for role conflict than ambiguity with the personal outcomes.

EXAMINATION OF NONLINEAR RELATIONSHIPS

The purpose of this section is to examine whether any of the moderated regression equations presented earlier in the chapter have nonlinear relationships with the criterion variables. Only quadratic relationships will be examined because of the difficulty and unreliability of higher order polynomials. According to Kerlinger and Pedhazur (1973, p. 212):

In the behavioral sciences it is rare to find significant trends beyond the quadratic. Moreover, the higher the degree of polynomial the more it is affected by the unreliability of the measure involved, and the more difficult it is to interpret.

Because of the large number of linear and interaction terms, a hierarchical procedure recommended by Cohen (1968) and used by Hulin and Smith (1969) is adopted by this writer. Using the participation construct as an example, the following sets of variables are presented:

Linear Set (5 terms)	Participation (PT), Role Ambiguity (RA), Role Conflict (RC), Ambiguity x Participation (RA x PT), Conflict x Participation (RC x PT)
Quadratic Main Effects Set (8 terms)	Includes all of the five terms of the linear set with the following additional quadratic variables: Participation-squared (PT) ² Ambiguity-squared (RA) ² Conflict-squared (RC) ²
Quadratic Interaction Set (10 terms)	Includes all eight terms of the quadratic main effects set with the following additional variables: (Ambiguity x Participation)-squared (RA x PT) ² (Conflict x Participation)-squared (RC x PT) ²

Using the formula described in the previous chapter, the difference between the change in R^2 of three hierarchical regressions is computed. The first computation measures the additional variance added by the main quadratic terms. The second computation measures the incremental R^2 due to the addition of the quadratic interaction terms. The last computation examines the differences between the linear set and the most comprehensive set containing all of the variables.

All of the procedures are summarized in Tables 5.16.A.1 through 5.16.D.4 and appear in Appendix VIII at the end of the study. A .01 level of significance will be used for purposes of identifying curvilinear relationships. Referring to Table A.1.A, none of the quadratic terms are significant in the first two columns for job satisfaction where all of the accountants are treated as one sample.

Only the preference and leader interpersonal relations variables have significant nonlinear relationships. The next two tables show one nonlinear interaction term for the leadership variable ($F = 5.30, P < .01$). The job performance variable contains most of the significant quadratic terms, suggesting the possibility of a curvilinear relationship.

The results for each of the three organizational positions follow a similar pattern. Other than the job performance variable, few of the quadratic terms are significant. The reader should note that some of the squared interaction terms are not reported because they were not able to enter the regression procedure. Because of the large number of predictor variables for each of the organizational positions, the participation construct with respect to the staff level (Table A.2.D) will only be analyzed. The increase in the R^2 of 4 per cent indicates a significant nonlinear relationship ($F = 4.31, P < .01$). Examining the role ambiguity and conflict variables, the linear terms are negative whereas the squared terms are positive. This suggests a "concave up" curve where job satisfaction falls and then rises as role ambiguity and conflict increases. This may occur where excessive role ambiguity and conflict eventually become tolerated by the staff accountant to the point where he may perceive higher levels of job performance. The reader will recall that the job performance variable, because of the self-rating evaluations, is susceptible to possible halo effects.

Auditors may tend to rate themselves favorably under unpleasant audit environments. Discussion and treatment of the other nonlinear terms are beyond the scope of this study. The final task of summarizing all of the findings is reserved for the following chapter.

CHAPTER VI

SUMMARY OF FINDINGS AND RECOMMENDATIONS FOR FUTURE RESEARCH

As indicated in Chapter I, the primary research objective in this study was the development of a role theory model for examining the behavior of independent accountants. Although role ambiguity and conflict were the prominent variables in the conceptual model, emphasis was directed toward the development of the antecedent factors comprising the auditor's perceptual environment. Perceived deficiencies in these predictors were characterized as an alien audit environment and the potential source of role ambiguity, conflict and personal outcomes. The role strain constructs were examined as dependent variables where they were significantly influenced by the auditor's alien audit environment. Role ambiguity and conflict were also positioned as predictors of four personal outcomes. Finally, they were seen as moderating factors between the alien audit environment construct and the criterion variables. The final objective was the examination of the interaction of these role strain factors with the auditor's organizational position against four personal outcomes. The following sections summarize the conclusions of the findings.

SOURCES AND RESULTS OF ROLE AMBIGUITY
AND CONFLICT UNMODERATED BY ORGANIZATIONAL LEVEL

Table 6.1 summarizes all of the significant relationships found with role ambiguity and conflict. The table is a review of the partial correlations reported in Table 5.3 in the previous chapter. Role ambiguity was significantly related to only five out of the ten predictors. The only significant relationship with the dependent variables was job anxiety. Role conflict was a more pervasive construct where nine of the ten independent variables were significant. Job performance was not significantly related to this role strain factor. These relationships were not moderated by the auditor's organizational position which is summarized in the next section. Tables 6.2 and 6.3 compare the relationship between role ambiguity and conflict with the personal outcomes with some of the studies reported in the literature review sections of Chapter III.

SUMMARY OF SIGNIFICANT RELATIONSHIPS
FOR ROLE AMBIGUITY AND CONFLICT
MODERATED BY ORGANIZATIONAL LEVEL

Table 6.4 summarizes the same relationships described in the previous section for each organizational position. The reader will recall from Chapter V that absolute perceptions of role ambiguity were more prevalent at the staff level of the organization. Auditors across all organization levels had similar perceptions of role conflict. Consistent with the results reported in the previous section, role conflict appears to be the most pervasive construct, particularly for the lower and middle organizational positions. Ambiguity was significantly

TABLE 6.1

SUMMARY OF SIGNIFICANT RELATIONSHIPS FOR ROLE AMBIGUITY AND CONFLICT
UNMODERATED BY ORGANIZATIONAL LEVEL

<u>Independent Variable</u>	<u>Role Ambiguity</u>		<u>Role Conflict</u>	
	<u>Significant</u>	<u>Not Significant</u>	<u>Significant</u>	<u>Not Significant</u>
<u>Firm Frame of Reference</u>				
(1) Participation	X		X	
(2) Competence and Training	X		X	
(3) Reward/Performance Relationship		X	X	
<u>Client Frame of Reference</u>				
(4) Client Relationship	X		X	
(5) Pressure to Perform		X	X	
(6) Organizational Structure		X	X	
<u>Professional Frame of Reference</u>				
(7) Preference for Assignments	X		X	
(8) Specialization		X		X
<u>Supervisor Frame of Reference</u>				
(9) Leadership Structure		X	X	
(10) Leadership Interpersonal Relations	X		X	

TABLE 6.1
(continued)

<u>Dependent Variables</u>	<u>Role Ambiguity</u>		<u>Role Conflict</u>	
	<u>Significant</u>	<u>Not Significant</u>	<u>Significant</u>	<u>Not Significant</u>
(11) Satisfaction with Work	X		X	
(12) Desire to Leave	X		X	
(13) Job Anxiety		X	X	
(14) Job Performance	X			X

TABLE 6.2

COMPARISON OF STUDIES OF THE RELATIONSHIPS BETWEEN
ROLE AMBIGUITY AND PERSONAL OUTCOMES

<u>Personal Outcome</u>	<u>Slavin (1980) (N = 244)</u>	<u>Senatra (1976) (N = 76)</u>	<u>Miles (1974) (N = 202)</u>	<u>House & Rizzo (1972) (N = 200)</u>	<u>Kahn, et. al. (1964) (N = 53)</u>
Job Satisfaction					
Work	-.32***				
Global Measure		-.47***	-.49***		-.32*
Advancement				-.23**	
Autonomy				-.36**	
Intrinsic Job				-.36**	
Job Security				-.22**	
Pay				-.28**	
Recognition				-.43**	
Social Environment				-.41**	
Adequacy of Authority				-.37**	
Desire to Leave	.35***	.36***			
Job Anxiety	.28***	.34***	.31***	.12	.51**
Job Performance	-.27**		-.28***		-.27*

* P < .05

** P < .01

*** P < .001

TABLE 6.3

COMPARISON OF STUDIES OF THE RELATIONSHIPS BETWEEN
ROLE CONFLICT AND PERSONAL OUTCOMES

<u>Personal Outcome</u>	<u>Slavin (1980) (N = 244)</u>	<u>Senatra (1976) (N = 76)</u>	<u>Miles (1974) (N = 202)</u>	<u>House & Rizzo (1972) (N = 200)</u>	<u>Kahn, et. al. (1964) (N = 53)</u>
Job Satisfaction					
Work	-.43***				
Global		-.36***	-.25***		(***) ^a
Advancement				-.11	
Autonomy				-.12	
Intrinsic Job				-.11	
Job Security				-.15*	
Pay Recognition				-.12	
Social Environment				-.22**	
Adequacy of Authority				-.15*	
Desire to Leave	.33***	.38***			
Job Anxiety	.45***	.54***	.25***		(*) ^a
Job Performance	-.13*		.07		

* P < .05

** P < .01

*** P < .001

^a only t tests were reported

TABLE 6.4

SUMMARY OF SIGNIFICANT RELATIONSHIPS FOR ROLE AMBIGUITY
AND CONFLICT BY ORGANIZATIONAL LEVEL

<u>Independent Variable</u>	<u>Significant Relationships with Role Ambiguity</u>			<u>Significant Relationships with Role Conflict</u>		
	<u>Staff</u>	<u>Senior</u>	<u>Manager</u>	<u>Staff</u>	<u>Senior</u>	<u>Manager</u>
<u>Firm Frame of Reference</u>						
(1) Participation			X	X	X	
(2) Competence and Training	X		X	X	X	X
(3) Reward/Performance Relationship				X	X	
<u>Client Frame of Reference</u>						
(4) Client Relationship		X	X	X	X	
(5) Pressure to Perform				X	X	X
(6) Organizational Structure			X	X	X	X
<u>Professional Frame of Reference</u>						
(7) Preference for Assignments			X		X	
(8) Degree of Specialization		X				
<u>Supervisor Frame of Reference</u>						
(9) Leadership Structure	X				X	
(10) Leadership Interpersonal Relations		X		X	X	X

TABLE 6.4
(continued)

<u>Dependent Variable</u>	<u>Significant Relationships with Role Ambiguity</u>			<u>Significant Relationships with Role Conflict</u>		
	<u>Staff</u>	<u>Senior</u>	<u>Manager</u>	<u>Staff</u>	<u>Senior</u>	<u>Manager</u>
(11) Satisfaction with Work			X	X	X	
(12) Desire to Leave	X			X	X	
(13) Job Anxiety			X	X	X	X
(14) Job Performance	X					

related to only ten out of thirty predictors whereas conflict had twenty significant relationships. The former variable was related to four personal outcomes for the staff and manager positions. Conflict was significantly related to seven out of nine criterion variables. The results are contrary to the role theory literature where ambiguity and not conflict was seen as the most significant factor in effecting organizational behavior.

A possible explanation regarding the high incidence of role conflict relationships may be attributed to the characteristics and organizational position of the participants of this study. Referring to Table 6.4, there were only four significant relationships with the role ambiguity construct at the staff position compared to ten for the role conflict variable. Role ambiguity had a slightly greater impact with manager accountants (7 relationships) compared to role conflict (5 relationships). Apparently, accountants at the lower positions suffer more from the strain of role conflict than from role ambiguity. This would be expected where auditors at the entry level positions are assigned to routine and repetitive tasks. They may still experience role conflict particularly where they receive instructions from their firm that are opposed by the client's organization or are contrary to the standards of the profession.

When examining the organizational level, these observations are consistent with some of the findings reported in the role theory literature. Both the House and Rizzo (1972) and the Hamner and Tosi (1974) studies found more significant relationships for role ambiguity. The opposite result was reported by Tosi and Tosi (1970), Tosi (1972), and Szilgyi (1977), where role conflict was the influential variable. The samples used in the former group of studies consisted of administrators, engineers and scientists representing the higher positions of the organization. The participants in the latter group of studies were teachers, loan officers and service employees. Similar to the staff accountant's position, they represented the lower level of the organization. The following sections summarize the moderating effects of the organizational level on the role ambiguity and conflict interactions.

SUMMARY OF MODERATING EFFECTS OF ROLE AMBIGUITY AND CONFLICT

Only ten significant terms are reported on Table 6.5 where all of the accountants were treated as one sample. Most of the relationships were found with the job performance outcome. The number of interaction terms increased to forty-one where each organizational position was considered (Table 6.6). Most of the interactions were reported for the job anxiety and performance

variables. Referring to Table 6.7, there were more role conflict than ambiguity interactions for staff accountants. This was contrary to what was expected but consistent with the general role theory literature. There were slightly more ambiguity interactions for the manager position. This group also had the largest number of significant relationships.

From Tables 6.6 and 6.7, it appears that ambiguity and conflict have a greater effect for manager accountants with respect to the job anxiety and performance outcomes. All of the personal outcomes were equally effected by the interaction terms for the other organizational positions. These results indicate that role ambiguity and conflict have different affects on specific personal outcomes depending upon the auditor's position in the organization. Researchers should be extremely cautious in generalizing from samples that are drawn across various organizational levels and the criterion values they examine. In an effort to determine the cause for the greater frequency of relationships with the job anxiety and performance outcomes at the manager level, a Scheffé post-comparative test was computed for all of the four criterion variables. Managers were found to be more satisfied with their jobs and less prone to leave the organization than auditors at the

TABLE 6.5

SUMMARY OF SIGNIFICANT MODERATING EFFECTS OF ROLE AMBIGUITY
AND CONFLICT FOR ALL ACCOUNTANTS

<u>Independent Variable</u>	<u>Satisfaction with Work</u>		<u>Desire to Leave</u>		<u>Job Anxiety</u>		<u>Job Performance</u>	
	<u>RA</u>	<u>RC</u>	<u>RA</u>	<u>RC</u>	<u>RA</u>	<u>RC</u>	<u>RA</u>	<u>RC</u>
<u>Firm Frame of Reference</u>								
(1) Participation			X					
(2) Competence and Training	X							X
(3) Reward/Performance Relationship								
<u>Client Frame of Reference</u>								
(4) Client Relationship				X			X	
(5) Pressure to Perform								
(6) Organizational Structure						X	X	X

TABLE 6.5
(continued)

<u>Independent Variable</u>	<u>Satisfaction with Work</u>		<u>Desire to Leave</u>		<u>Job Anxiety</u>		<u>Job Performance</u>	
	<u>RA</u>	<u>RC</u>	<u>RA</u>	<u>RC</u>	<u>RA</u>	<u>RC</u>	<u>RA</u>	<u>RC</u>
<u>Professional Frame of Reference</u>								
(7) Preference for Assignments								
(8) Degree of Specialization							X	
<u>Supervisor Frame of Reference</u>								
(9) Leadership Structure								X
(10) Leadership Interpersonal Relations								

NOTE: RA = Role Ambiguity Interaction
RC = Role Conflict Interaction

TABLE 6.6

SUMMARY OF SIGNIFICANT MODERATING EFFECTS OF ROLE AMBIGUITY
AND CONFLICT FOR EACH ORGANIZATIONAL POSITION

<u>Independent Variable</u>	<u>Satisfaction with Work</u>							<u>Desire to Leave</u>						
	<u>Staff</u>		<u>Senior</u>		<u>Manager</u>			<u>Staff</u>		<u>Senior</u>		<u>Manager</u>		
	<u>RA</u>	<u>RC</u>	<u>RA</u>	<u>RC</u>	<u>RA</u>	<u>RC</u>	<u>Total</u>	<u>RA</u>	<u>RC</u>	<u>RA</u>	<u>RC</u>	<u>RA</u>	<u>RC</u>	<u>Total</u>
<u>Firm Frame of Reference</u>														
(1) Participation				X			1			X				1
(2) Competence and Training		X					1							
(3) Reward/Performance Relationship														
<u>Client Frame of Reference</u>														
(4) Client Relationship								X	X					2
(5) Pressure to Perform					X	X	2							
(6) Organizational Structure		X				X	2	X						1
<u>Professional Frame of Reference</u>														
(7) Preference for Assignments														
(8) Specialization		X	X				2							
<u>Leadership Frame of Reference</u>														
(9) Leadership Structure														
(10) Leadership Interpersonal Relations												X		1
Total Significant Relationships	--	3	1	1	1	2	8	2	2	--	--	1	--	5

NOTE: RA = Role Ambiguity Interaction
RC = Role Conflict Interaction

TABLE 6.6
(continued)

<u>Independent Variable</u>	<u>Job Anxiety</u>						<u>Job Performance</u>							
	<u>Staff</u>		<u>Senior</u>		<u>Manager</u>		<u>Staff</u>		<u>Senior</u>		<u>Manager</u>			
	<u>RA</u>	<u>RC</u>	<u>RA</u>	<u>RC</u>	<u>RA</u>	<u>RC</u>	<u>Total</u>	<u>RA</u>	<u>RC</u>	<u>RA</u>	<u>RC</u>	<u>Total</u>		
<u>Firm Frame of Reference</u>														
(1) Participation					X		1			X		X	2	
(2) Competence and Training								X	X		X	X	4	
(3) Reward/Performance Relationship	X	X			X		3				X	X	2	
<u>Client Frame of Reference</u>														
(4) Client Relationship		X					1							
(5) Pressure to Perform								X			X	X	3	
(6) Organizational Structure					X	X	2				X	X	2	
<u>Professional Frame of Reference</u>														
(7) Preference for Assignments			X	X	X		3							
(8) Specialization														
<u>Leadership Frame of Reference</u>														
(9) Leadership Structure					X	X	2							
(10) Leadership Interpersonal Relations			X	X	X		3							
Total Significant Relationships	1	2	2	2	6	2	15	--	2	1	1	4	5	13

NOTE: RA = Role Ambiguity Interaction
RC = Role Conflict Interaction

TABLE 6.7

BREAKDOWN OF ROLE AMBIGUITY AND CONFLICT
INTERACTION TERMS

<u>Organizational Position</u>	<u>Number of Role Ambiguity Interactions</u>	<u>Number of Role Conflict Interactions</u>	<u>Total</u>
Staff Accountants	3	9	12
Senior Accountants	4	4	8
Managers	<u>12</u>	<u>9</u>	<u>21</u>
Total Number of Interactions	19	22	41

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other organizational positions. This was not the case for job anxiety and performance where the auditors had similar perceptions across all of the positions. This may be the reason why there were few role ambiguity and conflict interactions for the satisfaction and leaving variables at the manager position.

In summary, a contingency approach must be used when analyzing role behavior in any organization. Role ambiguity and conflict were important factors for specific personal outcomes depending upon the organizational position that was analyzed. In addition, not all of the predictors had significant interactions across organizational levels. Referring to Table 6.6, participation had a significant interaction with role ambiguity and job anxiety, but only for the manager position. Other than the greater number of interactions found with the highest organizational position (Table 6.7), it may be concluded that there was essentially no pattern of relationships across all levels of the organization.

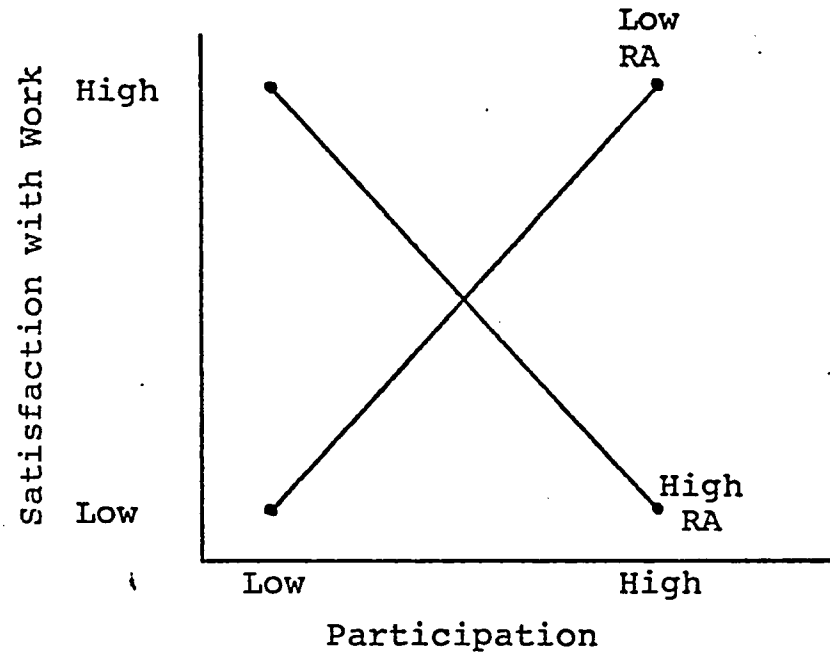
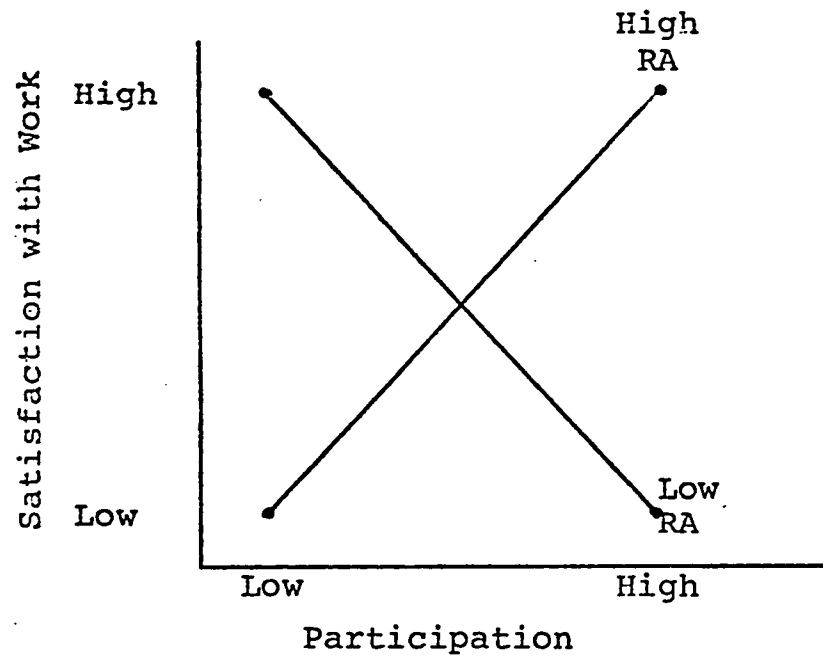
AVERSIVE EFFECTS OF ROLE AMBIGUITY AND CONFLICT

Role ambiguity and conflict have generally been described in the literature as undesirable factors that all organizations should strive to eliminate. The reader will recall from Figure 5.2 of the previous chapter

that in seven out of eleven presentations, high and low levels of these role strain constructs intersected in an area of the graph. This suggested that role strain did not always exhibit aversive results for the auditor. Figure 6.1 describes two hypothetical interaction effects of role ambiguity and participation with job satisfaction. In Figure 6.1.a, high levels of role ambiguity are related to job satisfaction where the auditor participates in the selection of his client engagements. Where the auditor perceives low levels of participation, which is characterized by an alien audit environment, high degrees of role ambiguity are unfavorable outcomes. The opposite situation is suggested in Figure 6.1.b. Here high levels of role ambiguity contribute to more job satisfaction where the auditor is not consulted with respect to choosing his assignments. Of the seven relationships that had intersections somewhere in the graph (Figure 5.2), three role ambiguity interactions were reported as favorable outcomes where the auditor perceived he was in an alien audit environment. Although one cannot generalize from such a small number of relationships, it is possible that role ambiguity may not have aversive effects where the auditor is not working in an alien audit environment.

FIGURE 6.1

HYPOTHETICAL RELATIONSHIPS OF ROLE AMBIGUITY



Role ambiguity and conflict may not be related to unfavorable outcomes in a public accounting firm. The basis of this conclusion is the failure to detect many significant interaction effects even where each organizational position was analyzed separately. In addition, most of the multiple correlations were less than 40 per cent and although were statistically significant are to be interpreted with caution. The reader will recall the limitation of using many accounting firms in order to obtain an adequate data base. This precluded any study regarding the influence of a specific organization. Another limitation was the perceptual character of the data which may have contributed to a halo effect in some of the responses.

A plausible explanation for failing to observe many interactions was attributed to the unique nature of the public accounting profession. Auditors that are slightly beyond the entry level, unlike many other professions, may still be preconditioned not to expect an ideal working environment. They do not always expect to select their client engagements nor do they expect to always be satisfied with their assignments. They are conditioned to tolerate stress because of the strong incentive of remaining with the public accounting firm in order to obtain the two-year employment require-

ment for certification. Of the few relationships that were significant, more role conflict interactions were observed at the lower organizational positions. Slightly more role ambiguity episodes were experienced at the higher levels of the organization. Apparently, auditors at the lower positions that were intolerant of role stress may still be experiencing conflict from the client organization, particularly where there may be disagreements in implementing auditing procedures. Those auditors at the manager level may still have difficulty defining the requirement of their job.

From the few interactions that were reported, some conclusions may be drawn. They are to be interpreted with caution in view of the moderate multiple correlational results and the absence of any clear patterns that were reported.

(1) Role ambiguity and conflict do not have similar effects on the personal outcomes. Figure 5.2.b indicated that role ambiguity did not contribute to job anxiety where the staff accountant perceived low levels of the reward/performance variable. This was not the case for perceptions of high levels of role conflict (Table 5.2.C). Auditors at this same position suffered from greater job anxiety where they perceived low levels of the reward/performance variable.

(2) Role ambiguity and conflict may result in different personal outcomes depending upon the auditor's position in the organization. Low ambiguity was related to more tension for staff accountants in an alien audit environment (Figure 5.2.f). This was not the case for manager accountants where lower levels of ambiguity corresponded with less job tension under a similar audit environment.

(3) Role ambiguity and conflict may have more relationships with specific personal outcomes depending upon the auditor's position in the organization. Table 6.6 indicated that seventeen out of twenty-one significant interactions for manager accountants were related to the job anxiety and performance outcomes.

The following section discusses the areas that future researchers should investigate, particularly with respect to the public accounting profession.

RECOMMENDATION FOR FUTURE RESEARCH

Many of the suggestions made in this section regarding future research are related to the limitations of this study. The reader has been informed in several parts of this project of the perceptual nature of the data. Reputable researchers should attempt to gain

access to objective performance evaluations in public accounting firms. A more ambitious approach would be a field study similar to the pioneering achievements of the Kahn, et. al. (1964) project. The perceptions of each auditor's role sender could be obtained and compared to the evaluations of the focal person. A similar approach has been used by Greene (1972) where supervisors and subordinates were grouped into 142 managerial dyads. The perceptions of the role senders employed in the client's organization should also be examined for objective sources of role ambiguity and conflict.

This writer has tentatively shown how the grouping of various organizational positions in one sample design may fail to detect significant relationships or even lead to spurious conclusions. The examination of each organizational position may still be inadequate for purposes of discerning general patterns of behavior. An alternative approach would be to identify the auditor's area of client specialization. Researchers who would have access to public accounting firms could develop working profiles of each auditor's past assignments. One objective would be to determine whether accountants who were assigned to similar client engagements had comparable perceptions of role ambiguity and conflict.

Comparisons could be made between auditors who specialize in nonprofit organizations compared to those accountants who have clients with a profit motive.

Although this study found role perceptions were not the same across all organizational positions, it was still not clear whether the focal person changes his attitudes as he advances through the accounting firm. A longitudinal study could examine the possible changes in level of role ambiguity and conflict perceived by the auditor over a period of time.

Another limitation of this study was that it did not examine any personality characteristics. The need for clarity construct was included in the research questionnaire but was eliminated from the model because of the small number of relationships that were found. Future studies should determine whether other personality variables are important factors in analyzing role behavior of auditors.

Additional research should also examine whether there are similar perceptions for accountants who occupy different functional positions in an accounting firm. Comparisons could be made between accountants who work in the auditing, tax and management advisory service

departments. In addition, comparisons could be made between accountants that work in private corporations, governmental agencies and academia. Future studies should include accountants who are employed at large offices of "Big Eight" accounting firms. This was a significant limitation of this study as indicated in an earlier chapter.

The final recommendation is directed to the need to examine the various categories of role conflict and ambiguity. Future studies should determine whether there are different perceptions of person-role, inter-sender role and inter-role conflict. The specific types of role ambiguity should be identified such as their relationship to the task assignment, supervisor demands or client expectations.

In summary, the role theory model was an adequate framework for identifying potential sources and effects of ambiguity and conflict. Perhaps the most significant conclusion, particularly with respect to the interaction terms that were reported, was that general patterns do not exist throughout all organizational positions of an accounting firm. Both specific predictors and criterion variables had different effects for each organizational position. A earlier example was the significant interactions found for the manager

position, but only for the job anxiety and performance variables. Role ambiguity and conflict appear to exist within the public accounting firm. They may not always contribute to unfavorable outcomes, even where the auditor perceives he is working in an alien audit environment.

APPENDICES

HOEFSTRA
UNIVERSITY

HEMPSTEAD, NEW YORK 11550

APPENDIX I

LETTER REQUESTING THE AUDITOR TO
PARTICIPATE IN THE STUDY

Dear Fellow Accountant:

A very special favor is being asked of you. I am currently working on a research project for a doctoral dissertation on the behavior and activities of public auditors.

Being a former auditor, I know that your time is very valuable, and any inconvenience concerning research requests can be annoying. I wish there were some other way of doing this kind of research without causing you this disturbance, but unfortunately there is not. With this in mind, I am asking if you could please complete the enclosed questionnaire. It should only take approximately 30-40 minutes and your response will be completely confidential and anonymous. Because the questionnaire has not in any way been coded, it is impossible for anyone to associate your identity as an individual or your firm with your answers.

Please complete the questionnaire as promptly as possible, preferably in one sitting, without any consultation with your colleagues. Please be frank and honest in your responses as much as possible. The success of the research project depends on the accuracy of your observations.

Please return your questionnaire in one of the postage paid return envelopes provided. Because you have been selected in a sample, the success of this project depends heavily on your personal contribution.

Please complete the special response letter and mail it in the second return envelope provided. This will inform me if you have participated in the project without revealing your identity on the questionnaire.

I hope you will be participating in this research project and I wish to thank you in advance for your cooperation. Your contribution will make a significant impact in this area of study.

Respectfully,

Nathan Slavin, CPA
Assistant Professor
Accounting Department

SPECIAL RESPONSE FORM ACKNOWLEDGING
THE AUDITOR'S DECISION TO PARTICIPATE IN THE STUDY

Dear

I am using this special response form in order that I may know if you will be participating in my research study. Again, let me assure you that because the questionnaire is not coded, it is impossible for me to associate your identity with your responses.

Please mail this form no later than _____ in order that I may avoid the expense of mailing you a second request. Use one of the two postage paid envelopes provided. Please do not mail this form with the questionnaire. Please check one of the following statements:

I have completed and mailed the questionnaire.

Sorry, I do not wish to participate in your study.

Thank you again for your cooperation.

Respectfully,

Professor Nathan Slavin

APPENDIX III -- RESEARCH QUESTIONNAIRE

PART I

Description of Your Work Environment Within Your Firm

In this part of the questionnaire we would like you to describe the present environment within your firm. By combining your description with that of other employees, we hope to get an idea of how employees see their work environment within their firm.

By "work environment within your firm" we mean your firm's standard operating procedures and policies.

Please indicate the degree to which each statement describes the work environment within your firm as you experience and see it. Do this by writing the appropriate number (based on the scale below) in the blank to the left of each statement.

Make your descriptions as objectively and factually accurate as possible, without regard for whether you like or dislike your job.

CD 1 1-10	1 Never True	2 Almost Never True	3 Sometimes True	4 Almost Always True	5 Always True
11	1. Employees in my firm have the proper background and training to do the job.				
12	2. Employees are rewarded on the basis of the <u>quality</u> of their work.				
13	3. Pay increases are related to performance.				
14	4. Everyone in my firm knows how to do his job.				
15	5. I am assigned to client engagements without being consulted.				
16	6. Promotion is based on merit.				

Appendix III (continued)

- 17 7. My firm would think I am not a "team player" if I would try to change my
client engagement.
- 18 8. New employees are given a good idea of what to expect.
- 19 9. Partners or managers ask my advice when they assign me to client engagements.
- 20 10. Rewards are based not so much on the quality or quantity of your work but on
"who you know."
- 21 11. I am encouraged to participate in the selection of my client engagements.
- 22 12. Employees in my firm receive sufficient training.
- 23 13. Promotions are given on the basis of "who you know" rather than on merit.
- 24 14. Once I am assigned to a client engagement, I cannot have it changed.
- 25 15. New employees experience problems because they do not get enough training.
- 26 16. I have a lot to say in picking my client engagements.

PART II

Description of Your Work Environment as Represented by Your Client Engagements

In this part we hope to get an idea of your physical working conditions in the client's company you consider most typical of your auditing experience.

Please indicate the degree to which each statement describes your work environment in this client engagement as you experience and see it. Do this by writing the appropriate number (based on the scale below) in the blank to the left of each statement.

Make your descriptions as objectively and factually as possible, without regard for whether you like or dislike your job.

APPENDIX III (continued)

	1 Never True	2 Almost Never True	3 Sometimes True	4 Almost Always True	5 Always True	
27	<u> </u>					1. Client employees trust the auditors and offer them support.
28	<u> </u>					2. For auditors on the client engagement, there is a continuous series of deadlines and tight schedules.
29	<u> </u>					3. A friendly atmosphere prevails between the client's employees and the auditors.
30	<u> </u>					4. For the employees in the client's company, productivity sometimes suffers from lack of organization and planning.
31	<u> </u>					5. There is a serious conflict between the client's employees and the auditors.
32	<u> </u>					6. For the employees in the client's company, the management isn't so concerned about formal organization and authority, but concentrates instead on getting the right people together to do the job.
33	<u> </u>					7. For auditors on the client engagement, there is a strong pressure to produce.
34	<u> </u>					8. For the employees in the client's company, red-tape is kept to a minimum.
35	<u> </u>					9. For the employees in the client's company, excessive rules, administrative details, and red-tape make it difficult for new and original ideas to receive consideration.
36	<u> </u>					10. For the employees in the client's company, jobs are clearly defined and logically structured.
37	<u> </u>					11. For auditors on the client engagement, the auditing supervisor emphasizes production.

APPENDIX III (continued)

- 38 12. Client employees get along well with the auditors and enjoy the audit engagement.
- 39 13. There is teamwork between the client's employees and the auditors in completing the audit engagement.
- 40 14. For auditors on the client engagement, there are high performance standards.
- 41 15. Auditors on the client engagement are rewarded on the basis of the quantity of their work.
- 42 16. For the employees in the client's company, it is sometimes unclear who has formal authority to make a decision.
- 43 17. For the employees in the client's company, the policies and organizational structure are clearly explained.
- 44 18. On the client engagement, auditors compete with each other.
- 45 19. For the employees in the client's company, they are not sure exactly who is the boss.

PART III

Auditors are often required to development an expertise and specialization with clients of specific industries and institutions. Please use the following scale and place the number code of your response in the blank provided to the left of the question.

1	2	3	4	5
Never	Almost	Sometimes	Almost	Always
True	Never True	True	Always True	True

APPENDIX III (continued)

- 46 ___ 1. Members in my firm who have job positions at my level would want to be
assigned to my client engagements.
- 47 ___ 2. I have one of the best assignments of client engagements.
- 48 ___ 3. I would like to change at least one of my client engagements.
- 49 ___ 4. I would consider myself a specialist of client engagements that are within
the same industry.
- 50 ___ 5. I expect to be assigned to future client engagements that are generally
within the same industry.
- 51 ___ 6. I would not have chosen the client engagements I am on.
- 52 ___ 7. Important members of my firm consider me a specialist of certain types of
clients.
- 53 ___ 8. I expect to be assigned to the same type of client engagements I have had in
the past.
- 54 ___ 9. Members in my firm with job positions below my level would want to be
assigned to my client engagements.
- 55 ___ 10. I prefer my client engagements.
- 56 ___ 11. I would rather have client engagements from an industry that is different
from the engagements I have now.
- 57 ___ 12. I do not have good client engagements.

APPENDIX III (continued)

PART IV

An auditor may be assigned to client engagements within unique industries and environments. Assume there are two major types of clients which have been referred to as (1) commercial profit oriented firms and (2) non-commercial or specialized firms. The following are some of the examples of this classification.

<u>Commercial Clients</u>	<u>Non-Commercial or Specialized Clients</u>
1. Manufacturer - General Motors, IBM, Westinghouse	1. Non-Profit Organizations - Ford Foundation, Lenox Hill Hospital
2. Merchandise Concerns - Sears, R. H. Macy's	2. Specialized Industries - Insurance, Banking, Brokerage and Investment Companies
3. Service Companies - TWA, McDonald's, ITT	

Please use the following scale and place the number code of your response in the blank provided to the left of the question.

	1 Never True	2 Almost Never True	3 Sometimes True	4 Almost Always True	5 Always True
58	1. Most members in my firm with the same job position as myself would rather be assigned to commercial clients as opposed to non-commercial/specialized clients.				
59	2. Commercial client assignments are more prestigious than non-commercial/specialized client assignments.				
60	3. I would rather be assigned to commercial clients than non-commercial/specialized clients.				

APPENDIX III (continued)

61 ___ 4. The best type of assignments one could have are non-commercial/specialized clients.

62 ___ 5. Most members in my firm with job positions below me would like to have non-commercial/specialized clients rather than commercial clients.

63 ___ 6. Check the best answer which describes your actual assignments to commercial and non-commercial/specialized clients:

___ Substantially all my audit assignments are with commercial clients.

___ Most of my audit assignments are with commercial clients with some time devoted to non-commercial/specialized clients.

___ I have an equal number of assignments with commercial and non-commercial/specialized clients.

___ Most of my audit assignments are with non-commercial/specialized clients with some time devoted to commercial clients.

___ Substantially all my audit engagements are with non-commercial/specialized clients.

64 ___ 7. Check the best answer which describes the client assignments you prefer to have.

___ I prefer to be assigned to substantially all commercial clients.

___ I prefer to be assigned to mostly commercial clients with some assignments to non-commercial/specialized clients.

___ I prefer to be assigned to an equal number of assignments with commercial and non-commercial/specialized clients.

___ I prefer to be assigned to mostly non-commercial/specialized clients with some assignments to commercial clients.

___ I prefer to be assigned to substantially all non-commercial/specialized clients.

APPENDIX III (continued)

PART V

The purpose of this part of the questionnaire is to develop some understanding regarding the characteristics of the supervisors you have had on your engagements. Because all supervisors do not behave in the same manner please pick a supervisor that best represents your total work experience with the firm.

Using the following scale, place the number code of your response in the blank provided to the left.

	1 Frequently	2 Occasionally	3 Rarely	4 Almost Never	5 Never	
65	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1. He lets group members know what is expected of them.
66	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2. He encourages the use of uniform procedures.
67	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3. He tries out his ideas with the group.
68	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4. He makes his attitude clear to the group.
69	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5. He decides what shall be done and how it shall be done.
70	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6. He makes sure that his part in the group is understood by the group members.
71	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7. He maintains definite standards of performance.
72	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8. He asks that the group members follow standard rules and regulations.
73	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9. He assigns group members to particular tasks.
74	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10. He schedules the work to be done.

APPENDIX III (continued)

Use the following scale to answer questions 11 and 12:

	1 Not at All	2 To a Very Little Extent	3 To Some Extent	4 To a Considerable Extent	5 To a Very Great Extent
75	11. Suppose you were having some sort of difficulty in your job. To what extent do you feel your supervisor would be willing to help you if you asked for it?				
76	12. We all respect the knowledge and judgment of some people more than others. To what extent do you feel your supervisor would be willing to help you if you asked for it?				
77	13. Check the best answer on how you like your supervisor personally.				
	_____ I like him a lot and would like to get to know him personally.				
	_____ I like him fairly well.				
	_____ I don't have much feeling about him one way or the other.				
	_____ I don't like him very much.				
	_____ I dislike him.				

PART VI

DIRECTIONS: Many people experience some strain or ill health as a result of working hard at their jobs. The findings of some surveys show that this is an important factor to understand when studying people at work. For questions 1 through 13 below, please indicate the extent to which the statements tend to be true for you. Using the following scale, place the number code of your response to each statement in the blank provided to the left of the statement.

APPENDIX III (continued)

	1 Not at all true	2 True to a Very Little Extent	3 True to Some Extent	4 True to a Considerable Extent	5 True to a Very Great Extent
78	<u> </u>				
79	<u> </u>				
80	<u> </u>				
CD 2					
1	<u> </u>				
2	<u> </u>				
3	<u> </u>				
4	<u> </u>				
5	<u> </u>				
6	<u> </u>				
7	<u> </u>				
8	<u> </u>				
9	<u> </u>				
10	<u> </u>				

Please use the following scale and place the number code of your response in the blank provided on the left to questions 14 and 15.

APPENDIX III (continued)

	1 Not at All	2 To a Very Little Extent	3 To Some Extent	4 To a Consider- able Extent	5 To A Very Great Extent
11					
	14.	To what extent do you experience stress as a result of <u>your job</u> ?			
12					
	15.	To what extent do you experience stress and tension as a result of pressures and demands placed on you <u>outside</u> your job (from family, friends, neighbors, members of organizations you belong to, and so forth)?			

PART VII

Most people have things to do in their work that sometimes cause them problems. In the following portion of this questionnaire we would like to ask you some questions about what happens in your work and how it affects you.

For questions 1 through 16 below, please indicate the degree to which each of the following conditions exists for you on your job. Using the following scale, place the number code of your response to each condition in the blank provided to the left of the statement:

	Very false	1	2	3	4	5	Very true
13							
	1.	I have to do things that should be done differently.					
14							
	2.	I have to work on unnecessary things.					
15							
	3.	I have to do things that are against my personal principles.					
16							
	4.	I receive an assignment without the proper manpower to complete it.					

APPENDIX III (continued)

- 17 5. I receive an assignment without adequate resources and materials to execute it.
- 18 6. I work with two or more groups who operate quite differently.
- 19 7. I have to buck a rule or policy in order to carry out an assignment.
- 20 8. I receive incompatible requests from two or more people.
- 21 9. I do things that are apt to be accepted by one person and not accepted by others.
- 22 10. I frequently have much more to do than I can handle during the time available at work.
- 23 11. I feel certain about how much authority I have.
- 24 12. Clear, planned goals and objectives exist for my job.
- 25 13. I know that I have divided my time properly.
- 26 14. I know what my responsibilities are.
- 27 15. I know exactly what is expected of me.
- 28 16. Explanation is clear of what has to be done.

PART VIII

The purpose of this form is to determine how you rate yourself relative to others in your company with similar duties. You will be asked to rate yourself for characteristics on a seven-point scale which will look like this.

(low) . 1 2 3 4 5 6 7 (high)

APPENDIX III (continued)

You are to circle the number on the scale that represents where you stand compared to others with similar duties. If you think you are low on the characteristic, you would circle the numeral 1. If you think that you are a little less than average as compared with others with similar duties, you would circle the numeral 3, and so on. For each scale, circle only one number.

Please do not omit any scales

- | | | | | | | | | | | |
|----|--|-------|---|---|---|---|---|---|---|--------|
| 29 | 1. Quality of your job performance. | (low) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | (high) |
| 30 | 2. Your productivity on the job. | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 31 | 3. Amount of effort you expend on the job. | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
| 32 | 4. Amount of most recent pay increase. | | 1 | 2 | 3 | 4 | 5 | 6 | 7 | |

PART IX

People differ in the amounts and kinds of job clarity they prefer. The following four questions are provided to sample your preference for various kinds of clarity. Using the following scale, place the number code of your response in the blank provided to the left of questions 1 - 4.

	1	2	3	4	5
	Not at All	Important to a Very Little Extent	Important to Some Extent	Important to a considerable extent	Important to a Very Great Extent
33	_____	1. How important is it to you to know, in detail <u>what</u> you have to do on the job?			
34	_____	2. How important is it to you to know, in detail how you are supposed to do your job?			

APPENDIX III (continued)

35 _____ 3. How important is it to you to know, in detail what the limits of your
authority on the job are?

36 _____ 4. How important is it to you to know how well you are doing?

37 5. Check one of the following statements which best describes your intentions
towards leaving or staying with your present firm.

- _____ 1. I intend to leave as soon as possible.
- _____ 2. I am more likely to leave than stay.
- _____ 3. I am uncertain about leaving.
- _____ 4. I am more likely to stay than leave.
- _____ 5. I do not intend to ever leave.

38 6. Check one of the following which best indicates the length of time you plan
to remain a member of your present firm.

- _____ 1. One year or less.
- _____ 2. Two to three years.
- _____ 3. Four to five years.
- _____ 4. Six to seven years.
- _____ 5. More than seven years.

39 7. How would you best describe the conditions regarding your status and advancement
within your firm?

- _____ 1. I have already been informed either directly or indirectly that I
should make immediate plans in seeking employment elsewhere.
- _____ 2. I have been encouraged to remain with the firm for a limited time
(e.g. less than a year).
- _____ 3. I have been encouraged to remain with the firm but I am uncertain
about any future advancement.
- _____ 4. I have been encouraged to remain with the firm with a chance of
being promoted to no more than the next position.
- _____ 5. I have been encouraged to remain with the firm with a chance of
eventually being promoted to manager or partner.

APPENDIX III (continued)

- 40 8. Some people are completely involved in their job - they are absorbed in it night and day. For other people, their job is simply one of several interests. How involved do you feel in your job?
- (1) Very little involved; my other interests are more absorbing.
 - (2) Slightly involved.
 - (3) Moderately involved; my job and my other interests are equally absorbing to me.
 - (4) Strongly involved.
 - (5) Very strongly involved; my work is the most absorbing interest in my life.
- 41 9. How often do you do some extra work for your job which isn't really required of you?
- (5) Almost every day
 - (4) Several times a week
 - (3) About once a week
 - (2) Once every few weeks
 - (1) About once a month or less
- 42 10. Would you say you work harder, less hard, or about the same as other people doing your type of work at your company?
- (5) Much harder than most others
 - (4) A little harder than most others
 - (3) About the same as most others
 - (2) A little less hard than most others
 - (1) Much less hard than most others
- 43 11. On most days on your job, how often does time seem to drag for you?
- (1) About half the day or more
 - (2) About one-third of the day
 - (3) About one-quarter of the day
 - (4) About one-eighth of the day
 - (5) Time never seems to drag

APPENDIX III (continued)

PART X

JOB DESCRIPTION INVENTORY

Think about your job. If the word or phrase in each item below describes your feeling toward your job(work, pay, etc.), write a Y for YES in the space. If the Item does NOT tell how you feel, write N for NO in the space. If you don't know how you feel about the question write ? in the space.

<u>Work</u>		<u>Supervision</u>	
44	<input type="checkbox"/> Fascinating	62	<input type="checkbox"/> Asks my advice
45	<input type="checkbox"/> Routine	63	<input type="checkbox"/> Hard to please
46	<input type="checkbox"/> Satisfying	64	<input type="checkbox"/> Impolite
47	<input type="checkbox"/> Boring	65	<input type="checkbox"/> Praises good work
48	<input type="checkbox"/> Good	66	<input type="checkbox"/> Tactful
49	<input type="checkbox"/> Creative	67	<input type="checkbox"/> Influential
50	<input type="checkbox"/> Respected	68	<input type="checkbox"/> Up-to-date
51	<input type="checkbox"/> Hot	69	<input type="checkbox"/> Doesn't supervise enough
52	<input type="checkbox"/> Pleasant	70	<input type="checkbox"/> Quick tempered
53	<input type="checkbox"/> Useful	71	<input type="checkbox"/> Tells me where I stand
54	<input type="checkbox"/> Tiresome	72	<input type="checkbox"/> Annoying
55	<input type="checkbox"/> Healthful	73	<input type="checkbox"/> Stubborn
56	<input type="checkbox"/> Challenging	74	<input type="checkbox"/> Knows job well
57	<input type="checkbox"/> On your feet	75	<input type="checkbox"/> Bad
58	<input type="checkbox"/> Frustrating	76	<input type="checkbox"/> Intelligent
59	<input type="checkbox"/> Simple	77	<input type="checkbox"/> Leaves me on my own
60	<input type="checkbox"/> Endless	78	<input type="checkbox"/> Lazy
61	<input type="checkbox"/> Give sense of accomplishment	79	<input type="checkbox"/> Around when needed

APPENDIX III (continued)

	<u>Pay</u>		<u>Co-Workers</u>
80	Income adequate for	18	Stimulating
CD 3	normal expenses	19	Boring
1	Satisfactory Profit Sharing	20	Slow
2	Barely live on income	21	Ambitious
3	Bad	22	Stupid
4	Income provides luxuries	23	Responsible
5	Insecure	24	Fast
6	Less than I deserve	25	Intelligent
7	Highly paid	26	Easy to make enemies
8	Underpaid	27	Talk too much
		28	Smart
	<u>Promotions</u>	29	Lazy
9	Good opportunity for advancement	30	Unpleasant
10	Opportunity somewhat limited	31	No privacy
11	Promotion on ability	32	Active
12	Dead End Job	33	Narrow interests
13	Good chance for promotion	34	Loyal
14	Unfair promotion policy	35	Hard to meet
15	Infrequent promotions		
16	Regular promotions		
17	Fairly good chance for promotion		

PART XI

Background Information

Differences in background often affect the way people see the work situation and how they feel about it. The following questions are asked so that these differences can be studied.

The questions are not asked to identify you; they are, in fact, designed to preserve your anonymity.

APPENDIX III (continued)

- | | | | |
|-------|--|----|--|
| 36-37 | 1. Age _____ | 51 | 9. Number of professional staff in your office: |
| 38 | 2. Male _____ Female _____ | | 0-10 _____ |
| 39 | 3. Education: Please check the highest level of education you have attained: | | 11-25 _____ |
| | Bachelor's Degree _____ | | 26-50 _____ |
| | Master's Degree _____ | | 51-100 _____ |
| | Other (Specify) _____ | 52 | Over 100 _____ |
| 40 | 4. Do you have a CPA certificate? | | 10. How many auditors, including the manager, are assigned on one of <u>your</u> typical client engagements? |
| | Yes _____ No _____ | | 1-4 _____ |
| 41 | 5. Marital Status: | | 5-8 _____ |
| | Married _____ | | 9-12 _____ |
| | Single _____ | | 13-16 _____ |
| | Widowed _____ | 53 | 17 or more _____ |
| | Divorced, Separated _____ | | 11. On the average, how many immediate supervisors do you work for simultaneously? |
| 42-45 | 6. Length of employment with <u>current</u> firm: | | 1 _____ 5 _____ |
| | Years _____ Months _____ | | 2 _____ 6 _____ |
| 46-49 | 7. Length of employment with any previous CPA firm: | | 3 _____ 7 _____ |
| | Years _____ Months _____ | 54 | 4 _____ 8 or more _____ |
| 50 | 8. Current position with firm: | | 12. On the average, how many client engagements do <u>you</u> work on simultaneously? |
| | Junior/Staff Accountant _____ | | 1 _____ 5 _____ |
| | Semi-Senior Accountant _____ | | 2 _____ 6 _____ |
| | Senior or Supervisor Accountant _____ | | 3 _____ 7 _____ |
| | Manager _____ | | 4 _____ 8 or more _____ |
| | Other _____ | | |

APPENDIX III (continued)

55 13. On the average, how many hours do you spend on continuing education in a year?

None _____	41-80 _____
1-20 _____	81-100 _____
21-40 _____	Over 100 _____

56 14. Where is your office located?

1. Manhattan _____
2. Long Island _____
3. New Jersey _____
4. Elsewhere (specify) _____

57 15. Size of your firm:

1. Big-Eight _____
2. Medium _____
3. Small _____
4. Single Practitioner _____



HEMPSTEAD, NEW YORK 11550

APPENDIX IV

QUESTIONNAIRE USED FOR OBTAINING EMPLOYMENT
STATUS OF HOFSTRA ALUMNI

Dear Accounting Alumnus:

We are continually offering advanced educational programs at Hofstra and we are very much interested in your present career.

Could you please take a moment to check the appropriate boxes and return this form in the postage paid return envelope as promptly as possible?

Name: _____

Address: _____

1. Type of organization employed by:

Public Accounting Firm Private Corporation Government

Other (Please Specify) _____

2. Name of organization now employed at: _____

3. If you are employed in a Public Accounting Firm today, what is your present position?

Junior/STAFF Semi-Senior Senior/Supervisor

Manager Partner

4. Please answer these questions if you have left a Public Accounting Firm:

A. What year did you leave? _____

B. What was the name of the firm? _____

C. How many years did you work there? _____

D. What was your position when you left? _____

Thank you for taking the time to respond to this survey.

Respectfully,

Ralph Polimeni
Chairman

Accounting Department

RP/10

APPENDIX V

SAMPLE OF LETTER PREPARED BY A
CPA FIRM'S MANAGING PARTNER ENCOURAGING
HIS STAFF TO PARTICIPATE IN THE STUDY

I believe that we will all agree that it's in our best interest to try to improve our own satisfaction with our jobs and the environment within which we work. Because of that, I've agreed that we would cooperate with Professor Slavin on the study that is enclosed. Several other firms are also participating.

I would like to emphasize two points, however. One is that your responses will go directly to Professor Slavin, will be completely anonymous, and will never in any way be referred back to us. The second is that you don't have to do this if you don't wish to.

I urge you to cooperate with the study since I think it's in everyone's best interest that this sort of information be elicited. When Professor Slavin completes his study, we will receive a copy of it and you might be interested in seeing how your responses compare to that of the entire sample.

Cordially,

APPENDIX VI

SAMPLE OF CORRESPONDENCE FROM CPA FIRMS
THAT AGREED TO PARTICIPATE IN THE STUDY

Exhibit VI-A

June 27, 1979

Mr. Nathan Slavin
Hofstra University
Hempstead, N.Y. 11550

Dear Nathan,

We are pleased to be able to participate in your survey on the activities of independent auditors.

Enclosed you will find the list of the employees in the audit department and a letter to each as you requested. I feel that the response to this survey might be greater if the request came directly from you.

I will advise the staff to expect the questionnaire and request that they cooperate with you. If I can do anything else, don't hesitate to call me.

Very truly yours,

Encs.

APPENDIX VI
(continued)

Exhibit VI-B

June 28, 1979

Professor Nat Slavin
Hofstra University
1000 Fulton Avenue
Hempstead, New York 11550

Dear Nat:

As requested, enclosed is a listing of personnel in our office assigned to the audit division with at least one year's experience. I will arrange to send letters to these individuals as soon as I receive the enclosures which you are sending.

Sincerely,

APPENDIX VI
(continued)

Exhibit VI-C

June 1, 1979

Professor Nathan Slavin
Hofstra University
Hempstead, New York 11550

Dear Professor Slavin:

I am enclosing a list of the names of people who meet your criteria. I am also enclosing a draft of a letter that I think might be appropriate for me to include. If the draft meets with your approval, would you let my secretary know and we'll have it typed on firm stationery and send you sufficient copies for everybody. You could then prepare the envelopes and address them to the people on the list at our offices.

If you have anything you wish to discuss with me, please let my secretary know as I will be out of the office for the coming week.

Very truly yours,

Encls.

APPENDIX VII

SAMPLE OF CORRESPONDENCE FROM CPA FIRMS
THAT REFUSED TO PARTICIPATE IN THE STUDY

Exhibit VII-A

August 6, 1979

Dr. Nathan Slavin, CPA
Professor - Accounting Dept.
Hofstra University
Hempstead, N.Y. 11550

Dear Dr. Slavin:

I apologize for the delay in responding to your letter of June 8, 1979. The summer vacation schedules have made it difficult to discuss your proposals with the necessary people hear.

Although your research project has considerable appeal to us, we have decided not to participate. The primary reason for this is our sense that an attitudinal survey, such as your own, would very likely stimulate expectations and demands that we are unprepared to meet at this time.

I do want you to understand that our decision in no way reflects any negative reactions to your proposals. The project would appear to me to have considerable merit, and I wish you success with its implementation.

I do trust you appreciate the basis for our decision.

Sincerely,

Director of Recruitment
and University Relations

APPENDIX VII
(continued)

Exhibit VII-B

June 15, 1979

Professor Nathan Slavin, CPA
Hofstra University
Accounting Department
Hempstead, New York 11550

Dear Professor Slavin:

I have reviewed the information you forwarded to me regarding your research proposal and have discussed this with our managing partner, and also our executive office. I regret that we will not be able to participate in the study as you had hoped.

However, if there is any other way that we can be of service to you in the future, please do not hesitate to call.

Sincerely,

Partner

APPENDIX VII
(continued)

Exhibit VII-C

June 26, 1979

Professor Nathan Slavin
Hofstra University
Hempstead, NY 11550

Dear Professor Slavin:

Thank you for the opportunity to participate in the dissertation project on the behavior of public accountants. After consideration, our firm has decided not to participate.

If, at some later time, we can help with another project please contact us.

Very truly yours,

APPENDIX VIII -- PROCEDURES USED IN ANALYZING THE RESULTS OF THE EMPIRICAL STUDY
TABLE 5.1.A

PEARSON PRODUCT-MOMENT CORRELATION BETWEEN INDEPENDENT VARIABLES WITH SATISFACTION WITH WORK AND JOB ANXIETY

<u>Independent Variable</u>	<u>Satisfaction with Work</u>				<u>Job Anxiety</u>			
	<u>All Accountants</u>	<u>Staff</u>	<u>Seniors</u>	<u>Managers</u>	<u>All Accountants</u>	<u>Staff</u>	<u>Seniors</u>	<u>Managers</u>
<u>Firm Frame of Reference</u>								
(1) Participation	.42*	.46*	.31*	.43*	-.24*	-.22*	-.27*	-.37*
(2) Competence and Training	.36*	.32*	.32*	.33*	-.30*	-.17**	-.48*	-.30*
(3) Performance/Reward Relationship	.32*	.24*	.33*	.29*	-.28*	-.30*	-.31*	-.26**
<u>Client Frame of Reference</u>								
(4) Client Relations	.24*	.24*	.26*	.38*	-.30*	-.26*	-.50*	-.35*
(5) Pressure to Perform	-.25*	-.24*	-.37*	-.08	.38*	.30*	.37*	.50*
(6) Organizational Structure	.18*	.16**	.12	.29*	-.26*	-.25*	-.30*	-.21**
<u>Professional Frame of Reference</u>								
(7) Preference for Assignments	.47*	.39*	.53*	.46*	-.30*	-.17**	-.33*	-.45*
(8) Specialization	.09	-.12	.18**	-.12	.00	.04	-.21*	.18
<u>Leadership Frame of Reference</u>								
(9) Leadership Structure	.11**	.20**	.10	.24**	-.09**	-.03	-.07	-.23**
(10) Leader Interpersonal Relations	.38*	.26*	.45*	.38*	-.28**	-.17**	-.38*	-.26**

APPENDIX VIII (continued)
TABLE 5.1.B

PEARSON PRODUCT-MOMENT CORRELATION BETWEEN INDEPENDENT VARIABLES WITH DESIRE TO LEAVE AND JOB PERFORMANCE

<u>Independent Variable</u>	<u>Desire to Leave</u>				<u>Job Performance</u>			
	<u>All Accountants</u>	<u>Staff</u>	<u>Seniors</u>	<u>Managers</u>	<u>All Accountants</u>	<u>Staff</u>	<u>Seniors</u>	<u>Managers</u>
<u>Firm Frame of Reference</u>								
(1) Participation	-.44*	-.27*	-.37*	-.45*	.19*	.11	.16**	.09
(2) Competence and Training	-.37*	-.50*	-.31*	-.02	.17*	.18**	.14	.08
(3) Performance/Reward Relationship	-.33*	-.21*	-.35*	-.29*	.07	-.04	.17**	.04
<u>Client Frame of Reference</u>								
(4) Client Relations	-.21*	-.22**	-.25*	-.14	.13*	.10	.21**	-.01
(5) Pressure to Perform	.17*	.12	.30*	.17	.03	.03	-.08	.14
(6) Organizational Structure	-.14*	-.21**	-.15	-.03	.12**	.11	.08	.17
<u>Professional Frame of Reference</u>								
(7) Preference for Assignments	-.44*	-.41*	-.42*	-.46*	.20*	.18**	.24*	.10
(8) Specialization	-.13*	.01	-.09	.14	.16*	.16**	.07	.01
<u>Leadership Frame of Reference</u>								
(9) Leadership Structure	-.09	-.25*	-.12	-.05	.11**	.22**	.12	.10
(10) Leader Interpersonal Relations	-.34*	-.30*	-.42*	-.23**	.24*	.20**	.30*	.22**

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.2

SUMMARY OF SIGNIFICANCE AND DIRECTION OF PEARSON PRODUCT-MOMENT CORRELATIONS
BETWEEN INDEPENDENT VARIABLES AND PERSONAL OUTCOMES

<u>Independent Variable</u>	<u>Total Relationship Predicted</u>	<u>Predicted Direction</u>		<u>Contrary to Predicted Direction</u>	
		<u>Significant</u>	<u>Non Significant</u>	<u>Significant</u>	<u>Non Significant</u>
(1) Participation	16	14	2	--	--
(2) Competence and Training	16	13	2	--	1
(3) Performance/Reward Relationship	16	13	2	--	1
(4) Client Relations	16	14	1	--	1
(5) Pressure to Perform	16	9	4	--	3
(6) Organizational Structure	16	9	7	--	--
(7) Preference for Assignments	16	15	1	--	--
(8) Specialization	8	2	3	--	3
(9) Leadership Structure	16	8	8	--	--
(10) Leader Inter-personal Relations	16	16	--	--	--

APPENDIX VIII (continued)
TABLE 5.3

ZERO ORDER AND PARTIAL PEARSON PRODUCT-MOMENT CORRELATIONS BETWEEN ROLE AMBIGUITY, ROLE CONFLICT
WITH INDEPENDENT AND DEPENDENT VARIABLES FOR ALL ACCOUNTANTS
(N = 244)

<u>Independent Variable</u>	<u>Role Ambiguity</u>		<u>Role Conflict</u>	
	<u>Zero Order</u>	<u>Partial Controlling for Conflict</u>	<u>Zero Order</u>	<u>Partial Controlling for Ambiguity</u>
<u>Firm Frame of Reference</u>				
(1) Participation	-.41*	-.29*	-.38*	-.24*
(2) Competence and Training	-.49*	-.33*	-.53*	-.39*
(3) Performance/Reward Relationship	-.29*	-.12	-.43*	-.35*
<u>Client Frame of Reference</u>				
(4) Client Relationship	-.36*	-.21*	-.44*	-.33*
(5) Pressure to Perform	.14**	-.06	.41*	.39*
(6) Organizational Structure	-.26*	-.12	-.37*	-.29*
<u>Professional Frame of Reference</u>				
(7) Preference for Assignments	-.33*	-.22*	-.31*	-.19*
(8) Degree of Specialization	-.24*	-.23	-.08	.04
<u>Supervision Frame of Reference</u>				
(9) Leadership Structure	-.13**	-.05	-.19*	-.14**
(10) Leadership Interpersonal Relations	-.36*	-.21*	-.43*	.33*
<u>Dependent Variable</u>				
(11) Satisfaction with Work	-.32*	-.16**	-.43*	-.34*
(12) Desire to Leave	.35*	.23*	.33*	.21*
(13) Job Anxiety	.28*	.10	.45*	.37*
(14) Job Performance	-.27*	-.23*	-.13**	-.01

* $P < .01$

** $P < .05$

APPENDIX VIII (continued)
TABLE 5.4

t TEST FOR COMPARISON OF MEAN FOR POTENTIAL SOURCES
AND CONSEQUENCES OF ROLE AMBIGUITY

<u>Independent Variables</u>	<u>Degree of Role Ambiguity</u>				<u>Significance</u>
	<u>Number of Respondents</u>	<u>High</u>	<u>Number of Respondents</u>	<u>Low</u>	
<u>Firm Orientation</u>					
(1) Participation	157	14.7	143	17.5	.001
(2) Competence and Training	159	17.0	146	18.9	.001
(3) Performance/Reward Relationship	159	17.5	145	18.8	.001
<u>Client Orientation</u>					
(4) Client Relationship	157	17.2	145	18.5	.001
(5) Pressure to Perform	156	21.1	146	20.5	NS
(6) Organizational Structure	155	15.9	146	16.7	.002
<u>Professional Orientation</u>					
(7) Preference for Assignments	158	24.2	144	27.1	.001
(8) Degree of Specialization	159	12.3	145	13.4	.01

APPENDIX VIII (continued)
 TABLE 5.4
 (continued)

<u>Independent Variables</u>	<u>Degree of Role Ambiguity</u>				<u>Significance</u>
	<u>Number of Respondents</u>	<u>High</u>	<u>Number of Respondents</u>	<u>Low</u>	
<u>Leadership Orientation</u>					
(9) Leadership Structure	159	42.4	146	43.4	NS
(10) Leader Interpersonal Relations	157	11.5	144	12.7	.001
<u>Personal Outcomes</u>					
(11) Satisfaction with Work	157	33.1	142	39.2	.001
(12) Desire to Leave	155	8.6	143	6.9	.001
(13) Job Anxiety	159	34.1	144	30.1	.001
(14) Job Performance	159	16.6	146	18.1	.001

APPENDIX VIII (continued)
TABLE 5.5

t TEST FOR COMPARISON OF MEAN FOR POTENTIAL SOURCES
AND CONSEQUENCES OF ROLE CONFLICT

<u>Independent Variables</u>	<u>Degree of Role Conflict</u>				<u>Significance</u>
	<u>Number of Respondents</u>	<u>High</u>	<u>Number of Respondents</u>	<u>Low</u>	
<u>Firm Orientation</u>					
(1) Participation	155	14.9	146	17.3	.001
(2) Competence and Training	155	16.9	151	18.9	.001
(3) Performance/Reward Relationship	155	17.1	150	19.1	.001
<u>Client Orientation</u>					
(4) Client Relationship	154	17.0	149	18.6	.001
(5) Pressure to Perform	153	21.6	150	19.9	.001
(6) Organizational Structure	154	15.6	148	17.0	.001
<u>Professional Orientation</u>					
(7) Preference for Assignments	155	24.0	148	27.3	.001
(8) Degree of Specialization	155	12.7	150	12.9	NS

APPENDIX VIII (continued)
 TABLE 5.5
 (continued)

<u>Independent Variables</u>	<u>Degree of Role Conflict</u>				<u>Significance</u>
	<u>Number of Respondents</u>	<u>High</u>	<u>Number of Respondents</u>	<u>Low</u>	
<u>Leadership Orientation</u>					
(9) Leadership Structure	155	42.1	151	43.7	.009
(10) Leader Interpersonal Relations	152	11.3	149	12.9	.001
<u>Personal Outcomes</u>					
(11) Satisfaction with Work	153	32.3	147	40.0	.001
(12) Desire to Leave	152	8.5	148	7.0	.001
(13) Job Anxiety	154	35.4	149	29.1	.001
(14) Job Performance	155	16.9	151	17.7	.001

APPENDIX VIII (continued)
TABLE 5.6

ANALYSIS OF VARIANCE OF ROLE AMBIGUITY AND CONFLICT
ACROSS ORGANIZATIONAL LEVELS

<u>Source</u>	<u>Degrees of Freedom</u>	<u>Sums of Squares</u>	<u>Mean Squares</u>	<u>F Ratio</u>	<u>Significance</u>
<u>Role Ambiguity</u>					
Between Groups	2	234.29	117.14	7.36	.001
Within Groups	301	4788.61	15.91		
Total	303	5022.90			
<u>Role Conflict</u>					
Between Groups	2	4.36	2.18	0.76	.927
Within Groups	301	8336.61	25.60		
Total	303	8640.96			

APPENDIX VIII (continued)
TABLE 5.7

ZERO ORDER AND PARTIAL PEARSON PRODUCT-MOMENT CORRELATIONS BETWEEN AMBIGUITY (CONTROLLING FOR CONFLICT)
WITH INDEPENDENT AND DEPENDENT VARIABLES BY ORGANIZATIONAL LEVEL

<u>Independent Variable</u>	<u>Staff</u> (N = 81)		<u>Senior</u> (N = 101)		<u>Manager</u> (N = 58)	
	<u>Zero Order</u>	<u>Control for Conflict</u>	<u>Zero Order</u>	<u>Control for Conflict</u>	<u>Zero Order</u>	<u>Control for Conflict</u>
<u>Firm Frame of Reference</u>						
(1) Participation	-.20	-.07	-.27*	-.07	-.55*	-.47*
(2) Competence and Training	-.50*	-.37*	-.33*	-.11	-.51*	-.34*
(3) Performance/Reward Relationship	-.17	-.02	-.26	-.03	-.34*	-.22
<u>Client Frame of Reference</u>						
(4) Client Relationship	-.09	.06	-.50*	-.35*	-.39*	-.26**
(5) Pressure to Perform	-.03	-.16	.31*	.09	.22	.00
(6) Organizational Structure	-.14	-.02	-.17	-.01	-.52*	-.37*
<u>Professional Frame of Reference</u>						
(7) Preference for Assignments	-.25**	-.17	-.25**	-.12	-.45*	-.34*
(8) Degree of Specialization	-.19	-.22	-.25*	-.24**	.11	.14
<u>Supervision Frame of Reference</u>						
(9) Leadership Structure	-.29*	-.23**	-.15	-.01	-.28**	-.23
(10) Leadership Interpersonal Relations	-.22**	-.10	-.46*	-.31*	-.28**	-.08
<u>Dependent Variable</u>						
(11) Satisfaction with Work	-.31*	-.11	-.17	-.01	-.39*	-.28**
(12) Desire to Leave	.39*	.24**	.22**	.06	.23	.25
(13) Job Anxiety	.15	.01	.34*	.13	.45*	.29**
(14) Job Performance	-.35*	-.30*	-.16	-.15	-.15	-.09

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.8

DIFFERENCE BETWEEN CORRELATIONS OF ROLE AMBIGUITY CONTROLLING FOR CONFLICT ACROSS ORGANIZATIONAL LEVELS
WITH INDEPENDENT AND DEPENDENT VARIABLES

<u>Independent Variable</u>	<u>Difference Between Correlations</u>		<u>Staff (N = 81)</u>	<u>Senior (N = 101)</u>	<u>Manager (N = 58)</u>
	<u>Zero Order</u>	<u>Partial Control for Conflict</u>			
(1) Participation	1.88**	0.00			
	2.22**	2.54*			
	2.50*	2.65*			
(3) Competence and Training	1.20	1.85**			
	1.27	1.41			
	0.08	0.20			
(3) Performance/Reward Relationship	0.63	0.07			
	0.51	1.12			
	1.10	1.23			
(4) Client Relationship	3.07*	2.03**			
	0.80	0.57			
	1.94**	0.21			
(5) Pressure to Perform	1.94**	0.47			
	0.56	0.52			
	1.17	0.97			
(6) Organizational Structure	0.21	0.07			
	2.34**	2.18**			
	2.62*	2.22*			
(7) Preference for Assignments	0.00	0.33			
	1.33	1.35			
	1.39	1.10			
(8) Specialization	0.42	0.07			
	0.82	0.54			
	0.49	0.50			
(9) Leadership Structure	0.99	1.49			
	0.79	1.49			
	0.07	0.00			
(10) Leader Interpersonal Relations	1.82**	1.47			
	1.21	1.39			
	0.37	0.12			

APPENDIX VIII (continued)

TABLE 5.8
(continued)

<u>Dependent Variable</u>	<u>Difference Between Correlations</u>		<u>Staff (N = 81)</u>	<u>Senior (N = 101)</u>	<u>Manager (N = 58)</u>
	<u>Zero Order</u>	<u>Partial Control for Conflict</u>			
(11) Satisfaction with Work	0.99	0.67	_____	_____	_____
	1.39	1.61	_____	_____	_____
	0.55	1.07	_____	_____	_____
(12) Desire to Leave	1.25	1.23	_____	_____	_____
	0.06	1.13	_____	_____	_____
	1.07	0.06	_____	_____	_____
(13) Job Anxiety	1.35	0.81	_____	_____	_____
	0.76	0.97	_____	_____	_____
	2.01**	1.74**	_____	_____	_____
(14) Job Performance	1.36	1.06	_____	_____	_____
	0.06	0.35	_____	_____	_____
	1.29	1.33	_____	_____	_____

* P < .01

** P < .05

APPENDIX VIII (continued)

TABLE 5.9

ZERO ORDER AND PARTIAL PEARSON PRODUCT-MOMENT CORRELATIONS BETWEEN CONFLICT (CONTROLLING FOR AMBIGUITY)
WITH INDEPENDENT AND DEPENDENT VARIABLES BY ORGANIZATIONAL LEVEL

<u>Independent Variable</u>	<u>Staff</u> (N = 81)		<u>Senior</u> (N = 101)		<u>Manager</u> (N = 58)	
	<u>Zero Order</u>	<u>Control for Ambiguity</u>	<u>Zero Order</u>	<u>Control for Ambiguity</u>	<u>Zero Order</u>	<u>Control for Ambiguity</u>
<u>Firm Frame of Reference</u>						
(1) Participation	-.35*	-.30*	-.45*	-.38*	-.34*	-.10
(2) Competence and Training	-.53*	-.41*	-.54*	-.46*	-.53*	-.38*
(3) Performance/Reward Relationship	-.39*	-.36*	-.52*	-.46*	-.34*	-.21
<u>Client Frame of Reference</u>						
(4) Client Relationship	-.35*	-.35*	-.51*	-.36*	-.38*	-.23
(5) Pressure to Perform	.28**	.32*	.53*	.45*	.45*	.40*
(6) Organizational Structure	-.29*	-.26**	-.36*	-.32*	-.49*	-.31**
<u>Professional Frame of Reference</u>						
(7) Preference for Assignments	-.25**	-.16	-.32*	-.24**	-.35*	-.16
(8) Degree of Specialization	.01	.10	-.10	.02	-.01	-.08
<u>Supervision Frame of Reference</u>						
(9) Leadership Structure	-.20	-.10	-.32*	-.28*	-.17	-.04
(10) Leadership Interpersonal Relations	-.33*	-.27**	-.48*	-.34*	-.46*	-.38**
<u>Dependent Variable</u>						
(11) Satisfaction with Work	-.56*	-.50*	-.36*	-.32*	-.34*	-.18
(12) Desire to Leave	.48*	.39*	.38*	.32*	.02	-.10
(13) Job Anxiety	.36*	.33*	.51*	.43*	.47**	.32**
(14) Job Performance	-.17**	-.04	-.06	.01	-.14	-.08

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.10

DIFFERENCES BETWEEN CORRELATIONS OF ROLE CONFLICT CONTROLLING FOR AMBIGUITY ACROSS ORGANIZATIONAL LEVELS
WITH INDEPENDENT AND DEPENDENT VARIABLES

<u>Independent Variable</u>	<u>Difference Between Correlations</u>		<u>Staff (N = 81)</u>	<u>Senior (N = 101)</u>	<u>Manager (N = 58)</u>
	<u>Zero Order</u>	<u>Partial Control for Ambiguity</u>			
(1) Participation	0.01 0.76 0.07	0.60 1.73** 1.27	_____	_____	_____
(2) Competence and Training	0.00 0.08 0.00	0.41 0.56 0.22	_____	_____	_____
(3) Performance/Reward Relationship	1.09 1.28 0.35	0.80 1.64 0.99	_____	_____	_____
(4) Client Relationship	1.32 0.94 0.21	0.08 0.83 0.79	_____	_____	_____
(5) Pressure to Perform	2.01** 0.61 1.19	1.02 0.35 0.55	_____	_____	_____
(6) Organizational Structure	0.52 0.92 1.43	0.44 0.06 0.33	_____	_____	_____
(7) Preference for Assignments	0.51 0.19 0.66	0.56 0.56 0.00	_____	_____	_____
(8) Specialization	0.60 0.52 0.00	0.53 0.35 0.12	_____	_____	_____
(9) Leadership Structure	0.86 0.92 0.19	1.25 1.43 0.36	_____	_____	_____
(10) Leader Interpersonal Relations	1.20 0.15 0.93	0.51 0.27 0.74	_____	_____	_____

APPENDIX VIII (continued)
 TABLE 5.10
 (continued)

<u>Dependent Variable</u>	<u>Difference Between Correlations</u>		<u>Staff (N = 81)</u>	<u>Senior (N = 101)</u>	<u>Manager (N = 58)</u>
	<u>Zero Order</u>	<u>Partial Control for Ambiguity</u>			
(11) Satisfaction with Work	1.71**	1.45	_____	_____	_____
	0.13	0.87	_____	_____	_____
	1.68**	2.22**	_____	_____	_____
(12) Desire to Leave	0.82	0.53	_____	_____	_____
	2.20**	1.34	_____	_____	_____
	3.03*	1.88**	_____	_____	_____
(13) Job Anxiety	1.24	0.78	_____	_____	_____
	0.31	0.13	_____	_____	_____
	0.80	0.07	_____	_____	_____
(14) Job Performance	0.75	0.20	_____	_____	_____
	0.47	0.40	_____	_____	_____
	0.19	0.24	_____	_____	_____

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.11.A

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY,
ROLE CONFLICT AND PARTICIPATION WITH
PERSONAL OUTCOMES FOR ALL AUDITORS

<u>Dependent Variable</u>	<u>R²</u>	<u>F</u>	<u>d/f</u>
<u>Satisfaction with Work</u>			
RA, RC, PT, RAPT, RCPT	.30	20.64*	5/240
RA, RC, PT, RAPT	.30	25.85*	4/241
RA, RC, PT, RCPT	.30	25.90*	4/241
RA, RC, PT	.30	34.53*	3/242
<u>Desire to Leave</u>			
RA, RC, PT, RAPT, RCPT	.26	16.53*	5/240
RA, RC, PT, RAPT	.26	20.64*	4/241
RA, RC, PT, RCPT	.25	20.09*	4/241
RA, RC, PT	.24	25.92*	3/242
<u>Anxiety</u>			
RA, RC, PT, RAPT, RCPT	.22	13.28*	5/240
RA, RC, PT, RAPT	.22	16.66*	4/241
RA, RC, PT, RCPT	.22	16.58*	4/241
RA, RC, PT	.22	22.12*	3/242
<u>Job Performance</u>			
RA, RC, PT, RAPT, RCPT	.09	5.09*	5/240
RA, RC, PT, RAPT	.08	5.40*	4/241
RA, RC, PT, RCPT	.09	6.38*	4/241
RA, RC, PT	.08	6.70*	3/242

NOTE: RA = Role Anxiety, RC = Role Conflict, PT = Parti-
cipation, RAPT = Role Ambiguity x Participation,
RCPT = Role Conflict x Participation

* P < .01

APPENDIX VIII (continued)
TABLE 5.11.B

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY,
ROLE CONFLICT AND COMPETENCE AND TRAINING WITH
PERSONAL OUTCOMES FOR ALL AUDITORS

<u>Dependent Variable</u>	<u>R²</u>	<u>F</u>	<u>d/f</u>
<u>Satisfaction with Work</u>			
RA, RC, CT, RACT, RCCT	.24	14.96*	5/240
RA, RC, CT, RACT	.24	18.66*	4/241
RA, RC, CT, RCCT	.23	17.49*	4/241
RA, RC, CT	.22	23.21*	3/242
<u>Desire to Leave</u>			
RA, RC, CT, RACT, RCCT	.20	12.32*	5/240
RA, RC, CT, RACT	.20	15.45*	4/241
RA, RC, CT, RCCT	.20	15.04*	4/241
RA, RC, CT	.20	19.70*	3/242
<u>Anxiety</u>			
RA, RC, CT, RACT, RCCT	.22	13.40*	5/240
RA, RC, CT, RACT	.21	15.87*	4/241
RA, RC, CT, RCCT	.22	16.51*	4/241
RA, RC, CT	.21	21.25*	3/242
<u>Job Performance</u>			
RA, RC, CT, RACT, RCCT	.14	7.79*	5/240
RA, RC, CT, RACT	.11	7.81*	4/241
RA, RC, CT, RCCT	.13	9.39*	4/241
RA, RC, CT	.07	6.53*	3/242

NOTE: RA = Role Ambiguity, RC = Role Conflict, CT = Competence and Training, RACT = Role Ambiguity x Competence and Training, RCCT = Role Conflict x Competence and Training

* P < .01

APPENDIX VIII (continued)
TABLE 5.11.C

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY,
ROLE CONFLICT AND REWARD/PERFORMANCE RELATIONSHIP
WITH PERSONAL OUTCOMES FOR ALL AUDITORS

<u>Dependent Variable</u>	<u>R²</u>	<u>F</u>	<u>d/f</u>
<u>Satisfaction with Work</u>			
RA, RC, RD, RARD, RCRD	.23	14.04*	5/240
RA, RC, RD, RARD	.23	17.60*	4/241
RA, RC, RD, RCRD	.23	17.63*	4/241
RA, RC, RD	.23	23.55*	3/242
<u>Desire to Leave</u>			
RA, RC, RD, RARD, RCRD	.21	12.70*	5/240
RA, RC, RD, RARD	.21	15.94*	4/241
RA, RC, RD, RCRD	.21	15.87*	4/241
RA, RC, RD	.21	21.24*	3/242
<u>Anxiety</u>			
RA, RC, RD, RARD, RCRD	.22	13.47*	5/240
RA, RC, RD, RARD	.22	16.84*	4/241
RA, RC, RD, RCRD	.22	16.80*	4/241
RA, RC, RD	.21	22.04*	3/242
<u>Job Performance</u>			
RA, RC, RD, RARD, RCRD	.08	4.35*	5/240
RA, RC, RD, RARD	.08	4.89*	4/241
RA, RC, RD, RCRD	.08	5.44*	4/241
RA, RC, RD	.07	6.35*	3/242

NOTE: RA = Role Ambiguity, RC = Role Conflict,
RD = Performance/Reward Relationship,
RARD = Role Ambiguity x Performance/Reward Relationship,
RCRD = Role Conflict x Performance/Reward Relationship

* P < .01

APPENDIX VIII (continued)
TABLE 5.11.D

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY,
ROLE CONFLICT AND CLIENT RELATIONS
WITH PERSONAL OUTCOMES FOR ALL AUDITORS

<u>Dependent Variable</u>	<u>R²</u>	<u>F</u>	<u>d/f</u>
<u>Satisfaction with Work</u>			
RA, RC, CR, RACR, RCCR	.22	13.42*	5/240
RA, RC, CR, RACR	.22	16.76*	4/241
RA, RC, CR, RCCR	.21	16.43*	4/241
RA, RC, CR	.21	21.96*	3/242
<u>Desire to Leave</u>			
RA, RC, CR, RACR, RCCR	.19	11.00*	5/240
RA, RC, CR, RACR	.17	12.52*	4/241
RA, RC, CR, RCCR	.19	13.69*	4/241
RA, RC, CR	.17	16.43*	3/242
<u>Anxiety</u>			
RA, RC, CR, RACR, RCCR	.24	15.51*	5/240
RA, RC, CR, RACR	.24	18.96*	4/241
RA, RC, CR, RCCR	.24	19.25*	4/241
RA, RC, CR	.24	25.38*	3/242
<u>Job Performance</u>			
RA, RC, CR, RACR, RCCR	.09	4.80*	5/240
RA, RC, CR, RACR	.09	5.99*	4/241
RA, RC, CR, RCCR	.08	5.14*	4/241
RA, RC, CR	.07	6.46*	3/242

NOTE: RA = Role Ambiguity, RC = Role Conflict,
CR = Client Relations, RACR = Role Ambiguity x
Client Relations, RCCR = Role Conflict x Client
Relations

* P < .01

APPENDIX VIII (continued)
TABLE 5.11.E

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY,
ROLE CONFLICT AND PRESSURE TO PERFORM
WITH PERSONAL OUTCOMES FOR ALL AUDITORS

<u>Dependent Variable</u>	<u>R²</u>	<u>F</u>	<u>d/f</u>
<u>Satisfaction with Work</u>			
RA, RC, PR, RAPR, RCPR	.22	17.33*	5/240
RA, RC, PR, RAPR	.22	17.33*	4/241
RA, RC, PR, RCPR	.22	16.86*	4/241
RA, RC, PR	.21	21.66*	3/242
<u>Desire to Leave</u>			
RA, RC, PR, RAPR, RCPR	.17	12.21*	5/240
RA, RC, PR, RAPR	.17	12.21*	4/241
RA, RC, PR, RCPR	.17	11.93*	4/241
RA, RC, PR	.16	15.34*	3/242
<u>Anxiety</u>			
RA, RC, PR, RAPR, RCPR	.27	22.82*	5/240
RA, RC, PR, RAPR	.27	22.68*	4/241
RA, RC, PR, RCPR	.27	22.82*	4/241
RA, RC, PR	.27	30.26*	3/242
<u>Job Performance</u>			
RA, RC, PR, RAPR, RCPR	.09	6.28*	5/240
RA, RC, PR, RAPR	.09	6.28*	4/241
RA, RC, PR, RCPR	.09	5.83*	4/241
RA, RC, PR	.08	6.96*	3/242

NOTE: RA = Role Ambiguity, RC = Role Conflict,
PR = Pressure to Perform, RAPR = Role Ambiguity x
Pressure to Perform, RCPR = Role Conflict x
Pressure to Perform

* P < .01

APPENDIX VIII (continued)

TABLE 5.11.F

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY,
 ROLE CONFLICT AND CLIENT'S ORGANIZATIONAL STRUCTURE
 WITH PERSONAL OUTCOMES FOR ALL AUDITORS

<u>Dependent Variable</u>	<u>R²</u>	<u>F</u>	<u>d/f</u>
<u>Satisfaction with Work</u>			
RA, RC, SR, RASR, RCSR	.21	12.80*	5/240
RA, RC, SR, RASR	.21	15.79*	4/241
RA, RC, SR, RCSR	.21	16.07*	4/241
RA, RC, SR	.21	20.97*	3/242
<u>Desire to Leave</u>			
RA, RC, SR, RASR, RCSR	.16	9.03*	5/240
RA, RC, SR, RASR	.16	11.34*	4/241
RA, RC, SR, RCSR	.16	11.28*	4/241
RA, RC, SR	.16	15.07*	3/242
<u>Anxiety</u>			
RA, RC, SR, RASR, RCSR	.23	14.25*	5/240
RA, RC, SR, RASR	.22	16.69*	4/241
RA, RC, SR, RCSR	.23	17.85*	4/241
RA, RC, SR	.21	21.98*	3/242
<u>Job Performance</u>			
RA, RC, SR, RASR, RCSR	.10	5.07*	5/240
RA, RC, SR, RASR	.09	6.04*	4/241
RA, RC, SR, RCSR	.09	5.94*	4/241
RA, RC, SR	.07	6.24*	3/242

NOTE: RA = Role Ambiguity, RC = Role Conflict,
 SR = Client's Organizational Structure,
 RASR = Role Ambiguity x Client's Organizational
 Structure, RCSR = Role Conflict x Client's Organi-
 zational Structure

* P < .01

APPENDIX VIII (continued)
TABLE 5.11.G

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY,
ROLE CONFLICT AND PREFERENCE FOR ASSIGNMENTS
WITH PERSONAL OUTCOMES FOR ALL AUDITORS

<u>Dependent Variable</u>	<u>R²</u>	<u>F</u>	<u>d/f</u>
<u>Satisfaction with Work</u>			
RA, RC, PF, RAPF, RCPF	.33	23.42*	5/240
RA, RC, PF, RAPF	.33	29.40*	4/241
RA, RC, PF, RCPF	.32	29.00*	4/241
RA, RC, PF	.32	38.53*	3/242
<u>Desire to Leave</u>			
RA, RC, PF, RAPF, RCPF	.28	18.69*	5/240
RA, RC, PF, RAPF	.28	23.44*	4/241
RA, RC, PF, RCPF	.28	23.16*	4/241
RA, RC, PF	.27	30.52*	3/242
<u>Anxiety</u>			
RA, RC, PF, RAPF, RCPF	.25	16.15*	5/240
RA, RC, PF, RAPF	.24	19.44*	4/241
RA, RC, PF, RCPF	.25	20.01*	4/241
RA, RC, PF	.24	26.02*	3/242
<u>Job Performance</u>			
RA, RC, PF, RAPF, RCPF	.10	5.34*	5/240
RA, RC, PF, RAPF	.09	6.11*	4/241
RA, RC, PF, RCPF	.10	6.70*	4/241
RA, RC, PF	.09	7.55*	3/242

NOTE: RA = Role Ambiguity, RC = Role Conflict,
PF = Preference for Assignments, RAPF = Role Ambiguity
x Preference for Assignments, RCPF = Role Conflict x
Preference for Assignments

* P < .01

APPENDIX VIII (continued)
TABLE 5.11.H

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY,
ROLE CONFLICT AND SPECIALIZATION
WITH PERSONAL OUTCOMES FOR ALL AUDITORS

<u>Dependent Variable</u>	<u>R²</u>	<u>F</u>	<u>d/f</u>
<u>Satisfaction with Work</u>			
RA, RC, SP, RASP, RCSP	.21	12.85*	5/240
RA, RC, SP, RASP	.21	16.13*	4/241
RA, RC, SP, RCSP	.21	16.02*	4/241
RA, RC, SP	.21	21.38*	3/242
<u>Desire to Leave</u>			
RA, RC, SP, RASP, RCSP	.17	9.67*	5/240
RA, RC, SP, RASP	.17	12.10*	4/241
RA, RC, SP, RCSP	.16	11.81*	4/241
RA, RC, SP	.16	15.79*	3/242
<u>Anxiety</u>			
RA, RC, SP, RASP, RCSP	.21	12.93*	5/240
RA, RC, SP, RASP	.21	15.78*	4/241
RA, RC, SP, RCSP	.21	16.11*	4/241
RA, RC, SP	.21	21.13*	3/242
<u>Job Performance</u>			
RA, RC, SP, RASP, RCSP	.12	6.24*	5/240
RA, RC, SP, RASP	.11	7.44*	4/241
RA, RC, SP, RCSP	.09	6.06*	4/241
RA, RC, SP	.09	8.08*	3/242

NOTE: RA = Role Ambiguity, RC = Role Conflict,
SP = Specialization, RASP = Role Ambiguity x
Specialization, RCSP = Role Conflict x Specialization

* P < .01

APPENDIX VIII (continued)
TABLE 5.11.I

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY,
ROLE CONFLICT AND LEADERSHIP STRUCTURE
WITH PERSONAL OUTCOMES FOR ALL AUDITORS

<u>Dependent Variable</u>	<u>R²</u>	<u>F</u>	<u>d/f</u>
<u>Satisfaction with Work</u>			
RA, RC, LS, RALS, RCLS	.22	13.44*	5/240
RA, RC, LS, RALS	.22	16.57*	4/241
RA, RC, LS, RCLS	.22	16.75*	4/241
RA, RC, LS	.21	21.47*	3/242
<u>Desire to Leave</u>			
RA, RC, LS, RALS, RCLS	.16	9.27*	5/240
RA, RC, LS, RALS	.16	11.31*	4/241
RA, RC, LS, RCLS	.16	11.59*	4/241
RA, RC, LS	.16	15.14*	3/242
<u>Anxiety</u>			
RA, RC, LS, RALS, RCLS	.21	12.88*	5/240
RA, RC, LS, RALS	.21	16.21*	4/241
RA, RC, LS, RCLS	.21	15.94*	4/241
RA, RC, LS	.21	21.31*	3/242
<u>Job Performance</u>			
RA, RC, LS, RALS, RCLS	.10	5.43*	5/240
RA, RC, LS, RALS	.09	6.05*	4/241
RA, RC, LS, RCLS	.10	6.62*	4/241
RA, RC, LS	.08	6.71*	3/242

NOTE: RA = Role Ambiguity, RC = Role Conflict,
LS = Leadership Structure, RALS = Role Ambiguity x
Leadership Structure, RCLS = Role Conflict x
Leadership Structure

* P < .01

APPENDIX VIII (continued)
TABLE 5.11.J

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY,
ROLE CONFLICT AND LEADER INTERPERSONAL RELATIONS
WITH PERSONAL OUTCOMES FOR ALL AUDITORS

<u>Dependent Variable</u>	<u>R²</u>	<u>F</u>	<u>d/f</u>
<u>Satisfaction with Work</u>			
RA, RC, LR, RALR, RCLR	.24	14.97*	5/240
RA, RC, LR, RALR	.24	18.62*	4/241
RA, RC, LR, RCLR	.23	18.42*	4/241
RA, RC, LR	.23	24.65*	3/242
<u>Desire to Leave</u>			
RA, RC, LR, RALR, RCLR	.20	12.15*	5/240
RA, RC, LR, RALR	.20	14.78*	4/241
RA, RC, LR, RCLR	.20	15.25*	4/241
RA, RC, LR	.20	19.55*	3/242
<u>Anxiety</u>			
RA, RC, LR, RALR, RCLR	.23	14.36*	5/240
RA, RC, LR, RALR	.22	17.11	4/241
RA, RC, LR, RCLR	.23	17.97*	4/241
RA, RC, LR	.22	22.79*	3/242
<u>Job Performance</u>			
RA, RC, LR, RALR, RCLR	.11	6.00*	5/240
RA, RC, LR, RALR	.11	7.23*	4/241
RA, RC, LR, RCLR	.11	7.41*	4/241
RA, RC, LR	.10	8.94*	3/242

NOTE: RA = Role Ambiguity, RC = Role Conflict,
LR = Leader Interpersonal Relations,
RALR = Role Ambiguity x Leader Interpersonal Relations,
RCLR = Role Conflict x Leader Interpersonal Relations

* P < .01

APPENDIX VIII (continued)

TABLE 5.12.A

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY, ROLE CONFLICT, AND PARTICIPATION WITH PERSONAL OUTCOMES BY ORGANIZATION LEVEL

Dependent Variable	Chow Test F	Staff			Senior			Manager		
		R ²	F	d/f	R ²	F	d/f	R ²	F	d/f
<u>Satisfaction with Work</u>										
RA, RC, PT, RAPT, RCPT	1.64	.41	10.64*	5/77	.23	5.66*	5/97	.28	4.17*	5/54
RA, RC, PT, RAPT	1.60	.40	13.39*	4/78	.21	6.37*	4/98	.26	4.93*	4/55
RA, RC, PT, RCPT	1.89**	.40	13.38*	4/78	.23	7.12*	4/98	.26	4.89*	4/55
RA, RC, PT	1.62	.40	17.82*	3/79	.19	7.71*	3/99	.26	6.56*	3/56
<u>Desire to Leave</u>										
RA, RC, PT, RAPT, RCPT	3.16*	.33	7.63*	5/77	.23	5.71*	5/97	.23	3.27**	5/54
RA, RC, PT, RAPT	2.92*	.28	7.53*	4/78	.21	6.63*	4/98	.21	3.58**	4/55
RA, RC, PT, RCPT	3.69*	.32	9.00*	4/78	.22	7.05*	4/98	.22	3.78*	4/55
RA, RC, PT	3.67	.28	10.12*	3/79	.19	7.56*	3/99	.21	4.83*	3/56
<u>Anxiety</u>										
RA, RC, PT, RAPT, RCPT	1.73	.15	2.71**	5/77	.28	7.61	5/97	.43	8.01*	5/54
RA, RC, PT, RAPT	2.08**	.15	3.38**	4/78	.28	9.57*	4/98	.43	10.20*	4/55
RA, RC, PT, RCPT	1.73	.15	3.31**	4/78	.28	9.58*	4/98	.39	8.68*	4/55
RA, RC, PT	1.86	.14	4.26*	3/79	.28	12.88*	3/99	.36	10.56*	3/56
<u>Job Performance</u>										
RA, RC, PT, RAPT, RCPT	1.70	.12	2.16	5/77	.08	1.63	5/97	.23	3.14**	5/54
RA, RC, PT, RAPT	1.99**	.12	2.73**	4/78	.04	1.15	4/98	.22	3.94*	4/55
RA, RC, PT, RCPT	1.44	.12	2.74**	4/78	.06	1.67	4/98	.14	2.27	4/55
RA, RC, PT	1.48	.12	3.68**	3/79	.04	1.54	3/99	.04	0.75	3/56

NOTE: RA = Role Ambiguity, RC = Role Conflict, PT = Participation, RAPT = Role Ambiguity x Participation, RCPT = Role Conflict x Participation

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.12.B

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY, ROLE CONFLICT, AND
COMPETENCE/TRAINING WITH PERSONAL OUTCOMES BY ORGANIZATION LEVEL

Dependent Variable	Chow Test F	Staff			Senior			Manager		
		R ²	F	d/f	R ²	F	d/f	R ²	F	d/f
<u>Satisfaction with Work</u>										
RA, RC, CT, RACT, RCCT	1.65	.34	7.94*	5/77	.17	4.03*	5/97	.21	2.81**	5/54
RA, RC, CT, RACT	2.03**	.34	10.02*	4/78	.17	5.08*	4/98	.21	3.57**	4/55
RA, RC, CT, RCCT	2.25**	.33	9.73	4/78	.17	4.99*	4/98	.20	3.47**	4/55
RA, RC, CT	2.83*	.33	13.19*	3/79	.17	6.62*	3/99	.19	4.47*	3/56
<u>Desire to Leave</u>										
RA, RC, CT, RACT, RCCT	3.38*	.34	7.80*	5/77	.22	5.42*	5/97	.08	0.93	5/54
RA, RC, CT, RACT	3.90*	.32	8.98*	4/78	.22	6.78*	4/98	.08	1.17	4/55
RA, RC, CT, RCCT	3.72*	.32	9.33*	4/78	.19	5.82*	4/98	.08	1.17	4/55
RA, RC, CT	4.62*	.31	12.03*	3/79	.19	7.67*	3/99	.07	1.46	3/56
<u>Anxiety</u>										
RA, RC, CT, RACT, RCCT	1.78*	.16	2.92**	5/77	.34	10.08*	5/97	.32	5.14*	5/54
RA, RC, CT, RACT	2.17*	.16	3.66*	4/78	.34	12.66*	4/98	.29	5.71*	4/55
RA, RC, CT, RCCT	2.12*	.16	3.59*	4/78	.34	12.65*	4/98	.31	6.31*	4/55
RA, RC, CT	2.62*	.16	4.84*	3/79	.34	17.01*	3/99	.29	7.46	3/56
<u>Job Performance</u>										
RA, RC, CT, RACT, RCCT	1.80**	.21	4.18*	5/77	.09	1.84	5/97	.28	4.29*	5/54
RA, RC, CT, RACT	1.59	.15	3.53**	4/78	.08	2.12	4/98	.18	2.93**	4/55
RA, RC, CT, RCCT	1.84	.21	5.29*	4/78	.05	1.37	4/98	.28	5.35	4/55
RA, RC, CT	1.72	.13	3.78**	3/79	.05	1.84	3/99	.04	0.81	3/56

NOTE: RA = Role Ambiguity, RC = Role Conflict, CT = Competence and Training, RACT = Role Ambiguity x Competence and Training, RCCT = Role Conflict x Competence and Training

* P < .01
** P < .05

APPENDIX VIII (continued)

TABLE 5.12.C

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY, ROLE CONFLICT, AND
REWARD/PERFORMANCE RELATIONSHIP WITH PERSONAL OUTCOMES BY ORGANIZATION LEVEL

Dependent Variable	Chow Test	Staff			Senior			Manager		
	F	R ²	F	d/f	R ²	F	d/f	R ²	F	d/f
<u>Satisfaction with Work</u>										
RA, RC, RD, RARD, RCRD	3.22*	.33	7.64*	5/78	.16	3.81*	5/97	.28	4.38*	5/54
RA, RC, RD, RARD	2.21**	.33	9.67*	4/78	.15	4.44*	4/98	.26	4.85*	4/55
RA, RC, RD, RCRD	2.34*	.33	9.56*	4/78	.16	4.60*	4/98	.28	5.47*	4/55
RA, RC, RD	2.70*	.33	12.79*	3/79	.15	5.95*	3/99	.26	6.53*	3/56
<u>Desire to Leave</u>										
RA, RC, RD, RARD, RCRD	4.16*	.31	6.94*	5/77	.20	4.90*	5/97	.21	2.88**	5/54
RA, RC, RD, RARD	4.33*	.30	8.39	4/78	.19	5.75*	4/98	.20	3.54**	4/55
RA, RC, RD, RCRD	4.10*	.28	7.49	4/78	.20	6.10*	4/98	.18	3.11*	4/55
RA, RC, RD	5.00*	.27	10.09*	3/79	.19	7.74*	3/99	.18	4.20*	3/56
<u>Anxiety</u>										
RA, RC, RD, RARD, RCRD	2.07**	.21	4.01*	5/77	.29	8.00*	5/97	.37	6.38*	5/54
RA, RC, RD, RARD	1.60	.15	3.39*	4/78	.28	9.76*	4/98	.37	8.11*	4/55
RA, RC, RD, RCRD	1.26	.16	3.82*	4/78	.28	9.59*	4/98	.32	6.40*	4/55
RA, RC, RD	1.25	.14	4.40*	3/79	.28	12.84*	3/99	.30	7.93	3/56
<u>Job Performance</u>										
RA, RC, RD, RARD, RCRD	(x)	.17	3.24*	5/77	.09	1.96	5/97	.09	1.07	5/54
RA, RC, RD, RARD	2.26**	.17	4.06*	4/78	.07	1.86	4/98	.09	1.32	4/55
RA, RC, RD, RCRD	2.11**	.17	3.96*	4/78	.08	2.27	4/98	.07	1.05	4/55
RA, RC, RD	2.60*	.17	5.34*	3/79	.07	2.51	3/99	.05	0.88	3/56

NOTE: RA = Role Ambiguity, RC = Role Conflict, RD = Reward/Performance Relationship, RARD = Role Ambiguity x Reward/Performance Relationship, RCRD = Role Conflict x Reward/Performance Relationship

(x) Variable was insufficient to enter on Chow Test

* $p < .01$

** $p < .05$

APPENDIX VIII (continued)
TABLE 5.12.D

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY, ROLE CONFLICT, AND
CLIENT RELATIONS WITH PERSONAL OUTCOMES BY ORGANIZATION LEVEL

Dependent Variable	Chow Test F	Staff			Senior			Manager		
		R ²	F	d/f	R ²	F	d/f	R ²	F	d/f
<u>Satisfaction with Work</u>										
RA, RC, CR, RACR, RCCR	2.26**	.33	7.68	5/77	.14	3.25*	5/97	.26	3.86*	5/54
RA, RC, CR, RACR	2.24**	.33	9.60*	4/78	.14	4.10*	4/98	.24	4.42*	4/55
RA, RC, CR, RCCR	2.39*	.33	9.69*	4/78	.14	4.08*	4/98	.25	4.60*	4/55
RA, RC, CR	2.86*	.33	12.79*	3/79	.14	5.37*	3/99	.24	5.99*	3/56
<u>Desire to Leave</u>										
RA, RC, CR, RACR, RCCR	4.37*	.34	7.84	5/77	.19	4.62*	5/97	.10	1.23	5/54
RA, RC, CR, RACR	4.16*	.29	8.06*	4/78	.18	5.29*	4/98	.08	1.19	4/55
RA, RC, CR, RCCR	4.08*	.30	8.27*	4/78	.19	5.83*	4/98	.09	1.33	4/55
RA, RC, CR	5.03*	.28	10.11*	3/79	.17	6.65*	3/99	.08	1.61	3/56
<u>Anxiety</u>										
RA, RC, CR, RACR, RCCR	1.53	.21	4.06	5/77	.33	9.58*	5/97	.34	5.55*	5/54
RA, RC, CR, RACR	1.15	.16	3.85*	4/78	.32	11.72*	4/98	.31	6.19*	4/55
RA, RC, CR, RCCR	1.58	.18	4.42*	4/78	.33	12.05*	4/98	.34	6.95*	4/55
RA, RC, CR	1.25	.16	4.99*	3/79	.32	15.62*	3/99	.30	8.07*	3/56
<u>Job Performance</u>										
RA, RC, CR, RACR, RCCR	2.01**	.12	2.14	5/77	.10	2.20	5/97	.14	1.76	5/54
RA, RC, CR, RACR	1.82	.12	2.71**	4/78	.09	2.32	4/98	.13	2.11	4/55
RA, RC, CR, RCCR	1.80	.12	2.71**	4/78	.07	1.74	4/98	.12	1.84	4/55
RA, RC, CR	1.90	.12	3.66**	3/79	.07	2.33	3/99	.04	0.78	3/56

NOTE: RA = Role Ambiguity, RC = Role Conflict, CR = Client Relations, RACR = Role Ambiguity x Client Relations, RCCR = Role Conflict x Client Relations

* P < .01
** P < .05

APPENDIX VIII (continued)

TABLE 5.12.E

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY, ROLE CONFLICT, AND
PRESSURE TO PERFORM WITH PERSONAL OUTCOMES BY ORGANIZATION LEVEL

Dependent Variable	Chow Test F	Staff			Senior			Manager		
		R ²	F	d/f	R ²	F	d/f	R ²	F	d/f
<u>Satisfaction with Work</u>										
RA, RC, PR, RAPR, RCPR	3.00*	.34	7.87*	5/77	.22	5.49*	5/97	.27	3.93*	5/54
RA, RC, PR, RAPR	3.02*	.33	9.64*	4/78	.19	7.69*	3/99	.23	4.06*	4/55
RA, RC, PR, RCPR	3.30*	.34	9.96*	4/78	.22	6.89*	4/98	.19	3.27**	4/55
RA, RC, PR	3.69*	.33	13.00*	3/79	.19	7.65*	3/99	.19	4.43*	3/56
<u>Desire to Leave</u>										
RA, RC, PR, RAPR, RCPR	4.28*	.30	6.70*	5/77	.18	4.31*	5/97	.11	1.35	5/54
RA, RC, PR, RAPR	4.86*	.29	7.85*	4/78	.17	6.64*	3/99	.11	1.72	4/55
RA, RC, PR, RCPR	4.81*	.30	8.44*	4/78	.18	5.45*	4/98	.11	1.69	4/55
RA, RC, PR	5.74*	.28	10.29*	3/79	.17	6.64*	3/99	.11	2.20	3/56
<u>Anxiety</u>										
RA, RC, PR, RAPR, RCPR	1.53	.19	3.56*	5/77	.32	9.14*	5/97	.51	11.19*	5/54
RA, RC, PR, RAPR	1.70	.18	4.38*	4/78	.30	14.17*	3/99	.50	13.49*	4/55
RA, RC, PR, RCPR	1.61	.18	4.25*	4/78	.30	10.71*	4/98	.51	14.21*	4/55
RA, RC, PR	1.69	.17	5.33*	3/79	.30	14.17*	3/99	.49	17.96*	3/56
<u>Job Performance</u>										
RA, RC, PR, RAPR, RCPR	2.48*	.18	3.38*	5/77	.05	0.91	5/97	.34	5.60*	5/54
RA, RC, PR, RAPR	2.07**	.13	2.89**	4/78	.03	0.92	3/99	.29	5.56*	4/55
RA, RC, PR, RCPR	2.91*	.18	4.28*	4/78	.04	1.10	4/98	.32	6.40*	4/55
RA, RC, PR	1.64	.13	3.78**	3/79	.03	0.92	3/99	.11	2.42	3/56

NOTE: RA = Role Ambiguity, RC = Role Conflict, PR = Pressure to Perform, RAPR = Role Ambiguity x Pressure to Perform, RCPR = Role Conflict x Pressure to Perform

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.12.F

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY, ROLE CONFLICT, AND
CLIENT'S ORGANIZATIONAL STRUCTURE WITH PERSONAL OUTCOMES BY ORGANIZATION LEVEL

Dependent Variable	Chow Test F	Staff			Senior			Manager		
		R ²	F	d/f	R ²	F	d/f	R ²	F	d/f
<u>Satisfaction with Work</u>										
RA, RC, SR, RASR, RCSR	3.23*	.41	10.55*	5/77	.14	3.22*	5/97	.26	3.76*	5/54
RA, RC, SR, RASR	2.55*	.35	10.42*	4/78	.14	4.05*	4/98	.19	3.17**	4/55
RA, RC, SR, RCSR	3.13*	.40	13.15*	4/78	.13	3.65*	4/98	.21	3.71*	4/55
RA, RC, SR	2.85*	.34	13.57*	3/79	.13	4.84*	3/99	.18	4.22*	3/56
<u>Desire to Leave</u>										
RA, RC, SR, RASR, RCSR	4.48*	.33	7.54*	5/77	.16	3.59*	5/97	.13	1.55	5/54
RA, RC, SR, RASR	4.49*	.31	8.65*	4/78	.16	4.49*	4/98	.09	1.39	4/55
RA, RC, SR, RCSR	4.35*	.29	8.04*	4/78	.16	4.53*	4/98	.09	1.30	4/55
RA, RC, SR	5.41*	.29	10.75*	3/79	.15	6.05*	3.99	.08	1.65	3/56
<u>Anxiety</u>										
RA, RC, SR, RASR, RCSR	1.49	.14	2.54**	5/77	.31	8.83*	5/97	.40	7.18*	5/54
RA, RC, SR, RASR	1.53	.14	3.18**	4/78	.30	10.27*	4/98	.38	8.26*	4/55
RA, RC, SR, RCSR	1.76	.14	3.21**	4/78	.30	10.46*	4/98	.38	8.53*	4/55
RA, RC, SR	1.29	.14	4.20*	3/79	.29	13.63*	3/99	.29	7.48*	3/56
<u>Job Performance</u>										
RA, RC, SR, RASR, RCSR	1.58	.15	2.62**	5/77	.05	0.99	5/97	.20	2.78**	5/54
RA, RC, SR, RASR	1.48	.14	3.17**	4/78	.04	1.10	4/98	.15	2.36	4/55
RA, RC, SR, RCSR	1.82	.14	3.23**	4/78	.05	1.16	4/98	.19	3.30**	4/55
RA, RC, SR	1.55	.14	4.27*	3/79	.03	1.03	3/99	.03	0.55	3/56

NOTE: RA= Role Ambiguity, RC = Role Conflict, SR = Client's Organizational Structure, RASR = Role Ambiguity x Client's Organizational Structure, RCSR = Role Conflict x Client's Organizational Structure

* P < .01
** P < .05

APPENDIX VIII (continued)

TABLE 5.12.G

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY, ROLE CONFLICT, AND PREFERENCE FOR ASSIGNMENTS WITH PERSONAL OUTCOMES BY ORGANIZATION LEVEL

Dependent Variable	Chow Test F	Staff			Senior			Manager		
		R ²	F	d/f	R ²	F	d/f	R ²	F	d/f
<u>Satisfaction with Work</u>										
RA, RC, PF, RAPF, RCPF	2.25*	.39	9.93*	5/77	.34	9.88*	5/97	.29	4.39*	5/54
RA, RC, PF, RAPF	2.63*	.39	12.53*	4/78	.34	12.41*	4/98	.28	5.25*	4/55
RA, RC, PF, RCPF	2.64*	.39	12.55*	4/78	.33	12.28*	4/98	.26	4.89*	4/55
RA, RC, PF	3.19*	.39	16.77*	3/79	.33	15.94*	3/99	.26	6.64*	3/56
<u>Desire to Leave</u>										
RA, RC, PF, RAPF, RCPF	3.74*	.35	8.33*	5/77	.29	7.88*	5/97	.26	3.86*	5/54
RA, RC, PF, RAPF	4.40*	.34	9.96*	4/78	.29	9.88*	4/98	.26	4.19*	4/55
RA, RC, PF, RCPF	4.41*	.34	10.09*	4/78	.29	9.88*	4/98	.25	4.65*	4/55
RA, RC, PF	5.51*	.34	13.28*	3/79	.29	13.28*	3/99	.24	5.94*	3/56
<u>Anxiety</u>										
RA, RC, PF, RAPF, RCPF	2.35*	.16	2.84**	5/77	.37	11.24*	5/97	.48	9.77*	5/54
RA, RC, PF, RAPF	2.19**	.15	3.44**	4/78	.31	11.23*	4/98	.48	12.44*	4/55
RA, RC, PF, RCPF	2.13**	.15	3.48**	4/78	.34	12.42*	4/98	.45	11.20*	4/55
RA, RC, PF	1.91	.14	4.15*	3/79	.31	14.99*	3/99	.42	13.52*	3/56
<u>Job Performance</u>										
RA, RC, PF, RAPF, RCPF	1.61	.15	2.69**	5/77	.10	2.05	5/97	.14	1.75	5/54
RA, RC, PF, RAPF	1.86**	.13	2.90**	4/78	.09	2.30	4/98	.14	2.21	4/55
RA, RC, PF, RCPF	1.64	.15	3.39**	4/78	.09	2.37	4/98	.10	1.52	4/55
RA, RC, PF	1.83	.13	3.83**	3/79	.08	3.05**	3/99	.03	0.67	3/56

NOTE: RA = Role Ambiguity, RC = Role Conflict, PF = Preference for Assignments, RAPF = Ambiguity x Preference for Assignments, RCPF = Role Conflict x Preference for Assignments

* P < .01

** P < .05

APPENDIX VIII (continued)

TABLE 5.12.H

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY, ROLE CONFLICT, AND SPECIALIZATION WITH PERSONAL OUTCOMES BY ORGANIZATION LEVEL

Dependent Variable	Chow Test F	Staff			Senior			Manager		
		R ²	F	d/f	R ²	F	d/f	R ²	F	d/f
<u>Satisfaction with Work</u>										
RA, RC, SP, RASP, RCSP	4.29*	.38	9.28*	5/77	.28	7.47*	5/97	.20	2.66**	5/54
RA, RC, SP, RASP	4.69*	.35	10.73*	4/78	.27	9.00*	4/98	.20	3.37**	4/55
RA, RC, SP, RCSP	3.81*	.37	11.51*	4/78	.16	4.81*	4/98	.19	3.33**	4/55
RA, RC, SP	3.61*	.35	14.34*	3/79	.16	6.26*	3/99	.19	4.50*	3/56
<u>Desire to Leave</u>										
RA, RC, SP, RASP, RCSP	4.29*	.30	6.58*	5/77	.18	4.16*	5/97	.17	2.25	5/54
RA, RC, SP, RASP	4.41*	.28	7.56*	4/78	.17	5.06*	4/98	.11	1.75	4/55
RA, RC, SP, RCSP	5.52*	.30	8.25*	4/78	.17	4.93*	4/98	.15	2.37	4/55
RA, RC, SP	5.28*	.28	10.17*	3/79	.15	5.84*	3/99	.11	2.34	3/56
<u>Anxiety</u>										
RA, RC, SP, RASP, RCSP	1.80**	.16	3.00**	5/77	.33	9.39*	5/97	.33	5.25*	5/54
RA, RC, SP, RASP	2.05**	.15	3.45**	4/78	.33	11.85*	4/98	.31	6.19*	4/55
RA, RC, SP, RCSP	1.80	.14	3.22**	4/78	.33	11.85*	4/98	.30	6.02*	4/55
RA, RC, SP	2.30**	.13	4.04*	3/79	.33	15.96*	3/99	.30	8.15*	3/56
<u>Job Performance</u>										
RA, RC, SP, RASP, RCSP	1.00	.17	3.08**	5/77	.05	1.10	5/97	.15	1.87	5/54
RA, RC, SP, RASP	0.78	.16	3.65*	4/78	.03	0.64	4/98	.12	1.87	4/55
RA, RC, SP, RCSP	1.64	.15	3.53**	4/78	.05	1.22	4/98	.14	2.32	4/55
RA, RC, SP	0.97	.15	4.54*	3/79	.03	0.86	3/99	.04	0.71	3/56

NOTE: RA = Role Ambiguity, RC = Role Conflict, SP = Specialization, RASP = Role Ambiguity x Specialization, RCSP = Role Conflict x Specialization

* P < .01

** P < .05

APPENDIX VIII (continued)

TABLE 5.12.I

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY, ROLE CONFLICT, AND LEADERSHIP STRUCTURE WITH PERSONAL OUTCOMES BY ORGANIZATION LEVEL

Dependent Variable	Chow Test F	Staff			Senior			Manager		
		R ²	F	d/f	R ²	F	d/f	R ²	F	d/f
<u>Satisfaction with Work</u>										
RA, RC, LS, RALS, RCLS	2.72*	.34	7.95*	5/77	.16	3.56*	5/97	.25	3.60*	5/54
RA, RC, LS, RALS	2.41*	.34	10.05*	4/78	.13	3.67*	4/98	.23	4.15*	4/55
RA, RC, LS, RCLS	2.65*	.33	9.70*	4/78	.14	3.81*	4/98	.23	4.11*	4/55
RA, RC, LS	2.83*	.33	12.94*	3/79	.14	5.16*	3/99	.22	5.16*	3/56
<u>Desire to Leave</u>										
RA, RC, LS, RALS, RCLS	6.13*	.35	8.23*	5/77	.19	4.66*	5/97	.12	1.51	5/54
RA, RC, LS, RALS	4.79*	.29	8.11*	4/78	.15	4.30*	4/98	.09	1.35	4/55
RA, RC, LS, RCLS	5.34*	.32	9.05*	4/78	.17	5.03*	4/98	.10	1.48	4/55
RA, RC, LS	5.26*	.31	11.71*	3/79	.15	5.81*	3/99	.06	1.23	3/56
<u>Anxiety</u>										
RA, RC, LS, RALS, RCLS	2.77*	.18	3.27**	5/77	.30	8.42*	5/97	.45	8.87*	5/54
RA, RC, LS, RALS		.14	3.16**	4/78	.29	9.95*	4/98	.40	9.16*	4/55
RA, RC, LS, RCLS	1.84	.15	3.33**	4/78	.30	10.38*	4/98	.35	7.52*	4/55
RA, RC, LS	1.34	.14	4.12*	3/79	.28	12.54*	3/99	.30	8.11*	3/56
<u>Job Performance</u>										
RA, RC, LS, RALS, RCLS	1.18	.21	4.19*	5/77	.04	0.84	5/97	.11	1.28	5/54
RA, RC, LS, RALS	1.29	.20	4.73*	4/78	.03	0.81	4/98	.05	0.76	4/55
RA, RC, LS, RCLS	0.93	.20	4.98*	4/78	.04	0.89	4/98	.08	1.26	4/55
RA, RC, LS	1.60	.16	4.86*	3/79	.03	1.09	3/97	.03	0.59	3/56

NOTE: RA = Role Ambiguity, RC = Role Conflict, LS = Leadership Structure, RALS = Role Ambiguity x Leadership Structure, RCLS = Role Conflict x Leadership Structure

* P < .01
 ** P < .05

APPENDIX VIII (continued)
TABLE 5.12.J

MAIN AND INTERACTION EFFECTS USING ROLE AMBIGUITY, ROLE CONFLICT, AND
LEADER INTERPERSONAL RELATIONS WITH PERSONAL OUTCOMES BY ORGANIZATION LEVEL

Dependent Variable	Chow Test	Staff			Senior			Manager		
	F	R ²	F	d/f	R ²	F	d/f	R ²	F	d/f
<u>Satisfaction with Work</u>										
RA, RC, LR, RALR, RCLR	2.63*	.33	7.55*	5/77	.24	6.06*	5/97	.27	4.04*	5/54
RA, RC, LR, RALR	3.02*	.33	9.54*	4/78	.23	7.51*	4/98	.24	4.26*	4/55
RA, RC, LR, RCLR	3.11*	.33	9.54*	4/78	.23	7.52*	4/98	.24	4.38*	4/55
RA, RC, LR	3.81*	.33	12.79*	3/79	.23	10.08*	3/99	.23	5.45*	3/56
<u>Desire to Leave</u>										
RA, RC, LR, RALR, RCLR	3.89*	.31	6.96*	5/77	.25	6.44*	5/97	.10	1.27	5/54
RA, RC, LR, RALR	4.45*	.30	8.27*	4/78	.24	7.66*	4/98	.09	1.36	4/55
RA, RC, LR, RCLR	4.36*	.30	8.52*	4/78	.25	8.10*	4/98	.07	1.11	4/55
RA, RC, LR	5.21*	.30	11.08*	3/79	.23	9.58*	3/99	.07	1.46	3/56
<u>Anxiety</u>										
RA, RC, LR, RALR, RCLR	1.97**	.14	2.57**	5/77	.34	10.00*	5/97	.41	7.58*	5/54
RA, RC, LR, RALR	2.13**	.14	3.25**	4/78	.31	10.86*	4/98	.41	9.49*	4/55
RA, RC, LR, RCLR	1.97**	.14	3.06**	4/78	.34	12.62*	4/98	.37	8.20*	4/55
RA, RC, LR	1.55	.13	4.04**	3/79	.29	13.42*	3/99	.34	9.81*	3/56
<u>Job Performance</u>										
RA, RC, LR, RALR, RCLR	1.32	.16	3.04**	5/77	.11	2.38**	5/97	.07	0.81	5/54
RA, RC, LR, RALR	1.38	.13	2.92**	4/78	.11	3.01**	4/98	.07	1.01	4/55
RA, RC, LR, RCLR	1.47	.16	3.78*	4/78	.11	2.96**	4/98	.05	0.65	4/55
RA, RC, LR	1.71	.13	3.92**	3/79	.11	3.94**	3/99	.03	0.61	3/56

NOTE: RA = Role Ambiguity, RC = Role Conflict, LR = Leader Interpersonal Relations, RALR = Role Ambiguity x Leader Interpersonal Relations, RCLR = Role Conflict x Leader Interpersonal Relations

* P < .01
** P < .05

APPENDIX VIII (continued)
TABLE 5.13.A

CHANGE IN R² FOR EACH STEP OF A HIERARCHICAL REGRESSION FOR SATISFACTION WITH WORK

Frame of Reference	All Accountants			Staff			Seniors			Managers		
	R ²	ΔR ²	F	R ²	ΔR ²	F	R ²	ΔR ²	F	R ²	ΔR ²	F
Firm Frame of Reference	.28	--	--	.26	--	--	.21	--	--	.33	--	--
Client Frame of Reference	.29	.01	1.86	.30	.04	1.52	.25	.04	1.99	.39	.06	1.69
Professional Frame of Reference	.36	.07	11.83*	.35	.05	2.87	.40	.15	11.17**	.41	.02	0.69
Leadership Frame of Reference	.36	.00	0.86	.37	.02	0.97	.43	.03	2.43	.43	.02	0.92
Role Conflict	.38	.02	7.17*	.48	.11	15.52*	.43	.00	0.01	.43	.00	0.55
Role Ambiguity	.38	.00	0.02	.49	.01	0.89	.45	.02	4.08**	.44	.01	0.13
Role Ambiguity ^o	.36	.00	0.10	.39	.02	2.34	.45	.02	4.09**	.43	.00	0.06
Role Conflict ^{oo}	.38	.02	7.05**	.49	.10	13.64**	.45	.00	0.05	.44	.01	0.61

* P < .01

** P < .05

^o Role Ambiguity would have the corresponding F value if entered before Role Conflict

^{oo} Role Conflict would have the corresponding F value is entered after Role Ambiguity

APPENDIX VIII (continued)

TABLE 5.13.B

CHANGE IN R^2 FOR EACH STEP OF A HIERARCHICAL REGRESSION FOR DESIRE TO LEAVE

Frame of Reference	All Accountants			Staff			Seniors			Managers		
	R^2	ΔR^2	F	R^2	ΔR^2	F	R^2	ΔR^2	F	R^2	ΔR^2	F
Firm Frame of Reference	.28	--	--	.24	--	--	.21	--	--	.30	--	--
Client Frame of Reference	.29	.01	0.14	.26	.02	0.48	.24	.03	1.14	.35	.05	1.21
Professional Frame of Reference	.35	.06	10.22*	.32	.06	3.19**	.33	.09	6.05*	.37	.02	0.91
Leadership Frame of Reference	.36	.01	1.68	.32	.00	0.36	.36	.03	2.19	.39	.02	0.77
Role Conflict	.36	.00	0.14	.38	.06	7.09*	.36	.00	0.09	.40	.01	0.30
Role Ambiguity	.36	.00	0.87	.39	.01	0.58	.36	.00	0.91	.40	.00	0.48
Role Ambiguity ^o	.36	.00	0.96	.34	.02	1.44	.36	.00	0.80	.39	.00	0.30
Role Conflict ^{oo}	.36	.00	0.04	.39	.05	6.08**	.36	.00	0.21	.40	.01	0.96

* $P < .01$ ** $P < .05$ ^o Role Ambiguity would have the corresponding F value if entered before Role Conflict^{oo} Role Conflict would have the corresponding F value if entered after Role Ambiguity

APPENDIX VIII (continued)
TABLE 5.13.C

CHANGE IN R² FOR EACH STEP OF A HIERARCHICAL REGRESSION FOR JOB ANXIETY

Frame of Reference	All Accountants			Staff			Seniors			Managers		
	R ²	ΔR ²	F	R ²	ΔR ²	F	R ²	ΔR ²	F	R ²	ΔR ²	F
Firm Frame of Reference	.13	--	--	.08	--	--	.27	--	--	.32	--	--
Client Frame of Reference	.27	.14	15.74*	.17	.09	2.89**	.39	.12	6.53*	.51	.19	3.35**
Professional Frame of Reference	.30	.03	4.39**	.18	.01	0.12	.44	.05	3.98**	.58	.07	4.24**
Leadership Frame of Reference	.31	.01	0.00	.18	.00	0.24	.45	.01	0.83	.60	.02	1.49
Role Conflict	.33	.02	5.92**	.22	.04	3.32	.46	.01	2.10	.60	.00	0.01
Role Ambiguity	.33	.00	0.26	.23	.01	0.60	.46	.00	0.48	.61	.01	1.09
Role Ambiguity ^o	.31	.00	0.81	.20	.02	1.18	.45	.00	0.18	.61	.01	1.12
Role Conflict ^{oo}	.33	.02	5.34**	.23	.03	2.70	.46	.01	2.38	.61	.00	0.01

* P < .01

** P < .05

^o Role Ambiguity would have the corresponding F value if entered before Role Conflict

^{oo} Role Conflict would have the corresponding F value if entered after Role Ambiguity

APPENDIX VIII (continued)
TABLE 5.13.D

CHANGE IN R^2 FOR EACH STEP OF A HIERARCHICAL REGRESSION FOR JOB PERFORMANCE

Frame of Reference	All Accountants			Staff			Seniors			Managers		
	R^2	ΔR^2	F	R^2	ΔR^2	F	R^2	ΔR^2	F	R^2	ΔR^2	F
Firm Frame of Reference	.05	--	--	.06	--	--	.06	--	--	.04	--	--
Client Frame of Reference	.06	.01	1.42	.07	.01	0.23	.08	.02	0.89	.13	.09	1.90
Professional Frame of Reference	.09	.03	3.81**	.13	.06	2.43	.12	.04	1.78	.14	.01	0.18
Leadership Frame of Reference	.11	.02	2.97	.17	.04	1.92	.15	.03	1.62	.15	.01	0.41
Role Conflict	.11	.00	0.05	.20	.03	2.40	.19	.04	4.34**	.18	.03	1.92
Role Ambiguity	.13	.02	4.34**	.25	.05	4.59**	.19	.00	0.00	.19	.01	0.53
Role Ambiguity ^o	.13	.02	4.38**	.23	.06	5.73**	.15	.00	0.12	.17	.02	0.87
Role Conflict ^{oo}	.13	.00	0.02	.25	.02	1.35	.19	.04	4.16**	.19	.02	1.56

* $P < .01$

** $P < .05$

^o Role Ambiguity would have the corresponding F value if entered before Role Conflict

^{oo} Role Conflict would have the corresponding F value if Entered after Role Ambiguity

APPENDIX VIII (continued)

TABLE 5.14.A

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
ALL ACCOUNTANTS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 1 -- Variables entered: constructs related to Firm Frame of Reference

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.8327	.3580	.1431	33.877*
(2) Competence/Training	.6323	.1815	.2188	8.355*
(3) Reward/Performance Relationship	.4394	.1183	.2310	3.618

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.5255	Regression	3	6356.2786	2118.7595	30.7784*
R ²	.2762	Residual	242	16659.0710	68.8391	
Adj. R ²	.2672					
Standard Error	8.2969					

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.14.A (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
ALL ACCOUNTANTS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 2 -- Variables entered: constructs related to Client Frame of Reference

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.7550	.3246	.1461	26.707*
(2) Competence/Training	.6043	.1735	.2257	7.172*
(3) Reward/Performance Relationship	.3512	.0946	.2381	2.176
<u>Client Frame of Reference</u>				
(4) Client Relationship	.4003	.0968	.2626	2.323
(5) Pressure to Perform	-.3272	-.0928	.2054	2.538
(6) Organizational Structure	-.2243	-.0474	.2934	0.585

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.5410	Regression	6	6736.0176	1122.6696	16.4821*
R ²	.2927	Residual	239	16279.3320	68.1144	
Adj. R ²	.2749					
Standard Error	8.2531					

* P < .01

** P < .05

APPENDIX VIII (continued)

TABLE 5.14.A (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
ALL ACCOUNTANTS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 3 -- Variable entered: constructs related to Professional Frame of Reference

Variable	B	Beta	Standard Error	F Value
(1) Participation	.5284	.2272	.1475	12.830*
(2) Competence/Training	.5444	.1563	.2187	6.195*
(3) Reward/Performance Relationship	.1651	.0445	.2312	0.510
(4) Client Relationship	.2655	.0642	.2556	1.080
(5) Pressure to Perform	-.3665	-.1040	.1988	3.400
(6) Organizational Structure	-.3594	-.0760	.2824	1.620
<u>Professional Frame of Reference</u>				
(7) Preference for Assignments	.5068	.2969	.1044	23.553*
(8) Degree of Specialization	.0400	.0148	.1479	0.073

		Analysis of Variance	d/f	Sum of Squares	Mean Square	Overall F Value
Multiple R	.5974	Regression	8	8213.9489	1026.7436	16.4402*
R ²	.3569	Residual	237	14801.4007	62.4532	
Adj. R ²	.3352					
Standard Error	7.9027					

* P < .01

** P < .05

APPENDIX VIII (continued)

TABLE 5.14.A (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
ALL ACCOUNTANTS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 4 -- Variable entered: constructs related to Leadership Frame of Reference

Variable	B	Beta	Standard Error	F Value
(1) Participation	.5030	.2162	.1490	11.396*
(2) Competence/Training	.4935	.1416	.2233	4.884**
(3) Reward/Performance Relationship	.1340	.0361	.2356	0.323
(4) Client Relationship	.2077	.0502	.2600	0.638
(5) Pressure to Perform	-.3441	-.0976	.1999	2.964
(6) Organizational Structure	-.3058	-.0647	.2856	1.147
(7) Preference for Assignments	.4861	.2848	.1072	20.552*
(8) Degree of Specialization	.3297	.0122	.1490	0.049
<u>Leadership Frame of Reference</u>				
(9) Leadership Structure	-.0462	-.0263	.1019	0.206
(10) Leadership Interpersonal Relations	.4229	.0857	.3226	1.719

		Analysis of Variance	d/f	Sum of Squares	Mean Square	Overall F Value
Multiple R	.6013	Regression	10	8321.5046	832.1505	13.3087*
R ²	.3616	Residual	235	14693.8450	62.527	
Adj. R ²	.3344					
Standard Error	7.9074					

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.14.A (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
ALL ACCOUNTANTS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 5 -- Variable entered: Role Conflict

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.4763	.2078	.1474	10.440*
(2) Competence/Training	.2982	.0856	.2322	1.650
(3) Reward/Performance Relationship	.0733	.0197	.2337	0.098
(4) Client Relationship	.0944	.0228	.2601	0.132
(5) Pressure to Perform	-.1801	-.0151	.2066	0.760
(6) Organizational Structure	-.4114	-.0870	.2347	2.088
(7) Preference for Assignments	.4905	.2873	.1059	21.464*
(8) Degree of Specialization	.0564	.0209	.1474	0.146
(9) Leadership Structure	-.0632	-.0360	.1008	0.394
(10) Leadership Interpersonal Relations	.2739	.0556	.3233	0.718
(11) Role Conflict	-.3553	-.1924	.1327	7.166*

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.6169	Regression	11	8758.0965	796.1906	13.0676*
R ²	.3805	Residual	234	14257.2531	60.9284	
Adj. R ²	.3514					
Standard Error	7.8057					

* P < .01

** P < .05

APPENDIX VIII (continued)
 TABLE 5.14.A (continued)

HIERARCHICAL REGRESSION SUMMARY OF INDEPENDENT VARIABLES AND MODERATING VARIABLES
 ALL ACCOUNTANTS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 6 -- Variable entered: Role Ambiguity

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.4796	.2062	.1499	10.230*
(2) Competence/Training	.3046	.0874	.2381	1.636
(3) Reward/Performance Relationship	.0719	.0194	.2344	0.094
(4) Client Relationship	.0976	.0236	.2619	0.139
(5) Pressure to Perform	-.1786	-.0507	.2074	0.742
(6) Organizational Structure	-.4097	-.0866	.2856	2.058
(7) Preference for Assignments	.4913	.2878	.1063	21.367*
(8) Degree of Specialization	.0589	.0218	.1491	0.156
(9) Leadership Structure	-.0630	-.0358	.1010	0.389
(10) Leader Interpersonal Relations	.2772	.0652	.3251	0.727
(11) Role Conflict	-.3581	-.1939	.1349	7.047*
(12) Role Ambiguity	.0195	.0082	.1551	0.016

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.6169	Regression	12	8759.0681	729.9223	11.9296*
R ²	.3806	Residual	233	14256.2815	61.1858	
Adj. R ²	.3487					
Standard Error	7.8221					

* P < .01

APPENDIX VIII (continued)

TABLE 5.14.B

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
STAFF

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 1 -- Variable entered: constructs related to Firm Frame of Reference

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	1.3637	.4228	.3228	17.850*
(2) Competence/Training	.7493	.1948	.3920	3.654
(3) Reward/Performance Relationship	.1987	.0512	.4036	0.242

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.5079	Regression	3	2261.4632	753.8211	9.1525*
R ²	.2579	Residual	79	6506.6091	82.3621	
Adj. R ²	.2297					
Standard Error	9.0754					

* P < .01

** P < .05

APPENDIX VIII (continued)

TABLE 5.14.B (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
STAFF

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 2 -- Variable entered: constructs related to Client Frame of Reference

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	1.3180	.4086	.3219	16.766*
(2) Competence/Training	.7924	.2060	.3941	4.043**
(3) Reward/Performance Relationship	.1363	.0351	.4190	0.106
<u>Client Frame of Reference</u>				
(4) Client Relationship	.5908	.1306	.4688	1.588
(5) Pressure to Perform	-.5274	-.1551	.3506	2.263
(6) Organizational Structure	-.5653	-.1113	.5551	1.036

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.5477	Regression	6	2629.6953	438.2826	5.42643*
R ²	.2999	Residual	76	6138.3770	80.7681	
Adj. R ²	.2447					
Standard Error	8.9871					

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.14.B (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
STAFF

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 3 -- Variable entered: constructs related to Professional Frame of Reference

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	1.0406	.3226	.3350	9.647*
(2) Competence/Training	.6637	.1725	.3927	2.857
(3) Reward/Performance Relationship	.1080	.0278	.4092	0.070
(4) Client Relationship	.4495	.0994	.4733	0.902
(5) Pressure to Perform	-.5881	-.1730	.3471	2.871
(6) Organizational Structure	-.5845	-.1151	.5425	1.161
<u>Professional Frame of Reference</u>				
(7) Preference for Assignments	.4243	.2252	.1996	4.521**
(8) Degree of Specialization	-.3095	-.1007	.2970	1.086

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.5919	Regression	8	3071.4575	383.9322	4.9873*
R ²	.3503	Residual	74	5696.6148	76.9813	
Adj. R ²	.2801					
Standard Error	8.7739					

* P < .01

** P < .05

APPENDIX VIII (continued)

TABLE 5.14.B (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
STAFFDEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 4 -- Variable entered: constructs related to Leadership Frame of Reference

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	1.0724	.3325	.3360	10.187*
(2) Competence/Training	.7490	.1947	.4330	2.993
(3) Reward/Performance	.1503	.0387	.4179	0.129
(4) Client Relationship	.5495	.1215	.4793	1.315
(5) Pressure to Perform	-.6959	-.2047	.3575	3.790
(6) Organizational Structure	-.7427	-.1462	.5637	1.736
(7) Preference for Assignments	.4242	.2252	.2059	4.244**
(8) Degree of Specialization	-.3061	-.0996	.2997	1.043
<u>Leadership Frame of Reference</u>				
(9) Leadership Structure	.2819	.1225	.2523	1.248
(10) Leader Interpersonal Relations	-.7410	-.1324	.6667	1.236

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.6061	Regression	10	3220.7191	322.0719	4.1802*
R ²	.3673	Residual	72	5547.3532	77.0466	
Adj. R ²	.2795					
Standard Error	8.7777					

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.14.B (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
STAFF

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 5 -- Variable entered: Role Conflict

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.7141	.2214	.3197	4.988**
(2) Competence/Training	.0165	.0043	.4365	0.001
(3) Reward/Performance Relationship	-.0559	-.0144	.3848	0.021
(4) Client Relationship	.0831	.0184	.4530	0.034
(5) Pressure to Perform	-.3815	-.1122	.3358	1.291
(6) Organizational Structure	-.8412	-.1656	.5148	2.670
(7) Preference for Assignments	.4626	.2455	.1881	6.047**
(8) Degree of Specialization	-.2785	-.0906	.2735	1.037
(9) Leadership Structure	.1996	.0867	.2311	0.746
(10) Leader Interpersonal Relations	-.8142	-.1454	.6084	1.791
(11) Role Conflict	-.9689	-.4731	.2459	15.520*

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.6934	Regression	11	4215.8693	383.2608	5.9777*
R ²	.4808	Residual	71	4552.2030	64.1155	
Adj. R ²	.4004					
Standard Error	8.0072					

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.14.B (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
STAFF

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 6 -- Variable entered: Role Ambiguity

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.6821	.2115	.3218	4.495**
(2) Competence/Training	-.1185	-.0308	.4597	0.066
(3) Reward/Performance Relationship	-.0396	-.0102	.3855	0.011
(4) Client Relationship	.1088	.0241	.4541	0.057
(5) Pressure to Perform	-.3920	-.1153	.3362	1.360
(6) Organizational Structure	-.8494	-.1672	.5153	2.717
(7) Preference for Assignments	.4462	.2369	.1890	5.573**
(8) Degree of Specialization	-.3378	-.1099	.2809	1.447
(9) Leadership Structure	.1692	.0735	.2335	0.525
(10) Leader Interpersonal Relations	-.7711	-.1377	.6106	1.595
(11) Role Conflict	-.9250	-.4517	.2505	13.635*
(12) Role Ambiguity	-.2560	-.1001	.2712	0.891

		<u>Analysis of Variance</u>	<u>d/f.</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.6981	Regression	12	4273.0631	356.0886	5.5453*
R ²	.4873	Residual	70	4495.0092	64.2144	
Adj. R ²	.3995					
Standard Error	8.0134					

* P < .01

** P < .05

APPENDIX VIII (continued)

TABLE 5.14.C

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
SENIORS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 1 -- Variable entered: constructs related to Firm Frame of Reference

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.6894	.2577	.2725	6.401**
(2) Competence/Training	.8161	.2059	.4241	3.703
(3) Reward/Performance Relationship	.4256	.1034	.4500	0.894

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.4538	Regression	3	2033.8618	677.9539	8.5574 *
R ²	.2059	Residual	99	7843.1673	79.2239	
Adj. R ²	.1819					
Standard Error	8.9008					

* P < .01

** P < .05

APPENDIX VIII (continued)

TABLE 5.14.C (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
SENIORS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 2 -- Variable entered: constructs related to Client Frame of Reference

<u>Variable</u>	B	Beta	Standard Error	F Value
(1) Participation	.4125	.1542	.2930	1.978
(2) Competence and Training	.7626	.1924	.4372	3.042
(3) Reward/Performance Relationship	.2446	.0594	.4572	0.286
<u>Client Frame of Reference</u>				
(4) Client Relationship	.2116	.0514	.4273	0.245
(5) Pressure to Perform	-.8745	-.2356	.3865	5.119**
(6) Organizational Structure	-.0878	-.0183	.4772	0.034

		Analysis of Variance	d/f	Sum of Squares	Mean Square	Overall F Value
Multiple R	.5023	Regression	6	2492.3452	415.3909	5.4000*
R ²	.2523	Residual	96	7384.6839	76.9238	
Adj. R ²	.2056					
Standard Error	8.7706					

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.14.C (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
SENIORS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 3 -- Variable entered: constructs related to Professional Frame of Reference

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.1314	.0491	.2743	0.230
(2) Competence/Training	.5756	.1452	.3992	2.080
(3) Reward/Performance Relationship	-.0516	-.0125	.4200	0.015
(4) Client Relationship	.1186	.0288	.3977	0.089
(5) Pressure to Perform	-.8951	-.2412	.3518	6.473**
(6) Organizational Structure	-.4360	-.0909	.4461	0.955
<u>Professional Frame of Reference</u>				
(7) Preference for Assignments	.6963	.4127	.1598	18.976*
(8) Degree of Specialization	.2709	.0861	.2664	1.035

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.6528	Regression	10	4209.3521	420.9352	6.8328*
R ²	.4262	Residual	92	5667.6771	61.6052	
Adj. R ²	.3638					
Standard Error	7.8489					

* P < .01
** P < .05

APPENDIX VIII (continued)
TABLE 5.14.C (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
SENIORS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 4 -- Variable entered: constructs related to Leadership Frame of Reference

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.0022	.0008	.2809	0.000
(2) Competence/Training	.5402	.1363	.4019	1.807
(3) Reward/Performance Relationship	-.1029	-.0250	.4164	0.061
(4) Client Relationship	-.0784	-.0191	.4019	0.038
(5) Pressure to Perform	-.8420	-.2269	.3482	5.847**
(6) Organizational Structure	-.3766	-.0785	.4406	0.731
(7) Preference for Assignments	.6395	.3790	.1597	16.041*
(8) Degree of Specialization	.2531	.0804	.2636	0.921
<u>Leadership Frame of Reference</u>				
(9) Leadership Structure	-.0840	-.0475	.1550	0.293
(10) Leader Interpersonal Relations	.9979	.2190	.4535	4.843**

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.6528	Regression	10	4209.3521	420.9352	6.8328*
R ²	.4262	Residual	92	5667.6771	61.6052	
Adj. R ²	.3638					
Standard Error	.8489					

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.14.C (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
SENIORS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 5 -- Variable entered: Role Conflict

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.0030	.0011	.2825	0.000
(2) Competence/Training	.5518	.1392	.4162	1.758
(3) Reward/Performance Relationship	-.0949	-.0231	.4244	0.050
(4) Client Relationship	-.0685	-.0167	.4131	0.028
(5) Pressure to Perform	-.8562	-.2307	.3708	5.331**
(6) Organizational Structure	-.3697	-.0771	.4470	0.684
(7) Preference for Assignments	.6390	.3787	.1606	15.833*
(8) Degree of Specialization	.2522	.0801	.2652	0.905
(9) Leadership Structure	-.0825	-.0467	.1563	0.278
(10) Leader Interpersonal Relations	1.0073	.2211	.4631	4.732**
(11) Role Conflict	.0246	.0138	.2118	0.013

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.6529	Regression	11	4210.1908	382.7446	6.1462*
R ²	.4263	Residual	91	5666.8383	62.2730	
Adj. R ²	.3569					
Standard Error	7.8913					

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.14.C (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
SENIORS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Setp 6 -- Variable entered: Role Ambiguity

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	-.0369	-.0138	.2785	0.018
(2) Competence/Training	.6187	.1561	.4106	2.270
(3) Reward/Performance Relationship	-.1542	-.0374	.4184	0.136
(4) Client Relationship	.1670	.0406	.4226	0.156
(5) Pressure to Perform	-.9000	-.2425	.3653	6.069**
(6) Organizational Structure	-.4267	-.0890	.4405	0.939
(7) Preference for Assignments	.6478	.3839	.1580	16.811*
(8) Degree of Specialization	.3319	.1054	.2638	1.584
(9) Leadership Structure	-.1139	-.0645	.1545	0.544
(10) Leader Interpersonal Relations	1.2610	.2768	.4724	7.126*
(11) Role Conflict	-.0489	-.0274	.2115	0.053
(12) Role Ambiguity	.5419	.2023	.2682	4.083**

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.6717	Regression	12	4456.1036	351.3420	6.1651*
R ²	.4512	Residual	90	5420.9255	60.2325	
Adj. R ²	.3780					
Standard Error	7.7610					

* P < .01
** P < .05

APPENDIX VIII (continued)

TABLE 5.14.D

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
MANAGERSDEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 1 -- Variable entered: constructs related to Firm Frame of Reference

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.5210	.3333	.1838	8.032*
(2) Competence/Training	.3974	.1595	.2920	1.852
(3) Reward/Performance Relationship	.7692	.2937	.3018	6.494**

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.5761	Regression	3	913.1168	304.3723	9.2745*
R ²	.3319	Residual	56	1837.8165	32.8182	
Adj. R ²	.2961					
Standard Error	.7287					

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.14.D (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
MANAGERS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 2 -- Variable entered: constructs related to Client Frame of Reference

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.5405	.3457	.1933	7.819*
(2) Competence/Training	.3380	.1356	.3106	1.184
(3) Reward/Performance Relationship	.8179	.3123	.3094	6.988**
<u>Client Frame of Reference</u>				
(4) Client Relationship	.5179	.1677	.4309	1.444
(5) Pressure to Perform	.5765	.2104	.3242	3.163
(6) Organizational Structure	-.0404	-.0121	.4424	0.008

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.6246	Regression	6	1073.3430	178.8905	5.6517*
R ²	.3902	Residual	53	1677.5904	31.6527	
Adj. R ²	.3211					
Standard Error	.6261					

* P < .01

** P < .05

APPENDIX VIII (continued)

TABLE 5.14.D (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
MANAGERS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 3 -- Variable entered: constructs related to Professional Frame of Reference

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.3914	.2504	.2344	2.788
(2) Competence/Training	.4462	.1791	.3253	1.881
(3) Reward/Performance Relationship	.6718	.2565	.3428	3.840
(4) Client Relationship	.4126	.1336	.4451	0.859
(5) Pressure to Perform	.6354	.2318	.3299	3.710
(6) Organizational Structure	.0146	.0044	.4498	0.001
<u>Professional Frame of Reference</u>				
(7) Preference for Assignments	.1833	.1469	.1978	0.859
(8) Degree of Specialization	-.2066	-.0980	.2441	0.717

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.6378	Regression	8	1118.9075	139.8634	4.3707*
R ²	.4067	Residual	51	1632.0258	32.0005	
Adj. R ²	.3137					
Standard Error	5.6569					

* P < .01

** P < .05

APPENDIX VIII (continued)

TABLE 5.14.D (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
MANAGERS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 4 -- Variable entered: constructs related to Leadership Frame of Reference

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.4215	.2696	.2369	3.166
(2) Competence/Training	.4505	.1808	.3268	1.900
(3) Reward/Performance Relationship	.5604	.2140	.3531	2.519
(4) Client Relationship	.4636	.1501	.4673	0.985
(5) Pressure to Perform	.6591	.2405	.3330	3.918
(6) Organizational Structure	-.0223	-.0067	.4536	0.002
(7) Preference for Assignments	.0750	.0601	.2153	0.121
(8) Degree of Specialization	-.2624	-.1245	.2479	1.121
<u>Leadership Frame of Reference</u>				
(9) Leadership Structure	.1164	.1104	.1560	0.557
(10) Leader Interpersonal Relations	.3832	.0943	.5919	0.419

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.6544	Regression	10	1178.1318	117.8132	3.6704*
R ²	.4283	Residual	49	1572.8016	32.0980	
Adj. R ²	.3116					
Standard Error	5.6655					

* P < .01

** P < .05

APPENDIX VIII (continued)
 TABLE 5.14.D (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
 MANAGERS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 5 -- Variable entered: Role Conflict

Variable	B	Beta	Standard Error	F Value
(1) Participation	.4297	.2749	.2382	3.253
(2) Competence/Training	.3537	.1419	.3535	1.001
(3) Reward/Performance Relationship	.5550	.2119	.3548	2.447
(4) Client Relationship	.5065	.1640	.4730	1.147
(5) Pressure to Perform	.7368	.2688	.3507	4.414**
(6) Organizational Structure	-.1425	-.0428	.4840	0.087
(7) Preference for Assignments	.0576	.0461	.2176	0.070
(8) Degree of Specialization	-.2614	-.1240	.2491	1.101
(9) Leadership Structure	.1405	.1332	.1600	0.771
(10) Leader Interpersonal Relations	.2105	.0518	.6390	0.109
(11) Role Conflict	-.1621	-.1198	.2195	0.545

		Analysis of Variance	d/f	Sum of Squares	Mean Square	Overall F Value
Multiple R	.6593	Regression	11	1195.7926	108.7084	7.3553*
R ²	.4347	Residual	48	1555.1408	32.3988	
Adj. R ²	.3051					
Standard Error	5.6920					

* P < .01
 ** P < .05

APPENDIX VIII (continued)
TABLE 5.14.D (continued)

HIERARCHICAL REGRESSION SUMMARY FOR INDEPENDENT VARIABLES AND MODERATING VARIABLES
MANAGERS

DEPENDENT VARIABLE: SATISFACTION WITH WORK

Step 6 -- Variable entered: Role Ambiguity

<u>Variable</u>	<u>B</u>	<u>Beta</u>	<u>Standard Error</u>	<u>F Value</u>
(1) Participation	.4580	.2930	.2532	3.272
(2) Competence/Training	.3966	.1952	.3765	1.110
(3) Reward/Performance Relationship	.5603	.2139	.3584	2.444
(4) Client Relationship	.4965	.1608	.4782	1.078
(5) Pressure to Perform	.7563	.2759	.3581	4.460*
(6) Organizational Structure	-.0908	-.0273	.5095	0.032
(7) Preference for Assignments	.0631	.0505	.2201	0.082
(8) Degree of Specialization	-.2759	-.1309	.2546	1.174
(9) Leadership Structure	.1519	.1440	.1646	0.851
(10) Leader Interpersonal Relations	.1888	.0465	.6478	0.085
(11) Role Conflict	-.1747	-.1291	.2244	0.606
(12) Role Ambiguity	-.0981	-.0589	.2748	0.127

		<u>Analysis of Variance</u>	<u>d/f</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>Overall F Value</u>
Multiple R	.6605	Regression	12	1199.9983	99.9999	3.0304*
R ²	.4362	Residual	47	1550.9350	32.9986	
Adj. R ²	.2923					
Standard Error	5.7444					

* P < .01

** P < .05

APPENDIX VIII (continued)
TABLE 5.15

STEPWISE REGRESSION SELECTING MOST SIGNIFICANT PREDICTORS

<u>Independent Variables</u>	<u>All Accountants (N = 260)</u>				<u>Staff Accountants (N = 95)</u>			
	<u>Satisfaction with Work</u>	<u>Desire to Leave</u>	<u>Job Anxiety</u>	<u>Job Performance</u>	<u>Satisfaction with Work</u>	<u>Desire to Leave</u>	<u>Job Anxiety</u>	<u>Job Performance</u>
(1) Participation	.22*	-.21*			.21**			
(2) Competence/Training		-.22*				-.28*		
(3) Reward/Performance								
(4) Client Relationship			-.16*					
(5) Pressure to Perform			.25*					
(6) Organizational Structure								
(7) Preference for Assignments	.25*	-.29*	-.18*		.19**	-.25*		
(8) Specialization				.16*				
(9) Preference for Commercial	-.11**							
(10) Need for Clarity								
(11) Leadership Structure								
(12) Leadership Interpersonal Relations				.16*				
(13) Role Ambiguity				-.15*				.31*
(14) Role Conflict	-.25*		.21*		-.44*	.28*	.34*	
Multiple R	.60	.57	.55	.33	.65	.61	.34	.31
R ²	.37	.32	.31	.11	.42	.37	.12	.09
F Value	36.67*	40.07*	28.37*	10.70*	21.87	17.81	12.49*	10.08*

APPENDIX VIII (continued)
 TABLE 5.15
 (continued)

<u>Independent Variables</u>	<u>Senior Accountants (N = 105)</u>				<u>Manager Accountants (N = 60)</u>			
	<u>Satisfaction with Work</u>	<u>Desire to Leave</u>	<u>Job Anxiety</u>	<u>Job Performance</u>	<u>Satisfaction with Work</u>	<u>Desire to Leave</u>	<u>Job Anxiety</u>	<u>Job Performance</u>
(1) Participation					.38*			
(2) Competence/Training			-.27*					
(3) Reward/Performance					.32*			
(4) Client Relationship			-.21**					
(5) Pressure to Perform	-.23*						.47*	
(6) Organizational Structure								
(7) Preference for Assignments	.39*			.18**			.33*	
(8) Specialization			-.18**					
(9) Preference for Commercial		-.37*				-.46*		
(10) Need for Clarity								.30**
(11) Leadership Structure								
(12) Leadership Interpersonal Relations	.23*	-.30*		.24**				
(13) Role Ambiguity								
(14) Role Conflict			.24**				-.20**	
Multiple R	.63	.55	.64	.34	.56	.46	.75	.30
R ²	.40	.30	.41	.12	.31	.21	.57	.09
F Value	12.33	21.72*	17.44*	6.88*	12.79*	15.61*	24.54*	5.75

APPENDIX VIII -- PROCEDURES FOR DETERMINING NONLINEAR RELATIONSHIPS

TABLE 5.16.A.1

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
SATISFACTION WITH WORK FOR ALL ACCOUNTANTS

Independent Variable	R ²			Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
	R ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f
Participation												
Linear Terms	.29	23.45*	5/281							.02	1.60	5/276
Main Effects Squared	.31	15.44*	8/278	.02	2.69**	3/278						
Interaction Terms Squared	.31	12.42*	10/276									
Competence/Training												
Linear Terms	.26	19.62*	5/284									
Main Effects Squared	.26	12.49*	8/281				.01	1.91	2/279	.01	0.76	5/279
Interaction Terms Squared	.27	10.13*	10/279									
Reward/Performance												
Linear Terms	.24	18.00*	5/283									
Main Effects Squared	.25	11.79*	8/280	.01	1.24	3/280	.01	1.88	2/278	.02	1.50	5/278
Interaction Terms Squared	.26	9.63*	10/278									
Client Relations												
Linear Terms	.24	17.54*	5/281									
Main Effects Squared	.25	11.51*	8/278	.01	1.24	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.25	18.62*	5/281									
Main Effects Squared	.27	12.57*	8/278	.02	2.54	3/278				.02	1.51	5/276
Interaction Terms Squared	.27	10.02*	10/276									
Organizational Structure												
Linear Terms	.23	16.84*	5/282									
Main Effects Squared	.25	11.39*	8/279	.02	2.48	3/279				.02	1.48	5/277
Interaction Terms Squared	.25	9.07*	10/277									
Preference for Assignments												
Linear Terms	.33	27.94*	5/281									
Main Effects Squared	.35	18.64*	8/278	.02	2.85**	3/278	.02	4.38**	2/276	.04	3.50*	5/276
Interaction Terms Squared	.37	15.88*	10/276									
Specialization												
Linear Terms	.23	16.76*	5/283									
Main Effects Squared	.24	11.30*	8/280	.01	1.23	3/280	.01	1.85	2/278	.02	1.48	5/278
Interaction Terms Squared	.25	9.11*	10/278									
Leadership Structure												
Linear Terms	.23	16.89*	5/284									
Main Effects Squared	.25	11.45*	8/281	.02	2.50	3/281	.01	1.89	2/279	.03	2.26**	5/279
Interaction Terms Squared	.26	10.12*	10/179									
Leader Interpersonal Relations												
Linear Terms	.25	18.98*	5/280									
Main Effects Squared	.27	13.13*	8/277	.02	2.53	3/277	.02	3.87**	2/275	.04	3.10*	5/275
Interaction Terms Squared	.29	11.00*	10/275									

APPENDIX VIII (continued)

TABLE 5.16.A.2

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
DESIRE TO LEAVE FOR ALL ACCOUNTANTS

Independent Variable	R ²	F	d/f	Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
				ΔR^2	F	d/f	ΔR^2	F	d/f	ΔR^2	F	d/f
Participation												
Linear Terms	.25	18.78*	5/281									
Main Effects Squared	.25	11.67*	8/278				.01	0.68	2/276	.01	0.75	5/276
Interaction Terms Squared	.26	9.71*	10/276									
Competence/Training												
Linear Terms	.19	13.61*	5/289									
Main Effects Squared	.20	8.54*	8/281	.01	1.17	3/281				.01	0.70	5/279
Interaction Terms Squared	.20	6.87*	10/279									
Reward/Performance												
Linear Terms	.19	13.64*	5/283									
Main Effects Squared	.20	8.79*	8/280	.01	1.17	3/280				.01	0.70	5/278
Interaction Terms Squared	.20	7.09*	10/278									
Client Relations												
Linear Terms	.17	11.46*	5/281									
Main Effects Squared	.19	7.97*	8/278	.02	2.29	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.17	11.15*	5/281									
Main Effects Squared	.19	7.92*	8/278	.02	2.29	3/278				.02	1.36	5/276
Interaction Terms Squared	.19	6.50*	10/276									
Organizational Structure												
Linear Terms	.16	10.40*	5/282									
Main Effects Squared	.16	6.85*	8/279				.01	1.67	2/277	.01	0.67	5/277
Interaction Terms Squared	.17	5.55*	10/277									
Preference for Assignments												
Linear Terms	.26	19.86*	5/281									
Main Effects Squared	.27	12.78*	8/278	.01	1.27	3/278				.01	0.76	5/276
Interaction Terms Squared	.27	10.18*	10/276									
Specialization												
Linear Terms	.16	11.01	5/283*									
Main Effects Squared	.17	7.18	8/280*	.01	1.12	3/280	.01	0.61	2/278	.02	1.36	5/278
Interaction Terms Squared	.18	6.05	10/278*									
Leadership Structure												
Linear Terms	.16	10.86	5/284*									
Main Effects Squared	.18	7.83	8/281*	.02	2.28	3/281	.03	5.30*	2/279	.05	3.53*	5/279
Interaction Terms Squared	.21	7.81	10/279*									
Leader Interpersonal Relations												
Linear Terms	.18	12.64	5/280*									
Main Effects Squared	.19	8.21	8/277*	.01	1.14	3/277	.01	1.72	3/275	.02	1.38	5/275
Interaction Terms Squared	.20	7.05	10/275*									

APPENDIX VIII (continued)

TABLE 5.16.A.3

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
JOB ANXIETY FOR ALL ACCOUNTANTS

Independent Variable	R ²	F	d/f	Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
				ΔR ²	F	d/f	ΔR ²	f	d/f	ΔR ²	F	d/f
Participation												
Linear Terms	.21	15.11*	5/281									
Main Effects Squared	.22	9.62*	8/278	.01	1.19	3/278				.01	0.71	5/276
Interaction Terms Squared	.22	7.83*	10/276									
Competence/Training												
Linear Terms	.22	15.69*	5/284									
Main Effects Squared	.23	10.46*	8/281	.01	1.22	3/281				.01	0.72	5/279
Interaction Terms Squared	.23	8.51*	10/279									
Reward/Performance												
Linear Terms	.21	15.24*	5/283									
Main Effects Squared	.22	9.63*	8/280	.01	1.20	3/280	.01	1.81	2/278	.02	1.44	5/278
Interaction Terms Squared	.23	8.35*	10/278									
Client Relations												
Linear Terms	.25	18.95*	5/281									
Main Effects Squared	.26	12.39*	8/278	.01	1.25	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.26	19.81*	5/281									
Main Effects Squared	.26	12.40*	8/278				.02	3.83**	2/276	.02	1.53	5/276
Interaction Terms Squared	.28	10.60*	10/276									
Organizational Structure												
Linear Terms	.22	15.73*	5/282									
Main Effects Squared	.23	10.35*	8/279	.01	1.21	3/279	.01	1.82	2/277	.02	1.45	5/277
Interaction Terms Squared	.24	8.80*	10/277									
Preference for Assignments												
Linear Terms	.23	16.71*	5/281									
Main Effects Squared	.23	10.65*	8/278									
Interaction Terms Squared	.25	9.36	10/276				.02	3.68**	2/276	.02	1.47	5/276
Specialization												
Linear Terms	.21	15.22*	5/283									
Main Effects Squared	.21	9.47*	8/280				.01	1.78	2/278	.01	0.71	5/278
Interaction Terms Squared	.22	8.01*	10/278									
Leadership Structure												
Linear Terms	.21	14.85*	5/284									
Main Effects Squared	.22	9.95*	8/281	.01	1.20	3/281	.01	1.91	2/279	.02	1.45	5/279
Interaction Terms Squared	.23	8.49*	10/279									
Leader Interpersonal Relations												
Linear Terms	.21	15.00*	5/280									
Main Effects Squared	.23	10.57*	8/277									
Interaction Terms Squared	.24	8.58*	10/275									

APPENDIX VIII (continued)

TABLE 5.16.A.4

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
JOB PERFORMANCE FOR ALL ACCOUNTANTS

Independent Variable	R ²	F	d/f	Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
				ΔR ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f
Participation												
Linear Terms	.10	6.04*	5/281									
Main Effects Squared	.14	5.65*	8/278	.04	4.31*	3/278	.01	1.62	2/276	.05	3.25*	5/276
Interaction Terms Squared	.15	4.87*	10/276									
Competence/Training												
Linear Terms	.13	8.42*	5/284									
Main Effects Squared	.15	6.30*	8/281	.02	2.20	3/281	.01	1.66	2/279	.03	1.99	5/279
Interaction Terms Squared	.16	5.17*	10/279									
Reward/Performance												
Linear Terms	.09	5.73*	5/283									
Main Effects Squared	.14	5.51*	8/280									
Interaction Terms Squared	.14	4.48*	10/278	.05	5.43*	3/280				.05	3.23*	5/278
Client Relations												
Linear Terms	.10	6.15*	5/281									
Main Effects Squared	.14	5.47*	8/278	.04	4.31*	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.11	6.65*	5/281									
Main Effects Squared	.14	5.69*	8/278	.03	3.23**	3/278				.03	1.93	5/276
Interaction Terms Squared	.14	4.60*	10/276									
Organizational Structure												
Linear Terms	.11	6.83*	5/282									
Main Effects Squared	.15	6.03*	8/279	.04	4.38*	3/279				.04	2.61**	5/277
Interaction Terms Squared	.15	4.18*	10/277									
Preference for Assignments												
Linear Terms	.10	6.14*	5/281									
Main Effects Squared	.15	6.04*	8/278	.05	5.45*	3/278				.05	3.25*	5/276
Interaction Terms Squared	.15	4.90*	10/276									
Specialization												
Linear Terms	.11	6.84*	5/283						2/278			
Main Effects Squared	.17	7.24*	8/280	.06	6.75*	3/280				.06	4.02*	5/278
Interaction Terms Squared	.17	5.87*	10/278									
Leadership Structure												
Linear Terms	.10	6.35*	5/284									
Main Effects Squared	.15	6.21*	8/281	.05	5.51*	3/281	.01	1.66	2/279	.06	3.99*	5/279
Interaction Terms Squared	.16	5.20*	10/279									
Leader Interpersonal Relations												
Linear Terms	.10	6.41*	5/280									
Main Effects Squared	.16	6.52*	8/277	.06	6.60*	3/277	.01	1.66	2/275	.07	4.64*	5/275
Interaction Terms Squared	.17	5.44*	10/275									

APPENDIX VIII (continued)

TABLE 5.16.B.1

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
SATISFACTION WITH WORK FOR STAFF ACCOUNTANTS

Independent Variable	R ²	F	d/f	Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
				ΔR^2	F	d/f	ΔR^2	F	d/f	ΔR^2	F	d/f
Participation												
Linear Terms	.29	23.45*	5/281									
Main Effects Squared	.31	15.44*	8/278	.02	2.69**	3/278				.02	1.60	5/276
Interaction Terms Squared	.31	12.42*	10/276									
Competence/Training												
Linear Terms	.26	19.62*	5/284									
Main Effects Squared	.26	12.49*	8/281				.01	1.91	2/279	.01	0.76	5/279
Interaction Terms Squared	.27	10.13*	10/279									
Reward/Performance												
Linear Terms	.24	18.00*	5/283									
Main Effects Squared	.25	11.79*	8/280	.01	1.24	3/280	.01	1.88	2/278	.02	1.50	5/278
Interaction Terms Squared	.26	9.63*	10/278									
Client Relations												
Linear Terms	.24	17.54*	5/281									
Main Effects Squared	.25	11.51*	8/278	.01	1.24	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.25	18.62*	5/281									
Main Effects Squared	.27	12.57*	8/278	.02	2.54	3/278				.02	1.51	5/276
Interaction Terms Squared	.27	10.02*	10/276									
Organizational Structure												
Linear Terms	.40	13.98*	5/103									
Main Effects Squared	.42	9.00*	8/100	.02	1.15	3/100						
Interaction Terms Squared												
Preference for Assignments												
Linear Terms	.33	27.94*	5/281									
Main Effects Squared	.35	18.64*	8/278	.02	2.85**	3/278	.02	4.38**	2/276	.04	3.50*	5/276
Interaction Terms Squared	.37	15.88*	10/276									
Specialization												
Linear Terms	.23	16.76*	5/283									
Main Effects Squared	.24	11.30*	8/280	.01	1.23	3/280	.01	1.85	2/278	.02	1.48	5/278
Interaction Terms Squared	.25	9.11	10/278									
Leadership Structure												
Linear Terms	.23	16.89*	5/284									
Main Effects Squared	.25	11.45*	8/281	.02	2.50	3/281	.02	3.82**	2/279	.04	3.06*	5/279
Interaction Terms Squared	.27	10.12*	10/279									
Leader Interpersonal Relations												
Linear Terms	.25	18.98*	5/280									
Main Effects Squared	.27	13.13*	8/277	.02	2.53	3/277	.02	3.87**	2/275	.04	3.09*	5/275
Interaction Terms Squared	.29	11.01*	10/275									

APPENDIX VIII (continued)

TABLE 5.16.B.2

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
DESIRE TO LEAVE FOR STAFF ACCOUNTANTS

Independent Variable	R ²	F	d/f	Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
				ΔR ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f
Participation												
Linear Terms	.25	18.78*	5/281									
Main Effects Squared	.25	11.67*	8/278				.01	1.86	2/276	.01	0.76	5/276
Interaction Terms Squared	.26	9.71*	10/276									
Competence/Training												
Linear Terms	.19	13.61*	5/284									
Main Effects Squared	.20	8.54*	8/281	.01	1.17	3/281				.01	0.70	5/279
Interaction Terms Squared	.20	6.87*	10/279									
Reward/Performance												
Linear Terms	.19	13.64*	5/283									
Main Effects	.20	8.79*	8/280	.01	1.17	3/278				.01	0.70	5/278
Interaction Terms Squared	.20	7.09*	10/278									
Client Relations												
Linear Terms	.17	11.46*	5/281									
Main Effects Squared	.19	7.97*	8/278	.02	2.29	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.17	11.15*	5/281									
Main Effects Squared	.19	7.92*	8/278	.02	2.29	3/278				.02	1.36	5/276
Interaction Terms Squared	.19	6.50*	10/276									
Organizational Structure												
Linear Terms	.32	9.59*	5/103									
Main Effects Squared	.37	7.20*	8/100	.05	2.65**	3/100						
Interaction Terms Squared												
Preference for Assignments												
Linear Terms	.26	19.86*	5/281									
Main Effects Squared	.27	12.78*	8/278	.01	1.27	3/278				.01	0.76	5/276
Interaction Terms Squared	.27	10.18*	10/276									
Specialization												
Linear Terms	.16	11.01*	5/283									
Main Effects Squared	.17	7.18*	8/280	.01	1.12	3/280	.01	1.70	2/278	.02	1.36	5/278
Interaction Terms Squared	.18	6.05*	10/278									
Leadership Structure												
Linear Terms	.16	10.86*	5/284									
Main Effects Squared	.18	7.83*	8/281	.02	2.29	3/281	.03	5.30*	2/279	.05	3.53*	5/279
Interaction Terms Squared	.21	7.31*	10/279									
Leader Interpersonal Relations												
Linear Terms	.18	12.64*	5/280									
Main Effects Squared	.19	8.21*	8/277	.01	1.14	3/277	.01	1.72	2/275	.02	1.38	5/275
Interaction Terms Squared	.20	7.05*	10/275									

APPENDIX VIII (continued)

TABLE 5.16.B.3

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
JOB ANXIETY FOR STAFF ACCOUNTANTS

Independent Variable	R ²			Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
	R ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f
Participation												
Linear Terms	.21	15.11*	5/281									
Main Effects Squared	.22	9.62*	8/278	.01	1.19	3/278				.01	0.71	5/276
Interaction Terms Squared	.22	7.83*	10/276									
Competence/Training												
Linear Terms	.22	15.69*	5/284									
Main Effects Squared	.23	10.46*	8/281	.01	1.22	3/281				.01	0.72	5/279
Interaction Terms Squared	.23	8.51*	10/279									
Reward/Performance												
Linear Terms	.21	15.24*	5/283									
Main Effects Squared	.22	9.63*	8/280	.01	1.20	3/280	.01	1.81	2/278	.02	1.44	5/278
Interaction Squared	.23	8.35*	10/278									
Client Relations												
Linear Terms	.25	18.95*	5/281									
Main Effects Squared	.26	12.39*	8/278	.01	1.25	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.26	19.81*	5/281									
Main Effects Squared	.26	12.40*	8/278				.02	3.83**	2/276	.02	1.53	5/276
Interaction Terms Squared	.28	10.60*	10/276									
Organizational Structure												
Linear Terms	.17	4.21*	5/103									
Main Effects Squared	.22	3.58*	8/100	.05	2.14	3/100						
Interaction Terms Squared												
Preference for Assignments												
Linear Terms	.23	16.71*	5/281									
Main Effects Squared	.23	10.65*	8/278				.02	3.68**	2/276	.02	1.47	5/276
Interaction Terms Squared	.25	9.38*	10/276									
Specialization												
Linear Terms	.21	15.22*	5/283									
Main Effects Squared	.21	9.47*	8/280				.01	1.78	2/278	.01	0.72	5/278
Interaction Terms Squared	.22	8.01**	10/278									
Leadership Structure												
Linear Terms	.21	14.85*	5/284									
Main Effects Squared	.22	9.95*	8/281	.01	1.20	3/281	.01	1.81	2/279	.02	1.45	5/279
Interaction Terms Squared	.23	8.49*	10/279									
Leader Interpersonal Relations												
Linear Terms	.21	15.00*	5/280									
Main Effects Squared	.23	10.58*	8/277	.02	2.40	3/277	.01	1.81	2/275	.03	2.17	5/275

APPENDIX VIII (continued)

TABLE 5.16.B.4

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
JOB PERFORMANCE FOR STAFF ACCOUNTANTS

Independent Variable	R ²	F	d/f	Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
				ΔR^2	F	d/f	ΔR^2	F	d/f	ΔR^2	F	d/f
Participation												
Linear Terms	.10	6.04*	5/281									
Main Effects Squared	.14	5.65*	8/278	.04	4.31*	3/278	.01	1.62	2/276	.05	3.25*	5/276
Interaction Terms Squared	.15	4.87*	10/276									
Competence/Training												
Linear Terms	.13	8.42*	5/284									
Main Effects Squared	.15	6.30*	8/281	.02	2.20	3/281	.01	1.66	2/279	.03	1.99	5/279
Interaction Terms Squared	.16	5.17*	10/279									
Reward/Performance												
Linear Terms	.09	5.73*	5/283									
Main Effects Squared	.14	5.51*	8/280	.05	5.42*	3/280				.05	3.23*	5/278
Interaction Terms Squared	.14	4.48*	10/278									
Client Relations												
Linear Terms	.10	6.15*	5/281									
Main Effects Squared	.14	5.47*	8/278	.04	4.31*	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.11	6.65*	5/281									
Main Effects Squared	.14	5.69*	8/278	.03	3.23**	3/278				.03	1.93	5/276
Interaction Terms Squared	.14	4.60*	10/276									
Organizational Structure												
Linear Terms	.15	3.74*	5/103									
Main Effects Squared	.21	3.28*	8/100	.06	2.53	3/100						
Interaction Terms Squared												
Preference for Assignments												
Linear Terms	.10	6.14*	5/281									
Main Effects Squared	.15	6.04*	8/278	.05	5.45*	3/278				.05	3.33*	5/276
Interaction Terms Squared	.15	4.90*	10/276									
Specialization												
Linear Terms	.11	6.84*	5/283									
Main Effects Squared	.17	7.24*	8/280	.06	6.75*	3/280				.06	4.02*	5/278
Interaction Terms Squared	.17	5.87*	10/278									
Leadership Structure												
Linear Terms	.10	6.35*	5/284									
Main Effects Squared	.15	6.21*	8/281	.05	5.51*	3/281	.01	1.66	2/279	.06	3.99*	5/279
Interaction Terms Squared	.16	5.19*	10/279									
Leader Interpersonal Relations												
Linear Terms	.10	6.41*	5/280									
Main Effects Squared	.16	6.52*	8/277	.06	6.60*	3/277	.01	1.66	2.275	.07	4.64*	5/275
Interaction Terms Squared	.17	5.44*	10/275									

APPENDIX VIII (continued)

TABLE 5.16.C.1

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
SATISFACTION WITH WORK FOR SENIOR ACCOUNTANTS

Independent Variable	R ²	F	d/f	Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
				ΔR^2	F	d/f	ΔR^2	F	d/f	ΔR^2	F	d/f
Participation												
Linear Terms	.29	23.45*	5/281									
Main Effects Squared	.31	15.44*	8/278	.02	2.69**	3/278				.02	1.60	5/276
Interaction Terms Squared	.31	12.42*	10/276									
Competence/Training												
Linear Terms	.26	19.62*	5/284									
Main Effects Squared	.26	12.49*	8/281				.01	1.89	2/279	.01	0.76	5/279
Interaction Terms Squared	.27	10.13*	10/279									
Reward/Performance												
Linear Terms	.24	18.00*	5/283									
Main Effects Squared	.25	11.79*	8/280	.01	1.24	3/280	.01	1.88	2/278	.02	1.50	5/278
Interaction Terms Squared	.26	9.63*	10/278									
Client Relations												
Linear Terms	.24	17.54*	5/281									
Main Effects Squared	.25	11.51*	8/278	.01	1.24	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.25	18.62*	5/281									
Main Effects Squared	.27	12.57*	8/278	.02	2.54	3/278				.02	1.51	5/276
Interaction Terms Squared	.27	10.02*	10/276									
Organizational Structure												
Linear Terms	.15	3.80*	5/106									
Main Effects Squared	.20	3.28*	8/103	.05	2.15	3/103	.01	0.64	2/101	.06	1.53	5/101
Interaction Terms Squared	.21	2.66*	10/101									
Preference for Assignments												
Linear Terms	.33	27.94*	5/281									
Main Effects Squared	.35	18.64*	8/278	.02	2.85**	3/278	.02	4.38**	2/276	.07	3.50*	5/276
Interaction Terms Squared	.37	15.88*	10/276									
Specialization												
Linear Terms	.23	16.76*	5/283									
Main Effects Squared	.24	11.30*	8/280	.01	1.23	3/280	.01	1.85	2/278	.02	1.48	5/278
Interaction Terms Squared	.25	9.11*	10/278									
Leadership Structure												
Linear Terms	.23	16.89*	5/284									
Main Effects Squared	.25	11.45*	8/281	.02	2.57	3/284	.02	3.82**	2/279	.04	3.05*	5/279
Interaction Terms Squared	.27	10.12*	10/279									
Leader Interpersonal Relations												
Linear Terms	.25	18.98*	5/280									
Main Effects Squared	.27	13.13*	8/277	.02	2.53	3/277	.02	3.87**	2/275	.04	3.10*	5/275
Interaction Terms Squared	.29	11.01*	10/275									

APPENDIX VIII (continued)

TABLE 5.16.C.2

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
DESIRE TO LEAVE FOR SENIOR ACCOUNTANTS

Independent Variable	R ²			Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
	R ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f
Participation												
Linear Terms	.25	18.78*	5/281									
Main Effects Squared	.25	11.67*	8/278				.01	1.86	2/276	.01	0.76	5/276
Interaction Terms Squared	.26	9.71*	10/276									
Competence/Training												
Linear Terms	.19	13.61*	5/284									
Main Effects Squared	.20	8.54*	8/281	.01	1.17	3/281				.01	0.70	5/279
Interaction Terms Squared	.20	6.87*	10/279									
Reward/Performance												
Linear Terms	.19	13.64*	5/283									
Main Effects Squared	.20	8.79*	8/280	.01	1.17	3/280				.01	0.70	5/278
Interaction Terms Squared	.20	7.09*	10/278									
Client Relations												
Linear Terms	.17	11.46*	5/281									
Main Effects Squared	.19	7.97*	8/278	.02	2.29	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.17	11.15*	5/281									
Main Effects Squared	.19	7.92*	8/278	.02	2.29	3/278				.02	1.36	5/276
Interaction Terms Squared	.19	6.50*	10/276									
Organizational Structure												
Linear Terms	.13	3.08*	5/106									
Main Effects Squared	.15	2.25**	8/103	.02	0.81	3/103	.01	0.60	2/101	.03	0.72	5/101
Interaction Terms Squared	.16	1.88**	10/101									
Preference for Assignments												
Linear Terms	.26	19.86*	5/281									
Main Effects Squared	.27	12.78*	8/278	.01	1.27	3/278				.01	0.76	5/276
Interaction Terms Squared	.27	10.18*	10/276									
Specialization												
Linear Terms	.16	11.01*	5/283									
Main Effects Squared	.17	7.18*	8/280	.01	1.12	3/280	.01	1.70	2/278	.02	1.36	5/278
Interaction Terms Squared	.18	6.05*	10/278									
Leadership Structure												
Linear Terms	.16	10.86*	5/284									
Main Effects Squared	.18	7.83*	8/281	.02	2.28	3/281	.03	5.30*	2/279	.05	3.53*	5/279
Interaction Terms Squared	.21	7.31*	10/279									
Leader Interpersonal Relations												
Linear Terms	.18	12.64*	5/280									
Main Effects Squared	.19	8.21*	8/277	.01	1.14	3/277	.01	1.72	2/275	.02	1.38	5/275
Interaction Terms Squared	.20	7.05*	10/275									

APPENDIX VIII (continued)

TABLE 5.16.C.3

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
JOB ANXIETY FOR SENIOR ACCOUNTANTS

Independent Variable	R ²			Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
	R ²	F	d/f	Δ R ²	F	d/f	Δ R ²	F	d/f	Δ R ²	F	d/f
Participation												
Linear Terms	.21	15.11*	5/281									
Main Effects Squared	.22	9.62*	8/278	.01	1.19	3/278				.01	0.71	5/276
Interaction Terms Squared	.22	7.83*	10/276									
Competence/Training												
Linear Terms	.22	15.69*	5/284									
Main Effects Squared	.23	10.46*	8/281	.01	1.22	3/281				.01	0.72	5/279
Interaction Terms Squared	.23	8.51*	10/279									
Reward/Performance												
Linear Terms	.21	15.24*	5/283									
Main Effects Squared	.22	9.63*	8/280	.01	1.20	3/280	.01	1.81	2/278	.02	1.44	5/278
Interaction Terms Squared	.23	8.35*	10/278									
Client Relations												
Linear Terms	.25	18.95*	5/281									
Main Effects Squared	.26	12.39*	8/278	.01	1.25	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.26	19.81*	5/281									
Main Effects Squared	.26	12.40*	8/278				.02	3.83**	2/276	.02	1.53	5/276
Interaction Terms Squared	.28	15.60*	10/276									
Organizational Structure												
Linear Terms	.31	9.40*	5/106									
Main Effects Squared	.36	7.22*	8/103	.05	2.32	3/103	.01	0.80	2/101	.06	1.92	5/101
Interaction Terms Squared	.37	5.84*	10/101									
Preference for Assignments												
Linear Terms	.23	16.71*	5/281									
Main Effects Squared	.23	10.65*	8/278				.02	3.68**	2/276	.02	1.47	5/276
Interaction Terms Squared	.25	9.36*	10/276									
Specialization												
Linear Terms	.21	15.22*	5/283									
Main Effects Squared	.21	9.47*	8/280				.01	1.78	2/278	.01	0.71	5/278
Interaction Terms Squared	.22	8.01*	10/278									
Leadership Structure												
Linear Terms	.21	14.85*	5/284									
Main Effects Squared	.22	9.95*	8/281	.01	1.20	3/281	.01	1.81	2/279	.02	1.45	5/279
Interaction Terms Squared	.23	8.49*	10/279									
Leader Interpersonal Relations												
Linear Terms	.21	15.00*	5/280									
Main Effects Squared	.23	10.58*	8/277	.02	2.40	3/277	.01	1.81	2/275	.03	2.17	5/275
Interaction Terms Squared	.24	8.58*	10/275									

APPENDIX VIII (continued)

TABLE 5.16.C.4

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
JOB PERFORMANCE FOR SENIOR ACCOUNTANTS

Independent Variable	R ²			Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
	R ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f
Participation												
Linear Terms	.10	6.04*	5/281									
Main Effects Squared	.14	5.65*	8/278	.04	4.31*	3/278	.01	1.62	2/276	.05	3.25*	5/276
Interaction Terms Squared	.15	4.87*	10/276									
Competence/Training												
Linear Terms	.13	8.42*	5/284									
Main Effects Squared	.15	6.30*	8/281	.02	2.20	3/281	.01	1.66	2/279	.03	1.99	5/279
Interaction Terms Squared	.16	5.17*	10/279									
Reward/Performance												
Linear Terms	.09	5.73*	5/283									
Main Effects Squared	.14	5.51*	8/280	.05	5.43*	3/280				.05	3.23*	5/278
Interaction Terms Squared	.14	4.48*	10/278									
Client Relations												
Linear Terms	.10	6.15*	5/281									
Main Effects Squared	.14	5.47*	8/278	.04	4.31*	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.11	6.65*	5/281									
Main Effects Squared	.14	5.69*	8/278	.03	3.23**	3/278						
Interaction Terms Squared												
Organizational Structure												
Linear Terms	.04	1.00	5/106									
Main Effects Squared	.09	1.23	8/103	.05	1.89	3/103	.01	0.56	2/101	.06	1.35	5/101
Interaction Terms Squared	.10	1.08	10/101									
Preference for Assignments												
Linear Terms	.10	6.14*	5/281									
Main Effects Squared	.15	6.04*	8/278	.05	5.45*	3/278				.05	3.25*	5/276
Interaction Terms Squared	.15	4.90*	10/276									
Specialization												
Linear Terms	.11	6.84*	5/283									
Main Effects Squared	.17	7.24*	8/280	.06	6.75*	3/280				.06	4.02*	5/278
Interaction Terms Squared	.17	5.87*	10/278									
Leadership Structure												
Linear Terms	.10	6.35*	5/284									
Main Effects Squared	.15	6.21*	8/281	.05	5.51*	3/281	.01	1.66	2/279	.06	3.99*	5/279
Interaction Terms Squared	.16	5.20*	10/279									
Leader Interpersonal Relations												
Linear Terms	.10	6.41*	5/280									
Main Effects Squared	.16	6.52*	8/277	.06	6.60*	3/277	.01	1.66	3/275	.07	4.64*	5/275
Interaction Terms Squared	.17	5.44*	10/275									

APPENDIX VIII (continued)

TABLE 5.16.D.1

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
SATISFACTION WITH WORK FOR MANAGER ACCOUNTANTS

Independent Variable	R ²	F	d/f	Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
				ΔR ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f
Participation												
Linear Terms	.29	23.45*	5/281									
Main Effects Squared	.31	15.44*	8/278	.02	2.69**	3/278				.02	1.60	5/276
Interaction Terms Squared	.31	12.42*	10/276									
Competence/Training												
Linear Terms	.26	19.62*	5/284									
Main Effects Squared	.26	12.49*	8/281				.01	1.91	2/279	.01	0.76	5/279
Interaction Terms Squared	.27	10.13*	10/279									
Reward/Performance												
Linear Terms	.24	18.00*	5/283									
Main Effects Squared	.25	11.79*	8/280	.01	1.24	3/280	.01	1.88	2/278	.02	1.50	5/278
Interaction Terms Squared	.26	9.63*	10/278									
Client Relations												
Linear Terms	.24	17.54*	5/281									
Main Effects Squared	.25	11.51*	8/278	.01	1.24	3/278						
Pressure												
Linear Terms	.25	18.62*	5/281									
Main Effects Squared	.27	12.57*	8/278	.02	2.54	3/278				.02	1.51	5/276
Interaction Terms Squared	.27	10.02*	10/276									
Organizational Structure												
Linear Terms	.29	5.02*	5/61									
Main Effects Squared	.30	3.13*	8/58	.01	0.28	3/58						
Interaction Terms Squared												
Preference for Assignments												
Linear Terms	.33	27.94*	5/281									
Main Effects Squared	.35	18.64*	8/278	.02	2.85**	3/278	.02	4.38**	2/276	.04	3.50*	5/276
Interaction Terms Squared	.37	15.88*	10/276									
Specialization												
Linear Terms	.23	16.76*	5/283									
Main Effects Squared	.24	11.30*	8/280	.01	1.23	3/280	.01	1.85	2/278	.02	3.50*	5/278
Interaction Terms Squared	.25	9.11*	10/278									
Leadership Structure												
Linear Terms	.23	16.89*	5/284									
Main Effects Squared	.25	11.49*	8/281	.02	2.50	3/281	.02	3.82**	2/279	.04	3.06*	5/279
Interaction Terms Squared	.27	10.12*	10/279									
Leader Interpersonal Relations												
Linear Terms	.25	18.98*	5/280									
Main Effects Squared	.27	13.13*	8/277	.02	2.53	3/277	.02	3.87**	2/275	.04	3.10*	5/275
Interaction Terms Squared	.29	11.04*	10/275									

APPENDIX VIII (continued)

TABLE 5.16.D.2

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
DESIRE TO LEAVE FOR MANAGER ACCOUNTANTS

Independent Variable	R ²	F	d/f	Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms All Squared Terms		
				ΔR^2	F	d/f	ΔR^2	F	d/f	ΔR^2	F	d/f
Participation												
Linear Terms	.25	18.78*	5/281									
Main Effects Squared	.25	11.67*	8/278				.01	1.86	2/276	.01	0.75	5/276
Interaction Terms Squared	.26	9.71*	10/276									
Competence/Training												
Linear Terms	.19	13.61*	5/284									
Main Effects Squared	.20	8.54*	8/281	.01	1.17	3/281				.01	0.70	5/279
Interaction Terms Squared	.20	6.87*	10/279									
Reward/Performance												
Linear Terms	.19	13.64*	5/283									
Main Effects Squared	.20	8.79*	8/280	.01	1.17	3/280				.01	0.70	5/278
Interaction Terms Squared	.20	7.09*	10/278									
Client Relations												
Linear Terms	.17	11.46*	5/281									
Main Effects Squared	.19	7.97*	8/278	.02	2.29	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.17	11.15*	5/281									
Main Effects Squared	.19	7.92*	8/278	.02	2.29	3/278				.02	1.36	5/276
Interaction Terms Squared	.19	6.50*	10/276									
Organizational Structure												
Linear Terms	.16	2.27**	5/61									
Main Effects Squared	.17	1.46	8/58	.01	0.23	3/58						
Interaction Terms Squared												
Preference for Assignments												
Linear Terms	.26	19.86*	5/281									
Main Effects Squared	.27	12.78*	8/278	.01	1.27	3/278				.01	0.76	5/276
Interaction Terms Squared	.27	10.18*	10/276									
Specialization												
Linear Terms	.16	11.01*	5/283									
Main Effects Squared	.17	7.18*	8/280	.01	1.12	3/280	.01	1.70	2/278	.02	1.36	5/278
Interaction Terms Squared	.18	6.05*	10/278									
Leadership Structure												
Linear Terms	.16	10.86*	5/284									
Main Effects Squared	.18	7.83*	8/281	.02	2.28	3/281	.03	5.30*	2/279	.05	3.53**	5/279
Interaction Terms Squared	.21	7.31*	10/279									
Leader Interpersonal Relations												
Linear Terms	.18	12.64*	5/280									
Main Effects Squared	.19	8.21*	8/277	.01	1.14	3/277	.01	1.72	2/275	.02	1.38	5/275
Interaction Terms Squared	.20	7.05*	10/275									

APPENDIX III (continued)

TABLE 5.16.D.3

LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
JOB ANXIETY FOR MANAGER ACCOUNTANTS

Independent Variable	R ²	F	d/f	Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
				ΔR ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f
Participation												
Linear Terms	.21	15.11*	5/281	.01	1.19	3/278				.01	0.71	5/276
Main Effects Squared	.22	9.62*	8/278									
Interaction Terms Squared	.22	7.83*	10/276									
Competence/Training												
Linear Terms	.22	15.69*	5/284							.01	0.72	5/279
Main Effects Squared	.23	10.46*	8/281	.01	1.22	3/281						
Interaction Terms Squared	.23	8.51*	10/279									
Reward/Performance												
Linear Terms	.21	15.24*	5/283									
Main Effects Squared	.22	9.63*	8/280	.01	1.20	3/280	.01	1.81	2/278	.02	1.44	5/278
Interaction Terms Squared	.23	8.35*	10/278									
Client Relations												
Linear Terms	.25	18.95*	5/281									
Main Effects Squared	.26	12.39*	8/278	.01	1.25	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.26	19.81*	5/281									
Main Effects Squared	.26	12.40*	8/278				.02	3.83**	2/276	.02	1.53	5/276
Interaction Terms Squared	.28	10.60*	10/276									
Organizational Structure												
Linear Terms	.28	4.75*	5/61									
Main Effects Squared	.34	3.69*	8/58	.06	1.76	3/58						
Interaction Terms Squared												
Preference for Assignments												
Linear Terms	.23	16.71*	5/281									
Main Effects Squared	.23	10.65*	8/278				.02	3.68**	2/276	.02	1.47	5/276
Interaction Terms Squared	.25	9.36*	10/276									
Specialization												
Linear Terms	.21	15.22*	5/283									
Main Effects Squared	.21	9.47*	8/280				.01	1.78	2/278	.01	0.71	5/278
Interaction Terms Squared	.22	8.01*	10/278									
Leadership Structure												
Linear Terms	.21	14.85*	5/284									
Main Effects Squared	.22	9.95*	8/281	.01	1.20	3/281	.01	1.81	2/279	.02	1.45	5/279
Interaction Terms Squared	.23	8.49*	10/279									
Leader Interpersonal Relations												
Linear Terms	.21	15.00*	5/280									
Main Effects Squared	.23	10.57*	8/277	.02	2.40	3/277	.01	1.81	2/275	.03	2.17	5/275
Interaction Terms Squared	.24	8.58*	10/275									

APPENDIX VIII (continued)

TABLE 5.16.D.4

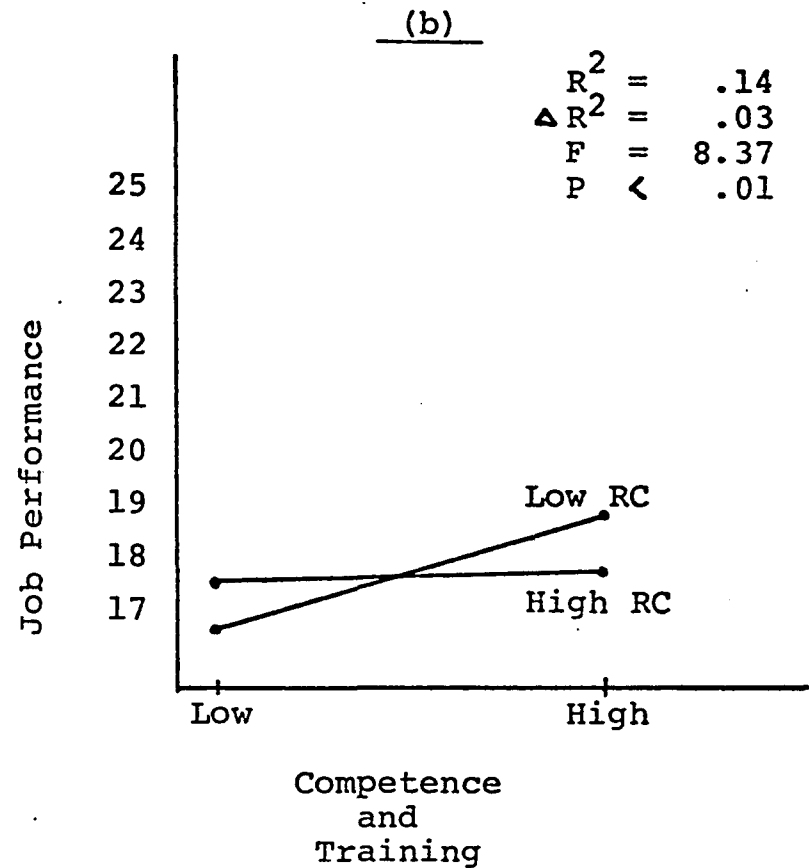
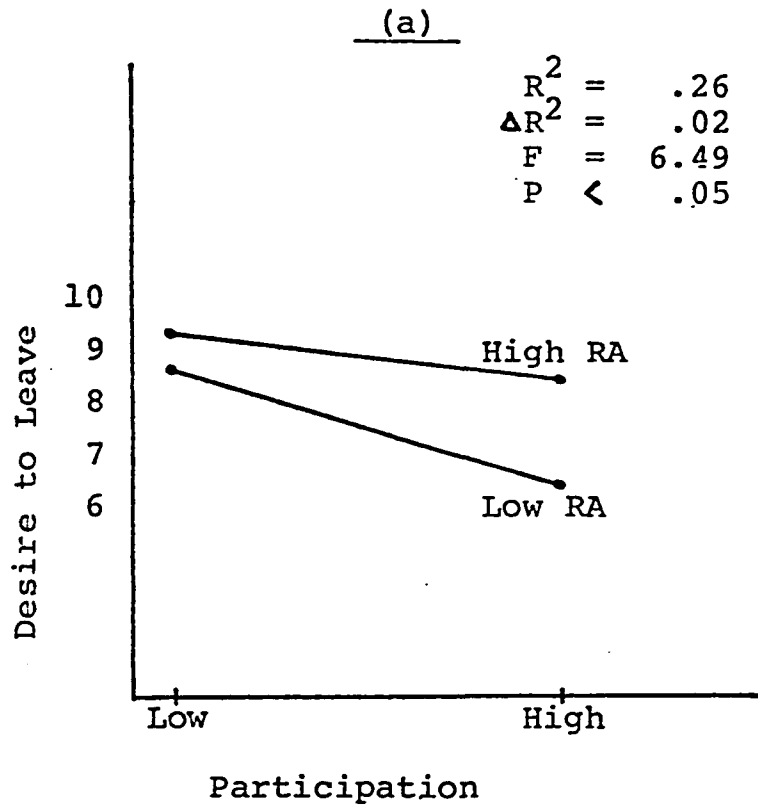
LINEARITY TEST BETWEEN ALL INTERACTION MODELS WITH
JOB PERFORMANCE FOR MANAGER ACCOUNTANTS

Independent Variable	R ²			Change in R ² From Adding Squared Main Effects			Change in R ² From Adding Squared Interaction Terms			Difference Between Linear Terms and All Squared Terms		
	R ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f	ΔR ²	F	d/f
Participation												
Linear Terms	.10	6.04*	5/281	.04	4.31*	3/278	.01	1.62	2/276	.05	3.25*	5/276
Main Effects Squared	.14	5.65*	8/278									
Interaction Terms Squared	.15	4.87*	10/276									
Competence/Training												
Linear Terms	.13	8.41*	5/284									
Main Effects Squared	.15	6.30*	8/281	.02	2.20	3/281	.01	1.66	2/279	.03	1.99	5/279
Interaction Terms Squared	.16	5.17*	10/279									
Reward/Performance												
Linear Terms	.09	5.73*	5/283									
Main Effects Squared	.14	5.51*	8/280	.05	5.43*	3/280				.05	3.23*	5/278
Interaction Terms Squared	.14	4.48*	10/278									
Client Relations												
Linear Terms	.10	6.15*	5/281									
Main Effects Squared	.14	5.47*	8/278	.04	4.31*	3/278						
Interaction Terms Squared												
Pressure												
Linear Terms	.10	6.64*	5/281									
Main Effects Squared	.14	5.69*	8/278	.04	4.31*	3/278				.04	2.57**	5/276
Interaction Terms Squared	.14	4.60*	10/276									
Organizational Structure												
Linear Terms	.21	3.23*	5/61									
Main Effects Squared	.27	2.70*	8/58	.06	1.59	3/58						
Interaction Terms Squared												
Preference for Assignments												
Linear Terms	.10	6.14*	5/281									
Main Effects Squared	.15	6.04*	8/278	.05	5.45*	3/278				.05	3.25*	5/276
Interaction Terms Squared	.15	4.90*	10/276									
Specialization												
Linear Terms	.11	6.84*	5/283									
Main Effects Squared	.17	7.24*	8/280	.06	6.75*	3/280				.06	4.02*	5/278
Interaction Terms Squared	.17	5.87*	10/278									
Leadership Structure												
Linear Terms	.10	6.35*	5/284									
Main Effects Squared	.15	6.21*	8/281	.05	5.51*	3/281	.01	1.66	2/279	.06	3.99*	5/279
Interaction Terms Squared	.16	5.20*	10/279									
Leader Interpersonal Relations												
Linear Terms	.10	6.41*	5/280									
Main Effects Squared	.16	6.52*	8/277	.06	6.60*	3/277	.01	1.66	2/275	.07	4.64*	5/277
Interaction Terms Squared	.17	5.44*	10/275									

APPENDIX IX -- GRAPHICAL PRESENTATION OF SELECTED INTERACTION TERMS

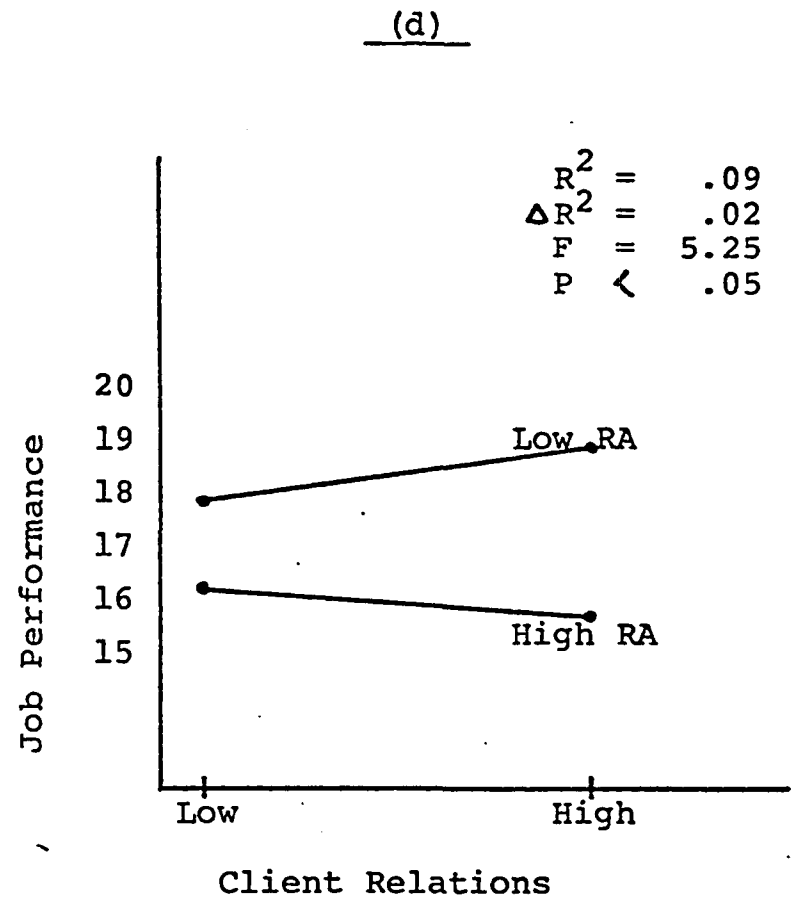
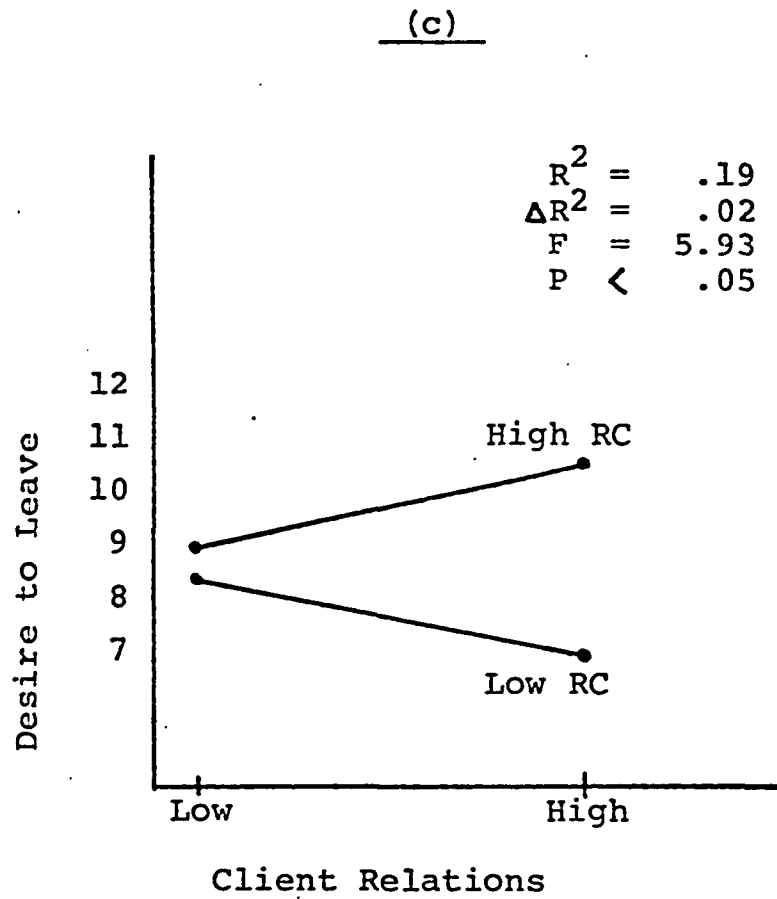
FIGURE 5.1

SIGNIFICANT INTERACTION TERMS BETWEEN ROLE CONFLICT AND AMBIGUITY
FOR FULL MODELS UNMODERATED BY ORGANIZATIONAL LEVEL



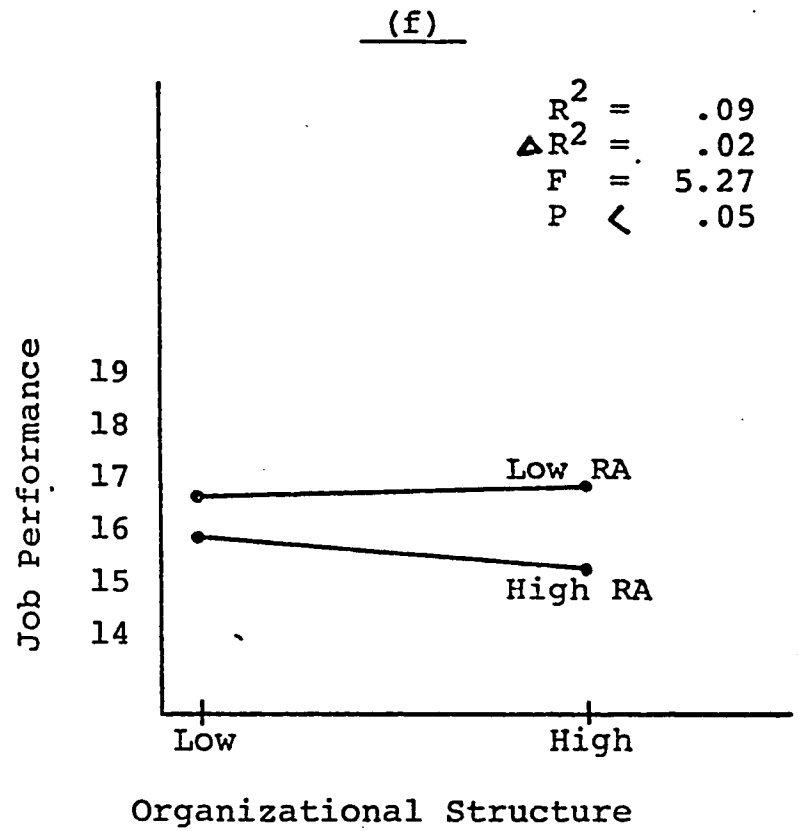
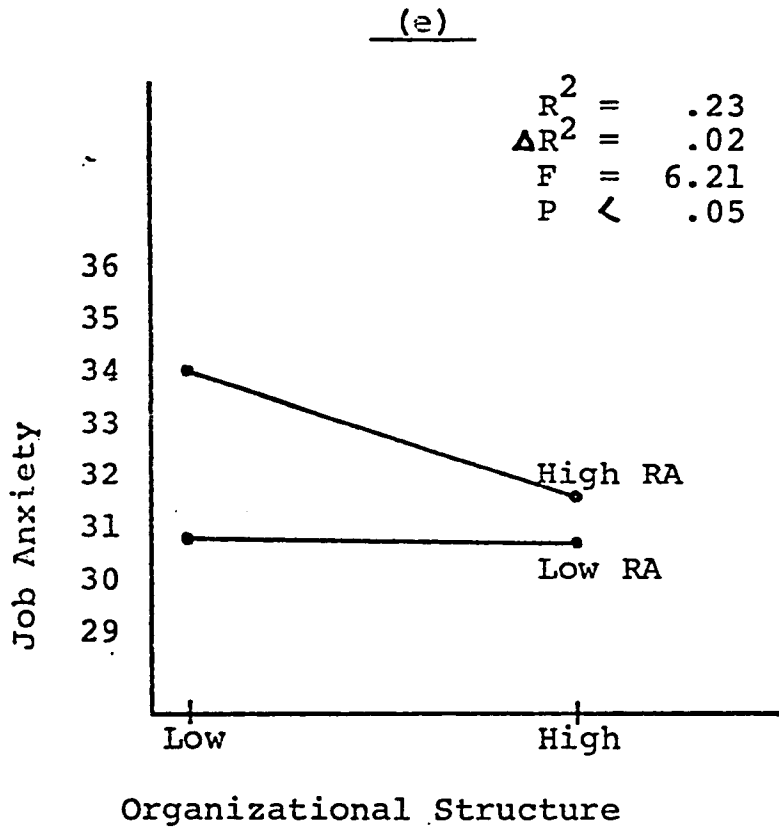
APPENDIX IX (continued)

FIGURE 5.1
(continued)



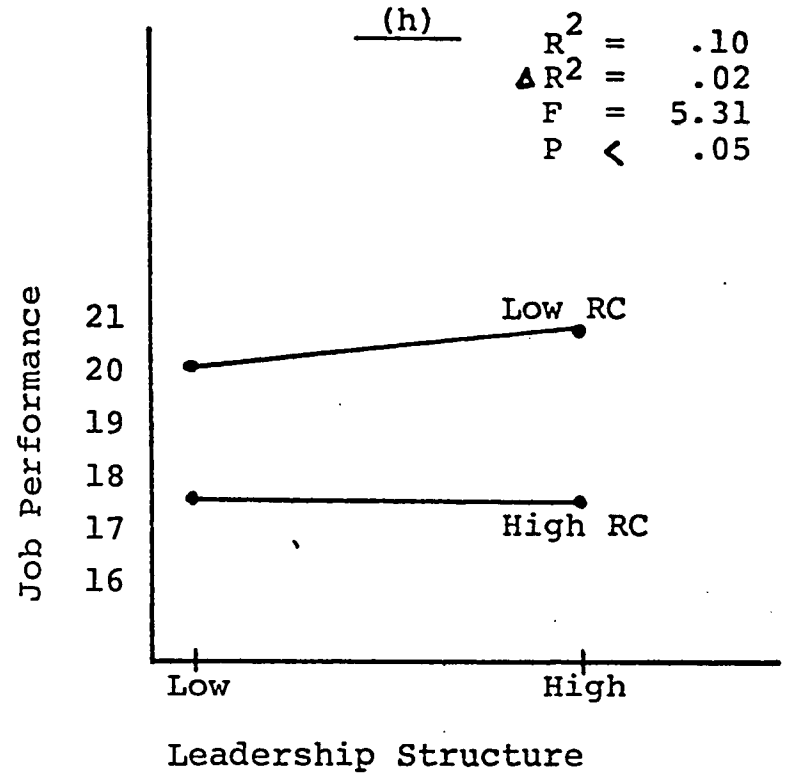
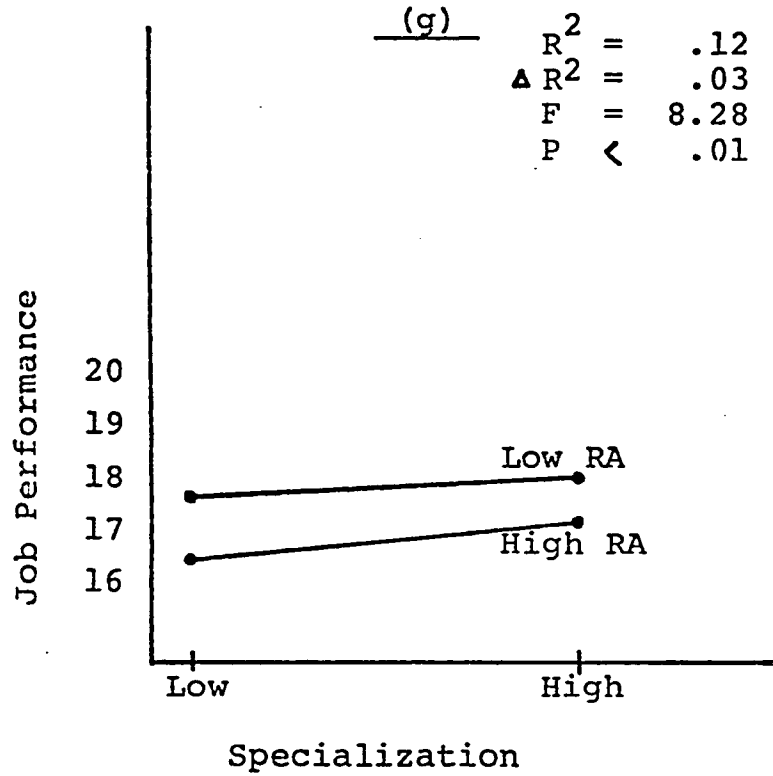
APPENDIX IX (continued)

FIGURE 5.1
(continued)



APPENDIX IX (continued)

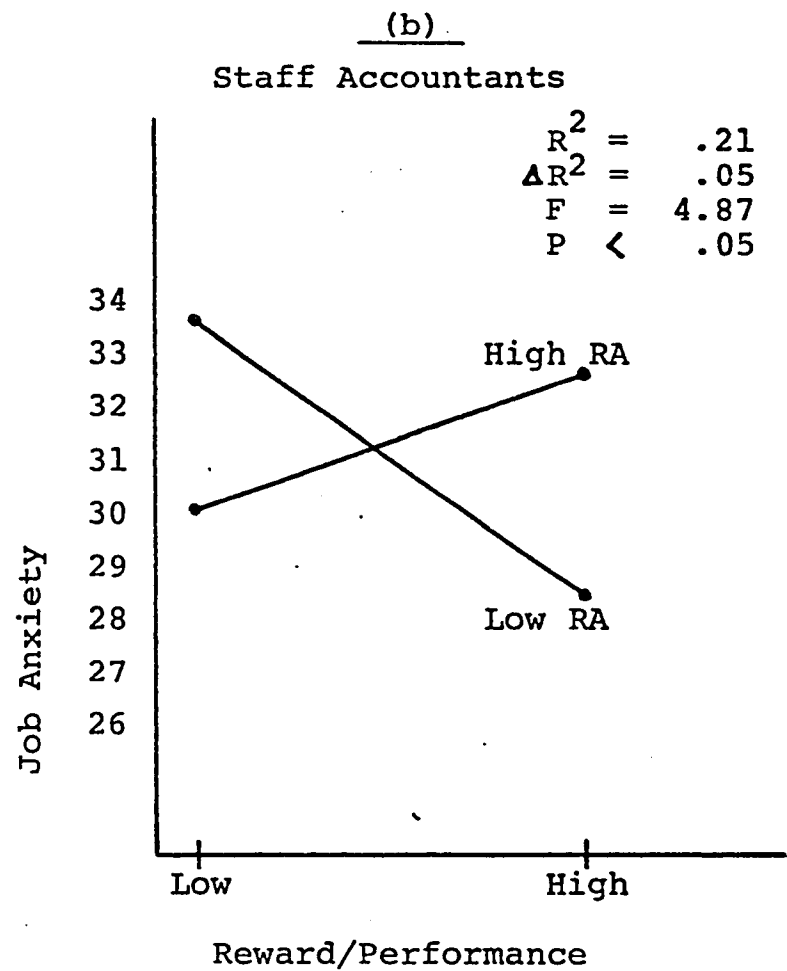
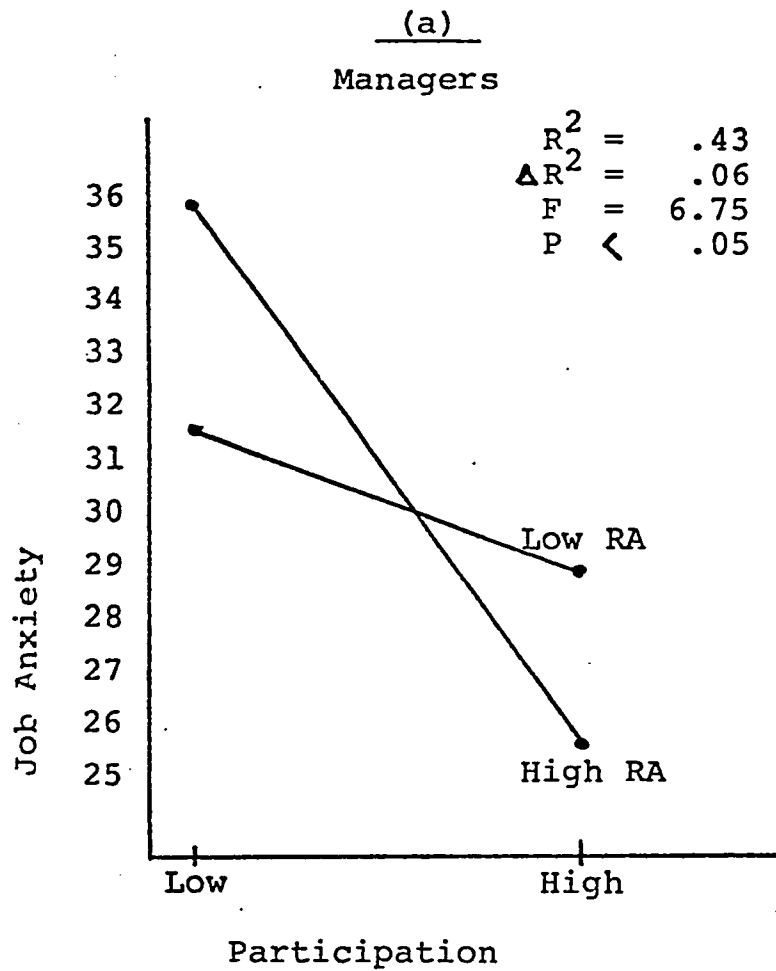
FIGURE 5.1
(continued)



APPENDIX IX (continued)

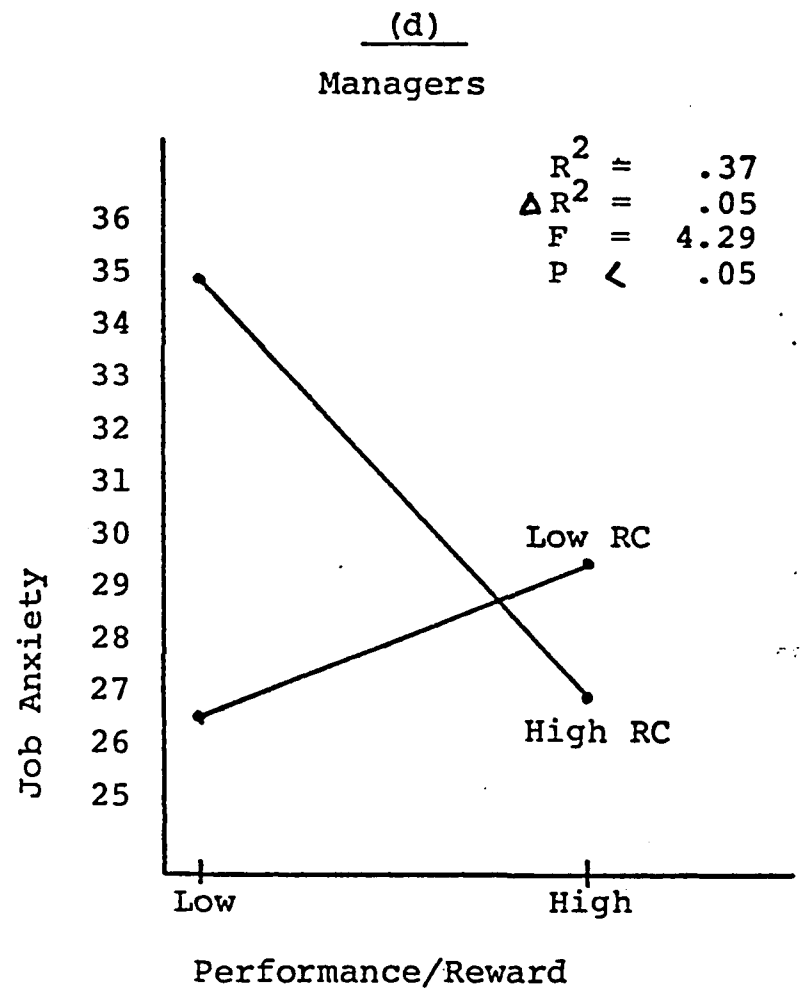
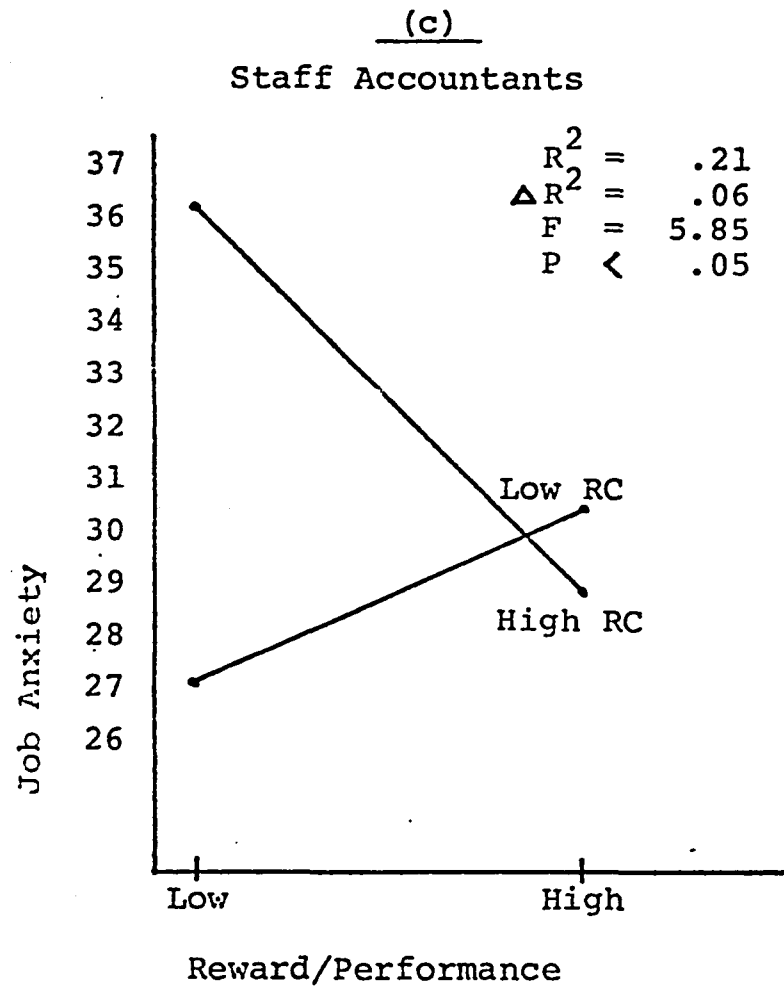
FIGURE 5.2

SIGNIFICANT INTERACTION TERMS BETWEEN ROLE CONFLICT AND AMBIGUITY WITH JOB ANXIETY MODERATED BY ORGANIZATIONAL LEVEL



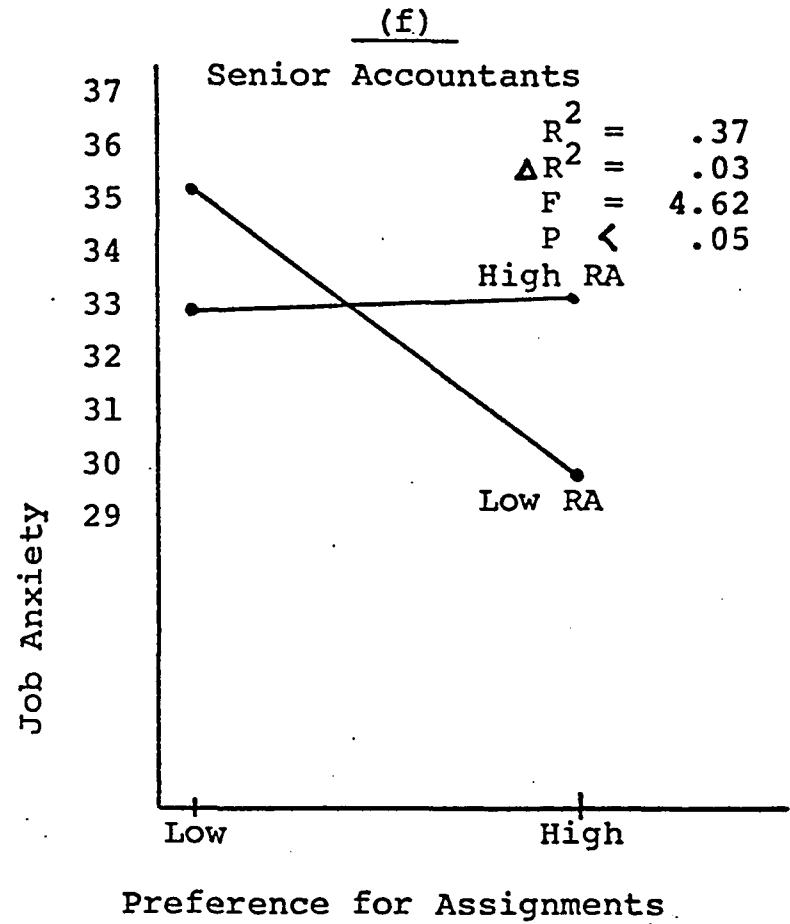
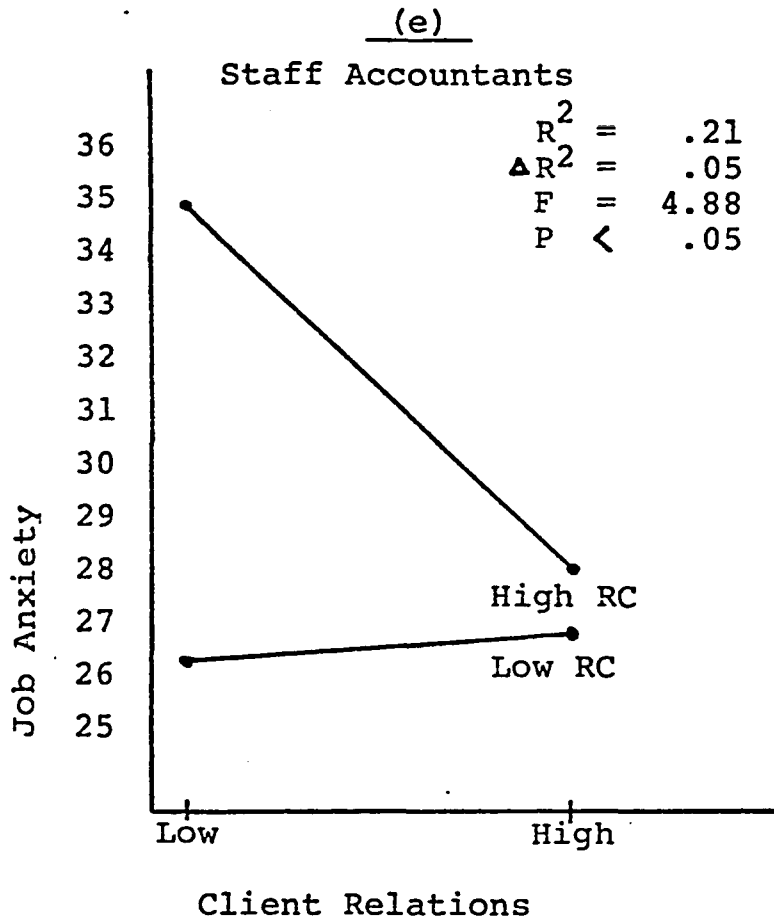
APPENDIX IX (continued)

FIGURE 5.2
(continued)



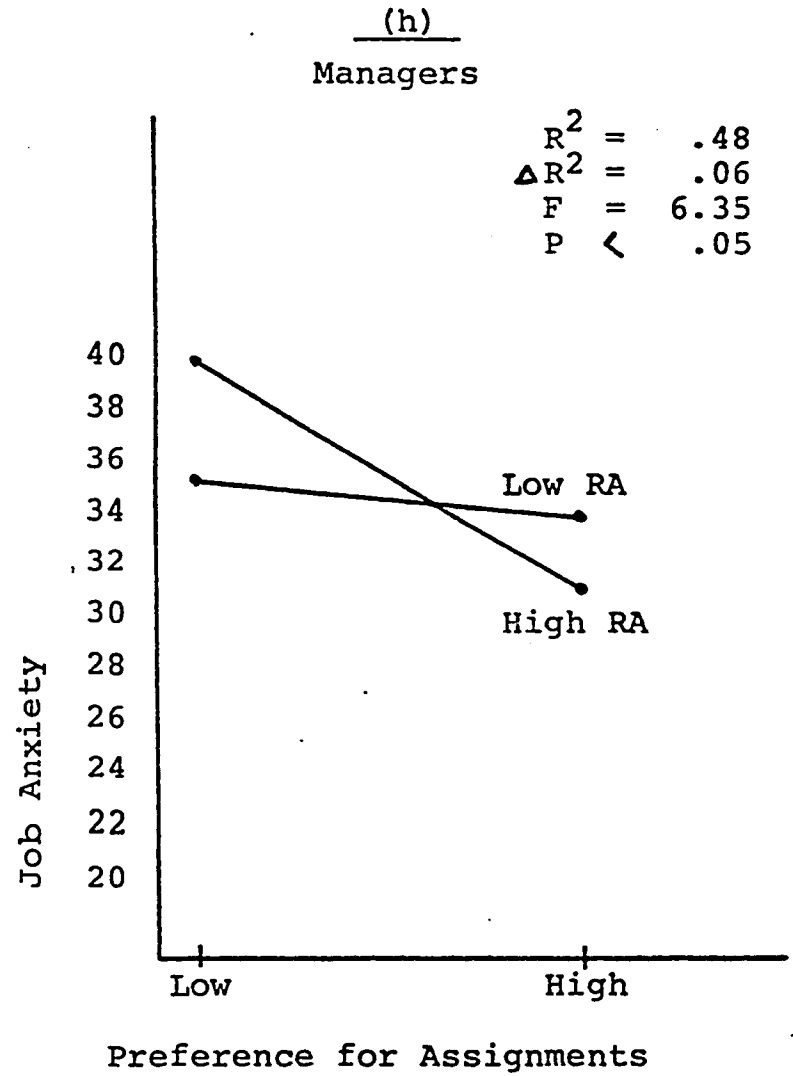
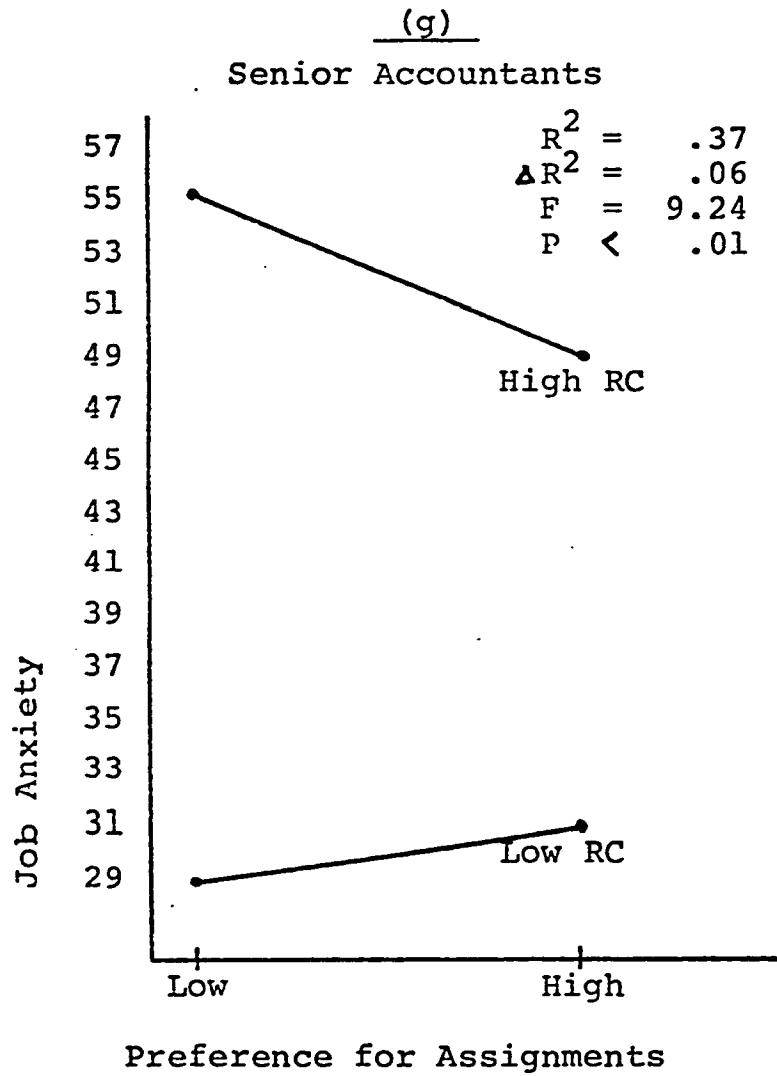
APPENDIX IX (continued)

FIGURE 5.2
(continued)



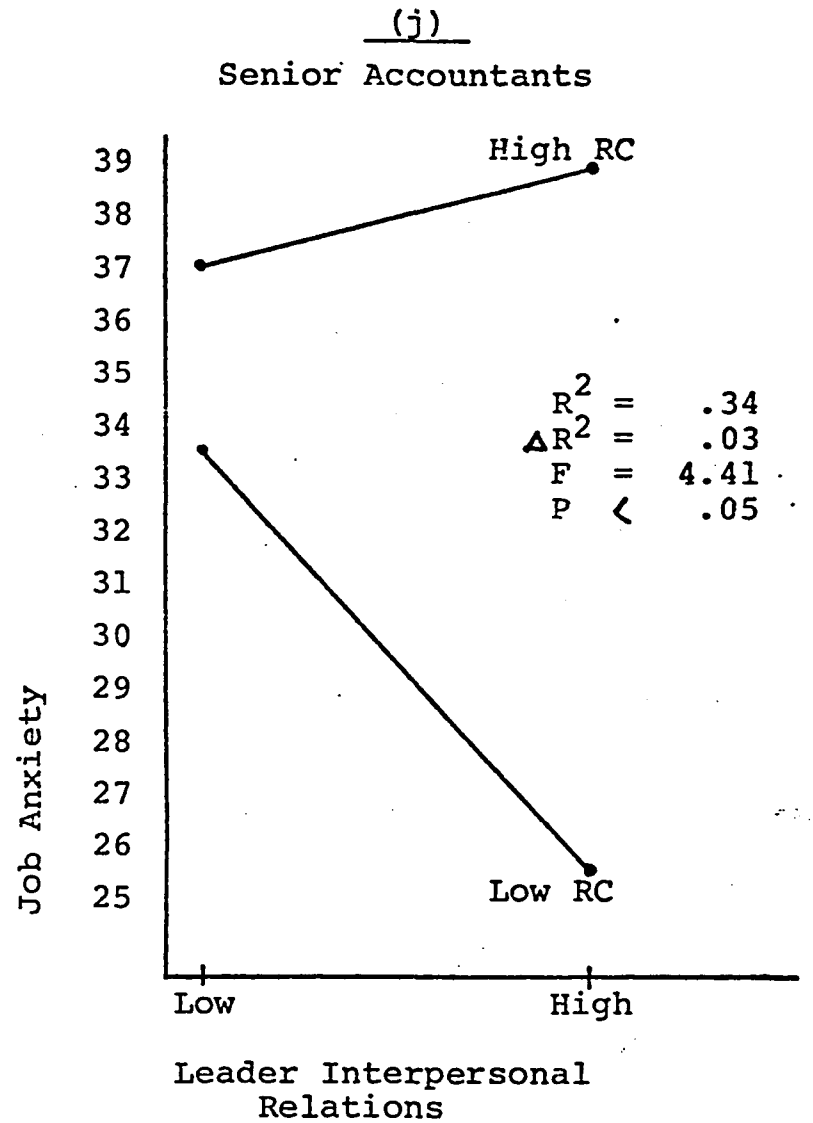
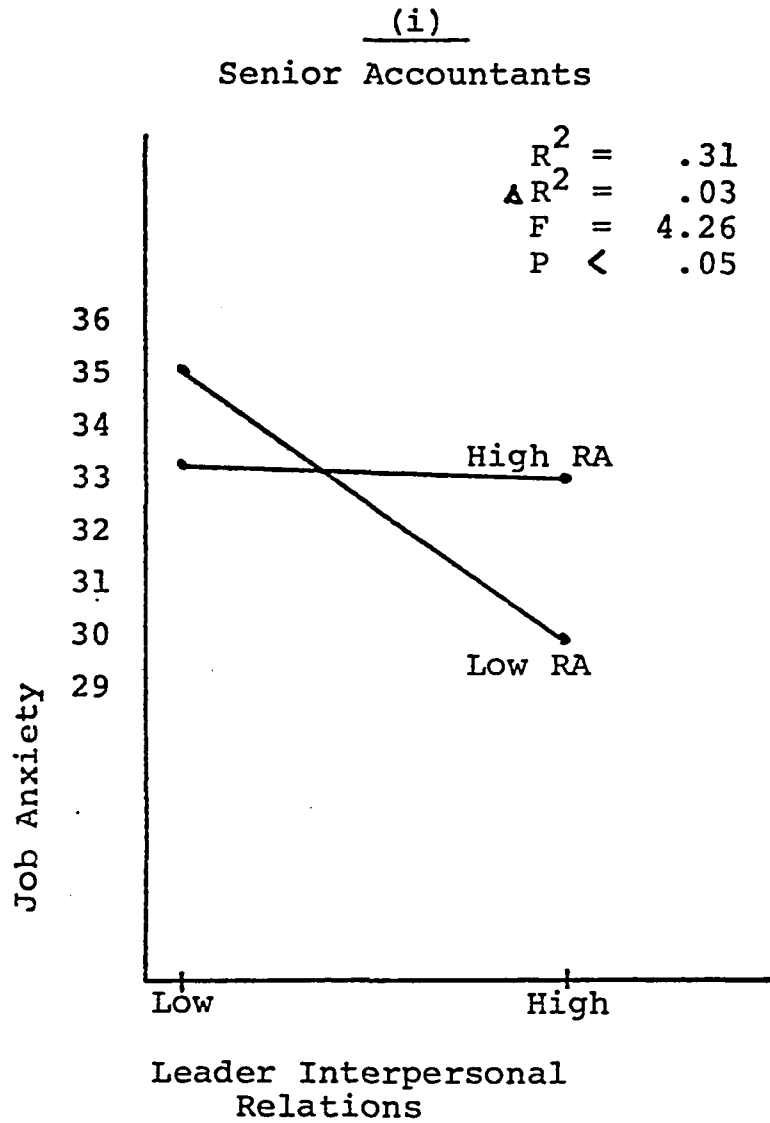
APPENDIX IX (continued)

FIGURE 5.2
(continued)



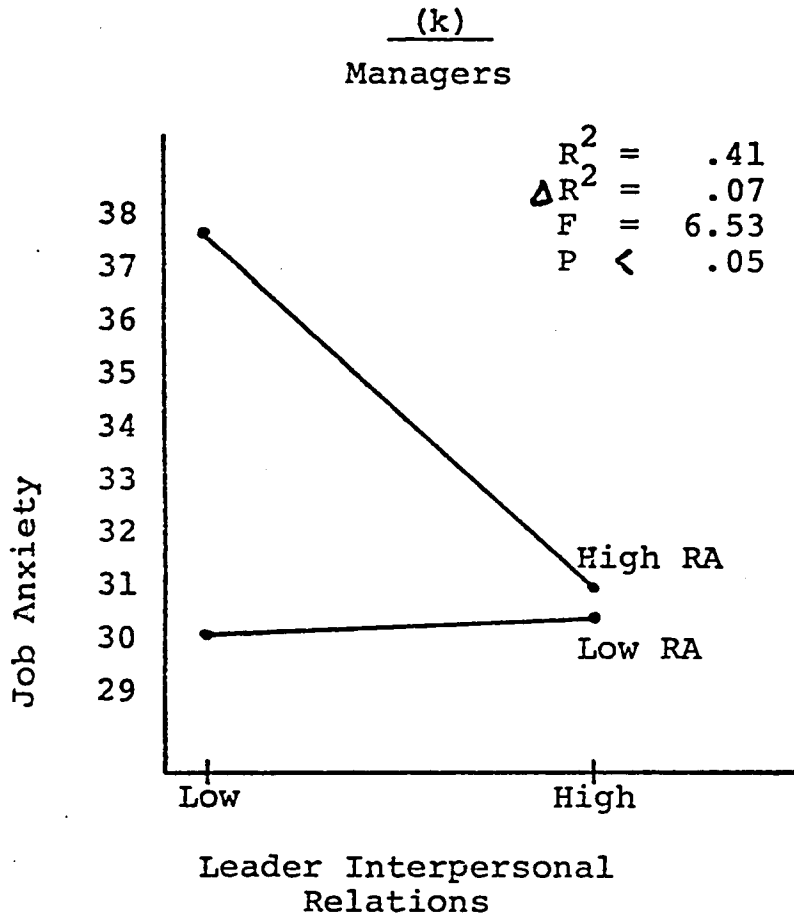
APPENDIX IX (continued)

FIGURE 5.2
(continued)



APPENDIX IX (continued)

FIGURE 5.2
(continued)



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