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LAIR, Marilyn June, 1935-  
A STUDY OF CONGRUENCY OF INDIVIDUAL NEEDS  
AND THE MOTIVATIONAL ASPECTS OF THE  
ORGANIZATIONAL CLIMATE.

The University of Oklahoma, Ph.D., 1972  
Psychology, industrial

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THE UNIVERSITY OF OKLAHOMA  
GRADUATE COLLEGE

A STUDY OF CONGRUENCY OF INDIVIDUAL NEEDS  
AND THE MOTIVATIONAL ASPECTS OF THE  
ORGANIZATIONAL CLIMATE

A DISSERTATION  
SUBMITTED TO THE GRADUATE FACULTY  
in partial fulfillment of the requirements for the  
degree of  
DOCTOR OF PHILOSOPHY

BY  
MARILYN JUNE LAIR  
Norman, Oklahoma

1972

A STUDY OF CONGRUENCY OF INDIVIDUAL NEEDS  
AND THE MOTIVATIONAL ASPECTS OF THE  
ORGANIZATIONAL CLIMATE

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## ACKNOWLEDGEMENTS

Gratitude is sincerely expressed to Dr. Raymond R. White who served as chairman of the doctoral committee and director of this study. His sincere interest and valuable assistance throughout the doctoral program are acknowledged with appreciation. Gratitude is also expressed to Dr. Donald A. Woolf who encouraged and counseled the writer in all stages of the preparation of this dissertation. Sincere thanks are extended to Dr. Thomas W. Wiggins and Dr. Chipman G. Stuart for serving as members of the doctoral committee.

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A STUDY OF CONGRUENCY OF INDIVIDUAL NEEDS  
AND THE MOTIVATIONAL ASPECTS OF THE  
ORGANIZATIONAL CLIMATE

CHAPTER I

THE PROBLEM

Introduction

The way an individual behaves at the workplace depends upon the characteristics of the individual and the environment in which he operates. Motivation research up to the present strongly supports the importance of individual needs as one of the determinants of human behavior. People have a number of basic motives or needs that tend to channel their potential energy. Whether a motive is actualized or initiated into behavior and useful work depends on the particular situational dimensions in which the person finds himself.

Research on how to measure environment or situational variables affecting individual motivation has been very limited. The bulk of the literature concentrates either on the psychology of an individual within an organization

or, conversely, on organizational structure, paying little attention to individual motivation and motivated behavior.<sup>1</sup>

Literature in the decade of the sixties has pointed out the significance of assessing the organizational climate to determine the situational variables which would serve to arouse motivation but little has been done to attempt to actually measure these properties of the environment.

Douglas McGregor in his book The Human Side of Enterprise developed what he calls the "managerial climate" and states that the climate is more significant than the type of leadership or the personal "style" of the superior.<sup>2</sup>

The first explicit studies of psychological climate were initiated by Kurt Lewin in the 1930's. Concerning the relationship between human behavior and the environment he states:

Characteristics of the psychological field must take into account such specific items as particular goals, stimuli, needs, social relations as well as more general characteristics of the field such as friendly relations and amount of freedom. These characteristics of the field are as important in psychology as, for instance, the field of gravity is for explaining events in the area of physics. Psychological atmospheres are empirical realities and are scientifically desirable facts.<sup>3</sup>

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<sup>1</sup>George H. Litwin and Robert A. Stringer, Jr., Motivation and Organizational Climate (Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1968), p. 30.

<sup>2</sup>Ibid., p. 35.

<sup>3</sup>Kurt Lewin, Field Theory in Social Science (New York: Harper and Brothers, 1951), p. 241.

The idea of organizational climate stresses that the environment is interpreted by the members of the organization to have a certain quality to which they are sensitive, and which, in turn, affects their attitudes and motivation.<sup>1</sup>

This study shall attempt to study and examine the content area of individual needs and organizational climate in an effort to explain important aspects of behavior of individuals in organizations in terms of motivation and climate, utilizing some of the tentative suggestive evidence of George H. Litwin and Robert A. Stringer, Jr. in their recent book Motivation and Organizational Climate, 1968.

#### Statement of the Problem

The problem is: To what extent there is congruency between individual needs and the motivational aspects of the organizational climate? Many studies on worker motivation conclude that there are basic incongruencies between the needs of individuals and the organizational environment in which today's worker operates within the complex organizational structure. Effort was made in this study to analyze individual needs and the motivational aspects present in the organizational climate in order to tentatively determine the "motivational state" of the organization to affect behavior and performance. Chris Argyris puts forth three main mechanisms

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<sup>1</sup> Renato Tagiuri, "The Concept of Organizational Climate," Organizational Climate, ed. Renato Tagiuri and George H. Litwin (Boston: Harvard University, 1968), p. 241.



of organizations which tend to frustrate the mature employee and encourage the status quo of the immature worker. These include the formal organization structure, directive leadership, and managerial controls such as budgets, incentive systems, and time and motion studies. He cites that the restrictions of the organizational environment placed on the individual for the sake of order and efficiency are resulting in a demotivated worker.<sup>1</sup>

The purpose of this research was to examine and ascertain (1) the needs or motives of professional and managerial workers, and (2) the motivational climate in which they work in order to see the amount of congruency that exists between an individual's measured needs and his organizational climate. Effort was made to determine tentative climate conditions which might be compatible with or arouse individual motivation.

The conjecture that individuals with certain personality characteristics will prefer specific organizational characteristics in order to arouse motivation and thereby affect motivational behavior was investigated. The researcher was specifically interested in examining relationships of personality and preferred organizational climate using an objective measure of personality.

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<sup>1</sup>Saul W. Gellerman, Motivation and Productivity (American Management Association, Inc., Vail-Ballou Press, Inc., 1963), p. 76.

Theorists, empirical researchers, and contributors to the literature have stated that specific kinds and strengths of individual needs are more conducive to being aroused or positively motivated if certain expectancies and incentives are present in the environment. Frederick Herzberg's studies identify these motivating factors that lead to job satisfaction to be: achievement, recognition, work itself, responsibility, and advancement.<sup>1</sup>

McClelland in his research concerning the achievement motive found that people with high need for achievement tend to experience aroused motivation more when situational variables offer such opportunities as exercising responsibility, encouragement toward risk taking, and concrete feedback to know how one is doing.<sup>2</sup>

The attempt to study motivational climate as a factor of human behavior in organizations is a relatively new phenomenon. Previous climate studies have dealt primarily with such factors as structure, procedure and task defining. Most studies of needs have focused mainly on the individual. Investigations are needed to study the relationships between current existing needs of individuals and the incentives available to the worker in his organizational climate.

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<sup>1</sup>Frederick Herzberg, Work and the Nature of Man (Cleveland: The World Publishing Company, 1966), pp. 76-77.

<sup>2</sup>Gellerman, Motivation and Productivity, pp. 126-127.

Kerlinger points out that many investigations must often be undertaken before the desirable aim of hypothesis testing through research can be achieved.<sup>1</sup>

### Operational Definitions

Terminology used in this study was defined as follows:

Need: A need is a construct (a convenient fiction or hypothetical concept) for a force (the physico-chemical nature of which is unknown) in the brain region, a force which organizes perception, apperception, intellection, conation, and action in such a way as to transform in a certain direction an existing, unsatisfying situation.<sup>2</sup>

Organizational Climate: A set of measurable properties of the work environment, perceived directly or indirectly by the people who live and work in this environment and assumed to influence their motivation and behavior.<sup>3</sup>

Aroused Motivation: To strive for a particular kind of satisfaction or goal.<sup>4</sup>

Atkinson Model of Aroused Motivation: A joint multiplicative function of (a) the strength of the basic motive (M), (b) the expectancy of attaining the goal (E), and (c) the perceived incentive value of the particular goal (I).<sup>5</sup>

### Hypotheses

In order to facilitate interpretation and comprehension of the variables related to individual needs and the dimensions of organizational climate conjectured to arouse motivation the following hypotheses were formulated:

---

<sup>1</sup>Fred N. Kerlinger, Foundations of Behavioral Research (New York: Holt, Rinehart and Winston, Inc., 1964), p. 388.

<sup>2</sup>Henry A. Murray, Explorations in Personality (New York: Oxford University Press, 1938), p. 124.

<sup>3</sup>Litwin and Stringer, Motivation, p. 1.

<sup>4</sup>Ibid., pp. 11-12.      <sup>5</sup>Ibid.

1. There is a significant relationship between an individual's manifest needs and his preference for specific organizational climate dimensions.
2. Individuals with needs for Achievement will prefer an organizational climate compatible with these needs.
3. Individuals with needs for Affiliation will prefer an organizational climate compatible with these needs.
4. There are significant differences between an individual's perceived, actual organizational climate and his perceived, ideal organizational climate.
5. There is a difference between the need dispositions of those industrial employees who showed the least job dissatisfaction and those who showed the most job dissatisfaction in their organizational climate.
6. There is a difference between the need dispositions of those educational employees who showed the least job dissatisfaction and those who showed the most job dissatisfaction in their organizational climate.

#### Assumptions

1. The instruments used in this study are effectively measuring individual needs and the motivational aspects of the organizational climate.
2. Human resource development of managers and professional employees is of concern to the organization.

### Delimitations

The focus of this study was concerned with individual needs and motivational aspects of the organizational climate.

Further delimitations included:

1. The subjects participating in this study were identified by their employing organization as either managers or professional employees.
2. Managers and professional employees of a medium-sized industrial organization.
3. Managers and professional employees of a medium-sized collegiate educational institution.
4. The findings of this study are applicable only to the population investigated.

### Limitations

The Organizational Climate Questionnaire used in this study to measure dimensions of the organizational climate has had limited publication of its use. Although this measure was considered sufficiently useful to be applied to studies, the researcher recognizes this as a limitation.

### Nature and Sources of Data

This study encompassed the following two areas for the collection of data:

- Area I: The individual need characteristics of managers and professional employees as measured by Edwards Personal Preference Schedule.
- Area II: The perceptions of both the actual and ideal organizational climates of managers and professional employees as measured by the Organizational Climate Questionnaire.

Subjects for data were (1) managers and professional employees of a medium-sized industrial organization located in the Southwestern area of the United States, and (2) administrative and professional employees of a medium-sized collegiate educational institution located in the Southwestern area of the United States.

### Significance and Need for the Study

Employers need to know and be cognizant of the phenomenon of organizational climate. Management needs to understand the kinds of expectancies that employees have relevant to their work situation. Studies need to be conducted to explore predictive relationships between the needs employees bring to the work situation and the motivational aspects that are present in their organizational climate. Tentative findings support the theory that people prefer climates which seem most likely to satisfy their dominant needs. Some contemporary research purports tentative suggestive findings that individuals with needs for achievement will prefer a climate that has motivational elements such as responsibility, risk, and reward, while those individuals with need for affiliation will prefer warm, supportive, and complimentary climates. Optimal climate for the employee has significantly been recognized as a prerequisite for job satisfaction. Consequently, more study and investigation is needed in this area.

A growing social need exists in today's society to more closely parallel the needs of individuals and the organizational climate in which he works. Much has been written concerning making the job more meaningful to the worker and at the same time accomplish organizational goals.

Human resources potential is only modestly utilized in many organizations. Untapped human resources constitute great opportunities for individual and organizational growth. A mismatch of individual's needs and opportunities and expectations of the work environment represents a serious waste of human potential as well as the likelihood of leading to individual frustration.

An investigation of the congruency of individual needs and organizational climate such as this study attempts can perhaps lead to tentative hypotheses concerning the matching of individual needs that exist at a current time with the recommended incentives in an effort to develop an organizational climate that is conducive to arouse motivation.

### Organization of the Report

Chapter I includes statement of the problem, operational definitions, hypotheses, assumptions, delimitations, limitations, nature and sources of data, significance and need for the study, and organization. Chapter II provides both an extensive review of the literature and the theoretical

framework basic to this study. Chapter III explains methodology and procedure. Chapter IV contains the results. Chapter V consists of the summary, the conclusions and the implications.



## CHAPTER II

### THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

The purpose of this study is to investigate the interaction of (1) the needs or motives of professional and managerial employees, and (2) the motivational climate in which they work in order to see the amount of congruency that exists between the individual's measured needs and his organizational climate. In other words, do professional employees whose personality scores are high on some factors desire certain motivational characteristics to be present in their ideal work climate? The interaction between personality characteristics and situational characteristics will be examined in order to determine if tentative climate conditions might be prerequisites to arousing motivation of professional and managerial employees.

This chapter presents a review of research and literature relevant to the study. The first section deals with a theoretical framework basic to individual needs and environment. The second section reviews research and literature related to individual needs and personality

characteristics. The last section examines research and literature related to the organizational climate.

### Theoretical Framework

#### Individual Need Characteristics

Much of the contemporary efforts toward a systematic study of human motivation are built upon the premise of behavior being the interaction of individual characteristics and situational characteristics. This section summarizes the contributions of selected authorities in the area of needs and organizational climate.

H. A. Murray<sup>1</sup> and his co-workers at the Harvard Psychological Clinic during the 1930's conducted an in-depth study of personality with all researchers studying the same series of individuals in an attempt to formulate the personality of every subject. Murray defined a need as:

. . . a construct (a convenient fiction or hypothetical concept) which stands for a force (the physico-chemical nature of which is unknown) in the brain regions, a force which organizes perceptions, apperception, intellection, conation and actions in such a way as to transform in a certain direction an existing, unsatisfying situation.<sup>2</sup>

It was Murray's idea that a need can be aroused by internal processes but, however, more frequently by the

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<sup>1</sup>Murray, Explorations in Personality, p. vii.

<sup>2</sup>Ibid., p. 124.

occurrence of the immediate press (situation). The need manifests itself by leading the organism to search for or avoid encountering, and respond to certain kinds of situations. Each need has a certain feeling and tends to use certain means for accomplishment. The existing need gives rise to a particular overt behavior which tends to bring about an end situation which is satisfying to the organism.<sup>1</sup>

The manifestations of a need could be distinguished as:

1. A typical behavioural trend or effect (transformation of external-internal conditions).
2. A typical mode (actones or sub-effects).
3. The search for, avoidance or selection of, attention and response to one of a few types of press (cathected objects of a certain class).
4. The exhibition of a characteristic emotion or feeling.
5. The manifestation of satisfaction with the achievement of a certain effect (or with a gratuity), or the manifestation of dissatisfaction when there is failure to achieve a certain effect.<sup>2</sup>

The term "need" is used by Murray to refer to the measurable "force" in the personality which is guiding the action in the direction of a definable goal. For example, a man may be motivated by a need for dominance but his aim at a particular time may be to be elected to a public office.<sup>3</sup>

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid.

<sup>3</sup>Clyde Kluckhohn and Henry A. Murray, Personality in Nature, Society, and Culture (New York: Alfred A. Knopf, 1961), p. 15.

Abraham Maslow's theory of human motivation is one of the most quoted sources of needs and needs satisfaction. His system of grouping needs into a hierarchy of prepotency is foundational for studying motivation.

Maslow considered the following propositions as behavioral phenomena that would have to be included in any theory of human motivation.

1. The integrated wholeness of the organism must be one of the foundation stones of motivation theory.
2. The hunger drive (or any other physiological drive) was rejected as a centering point or model for a definitive theory of motivation.
3. Such a theory should stress and center itself upon ultimate or basic goals rather than partial or superficial ones, upon ends rather than means to these ends.
4. There are usually available various cultural paths to the same goal.
5. Any motivated behavior, either preparatory or consummatory, must be understood to be a channel through which many basic needs may be simultaneously expressed or satisfied.
6. Practically all organismic states are to be understood as motivated and as motivating.
7. Human needs arrange themselves in hierarchies of prepotency. That is to say, the appearance of one need usually rests on the prior satisfaction of another, more pre-potent need.
8. Any classification of motivations must deal with the problem of levels of specificity or generalization of the motives to be classified.
9. Classifications of motivations must be based upon goals rather than upon instigating drives or motivated behavior.
10. Motivation theory should be human-centered rather than animal-centered.
11. The situation or the field in which the organism reacts must be taken into account but the field alone can rarely serve as an exclusive explanation for behavior.
12. Not only the integration of the organism must be taken into account, but also the possibility of isolated, specific, partial or segmental reactions.

13. Motivation theory is not synonymous with behavior theory. The motivations are only one class of determinants of behavior. While behavior is almost always motivated, it is also almost always biologically, culturally and situationally determined as well.<sup>1</sup>

Goble<sup>2</sup> in his abstracting and reiterating of Maslow's writings points out that the human being is motivated by a number of basic needs which are species-wide, apparently unchanging, and genetic or instinctual in origin. Maslow attempted to devise a positive theory of motivation which would provide a theoretical base for behavior. This theory proposed that man continually experiences needs that tend to "goad" him toward an attempt to satisfy these needs. These needs are arranged in a hierarchy, with man progressing from the basic needs toward the higher social and psychological needs. A listing with a brief explanation of these needs include:

1. Physiological needs--These needs make up the body's attempt to maintain a constant, normal state of the blood stream which is called homeostasis. Some of the needs included in this process include air, water, and food. Other physiological needs include body elimination, sleep, and sex.
2. Safety needs--The safety needs tend to emerge after the physiological needs have been to some extent satisfied. This set of needs is shown through the desire for security, order, fairness, and a certain amount of routine. Maslow explains that the safety needs can best be understood by observing infants

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<sup>1</sup>A. H. Maslow, "A Theory of Human Motivation," Psychological Review, L (1943), 370-371.

<sup>2</sup>Frank Goble, The Third Force (New York: Grossman Publishers, 1970), p. 37.

and children. An infant's desire for a routine and orderly world is an example. Harsh parental outbursts, quarreling, and rages sometimes elicit extreme terror in the child. The safety needs for the normal adults are generally satisfied today.

3. Love needs--Ascending up the hierarchial ladder based on prior satisfaction of the first two needs, the love needs become predominant. This need is one for love, affection, and friendly relations with people. "In our society the thwarting of these needs is the most commonly found core in cases of maladjustment and more severe psychopathology."<sup>1</sup>
4. Esteem needs--These needs are based on a normal desire of people to have a high evaluation of themselves. Self-esteem and the esteem of others is most important to the normal individual. The satisfaction of this need brings about self-confidence and feelings of adequacy and strength.
5. Self-actualization needs--Maslow proposed that even when the prior needs are relatively satisfied a new restlessness and discontent will emerge unless a person is doing what he is fitted to do. Ultimately, a man must become what he has the potential to become.<sup>2</sup>

Needs appear to be both conscious and unconscious.

A preponderance of investigation purports evidence of the importance of an individual's unconscious needs. On a priori grounds it appears that unconscious needs are more important than conscious needs.<sup>3</sup>

Another important point is that not all behavior is determined by the basic needs. There are many determinants of behavior other than motives or needs. Behavior may be determined completely by the external stimuli. It is imperative that we differentiate between expressive behavior and coping (purposive goal seeking) behavior. An expressive

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<sup>1</sup>Maslow, "A Theory of Human Motivation," 381.

<sup>2</sup>Ibid., pp. 372-383.

<sup>3</sup>Ibid., p. 389.

behavior is not aimed at any goal but is simply a reflection of the personality. Average behavior is usually both expressive and goal-directed.<sup>1</sup>

Fundamental to an understanding of Maslow's theory of human motivation is his differentiation between those needs called "higher" and those called "lower." The significance of this concept is basic to his premise that the basic needs arrange themselves in a fairly definite hierarchy on the basis of the principle of relative prepotency. The physiological needs are stronger than the safety needs, which are stronger than the love needs, which are stronger than the self-esteem needs, which in turn are stronger than the need for self-actualization. Thus, the safety need is stronger than the love need because it dominates the behavior of the organism in observable ways when both needs are frustrated. This is an order of choice or preference that ranges from lower to higher.

Higher needs are ontogenetic developments, that is the physical needs are observable at birth, safety soon after birth, while signs of interpersonal ties and affection are probably observed after months of life. Later we may see urges toward independence, achievement, and respect supersede safety and parental love. The satisfaction of higher needs produce more desirable subjective results such

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<sup>1</sup>Ibid., pp. 390-391.

as happiness and richness of inner life.<sup>1</sup> Even though Maslow proports that lower and higher needs have different properties he does not designate which needs are higher and which are lower. From examples used it appears logical to assume that the physiological and safety needs may be equated with lower needs while love, self-esteem and self-actualization may be considered higher needs.

The focal point of motivation theory is the concept of goals. This is the basic centering point in any motivation theory.<sup>2</sup>

Maslow writing ten years later on the subject of needs reaffirms his prior thinking that any sound basis for studying motivation must begin with the fundamental needs of man. Freedom must take into account the situation but cautions against allowing motivation theory to become pure situation theory.<sup>3</sup>

Contemporary developments in the area of needs are due in a large part to the accomplishments of the psychologists David C. McClelland of Harvard and John W. Atkinson at the University of Michigan. As is the case in any behavioral model, effort was made by McClelland and Atkinson

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<sup>1</sup>A. H. Maslow, Motivation and Personality (New York: Harper & Row, Publishers, 1954), pp. 146-148.

<sup>2</sup>Maslow, "A Theory of Human Motivation," p. 392.

<sup>3</sup>Maslow, Motivation and Personality, p. 75.



to describe the things people become motivated to do, as well as help to explain individual differences in the strengths of their motives.<sup>1</sup>

Litwin and Stringer provide a unique combination of the McClelland-Atkinson formulation of a theory of motivation. This formulation is built upon the Atkinson Model which he published in his Introduction to Motivation, 1964. The basic principles of this formulation include:

1. Adults have a considerable amount of potential energy.
2. Adults possess basic needs which act as outlets that regulate the flow of this potential energy.
3. Adults will differ greatly in the relative strength of various needs.
4. The degree to which a need is actualized or whether energy flows outward as behavior depends on the specific situation or environment of that individual.
5. Various situational characteristics arouse or release different needs and therefore open energy outlets. Therefore it can be assumed that needs are responsive to different situational characteristics.
6. Different needs or motives existing in an individual leads to a different pattern of behavior.
7. The changing of the nature of the situational characteristics causes different needs to be aroused or actualized which results in different patterns of behavior.

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<sup>1</sup>Litwin and Stringer, Motivation, p. 9.

The Atkinson Model purports that aroused motivation is a joint multiplicative function of (a) the strength of the basic motive or need, M; (b) the expectancy of attaining the goal, E; and (c) the perceived incentive value of the particular goal, I.<sup>1</sup> One can readily see that this model proposes behavior as a definite interaction between the needs that individuals experience and their perceptions of attaining goals which they value from their environment. This model can be stated as:

$$\text{Aroused Motivation} = M \times E \times I^2$$

It is generally agreed by authorities that motives are dispositions to seek goals which are both conscious and unconscious. These need dispositions are believed to be acquired during childhood and are presumed to remain relatively stable throughout lifetime.

Atkinson concludes that some of the unanswered questions relative to this theory are concerned with the antecedents of the expectancy that a particular act will lead to the goal. Also, why does the particular goal have a certain incentive value and not another? Clarification of the constructs by empirical definitions of antecedents is seen as the central problem of those who propose the Expectancy x Value theory of motivation.<sup>3</sup>

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<sup>1</sup>Ibid., pp. 10-12.

<sup>2</sup>Ibid.

<sup>3</sup>J. W. Atkinson, An Introduction to Motivation (New York: D. Van Nostrand Company, Inc., 1964), p. 276.

This McClelland-Atkinson model is being utilized in this study as a theoretical base from which to test the hypotheses stated in Chapter I. This schema presents the basic constructs which still leave many answers to be gleaned from this complex arena of human needs satisfaction in an organizational setting.

Further study investigating the impact of the needs of workers in an industrial setting has been done by Chris Argyris. Argyris' general concept is that the needs of healthy, mature adults are being frustrated by management's attempt to devise an orderly, efficient means of production. Ultimately management is "slipping a noose around its own neck" by propogating an environment which merely leads to frustration of the workers.<sup>1</sup> Surely it is failing to develop the human resources potential of its people.

Argyris puts forth the concept that all human behavior in an organization is caused by any one or a combination of: (1) Individual factors--thus a need for understanding individual personality characteristics; (2) Small informal group factors--components would include group dynamics and interpersonal relationships; and (3) Formal organizational factors--includes specific structural properties such as authority and responsibility, task-specialization, production processes, etc. Thus, trying to understand and

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<sup>1</sup>Gellerman, Motivation and Productivity, p. 73.  
"See also Chris Argyris, Personality and Organization  
(New York: Harper & Brothers, 1957)."

ultimately predict human behavior requires examining the interaction of all of the above three factors combined.<sup>1</sup>

The nature of the components of one's personality include both internal and external factors. Internal personality balance requires that the parts of one's personality be in equilibrium or balance with each other. Persons are said to be "adjusted" when the internal personality is balanced. External balance exists when the internal personality is in balance with the external environment. An individual whose personality is externally balanced is considered as "adapted." It is possible to be adjusted but not adapted and vice versa.<sup>2</sup>

Needs of individuals make up the very core of one's personality. "One of the most important inner needs is the need to maintain adjustment of the self in relation to the world in which it exists."<sup>3</sup>

Products of the existence of needs in individuals are abilities and interests. Abilities are the tools by which individuals fulfill their needs while interests are the result of a fusion of a multiplicity of needs. It is believed that needs develop early in life and through a

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<sup>1</sup>Chris Argyris, Personality and Organization (New York: Harper & Brothers, 1957), pp. 7-8.

<sup>2</sup>Ibid., p. 22.

<sup>3</sup>Ibid., p. 32.

process of learning an individual attempts to develop abilities required to satisfy these needs. Therefore it is an a priori assumption that interests appear to be indicators of the kinds of needs one is experiencing.<sup>1</sup>

In summary Argyris contends that as individuals try to reach expression of their needs in an environment where their work situations require them to be dominated, submissive, and utilize little of their own abilities, there will develop a frustrated, defensive, and apathetic worker. Argyris succinctly relates this phenomenon and its resultant behavior in the organization in these words:

An analysis of the basic properties of relatively mature human beings and formal organization leads to the conclusion that there is an inherent incongruency between the self-actualization of the two. This basic incongruency creates a situation of conflict, frustration, and failure for the participants. The conflict, frustration, and failure is hypothesized to increase as the individual increases in degree of maturity and/or as he becomes increasingly specialized. The individual may adapt to the conflict, frustration, and failure by leaving, climbing the organizational ladder, becoming apathetic, disinterested, and non-involved, by creating informal groups which develop into formal trade unions, by accepting dissatisfaction as inevitable, and consequently increasing his desire for human rewards, and finally by acculturating his children with these adaptive informal activities.<sup>2</sup>

Approximately seven years after publishing his theory of a basic incongruency existing between the needs

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<sup>1</sup>Ibid., pp. 32-33.

<sup>2</sup>Ibid., pp. 175-176.

of the healthy, mature adult and the demands of the organization, Argyris attempted to put forth some principles relative to how organizations might be redesigned to better utilize the potential of its human resources. Here he describes the individual as possessing psychological energy and how it can be used for both individual and organization effectiveness.<sup>1</sup>

A redesign of organizations of the future would include an increasing effort to develop an internal system capable of adjusting to an ever-changing external environment. Effort will be made to minimize dependence through a stronger internal commitment. This will give increased opportunity for psychological success and, an increased self-image. Job enlargement to better utilize one's capabilities will be accomplished through giving each worker a larger segment of the task. Small committees may be formed to continually assess the organization's strengths and weaknesses. With increased technology and production per man hour, more time can be utilized with such activities as organizational diagnosis and prognosis. Control may be viewed more as feedback to workers to enable them to acquire the information necessary to do their job. Structures as well as rewards, penalties, and incentive systems will be

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<sup>1</sup>Chris Argyris, Integrating the Individual and the Organization (New York: John Wiley and Sons, Inc., 1964), p. ix.

enlarged in a positive direction as to provide more psychological success to the worker.<sup>1</sup>

### Organizational Climate Characteristics

There is little doubt that the phenomenon climate, or the external and internal environment in which an individual works, has much to do with his behavior or performance. Several attempts have been made in the last decade to define climate and specifically, organization climate, as well as to formulate a systematic conception of climate. Much inquiry and experimentation has been conducted to examine the environment and its effect on individual behavior. Prior to this the bulk of the literature and research focused on the psychology of the individual and the structure of the organization. Limited effort had been expended to analyze the importance of expectancy and incentive value of particular goals to individuals.

Kurt Lewin in his discussion of determinants of "effective force" states that the momentary strength of the person's "need" or "intention" ( $t_g$ ), the strength of his "expectancy" ( $P_o$ ), the psychological distance from the goal ( $e_{p,g}$ ), and the perceived character of the goal itself ( $G$ ) all must be represented as determinants of the effective force on the person towards the goal.<sup>2</sup> Lewin also pointed

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<sup>1</sup>Ibid., pp. 274-275.

<sup>2</sup>Atkinson, An Introduction to Motivation, p. 104.

out in 1939 the dynamic relation of two different types of phenomena--that which involves a personal and an external unit related by a need.<sup>1</sup>

The sociologist George Homans contributed in 1950 his model of social systems. He described any social system as having an environment made up of three parts: (1) a physical environment (components such as land, geographical climate, etc.), (2) a cultural environment (values and goals of the society in which it is functioning), and (3) a technological environment (the technology, knowledge, and means available for accomplishing the task). This combined environment poses certain activities and interactions upon the individual in this environment. The activities, interactions and feeling of the people in the environment make up the "external system." Just as there is an external system operating in organizations there also exists an "internal system." By this is meant the way in which workers develop their own means by which they cope with the external system. These two systems interact and the changing of one ultimately results in a change in the other. The sentiments, goals, and interactions will eventually alter the external system.<sup>2</sup>

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<sup>1</sup>Sylvia Hazelton MacColl, Contributions to Psychological Theory (Durham, N. C.: Duke University Press, 1939), p. 11.

<sup>2</sup>Edgar H. Schein, Organizational Psychology (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1965), pp. 91-92.



Talcott Parsons<sup>1</sup> in his discussion of "General Theory of Action Systems" states that action is a process in the actor-situation system which has motivational significance to the individual actor. In other words, action has a bearing on the attainment of gratifications or the avoidance of deprivations by the actor, in the light of the relevant personality structures. The assumption is made that the ultimate source of energy used in action is derived from the organism; however, though rooted there, motivation cannot be analyzed in terms of the organism. Action elements are predominantly a function of the relation of the actor to his situation and the history of that relation through what we call "experience."

Motivation theorists are generally in agreement that the factors involved in studying motivation include the characteristics of the individual in relation to his environment. Man is by nature motivated, therefore the task is to attempt to direct his energy output toward desirable organizational goals. The inherent task at hand appears to be the task of identifying the specific situational characteristics necessary to arouse the motivation of an individual who possesses specific personality characteristics.

Creating the relationships whereby the individual's energy is released in certain directions rather than others

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<sup>1</sup>Talcott Parsons, The Social System (New York: The Free Press, 1951), p. 5.

is the organization's goal. Douglas McGregor puts this concept into this contemporary formula: (Performance  $P = f$  individual . . . environment). These relationships are indeed complex as they involve the goals, aspirations, values, attitudes, and perceptions of the individual in conjunction with the perceived rewards and their incentive value to the individual.<sup>1</sup>

### Individual Needs Research and Literature

Many theorists today posit that the differences in individual behavior depend upon two things: (1) the strength of the various needs or motives possessed, and (2) the environmental characteristics in which to actualize these needs. Much research has been done relative to studying the individual personality but relatively little has been done in terms of its transactional relationship to the environment.

Litwin and Stringer<sup>2</sup> examined the relationship between needs and organizational climate in an effort to further study individual motivation. Literature in the area of organizational climate since Kurt Lewin has appeared to show several dimensions of climate that tend to affect motivated behavior. Assuming that the organizational climate had measurable properties which seemed to influence motivated

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<sup>1</sup>Douglas McGregor, The Professional Manager, ed. by Caroline McGregor and Warren G. Bennis (New York: McGraw-Hill Book Company, 1967), pp. 5-6.

<sup>2</sup>Litwin and Stringer, Motivation, p. 45.

behavior at the workplace, these researchers, based on findings of literature and research on motivation, developed an instrument designed to measure the "motivational aspects" of the work environment. Their research represents an effort to apply both motivation theory and organization theory to the task of measuring organizational climate.

The general hypothesis of these researchers concerned the phenomena of the effects or influence of certain climate properties on the ability to arouse individual motivation. In other words, do persons with differing personality characteristics require or prefer certain climate dimensions in order to activate their energies toward certain goals. Their findings indicate that these preferences do occur; "people are attracted to climates that arouse their dominant needs."<sup>1</sup>

In order to identify the ideal climate desired to arouse individual motivation which is compatible with each subject's personality, a group of students were individually tested for personality characteristics using the Thematic Apperception Test. They were then asked to complete the Organizational Climate Questionnaire as they perceived their ideal work climate to be. The results of this research confirmed the original hypothesis that certain climate properties influence the level of aroused motivation.<sup>2</sup>

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<sup>1</sup>Ibid., p. 74.

<sup>2</sup>Ibid., p. 73.

The researchers hypothesized one of three effects to occur when particular personality characteristics were correlated with each of the nine motivational aspects which the Organizational Climate Questionnaire is designed to measure. The three influences were to indicate either an arousal, reduction, or no effect on aroused motivation. The results of the study are included in the following table:

TABLE 1<sup>1</sup>  
CORRELATIONS OF MOTIVATION AND  
PREFERRED OR IDEAL CLIMATE  
(N = 52)

Ideal Climate Scale	n Achievement		n Power		n Affiliation	
	Hypothesis	Correlation	Hypothesis	Correlation	Hypothesis	Correlation
Structure Responsi- bility Risk Reward Warmth and Support Conflict Expect Approval	reduction	.28**	arousal	.31**	reduction	-.25*
	arousal	.15	arousal	.27**	no effect	-.04
	arousal	.18	no effect	-.22	no effect	-.11
	arousal	.23*	no effect	.07	arousal	.24*
	no effect	-.16	no effect	.10	arousal	.19
	arousal	.12	arousal	.32**	reduction	-.09
	-----	.33**	-----	.37**	-----	.24*

\* p < .10 (two-tailed test)

\*\* p < .05 (two-tailed test)

The majority of the hypotheses were supported. An unexpected finding was that people with needs for achievement

<sup>1</sup>Ibid., p. 72.

would prefer Structure in their environment. It was hypothesized that it would be negatively correlated. This finding may be explainable in that those who have high needs for achievement also showed significant correlations with a desire for the Reward and Expect Approval dimensions. Therefore one might appear to want structure in an effort to get feedback to facilitate the Reward dimension. Those expressing the need for power correlated with the preference for individual Responsibility, the ability to tolerate Conflict, Structure and Expect Approval. Individuals possessing needs for affiliation tended to prefer Warm, Supportive climates.<sup>1</sup>

Their proposition that people with certain personality characteristics desire certain environmental characteristics present in order to arouse motivation seems to be supported in their research. These principles are certainly supportive of the Atkinson-McClelland Model that aroused motivation is a function of motives x expectancies, and x incentives.

Litwin and Stringer further tested their hypotheses by various experimental and field studies. One experimental study involved the creation of three simulated business organizations in an effort to evaluate the effects of three distinctively different leadership styles on aroused motivation of the workers. In general these hypotheses were confirmed, that is, different organizational climates can be a result of differing leadership styles. The performance records of the

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<sup>1</sup>Ibid., pp. 74-75.

three businesses were in line with what was expected from the different climates.<sup>1</sup>

Field studies were conducted to further test this aroused motivation principle. One study of an office climate found a distinct "mismatch" between the needs of the workers and the opportunities for satisfying those needs. The overall needs disposition of the girls in this office tended to be toward achievement and affiliation and less need for power. The results of measuring the climate using the Organizational Climate Questionnaire, however, revealed their work climate to possess high demands for Structure and Standards (dimensions which appear to be more compatible with needs for power) and relatively low on Risk, Responsibility and Rewards (those areas which appear to be desirable for needs for achievement) and low in Support, Warmth, and Identity (suggested dimensions for need for affiliation). Thus, the needs disposition of the workers was for an achieving, supportive climate, yet the organizational climate was more compatible with arousing motivation in individuals with needs for power. Thus, the climate appeared to be "unmotivating," to the workers in that office. There appeared to be little congruency between their dominant needs for achievement and affiliation and the primarily power-oriented climate in which they worked. Satisfaction in this climate appeared to be low, reports of bad attitudes of the workers and problems of absenteeism and turnover prevailed.<sup>2</sup>

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<sup>1</sup>Ibid., pp. 116-117.

<sup>2</sup>Ibid., pp. 148-151.

Litwin and Stringer concluded their research by suggesting four variables which appear to be foundational elements for managing motivation. These include:

1. The motives and needs the individuals bring to the situation;
2. The organizational tasks that must be performed;
3. The climate that characterizes the work situation; and
4. The personal strengths and limitations of the operating manager.<sup>1</sup>

One can readily see the implications of this theory of matching dominant needs of individuals with compatible motivational aspects in their climate. By learning to identify and define specific expectancies and incentives of the climate necessary to arouse motivation, administrators could perhaps be more effective in strengthening desired behavior patterns of workers.

The major focus of a study of needs and environmental congruency by Schwartz was aimed at prediction of academic performance and adjustment on the basis of the degree of congruence between individual needs and the ability to resolve these needs by behavior which was capable of being expressed through the environmental press. Schwartz used companionable instruments to measure the needs-environment parameters in a college environment. It was expected that low congruence between Need and Press would be indicative of the individual's inability to fulfill his needs and the results would be frustration, apathy, short-time perspective, etc. The use of

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<sup>1</sup>Ibid., p. 168.

the Need-Press Congruence procedure of this study failed to improve the predictions of grade-point average beyond the traditional ones being used. The only variable which proved to be related was a negative correlation between grade-point average and the Emotional Expression Need. Even though the congruence scores were not able to improve prediction of grade-point average, sufficient utility was supported for the use of this Need-Congruency Model.<sup>1</sup>

#### Effects of Personality Traits on Performance Effectiveness

The effects of personality traits on work satisfaction and job performance was investigated by Slocum, Miller and Misshauk. Their study disserted the query of whether first-line supervisors who differ in performance and job satisfaction also differ in personality traits they possess. It was anticipated that high and low producing foremen would possess varying personality characteristics. Using the Edwards Personality Preference Schedule the data failed to predict performance by personality traits alone. Using multiple correlation analysis and the EPPS scores as predictors of satisfaction, the data indicated the personality traits of Aggression, Succorance, and Change were able to predict 35 percent of the satisfaction of the high group while the combined measures of the traits of Heterosexuality, Endurance, Dominance,

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<sup>1</sup>Ronald M. Schwartz, "Congruence Between the Needs of Individuals and Environmental Press as Related to Performance and Adjustment in a Large Organization." (unpublished Ph.D. dissertation, Dept. of Psychology, New York University, 1964).



Change, and Abasement were able to predict 52 percent of the satisfaction for the low group. The need for achievement correlation although not reaching significant correlations was in the predicted direction. In four out of five areas testing work environment factors high-producing foremen perceived greater job satisfaction than low producers. These results indicate that there tends to be a meaningful relationship between these environmental characteristics of (1) job satisfaction, (2) pay satisfaction, (3) freedom satisfaction, and (4) total satisfaction and performance. This research, while being unable to predict performance from personality traits does suggest that when considering both job performance and satisfaction together personality traits are able to explain more variance than when only considered as they affect job performance.<sup>1</sup> These results suggest that we must take into account characteristics of the environment in an effort to predict performance.

Mary Jane Nelson's study which examined leadership effectiveness factors of supervisors found a significant relationship between the more effective supervisor's personality and his behavior as perceived by his subordinates. The Cattell Sixteen Personality Factor Questionnaire did

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<sup>1</sup>John W. Slocum, Jr., James D. Miller, and Michael J. Misshauk, "Needs, Environmental Work Satisfaction and Job Performance," Training and Development Journal (February, 1970), 12-15.

not appear to be a satisfactory predictor of supervisory effectiveness.<sup>1</sup> The personality inventory, however, did show that the mean value trait scores of the more effective supervisors tended to be more: outgoing and intelligent, higher on ego strength, forthright, conservative, self-controlled, and more relaxed.<sup>2</sup>

Kuhlen hypothesized that one's level of satisfaction or dissatisfaction with an area in life is a function of the degree to which dominant needs are fulfilled in that area. To measure this hypothesis Kuhlen administered the Edwards Personal Preference Schedule and two satisfaction questionnaires to 203 men and women teachers. His findings were supported for those people and the occupations that attract the kind of people who view occupation as a means for gratifying needs. That is, satisfaction will be a relation of need fulfillment of the occupation. The finding was only significant for men teachers and not for women. This seems explainable in that occupation does not appear to be a dominant means for fulfilling needs for women.<sup>3</sup>

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<sup>1</sup>Mary Jane Nelson, "An Analysis of Factors Contributing to the Intragroup Communication Effectiveness of Small Work Group Supervisors in Selected Oklahoma Business, Manufacturing, and Government Service Situations," (unpublished Ph.D. dissertation, University of Oklahoma, 1972), p. 117.

<sup>2</sup>Ibid., p. 120.

<sup>3</sup>Raymond G. Kuhlen, "Needs, Perceived Need Satisfaction Opportunities, and Satisfaction with Occupation," Journal of Applied Psychology, XLVII, No. 1 (1963), 56-64.

In conjunction with other predictors, Bromer, Johnson, and Sevransky found the personality traits, as measured by the Edwards Personal Preference Schedule, of Succorance, Nurturance and Endurance to be significant in selecting first-line foremen.<sup>1</sup>

Slocum and Hand in a similar study found the personality traits of Deference, Nurturance, Affiliation and Intraception, as measured by EPPS, to be important factors in predicting foremen's performance but did not find significant personality trait correlations to managerial satisfaction.<sup>2</sup>

Marsteller and Slocum<sup>3</sup> were unable to find significant relationships between psychological need satisfaction and personality and biographical data using the Bernreuter Personality Inventory.

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<sup>1</sup>John Bromer, J. Myron Johnson, and Paul Sevransky, "Validity Information Exchange," Personnel Psychology, XV (1962), 107-109.

<sup>2</sup>J. Slocum and H. Hand, "Prediction of Job Success and Employee Satisfaction for Foremen and Executives from Edwards Preference Scores," cited by Richard Marsteller and John W. Slocum, Jr., "Prediction of Psychological Need Satisfaction," Training and Development Journal, (February, 1972), 54.

<sup>3</sup>Richard A. Marsteller and John W. Slocum, Jr., "Prediction of Psychological Need Satisfaction," Training and Development Journal, (February, 1972), 50-59.

Many human behaviorists currently agree that the degree of success that managers achieve in their organizations is congruent with the amount of need satisfaction that they receive from the job. Based on this premise, questions need to be answered as to what are the best means for bringing about this need satisfaction.

In 1961 Lyman Porter conducted research to examine perceived need satisfactions in bottom and middle management jobs. The major finding of this study was that the vertical location of management positions appear to be an important variable in determining the extent to which psychological needs are fulfilled. Higher order psychological needs were relatively the least-satisfied needs in both bottom and middle management. He found security, esteem and autonomy needs more satisfied in middle than bottom levels of management.<sup>1</sup>

In 1962 he conducted a similar study but expanded his sample to include the top levels of management and increased the sample size from 139 to 2000 subjects. His findings again showed that need fulfillment deficiencies decreased from the lower levels of management upward to the very top levels of management. Relative to the kinds of needs, he found that self-actualization and autonomy produced the largest need

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<sup>1</sup>Lyman W. Porter, "A Study of Perceived Need Satisfactions in Bottom and Middle Management Jobs," Journal of Applied Psychology, XLV, No. 1 (February, 1961), 1-11.

deficiencies. In addition, in this study he found security to be about as well satisfied at the bottom as at top levels of management. This study showed the self-actualization need to be more satisfied at top levels of management, however, the deficiency was still large at this level in an absolute size. This research points out that there tend to be large numbers of managers with needs for self-actualization. This is true also for the esteem and autonomy need areas although to a somewhat lesser degree.<sup>1</sup>

A study which extended the areas Porter had studied to include self-perceived personality traits in relation to job attitudes in middle management was conducted by Eran. He found that those managers who described themselves most like top managers showed to be significantly more satisfied and placed substantial emphasis on inner-directed behavior in their jobs. He concluded by stating that neither of the two variables of the job situation or perceived personality traits can explain by itself the variations and satisfaction of psychological needs. The interaction of both are important to explaining behavior.<sup>2</sup>

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<sup>1</sup>Lyman W. Porter, "Job Attitudes in Management: I. Perceived Deficiencies in Need Fulfillment as a Function of Job Level," Journal of Applied Psychology, XLVI, No. 6 (December, 1962), 375-385.

<sup>2</sup>Mordechai Eran, "Relationship Between Self-Perceived Personality Traits and Job Attitudes in Middle Management," Journal of Applied Psychology, L, No. 5 (1966), 424-430.

The factor of ability level was found by Carlson to act as a moderator between job satisfaction and job performance. That is, to the extent that a worker's abilities match those required of his job, there will be a positive correlation between job satisfaction and job performance.<sup>1</sup>

Self-image was found by Korman to be relevant to performance of a task. An individual will tend to be motivated to perform a task in a manner which is consistent with his self-image as he approaches the task. The individual's social evaluation of his task competency tends to become internalized and affect his task performance. Korman found that using task goals as a way of increasing performance to be quite effective if the individual is interested in achieving task success.<sup>2</sup>

Parallel to this phenomenon of goal setting, Spitzer found significant correlation between the level of performance perceived instrumental to goal attainment and actual performance. His study confirmed the belief that the behavior of an individual in the industrial setting is a direct function to his expectancy of achieving a goal that he values.<sup>3</sup>

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<sup>1</sup>Robert E. Carlson, "Degree of Job Fit as a Moderator of the Relationship Between Job Performance and Job Satisfaction," Personnel Psychology, XXII (1969), 159-170.

<sup>2</sup>Abraham K. Korman, "Toward an Hypothesis of Work Behavior," Journal of Applied Psychology, LIV, No. 1 (1970), 31-41.

<sup>3</sup>Morton Edward Spitzer, "Goal-Attainment, Job Satisfaction and Behavior," (unpublished Ph.D. dissertation, New York University, 1964), cited in Dissertation Abstracts, p. 2037.

### Effects of Organizational Variables on Perceived Need Satisfaction

The effects of flat and tall organizational structures on needs disposition satisfaction was disserted by Ghiselli and Johnson. They attempted to research this phenomenon by utilizing a modified version of Porter's questionnaire which he developed using Maslow's need-hierarchy continuum which included the needs of: security, social, esteem, autonomy, and self-actualization. The results indicated that for managers in tall organizations there was little relationship between need satisfaction and success; however, quite the opposite results were obtained in flat organizations. The relationship between need satisfaction and success was minimal for the lower order needs but with higher and higher order needs it continually increases and rises to a coefficient of correlation of .35.<sup>1</sup> In summary it appears that there are little differences in manager's success and satisfaction of lower order needs but it is observable that in flat organizations more satisfaction and success is achieved with higher and higher order needs. These results seem to parallel many other studies which point job satisfaction contingent upon factors which include self-control over one's job, more responsibility, increased direct feedback, etc. The broader span of control existing in the flat organization is, of course, more conducive to these factors.

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<sup>1</sup>Edwin E. Ghiselli and Douglas A. Johnson, "Need Satisfaction, Managerial Success, and Organizational Structure," Personnel Psychology, XXIII (1970), 569-576.

The query of managers' need satisfactions as a function of the interaction among job level on one hand and company size, organizational structure, and line and staff type of job on the other hand were the variables used when El Salmi and Cummings attempted to examine the interaction of these variables as they relate to need satisfaction. With perceived need fulfillment as the dependent variable these researchers examined 425 managers on these four variables. Relative to company size at top levels of management, small companies produced significantly more need satisfaction than larger-sized companies. However, in the middle and lower levels, larger-sized companies produced more need fulfillment. El Salmi and Cummings suggested that it may be possible to explain this by taking into consideration total size and subunit size. They propose that the larger the size of the subunit, the more need fulfillment within all total size categories. When considering the interaction of levels and structure at top levels of management, tall structures produced significantly more need satisfaction than both flat and intermediate structures. Yet at lower levels of management, tall structures produce significantly less satisfaction than the other two. When considering job level and type of job, their research did not show line managers' jobs to produce more need fulfillment than staff jobs across all levels of management. At the middle levels, staff jobs appeared to be more fulfilling while at lower levels, line



managers' jobs were more fulfilling. In summary, it becomes apparent from this research that the effect of one organizational variable must be considered as it interacts with a complex of other organizational variables. We no longer can predict that one organizational variable will have a consistent unidirectional effect across a wide variety of organizational types and conditions. Thus, it appears then that if meaningful incentives are to be present in the organizational climate, they must meet unsatisfied needs of workers, but this may have to be determined more on an individual basis due to such diverse findings on need fulfillment when considering this interaction of variables.<sup>1</sup>

In an effort to examine the relationship of need satisfaction to job performance in managerial levels, Slocum found evidence to support the Lawler and Porter Model devised in 1967 which posits that an individual's degree of higher order need satisfaction is related to his performance. First-line supervisors and middle-top level managers' performance was correlated with the higher order need satisfactions of autonomy and self-actualization. Slocum's research agrees with Porter's in that satisfaction of higher order needs increases with increases upward in the hierarchy. Satisfaction of lower order needs did not correlate with performance

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<sup>1</sup>A. M. El Salmi and L. L. Cummings, "Managers Perceptions of Need and Need Satisfactions as a Function of Interactions Among Organizational Variables," Personnel Psychology, XXI (1968), 465-477.

for first-line supervisors.<sup>1</sup>

In a cross-section study of workers throughout the entire population and across all occupations the value of intrinsic and extrinsic job factors was studied. The results confirmed that at higher occupational levels intrinsic job components were valued more, while at lower levels extrinsic job components were more valued. Women tended to place more value on the social need, that is "good co-workers" while men placed higher value on the opportunity to use their abilities and skills.<sup>2</sup>

#### Organizational Climate Research and Literature

Researchers and practitioners have been concerned for a long time about the possibility of identifying environmental work factors that could lead to a high level of job satisfaction and performance. The relationship between job satisfaction and performance is one in which much controversy has existed.

The postulate that behavior is a function of the interaction of the individual organism and environment is one that is widely accepted. The current task is to continue to examine these interactions in an effort to build more

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<sup>1</sup>John W. Slocum, Jr., "Motivation in Managerial Levels: Relationship of Need Satisfaction to Job Performance," Journal of Applied Psychology, LV (1971), 312-316.

<sup>2</sup>Richard Centers and Daphne E. Bugental, "Intrinsic and Extrinsic Job Motivations Among Different Segments of the Working Population," Journal of Applied Psychology, L, No. 3 (June, 1966), 193-197.

effective behavioral models and to empirically test these models in order to examine the effects on behavior utilizing these relevant variables.

The purpose of this part of Chapter II is to review research and literature relevant to organizational climate. The researcher was fortunate in that the literature provided two excellent reviews of studies done in this area. Forehand and Gilmer provide a technical review and literature survey, plus a bibliography of over 100 studies involving organizational climate published up to 1964.<sup>1</sup> A more current synthesis of theories, concepts and empirical studies in the area of organizational climate was provided through the published results of a conference held at the Harvard University Graduate School of Business Administration in January, 1967. The purpose of this "Research Conference on Organizational Climate"<sup>2</sup> was to review, discuss and report the broad range of thinking of the current researchers about this concept of climate and evaluate the most appropriate research methodology.<sup>3</sup>

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<sup>1</sup>Garlie A. Forehand and B. Von Haller Gilmer, "Environmental Variation in Studies of Organizational Behavior," Psychological Bulletin, LXII, No. 6 (December, 1964), 361-382.

<sup>2</sup>Renato Tagiuri and George H. Litwin (eds.), Organizational Climate: Explorations of a Concept (Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1968), p. 1.

<sup>3</sup>Ibid.

The definition of organizational climate used in this study and cited in Chapter I is:

Organizational Climate: A set of measurable properties of the work environment, perceived directly or indirectly by the people who live and work in this environment and assumed to influence their motivation and behavior.<sup>1</sup>

It is within the context of this definition that the following research is reported.

Some of the methods used to examine the variation found in climate include field studies, participant's perceptions of their environment, actual observation by the researcher, and through experimental control of different organizational variables.<sup>2</sup> In an effort to examine the area in depth and formulate tenable hypotheses, it appears feasible to classify ways in which organizational climate may affect behavior. Suggested ways include: (1) definition of stimuli which confronts the individual, (2) placement of constraints upon the individual's freedom of choice of behavior, and (3) by rewarding and punishing behavior.<sup>3</sup>

Dimensions of the environment could encompass many variations. Forehand and Gilmer, based on their review of organizational literature, synthesized from a list of 30 properties and derived 5 organizational variables. These variables which they propose as a framework to study

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<sup>1</sup>Litwin and Stringer, Motivation, p. 1.

<sup>2</sup>Forehand and Gilmer, Psychological Bulletin, p. 361.

<sup>3</sup>Ibid., p. 369.

organizational climate include: size, organization structure, systems complexity, leadership pattern, and goal directions.

The direction of most organizational climate research appears to be culminating around an analogy between individual and environmental characteristics in an effort to maximize the relationship of the two and thereby increase organizational effectiveness. The literature indicates that a majority of the interest in this analogy has been within the last five years.

Herzberg has contributed to this examination of the organizational environment through his motivation-hygiene concept. He posits that it is the job itself that possesses the motivating factors, such as company policies and administration, supervision, working conditions, interpersonal relations, and money and status, if present in the environment, act to prevent job dissatisfaction but make no contribution to motivating workers. It is only through the job itself that motivation or job satisfaction can be influenced. These motivational factors include: achievement, recognition, work itself, responsibility, and professional growth. To operationalize this concept, Herzberg recommends a program of job enrichment designed to incorporate these motivational factors.<sup>1</sup> Herzberg and others have done

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<sup>1</sup>Frederick Herzberg, Work and the Nature of Man (Cleveland: The World Publishing Company, 1966), pp. 177-178.

extensive research to support his theory and basically when using his methodology, researchers have found comparable results. Others, when using different research techniques, have not always found the same results. There probably has not been an area receive as much professional attention and controversy as this area has.

### Performance-Motivation Relationships

Porter and Lawler put forth an explanation for the conflicting findings relative to job satisfaction and job performance. It was traditionally assumed because a man was satisfied he must be a productive performer. Research since has tended to reflect no significant correlation between job satisfaction and performance. Porter and Lawler, however, believe that "while it is true that very few well-controlled investigations found highly positive relationships between satisfaction and performance, the trend of the relationships nevertheless seems to be in that direction."<sup>1</sup>

Most studies have found a negative correlation between job satisfaction and turnover and absenteeism.<sup>2</sup> With the evidence of findings relative to job satisfaction, Porter and Lawler believe that management can look to job

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<sup>1</sup>Lyman W. Porter and Edward E. Lawler, III, "What Job Attitudes tell about Motivation," Harvard Business Review, XL (1968), 120.

<sup>2</sup>Ibid.

satisfaction to give other clues about the environment. They postulate that since satisfaction tends to be the result of some of our needs being fulfilled, then it can be assumed that a worker who is satisfied is one who receives rewards from his job. Most research relative to job satisfaction has been carried out at the rank-and-file level of organizations. At this level, rewards many times are largely beyond the control of the worker. A study conducted by these researchers on managers in five companies show that managers whose performance was ranked high by their superiors reported greater satisfaction than the lower-ranked managers. They found the greatest differences between high and low performance managers in terms of perceived rewards. High-performing managers reported more need fulfillment in areas concerned with opportunities to express autonomy and self-actualization in the job. That is, high performers perceived more intrinsic reward than low performers.

These researchers propose that if a company fails to find job satisfaction related to job performance then it may mean that the company is not differentially rewarding its best performers.<sup>1</sup> The desired goal then, becomes one in which management tries to strengthen the "effort-reward expectation"<sup>2</sup> of workers. The premise is that more effort will be expended for a reward that is valued and the higher

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<sup>1</sup>Ibid., p. 122.

<sup>2</sup>Ibid.

the expectation that effort will lead to this reward, the more effort will be put forth, and therefore the better the performance.<sup>1</sup>

Through a systematic assessment of workers' effort-reward expectations it then would be possible to regularly measure the motivational state of the organization. One could see that this could be used to pinpoint specific motivation needs by departments and areas throughout the organization.

One can assume that the most important part of using job satisfaction measures as a key to increasing job performance is through its reward practices. Workers must be able to see that increased effort and performance will bring about the rewards which they value. Therefore a low satisfaction-performance relationship should alert management to examine the effort-reward expectations of its workers.<sup>2</sup> This effort-reward expectation schema put forth by Porter and Lawler closely parallels the model reviewed earlier in this study by Atkinson and McClelland. That is, Aroused Motivation = Motives x Expectancies x Incentives.

Cherrington, Reitz, and Scott found similar results relative to rewards and satisfaction and productivity. They found significant positive correlations between satisfaction and productivity for task performance when rewards were

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<sup>1</sup>Ibid., p. 125.

<sup>2</sup>Ibid.



appropriately administered to high performers and significant negative correlations were found when rewards were inappropriately applied.<sup>1</sup>

The relationship between performance and value of motivators was studied by Friedlander with his results showing that the white-collar workers for whom the social environment and opportunity for advancement were perceived as important, were generally found to be poorer performers than for those who expressed less interest in these motivators. It appeared that the need for achievement through task performance was more related to high performance while the need for achievement through the social aspects of their work or the opportunity for recognition and advancement was more closely related to poorer performance. The results of this organizational climate research focuses on a tentative typology of motivators. Potential motivators for high performers appeared in this order: (1) intrinsic value of work, (2) recognition, and (3) social environment. In contrast, the potential motivators of low performers were indicated in this hierarchy: (1) social environment as most important, (2) intrinsic work, and (3) recognition.<sup>2</sup>

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<sup>1</sup>David J. Cherrington, H. Joseph Reitz, and William E. Scott, Jr., "Effects of Contingent and Noncontingent Reward on the Relationship between Satisfaction and Task Performance," Journal of Applied Psychology, LV, No. 6 (1971), 531-536.

<sup>2</sup>Frank Friedlander, "Motivations to Work and Organizational Performance," Journal of Applied Psychology, L No. 2 (1966), 148-149.

This closely parallels other findings that those for whom work is less meaningful tended to prefer climates high in esprit and low in disengagement while individuals who value their work as a primary opportunity for fulfillment wanted a climate that was significantly task oriented.<sup>1</sup>

There appears to be an increased interest in job design as a significant factor in examining situational characteristics. Lawler's proposals are compatible with the previously discussed effort-reward expectations in that in order for job design to positively affect motivation it must enable the worker to see that by putting forth more effort he will be able to receive rewards he values. In order for jobs to arouse higher order needs of individuals, it appears they must possess these three characteristics: (1) meaningful feedback about performance, (2) require use of valued abilities, and (3) self-control over goal setting.<sup>2</sup>

Also in the area of job design, Hackman and Lawler carried out a recent study to test the effects on motivation and performance when jobs are designed around the four core dimensions of variety, autonomy, task identity, and feedback. They found, as predicted, that when jobs are designed on

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<sup>1</sup>Frank Friedlander and Newton Margulies, "Multiple Impacts of Organizational Climate and Individual Value Systems upon Job Satisfaction," Personnel Psychology, XXII (1969), 182.

<sup>2</sup>Edward E. Lawler, III, "Job Design and Employee Motivation," Personnel Psychology, XXII (1969), 426-434.

these four dimensions that employees who are desirous of higher order need satisfaction tended to have high motivation, high job satisfaction, less absenteeism, and rated by their supervisors as high performers.<sup>1</sup> This finding lends support to the need to study both the individual characteristics and the situational characteristics in an effort to assess motivation.

A preponderance of the studies in the area of organizational climate have been conducted in the arena of educational institutions. George and Bishop examined the interaction between the structure of educational institutions and personalities of teachers. Using the canonical correlation technique they found patterns to suggest that in a smaller, less bureaucratic, innovative district a majority of teachers displayed low anxiety and perceived low organizational structure. Their personality characteristics were more dependent, conservative and trusting. In the larger, traditional and more bureaucratic districts the teachers perceived high organizational structure and were themselves more independent, opinionated and brighter, yet felt a higher degree of anxiety in their organizations.<sup>2</sup> Parallel to many studies examining

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<sup>1</sup>J. Richard Hackman and Edward E. Lawler, III, "Employee Reactions to Job Characteristics," Journal of Applied Psychology Monograph, LV, No. 3 (June, 1971), 259-282.

<sup>2</sup>Julius R. George and Lloyd K. Bishop, "Relationship of Organizational Structure and Teacher Personality Characteristics to Organizational Climate," Administrative Science Quarterly, XVI, No. 4 (December, 1971), 467-474.

industrial climates, Turner attempted to measure the degree of satisfaction-dissatisfaction within the elementary school educational climate. Six types of organizational climates were identified ranging from open to closed on a continuum. Achievement was perceived by teachers as the most satisfying factor in all six organizations. Satisfying to teachers in the open climate was the factor of working conditions, while in the closed climate the most dissatisfying factors were working conditions, school policy, and administration and supervision.<sup>1</sup> Wiggins found general leader behavior characteristics of principals and organizational climates of schools not significantly related; however, a relationship was found between the inter-personal orientation of principals and his school climate. He found that the length of incumbency of the principal was related to the congruency of his leader behavior and climate but not related to the congruence of the teacher-principal perceptions of their organizational climate.<sup>2</sup> This study, as well as those examining the industrial climate, point up the significance of the interpersonal qualities of the leader.

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<sup>1</sup>Harold Roy Turner, "Association Between Organizational Climates and Teacher Satisfaction-Dissatisfaction." (unpublished Ed.D. dissertation, Auburn University, 1968) cited by Dissertation Abstracts, p. 3403-A.

<sup>2</sup>Thomas Winfield Wiggins, "Leader Behavior Characteristics and Organizational Climate," (unpublished Ph.D. dissertation, Education, Administration School, Claremont Graduate School and University Center, 1968), p. 110.

It appears predictable that there will continue to be a preponderance of studies investigating organizational climate and its relation to other criterion variables. Perhaps our task in the future will be to integrate various approaches.

### Summary

The purpose of this chapter has been to (1) present a theoretical framework that would provide a foundation and direction in which to examine the stated hypotheses, and (2) to present a general review of relevant research and literature in the areas of individual needs and organizational climate.

The first section of this chapter has been an effort to establish a justification for a need to examine the relationship between individual needs and organizational climate. The contributions of selected authorities in each area were presented. The theoretical, Aroused Motivation Model of Atkinson-McClelland was presented to serve as a framework for testing the hypotheses of this study.

The second section includes a review of research and literature on individual needs. Studies that have attempted to examine needs in relation to the work environment were presented. Many of the studies centered around efforts to measure degrees of need fulfillment in relation to specific organizational variables. It becomes apparent from the

diverse findings that this interaction of needs and climate is a complex phenomenon.

The final section of this chapter has presented the research and literature in the area of organizational climate. The majority of contributions were centered around attempting to identify particular situational dimensions which appeared to be effective in increasing motivation and performance of workers. The findings appear to suggest that progress is being made in identifying dimensions that workers desire in their jobs. The task now appears to be in incorporating these elements into the job.

## CHAPTER III

### METHODOLOGY

The major part of this study is concerned with determining the extent of relationship between individual need dispositions and organizational climate variables conducive to arousing motivation of managerial and professional workers. The relationship was determined by analyzing the responses of participating subjects as recorded on (1) a personality inventory, and (2) an organizational climate questionnaire.

#### Pre-Experimental Procedures

The pre-experimental procedures for this study were divided into these six parts: (1) design of the experiment, (2) selection of the instruments, (3) description of Edwards Personal Preference Schedule (EPPS), (4) description of the Organizational Climate Questionnaire (OCQ), (5) validity and reliability of the instruments, and (6) the choice of proper statistical tests for analyzing the data collected.

### Research Design

Research design, in this study, refers to the overall plan for investigating the research problem. The basic purpose of the research design was to provide the answers to the research questions. The design chosen for this study was structured to enable the researcher to examine the climates of two functionally different organizations as the (1) criterion variable, and (2) needs of managers and professionals within these organizations as the predictor variable.

### Selection of Instruments

Two instruments were utilized in collecting the data for this study: (1) Edwards Personal Preference Schedule, and (2) the Organizational Climate Questionnaire. The Organizational Climate Questionnaire instructions were modified so that each subject answered the questionnaire under the following directions: (1) as he perceived his ideal organizational climate should be, and (2) as he perceived his actual climate was at the present time.

### Description of Edwards Personal Preference Schedule

The Edwards Personal Preference Schedule was designed to measure "a number of relatively independent normal personality variables."<sup>1</sup> The statements in the EPPS and the

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<sup>1</sup>Allen L. Edwards, Edwards Personal Preference Schedule Manual (New York: The Psychological Corporation, 1959), p. 5.



fifteen variables these statements purport to measure are based on a list of manifest needs originated by H. A. Murray in 1938. From the theory of needs posited by Murray, A. L. Edwards, in 1954, designed a test to measure these needs.<sup>1</sup>

FIGURE 1<sup>2</sup>

VARIABLES OF EDWARDS PERSONAL  
PREFERENCE SCHEDULE

Manifest Needs	Behavior
1. Achievement:	To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great novel or play.
2. Deference:	To get suggestions from others, to find out what others think, to follow instructions and do what is expected, to praise others, to tell others that they have done a good job, to accept the leadership of others, to read about great men, to conform to custom and avoid the unconventional, to let others make decisions.

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<sup>1</sup>Ibid.

<sup>2</sup>Ibid., p. 11.

FIGURE 1--Continued

Manifest Needs	Behavior
3. Order:	To have written work neat and organized, to make plans before starting on a difficult task, to have things organized, to keep things neat and orderly, to make advance plans when taking a trip, to organize details of work, to keep letters and files according to some system, to have meals organized and a definite time for eating, to have things arranged so that they run smoothly without change.
4. Exhibition:	To say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experiences, to have others notice and comment upon one's appearance, to say things just to see what effect it will have on others, to talk about personal achievements, to be the center of attention, to use words that others do not know the meaning of, to ask questions others cannot answer.
5. Autonomy:	To be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants, to do things that are unconventional, to avoid situations where one is expected to conform, to do things without regard to what others may think, to criticize those in positions of authority, to avoid responsibilities and obligations.

FIGURE 1--Continued

Manifest Needs	Behavior
6. Affiliation:	To be loyal to friends, to participate in friendly groups, to do things for friends, to form new friendships, to make as many friends as possible, to share things with friends, to do things with friends rather than alone, to form strong attachments, to write letters to friends.
7. Intraception:	To analyze one's motives and feelings, to observe others, to understand how others feel about problems, to put one's self in another's place, to judge people by why they do things rather than by what they do, to analyze the behavior of others, to analyze the motives of others, to predict how others will act.
8. Succorance:	To have others provide help when in trouble, to seek encouragement from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to receive a great deal of affection from others, to have others do favors cheerfully, to be helped by others when depressed, to have others feel sorry when one is sick, to have a fuss made over one when hurt.
9. Dominance:	To argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the actions of others, to tell others how to do their jobs.

FIGURE 1--Continued

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Manifest Needs	Behavior
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10. Abasement:	To feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.
11. Nurturance:	To help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.
12. Change:	To do new and different things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new things, to eat in new and different places, to try new and different jobs, to move about the country and live in different places, to participate in new fads and fashions.

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FIGURE 1--Continued

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Manifest Needs	Behavior
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13. Endurance:	To keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or problem until it is solved, to work at a single job before taking on others, to stay up late working in order to get a job done, to put in long hours of work without distraction, to stick at a problem even though it may seem as if no progress is being made, to avoid being interrupted while at work.
14. Heterosexuality:	To go out with members of the opposite sex, to engage in social activities with the opposite sex, to be in love with someone of the opposite sex, to kiss those of the opposite sex, to be regarded as physically attractive by those of the opposite sex, to participate in discussions about sex, to read books and plays involving sex, to listen to or to tell jokes involving sex, to become sexually excited.
15. Aggression:	To attack contrary points of view, to tell others what one thinks about them, to criticize others publicly, to make fun of others, to tell others off when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accounts of violence.

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The EPPS contains a unique feature--an attempt to control social desirability of a statement. Edwards noticed in many existing personality tests that people ordinarily respond to test items according to "the social desirability of that item rather than to its specific personality content."<sup>1</sup> To attempt to alleviate this limitation, Edwards employed the forced-choice technique in the construction of the EPPS by arranging the pairs of statements so that approximately equal statements--on the social desirability factor--were paired together. It was assumed then, that respondents would not make choices on the basis of social desirability but rather on their own personality characteristics. To assess each need, the EPPS contains nine brief statements that reflect a rational relationship to that need. The test includes 210 choices in which the respondent chooses the statement which is more self-descriptive. Every need is paired twice with every other need which requires each statement to be repeated three or four times. The strength of a particular need is measured by the number of times, out of the 28 options, that the respondent chooses the statement representing that need. In total the EPPS contains 225 pairs of items--210 choices relative to needs plus fifteen additional pairs included to evaluate the consistency of an individual's responses. A particular need could have a score varying from zero to 28 times.<sup>2</sup>

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<sup>1</sup>Richard J. Lanyon and Leonard D. Goodstein, Personality Assessment (New York: John Wiley and Sons, 1971), p. 44.

<sup>2</sup>Ibid.

In essence the format of the EPPS requires the respondent to distribute 210 endorsements over 420 items. In other words, he must indicate 210 points' worth of personality needs whether or not this degree of need exists. This procedure which allows comparisons of an individual's characteristics within himself but not comparable to others is termed ipsative and raises some problem in interpretation of test scores. Another problem posed by the forced-choice format is that by the nature of the forced choice, a higher score on one dimension will force a lower score on another dimension.<sup>1</sup> Despite these limitations, it is considered "one of the more psychometrically sophisticated of the rational-theoretical instruments,"<sup>2</sup> and we are lead to expect it to be a "useful or valid instrument."<sup>3</sup>

Another advantage of the EPPS is its terminology represented by the scoring variables as compared to the more psychiatric terminology of other contemporary instruments such as the Minnesota Multiphasic Personality Inventory. Variables representative of more normal connotations are more conducive for counseling and research purposes which was the basic

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<sup>1</sup>Ibid., p. 45.

<sup>2</sup>Ibid., p. 43.

<sup>3</sup>Ibid., p. 45.

function of the EPPS.<sup>1</sup> Porter and Lawler<sup>2</sup> recommend for measuring personality areas either the EPPS, the California Psychological Inventory, or the Minnesota Multiphasic Personality Inventory.

#### Description of Organizational Climate Questionnaire

Just as behavioral theorists have looked at climate in order to conceptualize the elements of the organizational system and the determinants of individual behavior, managers also use it as a link between the organization's procedures and practices with resultant effects, and concerns of individual workers.<sup>3</sup> Utilizing the work of Kurt Lewin as a foundation and from findings gleaned from laboratory research, industrial studies, and from research literature, Litwin and Stringer isolated and defined several dimensions of the organizational climate.<sup>4</sup>

The authors' specific aim in factor selection in devising an organizational climate questionnaire was that the dimension was measurable and that it would meet these criteria:

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<sup>1</sup>John E. Horrocks, Assessment of Behavior (Columbus: Charles E. Merrill Books, Inc., 1964), p. 540.

<sup>2</sup>Lyman W. Porter and Edward E. Lawler, Managerial Attitudes and Performance (Homewood, Illinois: Richard D. Irwin, Inc., 1968), p. 28.

<sup>3</sup>Litwin and Stringer, Motivation, p. 44.

<sup>4</sup>Ibid., p. 45.



(1) the dimension must be capable of describing the situation, (2) the dimension will relate to specific motivations and motivated behavior, and (3) they are capable of measuring changes in the situation.<sup>1</sup>

The instrument was designed to measure perceptions of the individuals working in that organization. The original questionnaire contained seven dimensions. After considerable success with testing and evaluating the questionnaire, the authors developed an improved climate questionnaire and expanded the dimensions to include the following nine areas: Structure, Responsibility, Reward, Risk, Warmth, Support, Standards, Conflict, and Identity.<sup>2</sup> These dimensions are defined in Figure 2 which follows:

FIGURE 2<sup>3</sup>

DIMENSIONS OF ORGANIZATIONAL  
CLIMATE QUESTIONNAIRE

Dimensions	Scale Description
1. Structure	The feeling that employees have about the constraints in the group, how many rules, regulations, procedures there are; is there an emphasis on "red tape" and going through channels, or is there a loose and informal atmosphere.

<sup>1</sup>Ibid., p. 46.      <sup>2</sup>Ibid., pp. 66, 79, 81, 82.

<sup>3</sup>Ibid., pp. 81-82.

FIGURE 2--Continued

Dimensions	Scale Description
2. Responsibility	The feeling of being your own boss; not having to double-check all your decisions; when you have a job to do, knowing that it is <u>your</u> job.
3. Reward	The feeling of being rewarded for a job well done; emphasizing positive rewards rather than punishments; the perceived fairness of the pay and promotion policies.
4. Risk	The sense of riskiness and challenge in the job and in the organization; is there an emphasis on taking calculated risks, or is playing it safe the best way to operate.
5. Warmth	The feeling of general good fellowship that prevails in the work group atmosphere; the emphasis on being well-liked; the prevalence of friendly and informal social groups.
6. Support	The perceived helpfulness of the managers and other employees in the group; emphasis on mutual support from above and below.
7. Standards	The perceived importance of implicit and explicit goals and performance standards; the emphasis on doing a good job; the challenge represented in personal and group goals.
8. Conflict	The feeling that managers and other workers want to hear different opinions; the emphasis placed on getting problems out in the open, rather than smoothing them over or ignoring them.
9. Identity	The feeling that you belong to a company and you are a valuable member of a working team; the importance placed on this kind of spirit.

After hypotheses testing in experimental and field studies using the Organizational Climate Questionnaire the measure was considered sufficiently useful for application in further studies.<sup>1</sup> A specimen questionnaire appears in Appendix A (Exhibit 2, 3).

FIGURE 3  
CONCEPTS, INSTRUMENTS, AND VARIABLES

Concept	Instrument	Variables
Manifest Needs	Edwards Personal Preference Schedule	Achievement Deference Order Exhibition Autonomy Affiliation Intracception Succorance Dominance Abasement Nurturance Change Endurance Heterosexuality Aggression <sup>2</sup>
Organizational Climate	Organizational Climate Questionnaire	Structure Responsibility Reward Risk Warmth Support Standards Conflict Identity <sup>3</sup>

<sup>1</sup>Ibid., p. 89.

<sup>2</sup>Edwards, EPPS Manual, p. 11.

<sup>3</sup>Litwin and Stringer, Motivation, pp. 81-82.

## Validity and Reliability of Instruments

Edwards Personal Preference Schedule

"The reliability of most of the EPPS is roughly comparable to that of other personality inventories--the test-retest reliability estimates, based on a three-week interval, ranged from .55 to .87, with a median of .73."<sup>1</sup>

The validity of a test is frequently defined as "the extent to which the test or inventory actually measures what it purports to measure." This definition, if accepted at face value, would require the validity of an inventory to be determined by correlation between scores on the inventory and some "pure criterion measure." Such pure criterion measures are generally not available. As a result, self-ratings and ratings by peers have frequently been substituted for the pure criterion measures.<sup>2</sup> "The studies of self-ratings generally find moderate relationships between the EPPS and self-ratings."<sup>3</sup> Comparisons of the California Psychological

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<sup>1</sup>Lawrence J. Strickler, "Tests and Reviews: Character--Nonprojective," The Sixth Mental Measurement Yearbook, ed. Oscar Krisen Buros (Highland Park, New Jersey: The Gryphon Press, 1965), p. 202.

<sup>2</sup>Edwards, EPPS Manual, p. 21.

<sup>3</sup>Strickler, Sixth Mental Measurement Yearbook, p. 202.

Inventory and EPPS scales in general show correlations in the expected directions with the highest correlation reaching .42.<sup>1</sup>

The EPPS achievement scale has shown rather consistently to be correlated with academic achievement in both high school and college.<sup>2</sup>

The norms in the 1959 edition of the EPPS Manual are excellent. Norms are presented for 1509 male and female college students throughout the country, a representative sample of adults. Norms are also available on 1550 male and female high school students but are not reported in the manual.<sup>3</sup>

#### Organizational Climate Questionnaire (OCQ)

Scale properties on seven of the OCQ scales show good consistency. Only the Standards and Conflict scales have problems with consistency.<sup>4</sup> Experimental and field studies have been conducted using the OCQ with findings reporting

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<sup>1</sup>Marvin D. Dunnette, Wayne K. Kirchner, and JoAnne De Gidio, "Relations Among Scores on Edwards Personal Preference Schedule, California Psychological Inventory, and Strong Vocational Interest Blank for an Industrial Sample," Journal of Applied Psychology, XLII, No. 3 (1958), 178-181.

<sup>2</sup>Lanyon and Goodstein, Personality Assessment, p. 45.

<sup>3</sup>Ibid.

<sup>4</sup>Litwin and Stringer, Motivation, p. 82.

most hypotheses being supported. The findings related to the OCQ show demonstrated relationships of the climate measure to organizational conditions, on the one hand, and to conditions of individual motivation, on the other.<sup>1</sup> The OCQ was considered sufficiently useful, by its authors, to be applied in further studies.<sup>2</sup>

#### Choice of Statistical Methods

The primary interest of the investigation is the nature and significance of the relationship between needs of individuals and the motivational aspects of the organizational climate. Methodologically, this implies a study of the relationships between the fifteen manifest needs variables and the nine organizational climate variables. Based on this criterion, the need for a multivariate statistical design is indicated.

After surveying multivariate statistics and its various uses, canonical correlation analysis was chosen as the most effective tool for testing the general hypothesis of this study. Because of its limited use this technique is reviewed:

The interrelations between two sets of measurements made on the same subjects can be studied by canonical-correlation methods.<sup>3</sup>

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<sup>1</sup>Ibid., p. 92.

<sup>2</sup>Ibid., p. 89.

<sup>3</sup>William W. Cooley and Paul R. Lohnes, Multivariate Procedures for the Behavioral Sciences (New York: John Wiley and Sons, Inc., 1962), p. 35.

Canonical correlation analysis was introduced by Hotelling (1935 and 1936) in an effort to contribute a model whereby the "concepts of correlation and regression may be applied not only to ordinary one-dimensional variates but also to variates of two or more dimensions."<sup>1</sup>

Suppose we have a set of  $n_1$  predictor variables and a set of  $n_2$  criterion variables for the same individuals. We wish to determine that linear combination of the predictor variables and that linear combination of the criterion variables which will yield the highest possible correlation between the two composites. Having determined these two linear functions, we wish to determine a second pair of linear functions which will yield two composites maximally correlated with each other but with the condition that each will correlate zero with each of the first pair of composites. We then seek a third pair of linear functions yielding maximally correlated composites but orthogonal to the first two pairs. This procedure may continue until we have  $n_1$  or  $n_2$  pairs, whichever is the smaller.<sup>2</sup>

The problem in this investigation is to find through canonical correlation analysis two sets of weights that will maximize the correlation between  $\hat{x}$  and  $\hat{y}$ , the derived canonical variates. Cooley and Lohnes state that geometrically the canonical correlation analysis can be understood as a measure of the degree to which individuals occupy the same relative positions in the  $p$  predictor-dimensional space as they do in the  $q$  criterion-dimensional space.<sup>3</sup>

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<sup>1</sup>Harold Hotelling, "The Most Predictable Criterion," Journal of Educational Psychology, No. 26 (1935), pp. 139-142; and Harold Hotelling, "Relations Between Two Sets of Variates," Biometrika, XXVIII (1936), 321-377.

<sup>2</sup>Paul Horst, "Relations Among  $m$  Sets of Variables," Psychometrika, XXVI (June, 1961), 129-149.

<sup>3</sup>Cooley and Lohnes, Multivariate Procedures, p. 36.

The analysis is described by Cooley and Lohnes beginning with the partitioning of  $R$ , the matrix of intercorrelations for the predictor and criterion variables, into four submatrices:

$R_{11}$  = intercorrelations among the  $p$  predictors.

$R_{22}$  = intercorrelations among the  $q$  criteria.

$R_{12}$  = intercorrelations of predictors with criteria.

$R_{21}$  = the transpose of  $R_{12}$ .

$$R = \begin{bmatrix} R_{11} & R_{12} \\ R_{21} & R_{22} \end{bmatrix}$$

The partitioned portions of  $R$  are then used in the following canonical equation:

$$(R_{22}^{-1} R_{21} R_{11}^{-1} R_{12} - \lambda_i I) b_i = 0.$$

The solution then involves finding latent roots  $\lambda$  for which

$$|R_{22}^{-1} R_{21} R_{11}^{-1} R_{12} - \lambda I| = 0.^1$$

Bartlett<sup>2</sup> contributed procedures for testing the significance of canonical correlations. He defined lambda:  $\Lambda = \prod_{i=1}^q (1 - \lambda_i)$ ,  $q < p$ . The  $\chi^2$  approximation for the distribution of  $\Lambda$  provides a test for the null hypothesis that the predictor variables are unrelated to the criterion variables:

$$\chi^2 = -[N - .5(p + q + 1)] \log_e$$

with  $pq$  degrees of freedom. If the null hypothesis can be rejected, the contribution of the first root to  $\Lambda$  can be removed and the significance of the  $q-1$  roots can be tested.

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<sup>1</sup>Ibid.

<sup>2</sup>M. S. Bartlett, "Multivariate Analysis," Journal Royal Statistical Society (Supplement 9, 1947), 176-190.



Early investigators of this statistical tool thought that only  $\lambda_1$  and the corresponding canonical correlation were of interest. Other workers have expanded on this technique and have shown that other roots may be meaningful; that is, one or more subsets of the predictor variables may be related to one or more subsets of the criterion variables.<sup>1</sup>

Canonical correlation analysis involves a large number of computations, and, therefore, requires the services of a computer. A computer-based program capable of computing a canonical correlation was available at the Merrick Computer Center, University of Oklahoma, and was used to investigate the hypotheses of this study. Canonical analysis was computed on the BMD06M Program: Canonical Analysis which is part of Biomedical Computer Programs (BMD) that are distributed through the Health Science Computing Facility, U.C.L.A.<sup>2</sup>

After the correlations had been computed, they were tested for significance at the .05 level.

Pearson's Product Moment Correlation was used to test Hypotheses 2 and 3. The computer program used was BMD02D: Correlation with Transgeneration.<sup>3</sup>

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<sup>1</sup>Ibid., p. 37.

<sup>2</sup>W. J. Dixon, ed., BMD: Biomedical Computer Programs (Berkeley: University of California Press, 1970), pp. 207-214.

<sup>3</sup>Ibid., pp. 49-60.

It was decided that one-way analysis of variance would be used to test Hypothesis 4: "There are significant differences between an individual's perceived, actual organizational climate and his perceived, ideal organizational climate." The sample units are the selected (1) industrial organizational climate, and the (2) collegiate, educational institution organizational climate. This one-way analysis of variance was computed utilizing the Biomedical Computer Program--  
BMD01V: Analysis of Variance for One-Way Design.<sup>1</sup>

Hypotheses 5 and 6 were tested utilizing the Student's t-test.

### Experimental Procedures

The experimental procedures for this study were divided into three parts: (1) selection of subjects, (2) data collection procedures, and (3) analysis of data.

### Selection of Subjects

There were two organizations chosen for this study: (1) an industrial organization, and (2) a collegiate, educational institution. These two types of organizations were chosen to test the hypotheses of this study because of the nature of the organizations and the diversity of their functions. A comparison of needs-climate correlations of the differing types of organizations appeared to be feasible.

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<sup>1</sup>Ibid., pp. 486-494.

Approval was gained from the proper managerial officials in both organizations after the nature of the study was explained in an informal conference. The researcher's explanations included: (1) purpose of the study, (2) knowledge expected to be gleaned from the study, (3) tests and procedures to be used, (4) participating subjects, and (5) amount of time required.

FIGURE 4  
PARTICIPATING ORGANIZATIONS AND DEPARTMENTS

Organization	Department
Industrial Organization (N = 185)	Production Engineering Finance Research
Educational Organization (N = 78)	Provost Administration and Finance University Community University Relations University Development Continuing Education and Public Service Ancillary Areas

Selection of Managers and Professionals  
in Industrial Organization

All managers in the areas of (1) Production, (2) Research, (3) Engineering, and (4) Finance, who were considered to be in the lower, middle, and upper-middle levels of management were included in this study. The subjects identified as

professionals included a random selection of professional employees from the research area.

#### Selection of Managers and Professionals in Educational Organization

All administrative officers and administrative staff were included in this sample. These managers represent the following areas: (1) Provost, (2) Administration and Finance, (3) University Community, (4) University Relations, (5) University Development, (6) Continuing Education and Public Service, and (7) Ancillary areas. The subjects identified as professionals included a random selection of professional employees (75 out of a possible 294) from the preceding areas.

#### Data Collection Procedures

Managers and professionals in the two organizational climates represented completed the data for this study during the Spring and Summer of 1972. Different collection procedures were utilized with the participating organizations and is explained in the following paragraphs.

#### Industrial Organization

After careful explanation of the purpose, design, and methodology to be used in the study during a prior conference, managers and professional employees of the industrial organization were chosen from four areas to participate. The personality test, organizational climate questionnaires, and demographic information was obtained from the subjects during

a two-hour session in which these employees were relieved from their job duties during the working day to enable them to participate. Several two-hour testing periods were conducted over a three-day period, which included one night-shift-testing session, in order to collect the data. The anonymity of these managers and professional employees was preserved. The instruments were scored at the Merrick Computing Center at The University of Oklahoma.

#### Collegiate Educational Organization

All administrative officers and assistant administrative staff plus a random sample of the professional employees from the collegiate educational institution were each mailed a data package via the university mailing facilities. The researcher collaborated with the Director of Personnel Services in the selection of subjects and dissemination of the data package. The data package was assembled in the following order: (1) a cover letter from the Director of Personnel Services, (2) general comments and instructions from the researcher, (3) personal data sheet (See Appendix B, Exhibits 4, 5, 7), (4) the Organizational Climate Questionnaire--(Ideal), (5) the Organizational Climate Questionnaire--(Actual), and (6) the Edwards Personal Preference Schedule. Items numbered 4 and 5 were reversed in the package and directions for one-half of the sample in an effort to alleviate any ordering effects. A follow-up letter to those who had not returned

their data package was sent approximately two weeks after receipt of the initial data package. The completed data packages were returned to the office of the Director of Personnel Services via the college mailing facilities. Anonymity was preserved--each subject was assured that the coding was only utilized to facilitate mailing. The results of the educational sample which included managers and professional employees yielded a 54% return of data. Since this mail questionnaire return was relatively low and because the researcher had no authorization to perform additional data collection beyond the follow-up letter, the results should be interpreted with caution.<sup>1</sup> The returns of this stratified sample, however, do appear to be proportionate by department. (See Appendix D, Exhibit 13.)

#### Analysis of Data

The data received from the participating managers and professional employees from both organizations were punched on IBM cards and processed through the Merrick Computer Center on the campus of The University of Oklahoma at Norman, Oklahoma. The Merrick Center has an IBM 360-50 computer and accompanying configuration.

The statistic used to test Hypothesis 1 was canonical correlation analysis. This technique is an effective tool

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<sup>1</sup>Kerlinger, Foundations, p. 397.

for studying the interrelationships between two sets of measurements made on the same subjects.<sup>1</sup> Hypotheses 2 and 3 were tested by using Pearson's Product Moment Correlation technique. Hypothesis 4 was tested by utilizing the one-way analysis of variance technique. Hypotheses 5 and 6 were computed utilizing the Student's t-test.

Computer-based programs capable of computing a canonical correlation, Pearson's Product Moment Correlation, a one-way analysis of variance, and the Student's t-test, which were required for this study, are available at the Merrick Computer Center. These specific programs are part of a series of programs developed by The University of California (Berkeley Campus) and published by the California Press, W. J. Dixon, editor.<sup>2</sup>

After the data had been computed utilizing the specific statistical techniques, they were tested for significance at the .05 level. Tables of statistical significance published by Downie and Heath were used in determining the significance of results.<sup>3</sup>

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<sup>1</sup>Cooley and Lohnes, Multivariate Procedures, p. 35.

<sup>2</sup>W. J. Dixon, ed., BMD: Biomedical Computer Programs, pp. 49-494.

<sup>3</sup>N. M. Downie and R. W. Heath, Basic Statistical Methods (New York: Harper & Row, Publishers, 1965), pp. 298-306.

## CHAPTER IV

### RESULTS

One-hundred eighty-five employees of an industrial organization located in Southwestern Oklahoma and 78 employees of a large Midwestern university acted as subjects in determining the type of need patterns, as measured by the Edwards Personal Preference Schedule (EPPS), associated with high and low levels of job dissatisfaction as measured by the discrepancies noted between the "actual" and "ideal" scores reported on the Organizational Climate Questionnaire (OCQ). A Pearson's Product Moment Correlation, a Canonical Correlation, a one-way Analysis of Variance (ANOVA) and the Student's t-test were the statistical tests used in comparing the 15 need scores with the 9 OCQ scores (actual), and the 9 OCQ scores (ideal). Six hypotheses were built on the premise that employees who are experiencing an unusually high degree of job dissatisfaction or an unusually low degree of job dissatisfaction will show need patterns which are compatible with their job-satisfaction level.

The results of the data analysis and hypothesis testing are presented in the following sections.



### Data Coding and Computer Processing

All 263 participants were asked to complete the EPPS and the Actual and Ideal versions of the OCQ. Once these measures had been collected it was necessary to code and process all raw data in order to test the hypotheses.

The EPPS answer sheets were scored on an IBM 1230 scoring machine located in the Nuclear Engineering Laboratory on the campus of The University of Oklahoma. The scores reported for the 15 EPPS variables and the 18 OCQ measures (9 actual and 9 ideal) were entered on IBM cards for further processing. The card format used for data entry is shown in Table 2.

The data were processed through the Merrick Computing Center located on the campus of The University of Oklahoma at Norman. The Merrick Center is equipped with an IBM 360-50 computer and accompanying configuration. This computer and its facilities were used in the actual manipulation of the data for testing the six hypotheses.

TABLE 2

CARD FORMAT USED TO ENTER DATA COLLECTED FROM SUBJECTS

Information	cc*
1. Subject's ID number	1-3
2. Location of institution	4
3. Sex of subject	5
4. Institution number	6
5. Subject classification number	7
6. The 15 need scores from the <u>Edwards Personal Preference</u> <u>Schedule</u>	8-37
7. The 9 variables scores from the <u>Organizational Climate</u> <u>Questionnaire--(Ideal)</u>	38-55
8. Age	56
9. Educational level	57-58
10. Level of organization	59
11. Years in organization	60-61
12. Number of years in present job	62-63
13. Area of endeavor:	
a. Psychology	64-65
b. Human Relations	66-67
c. Engineering	68-69
d. Manufacturing	70-71
e. Accounting	72-73
f. Other	74-75
g. Other	76-77
h. Other	78-79
14. Card number	80
(Second Card)	
1. Duplicate of first card	1-37
2. The 9 variables scores from the <u>Organizational Climate</u> <u>Questionnaire--(Actual)</u>	38-55
3. Duplicate of first card	56-79
4. Number of card	80

\*Card Column

### Results of Testing Hypothesis One

The hypothesis tested in proposition number one was as follows:

There is a significant relationship between the 15 variables of the Edwards Personal Preference Schedule and the 9 variables of the Organizational Climate Questionnaire as measured for the 263 industrial and educational employees used in the study.

In order to test Hypothesis 1, it was necessary to perform a Canonical Correlation between the 15 EPPS measures and the 9 OCQ (Ideal) measures for the entire group of 263 participants. A prewritten program, BMDX75, was used in making the computations. The resulting Canonical Correlations among the 15 EPPS variables and the 9 OCQ (Ideal) variables are presented in Table 3. The correlation values are converted to F values in order to test their significance.

The results of testing Hypothesis 1 shown in Table 3 show a high Canonical Correlation between the EPPS variables and the OCQ variables. These values were converted to F values for simplicity in checking the significance levels.<sup>1</sup> The first 4 correlations yielded significant F values. This allowed the researcher to conclude that there was a significant relationship between the 15 EPPS variables and the 9 OCQ dimensions.

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<sup>1</sup>M. S. Bartlett, "The Statistical Significance of Canonical Correlations, Biometrika, XXXII (1941), 29-38.

TABLE 3

CANONICAL CORRELATIONS AND TESTS OF SIGNIFICANCE OF SUCCESSIVE  
LATENT ROOTS: EDWARDS PERSONAL PREFERENCE SCHEDULE AND  
ORGANIZATIONAL CLIMATE QUESTIONNAIRE--(IDEAL)

Number of Latent Roots Removed	Corresponding Canonical R	<u>F</u>	<u>df</u>	<u>p</u> *
0	0.46790	8.62	14,246	<.001
1	0.34750	4.22	14,246	<.001
2	0.28946	2.81	14,246	<.01
3	0.25707	2.18	14,246	<.05
4	0.22534	1.64	14,246	
5	0.17963	1.03	14,246	
6	0.16178	0.83	14,246	
7	0.11198	0.39	14,246	
8	0.09529	0.28	14,246	

\*Significance level of F value

#### Results of Testing Hypotheses Two and Three

The null hypotheses tested in propositions number two and three were as follows:

##### Hypothesis 2:

There is no significant relationship between the Achievement variable on the Edwards Personal Preference Schedule and the 9 dimensions of the Organizational Climate Questionnaire--(Ideal) as measured for the 263 industrial and educational employees who participated in the study.

##### Hypothesis 3:

There is no significant relationship between the Affiliation variable on the Edwards Personal Preference Schedule and the 9 dimensions of the Organizational--(Ideal) as measured for the 263 industrial and educational employees who participated in the study.

In order to test null Hypotheses 2 and 3 it was necessary to compute intercorrelation matrices of the EPPS variables and the OCQ (Ideal) variables. These intercorrelations were made for three different groupings of the participants: (1) with all 263 subjects acting as one group, (2) using the 185 industrial employees as a group, and, (3) using the 78 educational employees as a group. In particular the two hypotheses being tested were related to the intercorrelation of the Achievement and Affiliation variables of the EPPS with the 9 OCQ variables. The intercorrelations of these variables for all three groupings are presented in Table 4.

When all 263 participants were used in making the correlations, 7 of the 9 OCQ--(Ideal) variables were significantly correlated with the Achievement variable of the EPPS. Only the variables of Warmth and Support were not correlated to the EPPS variable.

When the 185 industrial employees were used in making the calculations, the OCQ--(Ideal) variables of Structure, Responsibility, Reward, Standards, Conflict, and Identity were significantly related to the Achievement variable on the EPPS. However, the 78 educational employees showed significantly high correlations on only three of the OCQ--(Ideal) dimensions: Structure, Reward, and Risk. When the two groups were compared there were significantly more and higher relationships shown for the industrial employees.

TABLE 4

INTERCORRELATIONS OF ACHIEVEMENT AND AFFILIATION  
EDWARDS PERSONAL PREFERENCE SCHEDULE AND THE  
NINE ORGANIZATIONAL CLIMATE QUESTIONNAIRE  
VARIABLES-- (IDEAL)

OCQ Variables (Ideal)	Achievement			Affiliation		
	All Ss (N=263)	Indust. (N=185)	Education (N=78)	All Ss (N=263)	Indust. (N=185)	Education (N=78)
Structure	.1753**	.1637*	.2033*	-.0723	-.0474	-.1311
Responsi- bility	.1348*	.1553*	.0827	-.0294	-.0393	.0067
Reward	.2367**	.2563**	.1891*	-.0752	-.0499	-.1309
Risk	.1372*	.1074	.2295*	.0543	.0860	-.0517
Warmth	.0152	.0227	-.0120	.0252	.0756	-.1021
Support	.0504	.0566	.0342	-.0515	.0139	-.2045*
Standards	.1932**	.2243**	.1192	-.1292*	-.1256	-.1320
Conflict	.1459**	.2146**	-.0135	-.0788	-.0531	-.1431
Identity	.1229*	.1528*	.0720	-.0713	-.0495	-.1285

\*Significant;  $p < .05$ --(N=263; .1229) (N=185; .1474) (N=78; .1811)

\*\*Significant;  $p < .01$ --(N=263; .1721) (N=185; .2095) (N=78; .2504)

The variable of Affiliation was expected to show some negative correlations with the 9 OCQ--(Ideal) variables based on previous research. A comparison of the correlations computed for the industrial subjects and the educational subjects revealed very little. Of the 18 coefficients computed only one was significant beyond the .05 level. This was the relationship of the educational subjects' EPPS Affiliation scores with their OCQ--(Ideal) Support scores. All other correlations were non-significant. Six of the 9 correlations approached significance for the industrial subjects and 8 approached significant correlations for the educational subjects. Since the data, as shown in Table 4, reveals that 7 of the 9 OCQ variables

correlated significantly with the EPPS Achievement variable (Hypothesis 2) and 1 of the 9 OCQ variables correlated significantly with the EPPS Affiliation variable (Hypothesis 3) the researcher cannot continue to assume that there is no significant relationship and therefore must reject these null hypotheses.

#### Additional Findings of Hypotheses Two and Three

In addition to the intercorrelation of the Achievement and Affiliation variables on the EPPS and the 9 OCQ--(Ideal) variables, the correlations among the other EPPS variables and the OCQ--(Ideal) variables were made. While these data were not used in testing Hypotheses 2 and 3, the findings did expand the interpretation of the results reported in Table 4. The results of the computations made are presented in Tables 5, 6, and 7. In order to expedite the interpretation, only the significant correlations are reported. Complete correlation matrices are presented in the appendices.

#### Comparison of Tables Six and Seven

A comparison of Tables 6 and 7 showed very few commonalities among the correlations computed for the industrial and educational employees. The primary differences between the correlations computed for the two groups were on the EPPS variables of Deference and Nurturance. The industrial employees showed 4 high-negative correlations on the EPPS Deference variable with the OCQ dimensions of Structure, Responsibility, Support and Identity while the educational employees showed none.

TABLE 5

MATRIX OF SIGNIFICANT INTERCORRELATIONS AMONG THE FIFTEEN VARIABLES OF  
THE EDWARDS PERSONAL PREFERENCE SCHEDULE AND THE NINE VARIABLES  
OF THE ORGANIZATIONAL CLIMATE QUESTIONNAIRE COMPUTED FOR  
ALL INDUSTRIAL AND EDUCATIONAL PARTICIPANTS (N=263)

OCQ Variables (Ideal)	The Fifteen Variables of the <u>Edwards Personal Preference Schedule</u>													
	Ach.	Def.	Ord.	Exh.	Aut.	Aff.	Int.	Succ.	Dom.	Abase.	Nurt.	Change	Hetsx.	Aggres.
Structure	.18**	-.1969		.15*						.14*			.18**	
Respons.	.13*									.13*				
Reward	.24**									.14*			.14*	
Risk	.14*													
Warmth														
Support														
Standards	.19**					-.13*				.15*		-.14*		
Conflict	.15*													
Identity	.12*													

\*Significant;  $p < .05$   $\geq .1229$

\*\*Significant;  $p < .01$   $\geq .1721$



On the other hand, the educational employees showed 3 high-negative correlations on the EPPS Nurturance variable with the OCQ--(Ideal) dimensions of Support, Standards, and Conflict but the industrial employees failed to show any significant correlations between the EPPS Nurturance variable and the OCQ dimensions.

#### Comparison of Results with Former Research

Table 4 results were compared to results reported earlier by Litwin and Stringer. Only the Achievement and Affiliation variables were considered in making the comparison since the EPPS yields no measure which could be regarded as Power, such as that purportedly measured by the Thematic Apperception Test (TAT). (See page 31.)

The results reported by Litwin and Stringer showed that students and managers both had significant correlations of their Achievement scores and the OCQ--(Ideal) dimensions of Reward, Risk, and Identity. However, in the present study the industrial and educational groups had significantly high-positive correlations on Structure and Reward. On the variable of Affiliation, Litwin and Stringer found significant negative correlations between the OCQ--(Ideal) variable of Structure and their Affiliation measure. They also reported a significant positive correlation between the OCQ--(Ideal) dimensions of Warmth, Support, and Identity and the Affiliation measures of the students and managers used in the study.

TABLE 6

MATRIX OF SIGNIFICANT INTERCORRELATIONS AMONG THE FIFTEEN VARIABLES OF  
THE EDWARDS PERSONAL PREFERENCE SCHEDULE AND THE NINE VARIABLES  
OF THE ORGANIZATIONAL CLIMATE QUESTIONNAIRE COMPUTED FOR  
ALL INDUSTRIAL EMPLOYEES (N = 185)

OCQ Variables (Ideal)	The Fifteen Variables of the <u>Edwards Personal Preference Schedule</u>													
	Ach.	Def.	Ord.	Exh.	Aut.	Aff.	Int.	Succ.	Dom.	Abase.	Nurt.	Change	Hetsx.	Aggres.
Structure	.16*	-.24**	-.16*										.21**	
Respons.	.16*	-.15*												
Reward	.26**												.15*	
Risk														
Warmth														
Support		-.16*												
Standards	.22**								.16*					
Conflict	.21**													
Identity	.15*	-.15*											.15*	

\*Significant;  $p < .05$   $\geq .1474$

\*\*Significant;  $p < .01$   $\geq .2095$

TABLE 7

MATRIX OF SIGNIFICANT INTERCORRELATIONS AMONG THE FIFTEEN VARIABLES OF  
THE EDWARDS PERSONAL PREFERENCE SCHEDULE AND THE NINE VARIABLES  
OF THE ORGANIZATIONAL CLIMATE QUESTIONNAIRE COMPUTED FOR  
ALL EDUCATIONAL EMPLOYEES (N = 78)

OCQ Variables (Ideal)	The Fifteen Variables of the <u>Edwards Personal Preference Schedule</u>													
	Ach.	Def.	Ord.	Exh.	Aut.	Aff.	Int.	Succ.	Dom.	Abase.	Nurt.	Change	Hetsx.	Aggres.
Structure	.20*			.23*						.20*				
Respons.							-.21*							
Reward	.19*													
Risk	.23*													
Warmth												.21*		
Support			.26**		-.20*						-.20*			
Standards			.27**			.20*					-.18*			
Conflict											-.21*		.20*	.24*
Identity				.19*			-.20*							

\*Significant;  $p < .05 \geq .1811$

\*\*Significant;  $p < .01 \geq .2504$

However, the present study showed only one significant correlation between the EPPS Affiliation measures of the participants and the 9 dimensions of the OCQ--(Ideal). This correlation was noted when considering both educational and industrial employees collectively. A significant negative correlation was found between Affiliation and the Standards dimension of the OCQ--(Ideal). For the most part the results of the present study partially support the work done by Litwin and Stringer.

There are several possible explanations for the differences in the two studies. Two of the most possible are as follows: (1) the subjects used in the two studies were from entirely different types of organizations, and (2) the types of personality instruments in the two studies were very different. Litwin and Stringer used the Thematic Apperception Test to arrive at their measures of Achievement and Affiliation and the present study used the Edwards Personal Preference Schedule to identify these two dimensions. At the same time, those personality facets being measured by these two tests may be titled the same and be entirely different as to their true nature. This could account for a great deal of difference between the two studies.

### Results of Testing Hypothesis Four

The null hypothesis tested in proposition number four was as follows:

There is no significant difference in the amount of discrepancy noted between the 9 Organizational Climate Questionnaire variables, both Actual and Ideal, as reported by the industrial and educational employees.

In order to test null Hypothesis 4 it was necessary to compare the discrepancy scores of the industrial group with those reported by the educational group on all 9 dimensions of the OCQ--(Ideal) scores from their OCQ--(Actual) scores. The comparisons were made using a one-way analysis of variance on each of the 9 OCQ dimensions. The results of the computations are represented in Tables 8 through 16.

The results presented in Tables 8 through 16 indicate that the two groups of participants made significantly different ratings on 7 of the 9 OCQ variables. The most job dissatisfaction was reported on the Structure variable of the OCQ when the 263 participants were considered as one group. The 9 OCQ dimensions in descending order of job dissatisfaction were as follows: (1) Structure (the most dissatisfaction reported by the participants), (2) Reward, (3) Support, (4) Identity, (5) Responsibility, (6) Risk, (7) Warmth, (8) Standards, and (9) Conflict (the least amount of job dissatisfaction reported by the 263 participants.)

TABLE 8

A COMPARISON OF THE INDUSTRIAL AND EDUCATIONAL EMPLOYEES' DISCREPANCY  
SCORES FOR THE ORGANIZATIONAL CLIMATE QUESTIONNAIRE  
VARIABLE OF STRUCTURE

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	<u>F</u>	p*
Between Groups	62.71	1	62.71	4.726	<.01
Within Groups	3,463.47	261	13.27		
Total	3,526.18	262			

\*Significance level of F value

TABLE 9

A COMPARISON OF THE INDUSTRIAL AND EDUCATIONAL EMPLOYEES' DISCREPANCY  
SCORES FOR THE ORGANIZATIONAL CLIMATE QUESTIONNAIRE  
VARIABLE OF RESPONSIBILITY

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	<u>F</u>	p*
Between Groups	0.898	1	0.898	0.098	>.05
Within Groups	2,390.66	261	9.16		
Total	2,391.66	262			

\*Significance level of F value

TABLE 10

A COMPARISON OF THE INDUSTRIAL AND EDUCATIONAL EMPLOYEES' DISCREPANCY  
SCORES FOR THE ORGANIZATIONAL CLIMATE QUESTIONNAIRE  
VARIABLE OF REWARD

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	<u>F</u>	p*
Between Groups	397.52	1	397.52	35.272	<.001
Within Groups	2,941.47	261	11.27		
Total	3,338.99	262			

\*Significance level of F value

TABLE 11

A COMPARISON OF THE INDUSTRIAL AND EDUCATIONAL EMPLOYEES' DISCREPANCY  
SCORES FOR THE ORGANIZATIONAL CLIMATE QUESTIONNAIRE  
VARIABLE OF RISK

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	<u>F</u>	p*
Between Groups	92.03	1	92.03	13.654	<.001
Within Groups	1,759.14	261	6.74		
Total	1,851.17	262			

\*Significance level of F value

TABLE 12

A COMPARISON OF THE INDUSTRIAL AND EDUCATIONAL EMPLOYEES' DISCREPANCY  
SCORES FOR THE ORGANIZATIONAL CLIMATE QUESTIONNAIRE  
VARIABLE OF WARMTH

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	<u>F</u>	p*
Between Groups	76.40	1	76.40	13.595	<.001
Within Groups	1,466.82	261	5.62		
Total	1,543.22	262			

\*Significance level of F value

TABLE 13

A COMPARISON OF THE INDUSTRIAL AND EDUCATIONAL EMPLOYEES' DISCREPANCY  
SCORES FOR THE ORGANIZATIONAL CLIMATE QUESTIONNAIRE  
VARIABLE OF SUPPORT

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	<u>F</u>	p*
Between Groups	63.54	1	63.54	9.569	<.001
Within Groups	1,733.04	261	6.64		
Total	1,769.58	262			

\*Significance level of F value



TABLE 14

A COMPARISON OF THE INDUSTRIAL AND EDUCATIONAL EMPLOYEES' DISCREPANCY  
 SCORES FOR THE ORGANIZATIONAL CLIMATE QUESTIONNAIRE  
 VARIABLE OF STANDARDS

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	<u>F</u>	p*
Between Groups	16.06	1	16.06	4.101	<.01
Within Groups	1,023.12	261	3.92		
Total	1,039.18	262			

\*Significance level of F value

TABLE 15

A COMPARISON OF THE INDUSTRIAL AND EDUCATIONAL EMPLOYEES' DISCREPANCY  
 SCORES FOR THE ORGANIZATIONAL CLIMATE QUESTIONNAIRE  
 VARIABLE OF CONFLICT

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	<u>F</u>	p*
Between Groups	1.26	1	1.26	1.160	>.05
Within Groups	284.49	261	1.09		
Total	285.75	262			

\*Significance level of F value

TABLE 16

A COMPARISON OF THE INDUSTRIAL AND EDUCATIONAL EMPLOYEES' DISCREPANCY  
SCORES FOR THE ORGANIZATIONAL CLIMATE QUESTIONNAIRE  
VARIABLE OF IDENTITY

Source of Variation	Sum of Squares	Degrees of Freedom	Mean Square	<u>F</u>	p*
Between Groups	235.47	1	235.47	45.109	<.001
Within Groups	1,362.42	261	5.22		
Total	1,597.89	262			

\*Significance level of F value

When the 9 dimensions of the OCQ were compared showing the job dissatisfaction on each as reported by the industrial and educational personnel, some differences were noted. But for the most part, they indicated the most discrepancy on identical variables. For instance, both groups showed the most discrepancy on the variable of Structure, next was Reward (for both groups), and the variable of Support was third (for both groups.)

#### Summary of Results Presented in Tables Eight Through Sixteen

A summary of the results of Tables 8 through 16 is presented in Table 17 along with the means ( $\bar{X}$ ) and standard deviations (SD) of the discrepancy scores for each group. The final comparisons of the two groups can be summarized in the following statements:

1. Industrial employees were significantly more discrepant on Standards.
2. Educational employees were significantly more discrepant on Structure, Reward, Risk, Warmth, Support, and Identity.
3. Responsibility and Conflict showed no significant differences even though the industrial people showed more discrepancy on the Responsibility variable and the educational group showed more discrepancy on the Conflict dimension, the results were not statistically significant.

TABLE 17

## SUMMARY OF TABLES EIGHT THROUGH SIXTEEN

OCQ Variable	Groups				t-value	F-value	p*
	Industrial		Educational				
	$\bar{X}$	SD	$\bar{X}$	SD			
Structure	6.64	3.92	8.04	5.05	2.17	4.73	<.01
Responsibility	3.11	3.23	2.97	3.32	0.31	0.10	>.05
Reward	4.25	3.44	7.08	3.54	5.94	35.27	<.001
Risk	2.03	2.68	3.46	2.92	3.70	13.65	<.001
Warmth	1.56	2.75	3.04	3.04	3.69	13.59	<.001
Support	3.37	2.55	4.58	3.01	3.09	9.57	<.001
Standards	1.91	2.28	1.25	2.45	2.03	4.10	<.01
Conflict	0.86	1.91	1.13	1.82	1.08	1.16	>.05
Identity	2.33	2.05	4.27	2.16	6.72	45.11	<.001

\*Significance level

Results of Testing Hypotheses Five and Six

The null hypotheses tested in propositions number 5 and 6 were as follows:

Hypothesis 5

There is no statistically significant difference between the need dispositions of those industrial employees who showed the least discrepancy on the 9 dimensions of the Organizational Climate Questionnaire--(Actual minus Ideal) and those who showed the most discrepancy on the same dimensions.

Hypothesis 6

There is no statistically significant difference between the need dispositions of those educational employees who showed the least discrepancy on the 9 dimensions of the Organizational Climate Questionnaire--(Actual minus Ideal) and those who showed the most discrepancy on the same dimensions.

These were the most difficult of all the hypotheses to test. There were two problems in making the statistical test. First, it was necessary to determine which employees from the two organizational settings were the most dissatisfied with their jobs and which were the least dissatisfied. In order to identify these two groups, it was necessary to work with one group at a time. Using the scores of the 185 industrial employees a discrepancy score was obtained by subtracting the scores reported on the Structure dimension of the OCQ--(Actual) from those reported on the OCQ--(Ideal). After these discrepancy scores were computed it was necessary to arrange them in descending order, and take the upper 25, assumed to be the most dissatisfied with their jobs since their discrepancy scores

were the highest, and the bottom 25, assumed to be the least dissatisfied with their jobs since their OCQ discrepancy scores were the lowest computed. For further computations the two extremes of the distribution of discrepancy scores were compared and the middle group omitted in order to maximize the differences between the two groups.<sup>1</sup> All 15 EPPS variables were considered for both the high and low groups on each of the 9 OCQ variables. The mean ( $\bar{X}$ ) and standard deviation (SD) of the EPPS variables were computed on each of the 9 OCQ dimensions. Once the procedure had been completed for the industrial subjects, the 78 educational employees were considered as a group and the same statistical procedures were completed for their most dissatisfied and least dissatisfied employees on each of the 9 OCQ dimensions. The results of the computations made for the industrial and educational employees are shown in Tables 18 and 19, respectively.

The results shown in Tables 18 and 19 indicate that most of the EPPS variables were scored differently on each of the dimensions by the most dissatisfied workers, those who had the highest discrepancy scores, than they were by the least dissatisfied workers. This was true for both the industrial and the educational employees. However, a simple perusal of the tables cannot identify those which are

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<sup>1</sup>Kerlinger, Foundations, p. 338.

statistically different at or beyond the .05 level. A Student's t-test was computed for the various means of the EPPS variables on each of the 9 dimensions of the Organizational Climate Questionnaire. The significant results noted for the two groups of subjects are presented in Table 20.

The interpretation of Table 20 involves the consideration of two different dimensions--one on the EPPS and one on the OCQ. For example, the first significant difference noted for the industrial workers shows that the most dissatisfied workers scored significantly higher than the least dissatisfied workers on the EPPS Deference variable when they were being considered on the Structure dimension of the OCQ. Another example would be the first significant difference noted for the educational employees. The results indicate that the most dissatisfied educational employees scored significantly lower than the least dissatisfied workers on the EPPS Order variable when they were being considered on the Structure dimension of the OCQ.

The results presented in Table 20 allowed the researcher to reject the null hypotheses being tested and conclude that there were significant differences among the need patterns of the most dissatisfied and least dissatisfied industrial and educational employees on several dimensions of the OCQ instrument.

TABLE 18

DESCRIPTIVE STATISTICS OF THE FIFTEEN EDWARDS PERSONAL PREFERENCE SCHEDULE VARIABLES ON EACH OF THE NINE ORGANIZATIONAL CLIMATE QUESTIONNAIRE DIMENSIONS COMPARING THE MOST DISSATISFIED EDUCATIONAL EMPLOYEES (N=25) WITH THE LEAST DISSATISFIED EMPLOYEES (N=25)

The 15 EPPS Variables	The Nine Dimensions of the Organizational Climate Questionnaire																	
	Structure		Responsib.		Reward		Risk		Warmth		Support		Standards		Conflict		Identity	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
MOST DISSATISFIED EDUCATIONAL EMPLOYEES																		
Achievement	17.64	4.93	18.36	4.64	16.40	4.30	17.16	4.29	17.28	4.94	17.04	3.62	16.72	4.47	18.80	4.44	16.88	4.13
Deference	13.24	2.98	14.12	4.12	13.44	3.03	13.32	3.84	13.44	3.20	14.00	3.58	14.64	3.56	13.92	3.72	14.24	3.70
Order	10.92	4.55	13.44	4.80	12.48	5.36	13.00	4.95	13.64	5.47	13.00	4.73	14.80	5.87	14.36	4.58	13.20	5.00
Exhibitionism	14.24	3.53	12.72	3.89	13.84	4.05	12.60	3.86	13.32	3.96	13.28	3.22	12.56	4.70	13.96	4.00	13.56	4.17
Autonomy	11.56	3.57	12.12	4.13	12.20	3.24	12.88	4.12	12.04	4.36	12.12	3.83	10.96	3.42	12.80	3.75	11.68	4.05
Affiliation	13.64	3.98	14.12	3.98	14.52	3.92	12.68	4.60	13.72	4.37	13.48	3.75	14.08	3.52	13.52	4.16	14.36	4.52
Intracception	15.72	4.95	16.36	4.36	17.24	4.67	17.96	4.48	16.16	4.45	16.28	4.31	15.80	5.67	15.84	4.19	17.08	4.45
Succorance	9.84	5.10	8.76	5.52	9.60	4.96	8.72	4.83	9.36	4.59	9.32	4.49	9.92	4.34	8.48	3.56	9.48	4.78
Dominance	18.04	4.85	17.96	4.76	17.56	3.90	19.00	4.36	18.92	4.47	17.72	3.34	17.68	4.29	18.44	3.98	18.40	5.20
Abasement	9.52	4.87	9.48	5.43	10.48	4.48	10.64	5.33	10.00	4.52	10.44	4.37	10.32	5.60	9.00	4.89	9.48	4.65
Nurturance	13.12	4.07	12.48	4.18	14.00	4.35	12.88	4.40	13.08	3.52	13.48	3.70	14.04	3.31	12.60	4.26	13.24	4.12
Change	15.96	4.89	16.20	4.81	15.76	4.73	15.16	4.32	14.76	4.90	14.84	4.78	14.96	4.83	15.40	4.54	15.52	4.85
Endurance	16.20	4.66	16.12	4.22	15.28	4.76	16.16	3.02	16.44	4.31	16.64	3.46	16.92	4.92	16.76	4.59	16.36	3.43
Heterosex'ity	16.48	5.62	13.88	6.35	14.56	7.17	13.80	6.18	14.72	5.96	14.48	6.33	13.12	6.98	14.08	6.19	14.40	5.69
Aggression	13.20	5.12	10.96	5.50	12.08	4.80	13.16	5.49	12.64	5.15	13.12	5.23	11.04	5.14	11.44	5.32	11.56	5.52
LEAST DISSATISFIED EDUCATIONAL EMPLOYEES																		
Achievement	17.64	3.96	17.44	3.51	18.28	4.39	16.64	5.08	19.36	4.05	18.72	4.12	17.72	5.53	17.76	4.32	19.08	4.36
Deference	12.72	3.12	12.88	2.65	12.72	2.79	13.84	2.95	12.08	3.20	13.68	3.34	13.32	3.59	12.96	3.19	12.96	3.35
Order	13.56	4.97	13.20	5.66	12.88	5.25	12.76	5.31	13.44	5.60	14.04	4.62	12.80	4.30	12.48	5.24	13.60	5.68
Exhibitionism	11.00	4.31	13.92	4.56	13.24	4.94	13.56	5.31	12.84	4.91	12.56	4.94	13.56	5.22	12.16	4.84	13.80	5.24
Autonomy	13.12	5.62	11.36	5.63	12.52	4.05	10.76	4.47	12.80	5.54	12.16	4.84	12.64	4.17	11.76	4.75	13.32	5.76
Affiliation	12.72	4.19	13.08	4.34	11.88	4.24	14.08	4.28	11.64	4.12	13.32	4.51	12.56	5.00	13.28	4.62	12.60	4.14
Intracception	14.04	6.02	14.40	5.12	14.56	5.64	14.72	3.68	13.56	5.19	14.32	6.15	14.96	4.28	15.88	5.52	13.96	4.77
Succorance	8.88	4.86	10.40	4.33	8.28	4.74	10.40	5.17	7.68	5.01	9.32	4.41	9.72	5.66	10.16	5.06	8.12	4.98
Dominance	18.88	5.04	18.16	6.16	18.16	6.00	17.56	4.87	19.28	5.89	18.68	4.46	18.48	5.95	18.08	5.09	19.32	5.63
Abasement	11.40	5.85	13.04	3.71	11.68	5.26	11.72	4.30	11.36	5.96	11.24	5.99	12.08	4.32	12.56	4.27	10.72	4.80
Nurturance	13.52	3.81	13.84	3.95	13.20	4.60	14.16	4.43	12.20	4.36	13.96	4.41	12.72	4.99	14.16	4.38	12.68	4.21
Change	15.76	3.54	14.84	3.92	15.68	3.53	16.40	4.20	16.28	4.10	16.24	3.73	16.72	4.47	16.00	3.59	17.16	3.86
Endurance	15.56	4.62	16.24	4.87	15.52	3.80	16.24	5.50	15.80	4.40	16.47	5.09	15.40	4.69	16.00	3.14	16.08	4.64
Heterosex'ity	13.72	5.64	12.40	5.17	12.72	6.05	14.16	5.65	13.12	5.26	11.88	5.38	13.80	5.55	12.28	5.28	12.56	5.58
Aggression	11.92	5.09	11.68	4.51	12.96	4.92	10.24	3.79	12.76	4.87	10.56	3.95	12.48	4.54	11.52	4.68	11.40	4.82

TABLE 19

DESCRIPTIVE STATISTICS OF THE FIFTEEN EDWARDS PERSONAL PREFERENCE SCHEDULE VARIABLES ON EACH OF THE NINE ORGANIZATIONAL CLIMATE QUESTIONNAIRE DIMENSIONS COMPARING THE MOST DISSATISFIED INDUSTRIAL EMPLOYEES (N=25) WITH THE LEAST DISSATISFIED EMPLOYEES (N=25)

The 15 EPPS Variables	The Nine Dimensions of the Organizational Climate Questionnaire																	
	Structure		Responsib.		Reward		Risk		Warmth		Support		Standards		Conflict		Identity	
	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD	$\bar{X}$	SD
MOST DISSATISFIED INDUSTRIAL EMPLOYEES																		
Achievement	15.08	2.97	16.44	4.07	16.36	4.23	16.44	4.15	16.40	3.94	16.56	3.94	16.92	4.55	17.68	3.87	17.04	3.51
Deference	15.40	3.04	13.72	3.13	14.40	2.65	14.40	2.78	13.52	3.16	14.48	2.83	12.96	3.19	13.08	2.91	14.44	3.07
Order	15.68	3.29	14.72	3.62	14.08	3.13	13.76	3.86	13.12	4.66	13.60	3.70	13.92	3.43	13.32	3.89	13.76	4.18
Exhibitionism	11.64	4.13	13.52	3.92	12.28	3.93	11.76	3.97	13.32	3.74	12.12	3.03	13.08	3.51	13.04	4.02	12.84	4.54
Autonomy	12.00	3.98	12.52	4.19	12.48	4.03	12.68	3.53	12.48	4.48	12.72	3.60	12.08	3.97	13.28	3.80	12.84	3.29
Affiliation	14.56	3.33	13.12	4.53	12.40	3.99	14.36	4.15	13.84	4.19	13.20	3.42	14.12	3.93	14.68	5.23	14.12	4.21
Intracception	15.12	4.53	15.48	5.51	15.16	4.62	14.80	4.34	15.16	3.67	15.16	4.37	13.92	4.45	14.24	4.98	16.40	4.54
Succorance	10.16	3.85	9.28	3.97	10.20	3.92	10.12	4.42	10.16	3.75	10.04	3.85	9.95	3.87	8.96	3.75	8.84	3.73
Dominance	17.40	3.20	16.28	4.81	17.48	4.51	17.24	3.43	16.08	4.95	16.44	5.32	17.96	5.39	18.12	4.02	18.76	4.39
Abasement	15.72	4.43	14.84	4.37	15.72	3.59	15.72	4.25	13.92	4.36	15.04	4.53	13.08	4.23	13.84	5.41	14.28	4.72
Nurturance	15.04	3.50	12.84	5.03	12.92	4.66	14.56	5.07	13.60	4.93	13.40	4.88	12.36	4.34	11.84	5.36	13.52	5.49
Change	14.64	4.97	14.08	5.16	13.96	4.89	14.76	4.48	15.32	5.88	13.88	6.17	14.24	4.34	16.00	3.37	16.00	5.61
Endurance	14.92	4.34	16.16	5.08	16.20	3.97	14.16	4.26	15.76	5.04	16.56	5.00	15.76	5.13	15.76	4.15	14.44	4.96
Heterosex'ity	9.20	6.65	12.80	6.06	10.92	6.35	11.68	7.44	13.96	6.65	12.16	7.65	15.80	6.79	12.08	7.89	9.96	7.12
Aggression	11.48	4.91	12.92	4.79	12.00	4.27	11.96	5.13	13.04	4.34	13.64	5.19	13.20	4.19	12.76	4.27	11.40	4.07
LEAST DISSATISFIED INDUSTRIAL EMPLOYEES																		
Achievement	17.08	4.49	15.68	4.81	17.80	4.19	17.80	3.62	16.08	4.34	17.16	4.92	17.24	3.92	16.64	4.79	16.96	4.22
Deference	12.48	3.27	12.64	3.55	12.76	3.74	13.20	4.01	12.60	3.32	12.56	3.32	12.20	3.75	12.72	4.34	11.96	3.59
Order	14.32	4.91	13.48	4.50	14.00	4.69	13.76	4.65	12.32	4.90	12.68	4.51	13.24	4.30	14.16	4.99	13.72	4.32
Exhibitionism	12.24	4.94	11.92	4.70	12.16	5.80	12.24	3.70	13.04	5.36	13.28	5.68	11.80	4.80	11.96	4.32	11.88	4.90
Autonomy	13.04	3.54	13.36	3.41	13.08	4.19	13.44	4.11	12.36	4.05	13.48	3.91	12.60	4.09	12.28	3.85	13.16	4.13
Affiliation	13.08	3.76	13.48	3.49	14.28	3.47	12.76	3.55	14.04	3.59	13.96	3.38	14.04	4.39	14.24	3.36	13.92	3.53
Intracception	13.24	5.75	15.96	5.18	13.36	4.91	12.40	5.86	14.16	5.02	13.44	4.20	11.96	4.33	12.96	5.87	13.32	5.03
Succorance	8.56	4.11	8.72	5.52	10.64	4.93	8.44	4.18	10.96	5.57	9.48	3.71	9.80	4.37	9.20	4.56	9.56	4.59
Dominance	18.48	5.20	16.68	5.57	16.84	4.82	17.40	4.25	16.96	3.91	18.20	4.50	18.52	4.13	18.68	5.09	17.36	4.36
Abasement	12.00	5.02	12.84	4.78	12.84	5.92	12.76	4.80	12.88	5.28	11.92	5.82	15.04	6.07	13.56	6.35	14.04	5.33
Nurturance	11.72	5.12	13.60	5.56	13.84	6.34	12.32	3.84	15.04	5.41	12.68	5.51	14.76	5.27	13.32	5.44	13.96	5.18
Change	15.08	4.73	15.36	4.13	13.24	4.41	14.52	4.44	14.60	4.26	15.08	4.25	12.84	3.84	13.88	4.82	13.76	4.78
Endurance	16.64	4.12	16.08	4.12	14.52	5.42	17.44	3.31	14.72	5.65	16.20	4.42	16.76	5.25	14.68	4.78	16.68	5.60
Heterosex'ity	14.32	7.33	14.24	7.06	15.12	6.65	16.00	8.23	13.40	6.22	13.40	7.07	12.88	7.50	15.48	7.01	13.00	7.51
Aggression	12.52	6.10	10.76	4.84	10.72	4.77	10.44	6.02	11.52	4.84	11.56	5.29	12.12	6.19	11.36	5.51	12.28	5.71



TABLE 20

SIGNIFICANT DIFFERENCES NOTED BETWEEN THE NEED PAT-  
TERNS OF THE MOST DISSATISFIED AND LEAST DIS-  
SATISFIED EMPLOYEES ON EACH OF THE NINE  
DIMENSIONS OF THE ORGANIZATIONAL  
CLIMATE QUESTIONNAIRE

Statement of Differences	Statistical Results
<b>The Most Dissatisfied Industrial Workers had Significantly . . .</b>	
1. Higher DEFERENCE on STRUCTURE	t = 2.92, df=48;p <.05
2. Higher ABASEMENT on STRUCTURE	t = 2.72, df=48;p <.05
3. Higher NURTURANCE on STRUCTURE	t = 2.62, df=48;p <.05
4. Lower HET'SXLTY on STRUCTURE	t = 2.53, df=48;p <.05
5. Higher ABASEMENT on REWARD	t = 2.04, df=48;p <.05
6. Lower HET'SXLTY on REWARD	t = 2.24, df=48;p <.05
7. Lower HET'SXLTY on RISK	t = 1.91, df=48;p <.05
8. Lower HET'SXLTY on STANDARDS	t = 6.24, df=48;p <.001
9. Higher HET'SXLTY on IDENTITY	t = 2.23, df=48;p <.05
<b>The Most Dissatisfied Educational Workers had Significantly . . .</b>	
1. Lower ORDER on STRUCTURE	t = 1.92, df=48;p <.05
2. Higher EXHIB'TN on STRUCTURE	t = 2.85, df=48;p <.01
3. Lower ABASEMENT on RESPON.	t = 2.65, df=48;p <.05
4. Higher INT'CEPT. on RISK	t = 2.74, df=48;p <.05
5. Higher AGGRESS. on RISK	t = 2.14, df=48;p <.05
6. Lower ABASEMENT on CONFLICT	t = 2.69, df=48;p <.05

The implications of the results are obvious but need some expansion and clarification concerning their interpretations. The results of Hypotheses 5 and 6 indicated that there were some significant differences among the need patterns of the most dissatisfied and the least dissatisfied workers in the industrial and educational organizations on some dimensions of the OCQ. However, this is not to imply that applicants who scored likewise on the EPPS and the OCQ would

experience a high degree of job satisfaction or dissatisfaction. It does imply that such research should be conducted to determine the possibility of using the two instruments in conjunction with each other for purposes of screening potential employees and/or for attempting to place employees in job areas more compatible with their dominant needs.

### Summary of Hypotheses Testing

The researcher was able to reject the null hypothesis of all 6 of the propositions tested in the study. The rejection of these null hypotheses led to certain conclusions and implications for further research which are discussed in the next chapter. The results from testing the hypotheses divide themselves into three distinct phases of the investigation. These include (1) the establishment of the relationship(s) among the 15 variables of the EPPS and the 9 dimensions of the OCQ, (2) the determination of the amount of dissatisfaction being experienced by the industrial and educational employees when compared on each of the dimensions of the OCQ, and (3) a comparison of the need patterns of the most dissatisfied industrial and educational workers and the least dissatisfied industrial and educational workers on each of the OCQ dimensions.

The results of testing Hypotheses 1, 2, and 3 established the relationships among the 15 EPPS variables and the 9 OCQ dimensions. Significant correlations were found among the Structure, Responsibility, Reward, Standards, and Identity

dimensions of the OCQ and the Achievement, Deference, Dominance, and Heterosexuality variables of the EPPS. These findings failed to support the findings of Litwin and Stringer on the variable of Affiliation. However, this could well be the result of the differences in the Thematic Apperception Test (TAT) used by Litwin and Stringer and the Edwards Personal Preference Schedule (EPPS) used in this study, since the characteristic nature of the TAT is that of a projective test and the characteristic nature of the EPPS is that of a non-projective test. With the relationship established between the organizational climate of the employees and their need patterns, the researcher was ready to proceed to the next phase of the study--the testing of Hypothesis 4.

In testing Hypothesis 4 the need patterns of the industrial and educational subjects were ignored and the two groups were simply compared on the amount of dissatisfaction they were experiencing on 9 different dimensions of the organizational comparisons. The results of the one-way ANOVAs computed on each of the dimensions showed that the two groups of employees differed on 7 of the 9 dimensions. The dissatisfaction level of the industrial and educational employees was significantly different on the organizational variables of Structure, Reward, Risk, Warmth, Support, Standards, and Identity. However, no significant differences were observed on the two organizational variables of Responsibility and Conflict. The detection of

these significant differences led to an attempt by the investigator to determine possible causes for the differences in the dissatisfaction level of the two groups.

The results of testing Hypotheses 5 and 6 shed some light on the reasons for the dissatisfaction level of the different employees. The need patterns of the most dissatisfied industrial and educational employees were compared to the need patterns of the least dissatisfied industrial and educational employees on each dimension of the OCQ. When the mean values of the need patterns were compared for the most dissatisfied and the least dissatisfied employees, patterns began to emerge from the data collected on the Edwards Personal Preference Schedule and the Organizational Climate Questionnaire. Nine significant differences were observed for the industrial employees and 6 were observed for the educational employees. A synthesis of these results showed that the variables of Deference, Abasement, Heterosexuality, Intraception, and Aggression on the EPPS and the OCQ dimensions of Structure, Responsibility, Reward, Risk, Standards, Conflict, and Identity showed the most significant cause-effect relationships. These findings substantiated the results reported for Hypotheses 1, 2, and 3. The conclusions drawn from these findings are reported in the next chapter.

### Additional Findings on Satisfaction-Dissatisfaction

Results of examining the climate areas which reveal the most dissatisfaction for both the industrial and educational employees separately and also collectively indicate that much of the job dissatisfaction is found in identical variables although in separate climates. Areas of job dissatisfaction reported in descending order appeared as follows:

Industrial employees areas of job dissatisfaction:  
(1) Structure, (2) Reward, (3) Support, (4) Responsibility, (5) Identity, (6) Risk, (7) Standards, (8) Warmth, and (9) Conflict.

Educational employees areas of job dissatisfaction:  
(1) Structure, (2) Reward, (3) Support, (4) Identity, (5) Risk, (6) Warmth, (7) Responsibility, (8) Conflict, and (9) Standards.

Industrial and Educational employees areas of job dissatisfaction: (1) Structure, (2) Reward, (3) Support, (4) Responsibility, (5) Identity, (6) Risk, (7) Warmth, (8) Standards, and (9) Conflict.

One can readily see that the focal areas of job dissatisfaction for both groups are Structure, Reward, and Support.

Table 21 graphically reveals these ratings of Satisfaction-Dissatisfaction in relation to the climate when perceived by the two separate groups--educational workers and industrial workers--as measured by the OCQ climate dimensions.

TABLE 21

SATISFACTION-DISSATISFACTION RATINGS OF GROUPS FROM THE NINE  
DIMENSIONS OF THE ORGANIZATIONAL CLIMATE QUESTIONNAIRE

OCO Variable	Statistics (Descriptive	Combined Groups (N = 263)	Rank Order of Means	Industrial (N = 185)	Rank Order of Means	Educational (N = 78)	Rank Order of Means
Structure	Mean SD	7.20 5.82	1	6.64 3.92	1	8.04 5.05	1
Responsibility	Mean SD	3.18 4.41	4	3.11 3.23	4	2.97 3.32	7
Reward	Mean SD	5.21 4.85	2	4.25 3.44	2	7.08 3.54	2
Risk	Mean SD	2.51 4.31	6	2.03 2.68	6	3.46 2.92	5
Warmth	Mean SD	2.09 3.93	7	1.56 2.75	8	3.04 3.03	6
Support	Mean SD	3.84 3.72	3	3.37 2.55	3	4.58 3.01	3
Standards	Mean SD	1.77 3.15	8	1.91 2.28	7	1.25 2.45	9
Conflict	Mean SD	1.00 2.59	9	0.86 1.91	9	1.13 1.82	8
Identity	Mean SD	2.90 3.19	5	2.33 2.05	5	4.27 2.16	4

## CHAPTER V

### SUMMARY, CONCLUSIONS, AND IMPLICATIONS

#### Summary

A Canonical Correlation Analysis, a Pearson's Product Moment Correlation, a one-way Analysis of Variance (ANOVA), and a Student's t-test were used to test 6 hypotheses concerning the relationships among the 15 variables of the Edwards Personal Preference Schedule and the Organizational Climate Questionnaire's 9 dimensions, the differences among the dissatisfaction levels of industrial and educational employees on 9 dimensions of organizational climate, and the differences in the need patterns of the most dissatisfied and the least dissatisfied employees from the educational and the industrial organizations. A total of 185 managerial and professional employees of an industrial organization located in Southwestern Oklahoma and 78 managerial and professional employees of a Midwestern university acted as subjects in determining the type of need patterns associated with high and low levels of job dissatisfaction.

The results of testing the first 3 hypotheses showed that the EPPS variables and the 9 OCQ dimensions correlated

in several ways and that the EPPS would probably be a good instrument to use in future research of this nature. The fourth hypothesis showed that the amount of job dissatisfaction being experienced by the industrial employees and the amount of job dissatisfaction being experienced by the educational employees was significantly different on 7 of the 9 dimensions of the OCQ. The results of testing Hypotheses 5 and 6 showed that the need patterns of the most dissatisfied industrial and educational employees and the need patterns of the least dissatisfied employees differed in several ways. These differences are presented in Table 20 and are explained in the summary of the hypotheses testing. The results observed by the researcher in the conduct of this study led to the conclusions shown in the following section of the study.

#### Conclusions Made from the Results Observed

The results obtained from testing the 6 hypotheses, the results reported by earlier research efforts, and the additional findings presented in the Appendices served as the basis for making the following conclusions:

1. It was concluded that there was a significant relationship among the 15 EPPS variables and the 9 OCQ dimensions. These significant correlations were found among the Structure, Responsibility, Reward, Standards, and Identity dimensions of the OCQ and the Achievement, Deference, Dominance, and Heterosexuality variables of the EPPS.



2. It was concluded that for industrial managers and professional employees the OCQ variables of Structure, Responsibility, Reward, Standards, Conflict, and Identity were significantly related to the Achievement variable on the EPPS. Litwin and Stringer (1968) found similar organizational climate preferences for Achievement-oriented people. Similar studies need to attempt to replicate these findings. The significance of this is to attempt to provide a climate which will tend to arouse the dominant needs of the individual.
3. It was concluded that managers and professional employees in educational and industrial climates had Affiliation scores which correlated negatively with the OCQ Standards dimension. Litwin and Stringer also found Affiliation needs negatively correlated with the Standards dimension.
4. It was concluded that dissatisfaction levels of industrial and educational managers and professional employees differed on 7 of the 9 OCQ variables. Industrial employees showed significantly more discrepancy on Standards while educational employees showed significantly more discrepancy on Structure, Reward, Risk, Warmth, Support, and Identity.
5. It was concluded that need patterns emerge when comparing the most dissatisfied industrial and educational employees. Suggestive cause-effect relationships appeared to emerge between EPPS variables of Deference, Abasement, Heterosexuality, Intraception, and Aggression with OCQ dimensions of Structure, Responsibility, Reward, Risk, Standards, Conflict, and Identity. This suggestive evidence is perhaps the most significant finding of this study. Further analysis needs to be conducted comparing dissatisfaction levels in other types of organizations. The ramifications of this suggestive phenomenon would include isolating these areas in which the most perceived dissatisfaction is being experienced.

The significant differences observed between the need patterns and dissatisfaction levels of employees in relation to the motivational aspects of the organizational climate as

measured by the 9 variables of the OCQ are perhaps the major contribution of this study.

The most dissatisfied industrial employees showed significantly high need dispositions for Deference, Abasement, and Nurturance when examined on the Structure variable. A suggestive explanation for this phenomenon could be that these need variables are more compatible with a social-oriented environment and thus not congruent with the constraints of the organization as expressed through the Structure variable.

Similar incongruencies exist when examining the most dissatisfied educational employees. Significant need patterns were observed revealing lower Order needs on the Structure variable. This, too, suggests an incongruency between needs and climate. Individuals with low Order needs perhaps find the constraints of the organizational structure less compatible. Also, the findings of higher Exhibition on the Structure variable suggest incongruency between this need and the climate. To fulfill the needs of low Order and high Exhibition, a more permissive environment would be more desirable.

Based on the assumptions that in general American workers possess both achievement and affiliation needs and that achievement oriented people are not always more productive than affiliation oriented people, some interesting conclusions can be suggested. Basically, the distinction depends on the nature of the task and the amount of feedback received. Realizing that some needs are consistently more prominent in the makeup of an

individual than others, attention needs to be given to measuring this "prominent need makeup" and be cognizant of providing the kind of climate compatible with these need dispositions. The literature purports that people with needs for achievement will work harder when they get feedback concerning what is right and wrong about the way they are working; whereas, individuals with needs for affiliation will work harder when they are complimented for their attitudes. Further research is needed to more fully examine these propositions.

#### Implications for Further Research

The results of this study, the results of former research, and the questions which arose during the investigation of this study led to the following suggestions and implications for future research effort:

1. Instruments: Effort to determine need patterns and climate variables could be examined utilizing different personality tests as well as organizational climate measures. Comparison of the Thematic Apperception Test and the EPPS with dimensions of the OCQ would appear to be beneficial.
2. Subjects: It would be feasible to attempt to repeat the findings of this study utilizing subjects in other types of organizations such as military, religious, government-service organiza-

tions, etc. The query concerning the possibility of individuals with certain need patterns gravitating to specific organizations could also be examined.

3. Situations: Approach and methodology could be modified in a similar study to ascertain need patterns and climate variables. An experimental study designed to manipulate OCQ variables, such as Reward, could perhaps be effective in studying need-climate congruency.

### Concluding Remarks

The researcher of this study would desire that the results of this study can be applied in organizations in the future. Certainly a need exists to more fully utilize the human potential in organizations. The attempt to build an organizational climate which is congruent with one's dominant needs pattern in order to arouse motivation and thereby effect a more productive worker is one of much concern in business and educational organizations today. The researcher hopes that this study may lead to other similar research efforts.

### Addendum

Additional comments relative to application of the findings of this study seem pertinent. The overall goal of this research has been to attempt to devise tentative climate conditions which would be congruent with certain individual needs dispositions in order to arouse motivation and effect a more productive worker. A need exists in organizations today to develop the optimal climate whereby individual needs are matched with the climate dimensions necessary for arousing motivation.

Organizations could use instruments such as those used in this study--EPPS and OCQ--in an effort to diagnose the needs dispositions of their workers as well as their perception of their existing climate dimensions. On the basis of this data one could determine the extent of congruency between needs and climate that existed in the organization. After assessing the needs-climate situation a course of action could be planned and implemented which would either (1) restructure the work environment to make it more compatible with the dominant needs of that particular worker or (2) move the employee to an already existing environment that would be compatible with his needs. For example, an individual with high needs for achievement could be placed in a work environment where he would receive feedback, responsibility, risk, etc. Application of this "needs-climate congruency" concept in an

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effort to arouse motivation and effect a more productive worker appears to have significant value to organizations attempting to further develop human potential.

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## APPENDIX A

### INSTRUMENTS USED IN TESTING THE HYPOTHESES:

EPPS DENIAL

OCQ-- (ACTUAL)

OCQ-- (IDEAL)

## Exhibit 1

## THE PSYCHOLOGICAL CORPORATION

INCORPORATED IN 1921

304 EAST 45TH STREET

NEW YORK, N. Y. 10017

(212) 679-7070

July 18, 1972

Mrs. Marilyn J. Lair  
205 Elmhurst Drive  
Chickasha, Oklahoma 73018

Dear Mrs. Lair:

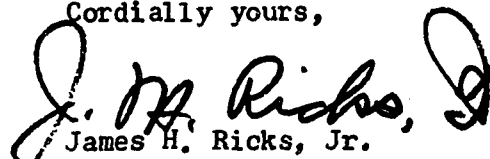
Thank you for your letter of June 30 requesting permission to include the Edwards Personal Preference Schedule in your doctoral dissertation.

We can understand your wish to include a copy of the Edwards Personal Preference Schedule with your thesis in order to provide full documentation. Let me say at once that if any member of your faculty committee who must read the thesis is not already acquainted with the EPPS, there is no objection to your providing him with a loose copy of the instrument itself and/or the manual along with his copy of the thesis for reading.

There is general agreement, however, that actual copies of tests should not be bound in, nor permanently filed with, theses and dissertations. Professors who are thesis advisors have concurred in the belief that it is unwise to place test copies in libraries--even within the bindings of a thesis--where the public can have free and unsupervised access to them. Beyond this, many dissertations now are available through University Microfilms which does not restrict their availability to professional persons. Any professional person who reads the dissertation would know how to gain access to the tests used if he wants and needs to do so.

We are sorry that we are unable to give you the permission you request, but we are sure you understand the reasons why it is undesirable to make test content generally available.

Cordially yours,



James H. Ricks, Jr.  
Associate Director  
Test Division

JHR/jib

P.S. An extra copy of this letter is enclosed in case you need to pass it along to your advisor or committee.

Encl.

## Exhibit 2

Subject's Number \_\_\_\_\_

ORGANIZATIONAL CLIMATE QUESTIONNAIRE<sup>1</sup>--(ACTUAL)

INSTRUCTIONS: We are interested in your feelings about certain aspects of your work atmosphere. Please answer each question as you feel work conditions actually exist in this organization at the present time. Read each statement and circle the appropriate number according to the following code:

Number Codes      1 = Definitely Agree  
                      2 = Inclined to Agree  
                      3 = Inclined to Disagree  
                      4 = Definitely Disagree

1. The jobs in this Organization are clearly defined and logically structured. . . 1      2      3      4
2. In this Organization it is sometimes unclear who has the formal authority to make a decision. . . 1      2      3      4
3. The policies and organization structure of the Organization have been clearly explained. . . 1      2      3      4
4. Red-tape is kept to a minimum in this Organization. . . 1      2      3      4
5. Excessive rules, administrative details, and red-tape make it difficult for new and original ideas to receive consideration. . . 1      2      3      4
6. Our productivity sometimes suffers from lack of organization and planning. . . 1      2      3      4
7. In some of the projects I've been on, I haven't been sure exactly who my boss was. . . 1      2      3      4
8. Our management isn't so concerned about formal organization and authority, but concentrates instead on getting the right people together to do the job. . . 1      2      3      4

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<sup>1</sup>George H. Litwin and Robert A. Stringer, Motivation and Organizational Climate (Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1968), pp. 204-207.

## Number Codes

- 1 = Definitely Agree  
 2 = Inclined to Agree  
 3 = Inclined to Disagree  
 4 = Definitely Disagree

9. We don't rely too heavily on individual judgment in this Organization; almost everything is double-checked. . .  
1      2      3      4
10. Around here management resents your checking everything with them; if you think you've got the right approach you just go ahead. . . 1      2      3      4
11. Supervision in this Organization is mainly a matter of setting guidelines for your subordinates; you let them take responsibility for the job. . . 1      2      3      4
12. You won't get ahead in this Organization unless you stick your neck out and try things on your own sometimes. . .  
1      2      3      4
13. Our philosophy emphasizes that people should solve their problems by themselves. . . 1      2      3      4
14. There are an awful lot of excuses around here when somebody makes a mistake. . . 1      2      3      4
15. One of the problems in this Organization is that individuals won't take responsibility. . . 1      2      3      4
16. We have a promotion system here that helps the best man to rise to the top. . . 1      2      3      4
17. In this Organization the rewards and encouragements you get usually outweigh the threats and the criticism. . .  
1      2      3      4
18. In this Organization people are rewarded in proportion to the excellence of their job performance. . .  
1      2      3      4
19. There is a great deal of criticism in this Organization. . . .  
1      2      3      4
20. There is not enough reward and recognition given in this Organization for doing good work. . . 1      2      3      4
21. If you make a mistake in this Organization you will be punished. . . 1      2      3      4

## Number Codes

- 1 = Definitely Agree  
 2 = Inclined to Agree  
 3 = Inclined to Disagree  
 4 = Definitely Disagree

22. The philosophy of our management is that in the long run we get ahead fastest by playing it slow, safe, and sure. . . 1 2 3 4
23. Our business has been built up by taking calculated risks at the right time. . . 1 2 3 4
24. Decision making in this Organization is too cautious for maximum effectiveness. . . 1 2 3 4
25. Our management is willing to take a chance on a good idea. . . 1 2 3 4
26. We have to take some pretty big risks occasionally to keep ahead of the competition in the business we're in. . . . 1 2 3 4
27. A friendly atmosphere prevails among the people in this Organization. . . 1 2 3 4
28. This Organization is characterized by a relaxed, easy-going working climate. . . 1 2 3 4
29. It's very hard to get to know people in this Organization. . . 1 2 3 4
30. People in this Organization tend to be cool and aloof toward each other. . . 1 2 3 4
31. There is a lot of warmth in the relationships between management and workers in this Organization. . . 1 2 3 4
32. You don't get much sympathy from higher-ups in this Organization if you make a mistake. . . 1 2 3 4
33. Management makes an effort to talk with you about your career aspirations within the Organization. . . 1 2 3 4
34. People in this Organization don't really trust each other enough. . . 1 2 3 4
35. The philosophy of our management emphasizes the human factor, how people feel, etc. . . 1 2 3 4



Number Codes                      1 = Definitely Agree  
    2 = Inclined to Agree  
    3 = Inclined to Disagree  
    4 = Definitely Disagree

36. When I am on a difficult assignment I can usually count on getting assistance from my boss and co-workers. . .  
1      2      3      4
37. In this Organization we set very high standards for performance. . . 1      2      3      4
38. Our management believes that no job is so well done that it couldn't be done better. . . 1      2      3      4
39. Around here there is a feeling of pressure to continually improve our personal and group performance. . .  
1      2      3      4
40. Management believes that if the people are happy, productivity will take care of itself. . . 1      2      3      4
41. To get ahead in this Organization it's more important to get along than it is to be a high producer. . .  
1      2      3      4
42. In this Organization people don't seem to take much pride in their performance. . . 1      2      3      4
43. The best way to make a good impression around here is to steer clear of open arguments and disagreements. . .  
1      2      3      4
44. The attitude of our management is that conflict between competing units and individuals can be very healthy. . . . 1      2      3      4
45. We are encouraged to speak our minds, even if it means disagreeing with our superiors. . . 1      2      3      4
46. In management meetings the goal is to arrive at a decision as smoothly and quickly as possible. . . 1      2      3      4
47. People are proud of belonging to this Organization. . .  
1      2      3      4
48. I feel that I am a member of a well functioning team. . . . 1      2      3      4
49. As far as I can see, there isn't very much personal loyalty to the company. . . 1      2      3      4
50. In this Organization people pretty much look out for their own interests. . . 1      2      3      4

## Exhibit 3

Subject's Number \_\_\_\_\_

ORGANIZATIONAL CLIMATE QUESTIONNAIRE<sup>1</sup>--(IDEAL)

INSTRUCTIONS: We are interested in your feelings about certain aspects of work environment. Please answer each question as you believe ideal work conditions should be in an organization. Read each statement and circle the appropriate number according to the following code:

Number Codes	1 = Definitely Agree
	2 = Inclined to Agree
	3 = Inclined to Disagree
	4 = Definitely Disagree

1. The jobs in this Organization are clearly defined and logically structured. . . 1 2 3 4
2. In this Organization it is sometimes unclear who has the formal authority to make a decision. . . 1 2 3 4
3. The policies and organization structure of the Organization have been clearly explained. . . 1 2 3 4
4. Red-tape is kept to a minimum in this Organization. . . 1 2 3 4
5. Excessive rules, administrative details, and red-tape make it difficult for new and original ideas to receive consideration. . . 1 2 3 4
6. Our productivity sometimes suffers from lack of organization and planning. . . 1 2 3 4
7. In some of the projects I've been on, I haven't been sure exactly who my boss was. . . 1 2 3 4
8. Our management isn't so concerned about formal organization and authority, but concentrates instead on getting the right people together to do the job. . . 1 2 3 4

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<sup>1</sup>George H. Litwin and Robert A. Stringer, Motivation and Organizational Climate (Boston: Division of Research, Graduate School of Business Administration, Harvard University, 1968), pp. 204-207.

## Number Codes

- 1 = Definitely Agree  
 2 = Inclined to Agree  
 3 = Inclined to Disagree  
 4 = Definitely Disagree

9. We don't rely too heavily on individual judgment in this Organization; almost everything is double-checked. . .  
1      2      3      4
10. Around here management resents your checking everything with them; if you think you've got the right approach you just go ahead. . . 1      2      3      4
11. Supervision in this Organization is mainly a matter of setting guidelines for your subordinates; you let them take responsibility for the job. . . 1      2      3      4
12. You won't get ahead in this Organization unless you stick your neck out and try things on your own sometimes. . .  
1      2      3      4
13. Our philosophy emphasizes that people should solve their problems by themselves. . . 1      2      3      4
14. There are an awful lot of excuses around here when somebody makes a mistake. . . 1      2      3      4
15. One of the problems in this Organization is that individuals won't take responsibility. . . 1      2      3      4
16. We have a promotion system here that helps the best man to rise to the top. . . 1      2      3      4
17. In this Organization the rewards and encouragements you get usually outweigh the threats and the criticism. . .  
1      2      3      4
18. In this Organization people are rewarded in proportion to the excellence of their job performance. . .  
1      2      3      4
19. There is a great deal of criticism in this Organization. . . . 1      2      3      4
20. There is not enough reward and recognition given in this Organization for doing good work. . . 1      2      3      4
21. If you make a mistake in this Organization you will be punished. . . 1      2      3      4

## Number Codes

- 1 = Definitely Agree  
 2 = Inclined to Agree  
 3 = Inclined to Disagree  
 4 = Definitely Disagree

22. The philosophy of our management is that in the long run we get ahead fastest by playing it slow, safe, and sure. . . 1 2 3 4
23. Our business has been built up by taking calculated risks at the right time. . . 1 2 3 4
24. Decision making in this Organization is too cautious for maximum effectiveness. . . 1 2 3 4
25. Our management is willing to take a chance on a good idea. . . 1 2 3 4
26. We have to take some pretty big risks occasionally to keep ahead of the competition in the business we're in. . . 1 2 3 4
27. A friendly atmosphere prevails among the people in this Organization. . . 1 2 3 4
28. This Organization is characterized by a relaxed, easy-going working climate. . . 1 2 3 4
29. It's very hard to get to know people in this Organization. . . 1 2 3 4
30. People in this Organization tend to be cool and aloof toward each other. . . 1 2 3 4
31. There is a lot of warmth in the relationships between management and workers in this Organization. . . 1 2 3 4
32. You don't get much sympathy from higher-ups in this Organization if you make a mistake. . . 1 2 3 4
33. Management makes an effort to talk with you about your career aspirations within the Organization. . . 1 2 3 4
34. People in this Organization don't really trust each other enough. . . 1 2 3 4
35. The philosophy of our management emphasizes the human factor, how people feel, etc. . . 1 2 3 4

Number Codes                      1 = Definitely Agree  
    2 = Inclined to Agree  
    3 = Inclined to Disagree  
    4 = Definitely Disagree

36. When I am on a difficult assignment I can usually count on getting assistance from my boss and co-workers. . .  
     1        2        3        4
37. In this Organization we set very high standards for performance. . . 1        2        3        4
38. Our management believes that no job is so well done that it couldn't be done better. . . 1        2        3        4
39. Around here there is a feeling of pressure to continually improve our personal and group performance. . .  
     1        2        3        4
40. Management believes that if the people are happy, productivity will take care of itself. . . 1        2        3        4
41. To get ahead in this Organization it's more important to get along than it is to be a high producer. . .  
     1        2        3        4
42. In this Organization people don't seem to take much pride in their performance. . . 1        2        3        4
43. The best way to make a good impression around here is to steer clear of open arguments and disagreements. . .  
     1        2        3        4
44. The attitude of our management is that conflict between competing units and individuals can be very healthy.  
     . . . 1        2        3        4
45. We are encouraged to speak our minds, even if it means disagreeing with our superiors. . . 1        2        3        4
46. In management meetings the goal is to arrive at a decision as smoothly and quickly as possible. . . 1        2        3        4
47. People are proud of belonging to this Organization. . .  
     1        2        3        4
48. I feel that I am a member of a well functioning team.  
     . . . 1        2        3        4
49. As far as I can see, there isn't very much personal loyalty to the company. . . 1        2        3        4
50. In this Organization people pretty much look out for their own interests. . . 1        2        3        4

## APPENDIX B

COVER LETTER

INSTRUCTIONS FROM RESEARCHER

FOLLOW-UP LETTER

PERSONAL DATA SHEET

LETTER REQUESTING PERMISSION

LETTER OF PERMISSION

## Exhibit 4

TO:

FROM: Leonard D. Harper, Director  
Office of Personnel Services

DATE: June 16, 1972

SUBJECT: Research on Organizational Climate

We have an unusual opportunity to participate in a research project aimed at identifying the factors in our working environment which do or can contribute to job satisfaction of our administrative and professional personnel. The University's administration is interested in learning and benefiting from the research in order that it may provide the best possible working environment for you.

Mrs. Marilyn Lair, a doctoral candidate in the area of Business Education, will conduct the research for us. A selected number of administrative and professional personnel, of which you are one, have been identified to participate in the study. The identity of each participant's responses will be kept completely anonymous in the analysis and summary phases of the study. We hope this will encourage frankness in your responses to questionnaires.

You will find questionnaires enclosed for you to complete as your part in the study. Included are comments and instructions for completing them from Mrs. Lair. Please return the completed materials to me by no later than Monday, June 26, 1972.

Your cooperation is needed to provide a sufficient sampling to make a valid study. Thanks for your interest and participation.

LDH/lt

## Exhibit 5

## INSTRUCTIONS FROM THE RESEARCHER:

General Comments: I appreciate the opportunity to conduct this analysis of the organizational climate for The University of Oklahoma. As administrative and professional people you can help to make a contribution in this area of motivation and needs by cooperating in this study. Persons participating in this study remain completely anonymous. Names are only used to facilitate mailing. Please be completely honest as you answer these questions.

General Instructions: In order to facilitate this information in a consistent way will you please follow the directions listed below:

1. After reading the cover letter from Mr. Harper and the comments and instructions from the researcher please begin by filling out the Personal Data Sheet. When answering item #4, please interpret by counting your immediate supervisor as the first level and continuing through the Vice Presidents (or Provost) of the University. In answering item #7 on the Personal Data Sheet you may limit your answer to only the training you have had in the last five years.
2. Complete the Organizational Climate Questionnaire--(Ideal) by reading the instructions and answering the questions as you believe the ideal work environment should be. Keep in mind that you are answering the questions as if you were describing the ideal organization.
3. Complete the Organizational Climate Questionnaire--(Actual) by reading the instructions and answering the questions as you believe conditions actually exist at The University of Oklahoma at the present time. (You may notice that the Organizational Climate Questionnaire--(Actual) and the Organizational Climate Questionnaire--(Ideal) contain the same set of 50 questions; however, the directions for each test are different.) Be careful to keep in mind the specific directions for that test as you answer the questions.
4. Complete the Edwards Personal Preference Schedule by reading the directions and marking your answers in the correct place on the special scoresheet provided on the inside of the test booklet. Use a number one or two lead pencil. Do not use a number three pencil or a pen.

Thank you very much for your cooperation.



## Exhibit 6

TO:

FROM: Marilyn J. Lair  
Ph.D. Candidate in Education  
The University of Oklahoma

DATE: June 30, 1972

SUBJECT: Request for Completion of Research on Analysis  
of Organizational Climate

As administrative and professional personnel at The University of Oklahoma you were selected to participate in a research study designed to measure the relationship between individual needs and the organizational climate. This is a unique study which we hope will make a contribution in the area of motivation of workers. The University of Oklahoma is interested in your participation in this study so that insight may be gained from your comments that will enable them to provide a better working environment for you.

You may feel assured that you are able to remain completely anonymous. The coding used is only for follow-up purposes. Results of this research will only be reported on a group basis.

Please complete the package of materials that was sent to you on June 16, 1972. I hope to start analysis of the data on Friday, July 7, 1972. This is necessary if I am to complete the work for the degree in a reasonable length of time. The results of the study will be published and available in the library after the dissertation is completed.

If you have questions about the objectives of the study you may call Dr. Donald Woolf in the Department of Management, telephone number 5-3861 or 5-2851, Leonard D. Harper, Personnel Services, 5-2578, or Marilyn Lair in Chickasha at 224-3541.

Your cooperation will certainly be appreciated.

MJL/lt

## Exhibit 7

## PERSONAL DATA SHEET

Instructions: Please read each question and supply the necessary information.

1. Subject's number\_\_\_\_\_.
2. Age: (Circle correct group) 20-34 35-44 45-54 55+
3. Formal education completed: (Circle correct number or degree group)  
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 Bachelor's Degree  
Graduate Degree
4. How many levels of supervision are there above your position in this organization?\_\_\_\_\_
5. How many years have you been employed by this organization?\_\_\_\_\_
6. How many years have you been in your present job?\_\_\_\_\_
7. Number of short courses and seminars attended in the following areas:

Psychology\_\_\_\_\_

Human Relations\_\_\_\_\_

Engineering\_\_\_\_\_

Manufacturing\_\_\_\_\_

Accounting\_\_\_\_\_

Others (indicate by giving course titles)

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Exhibit 8

HARVARD UNIVERSITY

GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

GEORGE F. BAKER FOUNDATION

DIVISION OF RESEARCH

SOLDIERS FIELD

BOSTON, MASSACHUSETTS 02163

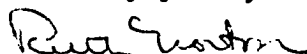
July 5, 1972

Mrs. Marilyn J. Lair  
205 Elmhurst Drive  
Chickasha, OK 73018

Dear Mrs. Lair:

Permission is granted to you to use the questionnaire from the Litwin Stringer book, Motivation and Organizational Climate, for the purpose outlined in your letter of June 30 to Professor Bertrand Fox. On the copy of the questionnaire that you bind into your thesis, please include a note giving the source.

Sincerely yours,



Ruth Norton  
Editor

Exhibit 9

205 Elmhurst Drive  
Chickasha, OK 73018  
June 30, 1972

Mr. Bertrand Fox, Director  
Division of Research  
Graduate School of Business Administration  
Harvard University, Soldiers Field  
Boston, Massachusetts

Dear Mr. Fox:

The Organizational Climate Questionnaire developed by Litwin and Stringer, and published in Motivation and Organizational Climate, 1968, is applicable to a study I am doing to complete doctoral degree requirements at the University of Oklahoma.

My interest is in examining the motivational climate of an industrial organization and an educational institution in relation to individual needs. The test Organizational Climate Questionnaire (Form B) appears to be applicable to measuring the motivational aspects of these two climates for my research.

Are there any restrictions to my use of the Organizational Climate Questionnaire (Form B) for the purpose stated? I will receive no remuneration for the study and will use the material and data only for incorporation into my dissertation, which will not be published or further copyrighted. May I have permission to bind a copy of this test into my dissertation?

I would appreciate hearing from you by return mail as I am trying to meet a July 15, 1972 deadline date.

Sincerely,

(Mrs.) Marilyn J. Lair

## APPENDIX C

### SUBSCORES

# Exhibit 10

## INTERCORRELATION MATRIX OF THE FIFTEEN EDWARDS PERSONAL PREFERENCE SCORES AND THE NINE ORGANIZATIONAL CLIMATE QUESTIONNAIRE DIMENSIONS FOR THE INDUSTRIAL EMPLOYEES (N=185)

	<u>Achiev.</u>	<u>Def.</u>	<u>Order</u>	<u>Exhib.</u>	<u>Aut'ny.</u>	<u>Affil.</u>	<u>Int'cept.</u>	<u>Succor.</u>
Structure	0.1637	-0.2386	-0.1550	0.1138	0.0508	-0.0474	-0.0564	0.0425
Responsibility	0.1553	-0.1474	-0.0569	0.0249	-0.1132	-0.0393	-0.0141	-0.0289
Reward	0.2563	-0.1173	0.0283	0.0987	-0.0418	-0.0499	-0.0308	-0.0533
Risk	0.1074	-0.1224	-0.0487	-0.0511	-0.0220	0.0860	-0.0639	-0.0771
Warmth	0.0227	-0.0166	0.0107	-0.0216	-0.0065	0.0756	0.0086	-0.0894
Support	0.0566	-0.1567	-0.0988	-0.0131	-0.0571	0.0139	0.0452	-0.0196
Standards	0.2243	-0.0652	-0.0173	0.0510	0.0863	-0.1256	-0.0191	-0.1175
Conflict	0.2146	-0.0986	-0.0536	0.0074	0.1050	-0.0531	-0.0576	-0.0417
Identity	0.1528	-0.1517	-0.0445	-0.0147	-0.0515	-0.0495	-0.0197	-0.0897
	<u>Dom.</u>	<u>Abase.</u>	<u>Nurt.</u>	<u>Change</u>	<u>Endur.</u>	<u>Het'sex.</u>	<u>Aggress.</u>	
Structure	0.1116	-0.0891	-0.1335	-0.0276	0.0578	0.2095	0.1168	
Responsibility	0.1231	-0.0355	0.0290	0.0593	0.0336	0.1283	-0.0375	
Reward	0.1487	-0.0024	-0.0196	0.0098	0.0228	0.1515	-0.0233	
Risk	0.0652	0.0236	-0.0292	0.0548	0.0114	0.1054	-0.0655	
Warmth	0.1318	0.0294	-0.0095	0.1349	-0.0357	0.1189	-0.0215	
Support	0.0103	0.0716	0.0586	0.0945	-0.0045	-0.0174	-0.0975	
Standards	0.1615	-0.0004	-0.1200	0.0194	0.1054	0.0351	0.1193	
Conflict	0.0242	-0.0824	-0.0682	0.0259	-0.0097	0.0400	0.0781	
Identity	0.0666	0.0187	-0.1045	-0.0594	0.0576	0.1474	0.0201	

# Exhibit 11

## INTERCORRELATION MATRIX OF THE FIFTEEN EDWARDS PERSONAL PREFERENCE SCORES AND THE NINE ORGANIZATIONAL CLIMATE QUESTIONNAIRE DIMENSIONS FOR THE EDUCATIONAL EMPLOYEES (N=78)

	<u>Achiev.</u>	<u>Def.</u>	<u>Order</u>	<u>Exhib.</u>	<u>Aut'ny.</u>	<u>Affil.</u>	<u>Int'cept.</u>	<u>Succor.</u>
Structure	0.2033	-0.0852	0.0223	0.2262	-0.0897	-0.1311	-0.0873	0.0707
Responsibility	0.0827	0.0217	-0.0676	0.1455	-0.0146	0.0067	-0.2076	-0.0307
Reward	0.1891	0.0239	0.0636	0.1415	-0.0112	-0.1309	0.0501	0.0639
Risk	0.2295	-0.0353	-0.1074	0.1066	-0.0657	-0.0517	-0.0101	-0.1412
Warmth	-0.0120	0.0098	0.2635	0.0852	-0.1990	-0.1021	-0.0356	0.0621
Support	0.0342	0.0283	0.2739	0.0535	-0.0368	-0.2045	0.0050	0.0039
Standards	0.1192	-0.0065	0.1107	-0.0298	0.1227	-0.1320	-0.0755	-0.0919
Conflict	-0.0135	-0.1267	0.0425	0.0710	0.1632	-0.1431	0.0061	-0.1092
Identity	0.0720	0.0205	0.0998	0.1937	-0.1363	-0.1285	-0.1988	0.0713

	<u>Dom.</u>	<u>Abase.</u>	<u>Nurt.</u>	<u>Change</u>	<u>Endur.</u>	<u>Het'sex.</u>	<u>Aggress.</u>
Structure	0.2049	-0.0155	-0.0261	-0.1413	0.0469	0.0971	0.0912
Responsibility	0.1495	-0.0232	0.0803	-0.1261	-0.0337	0.1035	-0.1094
Reward	0.1222	-0.0918	-0.1334	0.0576	-0.0394	0.0887	-0.1086
Risk	0.1388	-0.1496	-0.0561	-0.0944	0.0186	0.0459	0.0518
Warmth	0.0033	0.1219	-0.1360	-0.0093	0.2127	-0.1690	-0.0635
Support	0.0161	-0.0127	-0.1957	-0.0454	0.0568	-0.0168	-0.0966
Standards	0.1081	-0.1323	-0.1840	0.0054	0.1101	0.0660	0.0007
Conflict	0.1379	-0.0834	-0.2063	-0.0410	-0.0545	-0.2049	0.2361
Identity	0.0301	0.0336	-0.0789	-0.1206	0.1010	-0.0373	0.0159

# Exhibit 12

## INTERCORRELATION MATRIX OF THE FIFTEEN EDWARDS PERSONAL PREFERENCE SCORES AND THE NINE ORGANIZATIONAL CLIMATE QUESTIONNAIRE DIMENSIONS FOR BOTH THE INDUSTRIAL EMPLOYEES AND THE EDUCATIONAL EMPLOYEES (N=263)

	<u>Achiev.</u>	<u>Def.</u>	<u>Order</u>	<u>Exhib.</u>	<u>Aut'ny.</u>	<u>Affil.</u>	<u>Int'cept.</u>	<u>Succor.</u>
Structure	0.1753	-0.1969	-0.0978	0.1473	0.0060	-0.0723	-0.0637	0.0506
Responsibility	0.1348	-0.1077	-0.0669	0.0587	-0.0852	-0.0294	-0.0599	-0.0293
Reward	0.2367	-0.0865	0.0331	0.1179	-0.0353	-0.0752	-0.0018	-0.0228
Risk	0.1372	-0.0821	-0.0573	-0.0251	-0.0296	0.0543	-0.0648	-0.0935
Warmth	0.0152	-0.0129	0.0786	0.0140	-0.0616	0.0252	0.0027	-0.0484
Support	0.0504	-0.1065	0.0202	0.0100	-0.0512	-0.0515	0.0356	-0.0127
Standards	0.1932	-0.0515	0.0198	0.0326	0.0948	-0.1292	-0.0309	-0.1097
Conflict	0.1459	-0.1064	-0.0236	0.0266	0.1214	-0.0788	-0.0381	-0.0614
Identity	0.1229	-0.0955	0.0099	0.0475	-0.0795	-0.0713	-0.0834	-0.0343

	<u>Dom.</u>	<u>Abase.</u>	<u>Nurt.</u>	<u>Change</u>	<u>Endur.</u>	<u>Het'sex.</u>	<u>Aggress.</u>
Structure	0.1400	-0.0702	-0.1074	-0.0575	0.0553	0.1819	0.1093
Responsibility	0.1299	-0.0398	0.0394	0.0174	0.0189	0.1234	-0.0550
Reward	0.1448	-0.0475	-0.0446	0.0287	0.0111	0.1391	-0.0450
Risk	0.0720	0.0334	-0.0327	-0.0118	0.0057	0.0809	-0.0244
Warmth	0.0994	0.0325	-0.0375	0.1038	0.0255	0.0569	-0.0326
Support	0.0139	0.0386	-0.0043	0.0577	0.0130	-0.0167	-0.0975
Standards	0.1472	-0.0454	-0.1353	0.0193	0.1078	0.0432	0.0867
Conflict	0.0582	-0.0821	-0.1010	0.0087	-0.0211	0.0799	0.1209
Identity	0.0499	0.0379	-0.0959	-0.0829	0.0686	0.0938	0.0195



APPENDIX D

RAW DATA--EDUCATIONAL EMPLOYEES DATA  
COLLECTION RETURNS

## Exhibit 13

PERCENT OF RETURN OF DATA COLLECTION INSTRUMENTS  
FOR EDUCATIONAL EMPLOYEES (N=78)

Departmental Areas (A=Administrative) (P=Professional)	Data Package Mailed	Return	% of Return	Total Adm. & Prof. % Return
1. Provost	A = 13 P = 9 Total = 22	A = 8 P = 3 Total = 11	62 33 1/3	50
2. Administration and Finance	A = 32 P = 15 Total = 47	A = 25 P = 10 Total = 35	78 67	80
3. University Community	A = 12 P = 16 Total = 28	A = 5 P = 6 Total = 11	42 38	39
4. University Relations	A = 4 P = 9 Total = 13	A = 2 P = 2 Total = 4	50 22	31
5. University Development	A = 2 P = 3 Total = 5	A = 1 P = 1 Total = 2	50 33 1/3	40
6. Continuing Education & Public Service	A = 5 P = 19 Total = 24	A = 4 P = 11 Total = 15	80 58	63
7. Ancillary Areas	A = 3 P = 4 Total = 7	A = 2 P = 1 Total = 3	66 2/3 25	43