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EFFECTS OF GENERALIZED PERSONAL ATTRIBUTIONS  
AND ORGANIZATIONAL CLIMATE ON PERCEIVED VOLUNTEER  
SATISFACTION IN ONTARIO AMATEUR SPORT ASSOCIATIONS

by

Lisa Margaret Kikulis

A Thesis  
submitted to the  
Faculty of Graduate Studies and Research  
through the Faculty of  
Human Kinetics in Partial Fulfillment  
of the requirements for the Degree  
of Master of Human Kinetics at  
the University of Windsor

Windsor, Ontario, Canada

1987

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## ABSTRACT

# EFFECTS OF GENERALIZED PERSONAL ATTRIBUTIONS AND ORGANIZATIONAL CLIMATE ON PERCEIVED VOLUNTEER SATISFACTION IN ONTARIO AMATEUR SPORT ASSOCIATIONS

by

Lisa Margaret Kikulis

The purpose of this exploratory study was to identify "personality x situational" interactions associated with volunteer satisfaction. A further concern was the development and evaluation of an organizational climate scale as a valid measure of organizational climate for volunteer sport administrators. For these purposes a sample (N=279) of volunteers from 23 out of 70 Ontario sport associations completed a Volunteer Sport Administrator Experience Questionnaire (VSAEQ) which measured generalized personal attributions, organizational climate, and dimensions of volunteer satisfaction.

To evaluate the (N=32) organizational climate items, construct validity of derived versus a priori dimensions was assessed using factor and cluster

analysis. The eight organizational dimensions and six organizational climates did not approximate the underlying structure of the a priori dimensions and climates. Discriminant analysis established criterion related validity by indicating that the eight derived dimensions effectively classified volunteers into their predicted organizational climate. The derived organizational climates were established as valid measures of volunteer sport organizational climate.

The "personality x situational" analyses supported the interaction hypothesis in that the dimensions of volunteer satisfaction related to generalized personal attributions and organizational climate. Two separate personality dimensions, locus of control and locus of causality, interacted with organizational climate to relate to volunteer satisfaction. The outcome of the "locus of control x climate" interaction was significantly related to coworker and supervision satisfaction. The "High Bilocal x Controlled climate" interaction reported the highest coworker satisfaction and the "Internal x Open climate" reported the highest supervision satisfaction. The "locus of causality x climate" interaction was significant for role satisfaction. The "Stable x Open climate" interaction reported the highest role satisfaction. The results appeared to support a psycho-social analysis of behaviour. In



addition, the importance of volunteer perceptions of a self-efficacious climate was emphasized as the most important aspect of concern for the investigation of internal reinforcement. This result was primarily due to the amount of control, autonomy, and personal influence that accompanies a volunteer's experience.

By examining the dimensions of volunteer satisfaction perceptions of generalized personal attributions and organizational climate were meaningfully related. Also, the theoretical and practical applications of a psycho-social perspective was recommended for future research and evaluation of volunteer organizations when concerned with affective related variables.

## DEDICATION

I would like to dedicate this thesis to the nameless and numerous volunteers who have given and continue to give exhaustively of their time and interest to amateur sport.

## ACKNOWLEDGEMENTS

This thesis reflects the cooperation, dedication, enthusiasm, and expertise of many conscientious people. Foremost, I am indebted to Dr. Gordon Olafson, under whose council and chairmanship this thesis developed and materialized. His willingness to spend the time and effort necessary to critically analyse and comment thoughtfully helped me to refine and clarify my thinking. Most important was his support and encouragement which gave me the freedom and time to learn, for that I wish to express to him my most sincere feelings of appreciation.

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## CHAPTER I

### INTRODUCTION

Perceived psycho-social attributes have become a significant area of investigation in the behavioural sciences. Consideration of the factors and processes that contribute to behaviour demand a better understanding of individual affective orientations. Personality and situational attributions interact to influence voluntary action. Individuals are motivated to donate time, energy, expertise, or money, or all of the above, to organizations from which they gain satisfying experiences. Looking at voluntary action from an attributional perspective will illuminate the psycho-social factors and processes which underlie satisfaction in all individuals.

In the pursuit of organizational goals, an effective and efficient organization achieves cooperative purposes and the satisfaction of individual members (Bernard, 1964). Satisfaction is a positive affective response to a stimulus or experience that is influenced by an individual's past experiences and present expectations (deCharms, 1968; Rokeach, 1975; Vroom, 1964). Affective responses to situations emanate from multiple attitudinal dispositions. "Attitudes are not a func-

tion of deep seated needs but a product of how people socially construct the world around them" (Staw, Bell, & Clausen, 1986, p. 56). The complexity of these responses may best be understood from a social system perspective which considers the influence and impact of individual and situational dimensions.

Progress in organizational behaviour research will occur if the transactions, demands, opportunities, and constraints, that are a result of "personality x situational" interactions, are considered. Organizations are complex dynamic systems (Lawler, Nadler, & Cammann, 1980). Understanding the functioning of organizations involves an identification of processes that contribute to positive affective reactions. Dimensions that have emerged frequently in organizational behaviour research are organizational climate and personality attributions. It is clear that organizational climate and attributions operate at different levels of explanation. Organizational climate operates at the situational level representing a standard set of influences within a particular organization. These influences are inferred from important situational characteristics, indirectly from consistencies in perceptions, or from the behaviour of individuals. Personality attributions refer to generalized attributes of the individual. Attributions are characterized by personal evaluations

of events based upon interactions between actual events (experiences) and perceptions of those events (expectations). They contain no inherent requirement to accurately reflect situations nor perceptual agreement among individuals in a given situation. Personal attributions are, therefore, generalized dispositions operating at the individual level of explanation.

Generally, the focus of attributional research has related causality to personal factors and ignored the relevance of situational forces. This research has produced what Ross (1977) has labelled "fundamental attribution error", which occurs when insufficient attention is given to the situational dimension of attributional research. "Researchers assume individual differences and personal dispositions overcome situational variables across widely disparate situations" (Ross, 1977, p. 184-185). Attribution research has been necessary and very important to our knowledge base; but to increase the ability for understanding, explaining, predicting, and controlling volunteer satisfaction, it is necessary to avoid a limited analysis of individuals in organizations.

Viewing an organization as a social system, the development of useful, valid theories of volunteer satisfaction is contingent on the measurement of different levels of organizational functioning (i.e.,

organizational and individual processes). A multi-level assessment must include a wide range of variables that are both measurable and important to the individuals and the organization. A comprehensive approach to affective reactions in behavioural systems will contribute to the knowledge of how attributional processes contribute to satisfaction and will provide a means for hypothesizing what happens to behaviour (viz., voluntary action) over the long run as an individual's experiences vary.

#### Delineation, Need, & Purpose

Voluntary action is certainly of interest for sport organizations, since volunteers are a valuable human resource for all service organizations (Mason, 1984). Interest in voluntary action has been concerned primarily with describing and cataloging data relevant to attaining and retaining volunteers. Performance has been an important issue for decision-makers responsible for providing sport services. Product oriented information has produced normative data on the characteristics of volunteers. This research has provided useful prescriptions or advice to sport organizations. Nevertheless, "researchers need to recognize there is a wide range of behaviours and attitudes that materialize and drive volunteer activity, well after the decision

to join and donate energy and time have been made" (Dailey, 1986, p. 30). Attributional measures that consider what attracts volunteers to contribute to the functioning of sport organizations and why they participate has not been addressed in volunteer research.

At this point in our knowledge of voluntary action it is appropriate that a comprehensive model leading to a theory of voluntary action be put forth in an effort to explain volunteer satisfaction and to generate new facts about this aspect of volunteer organizations. The conceptual framework depicted in Figure 1 integrates the constructs relevant to this study and lends itself to the formulation and testing of hypotheses. The Conceptual Model of Satisfaction (see Figure 1) draws from the social systems perspective, using a multiple level analysis.

In Figure 1, individual and situational attributions are seen as the major forces affecting volunteer satisfaction. Campbell, Converse, and Rodgers (1976) distinguished between two types of predictor constructs, assessed outcomes (subjective assessment) and internal referents, that individuals use to determine their satisfaction level. The internal referents in Figure 1 (beliefs, values, and attitudes) facilitate the subjective assessment which in turn affects satisfaction. Fishbein (1965) explained positive affect

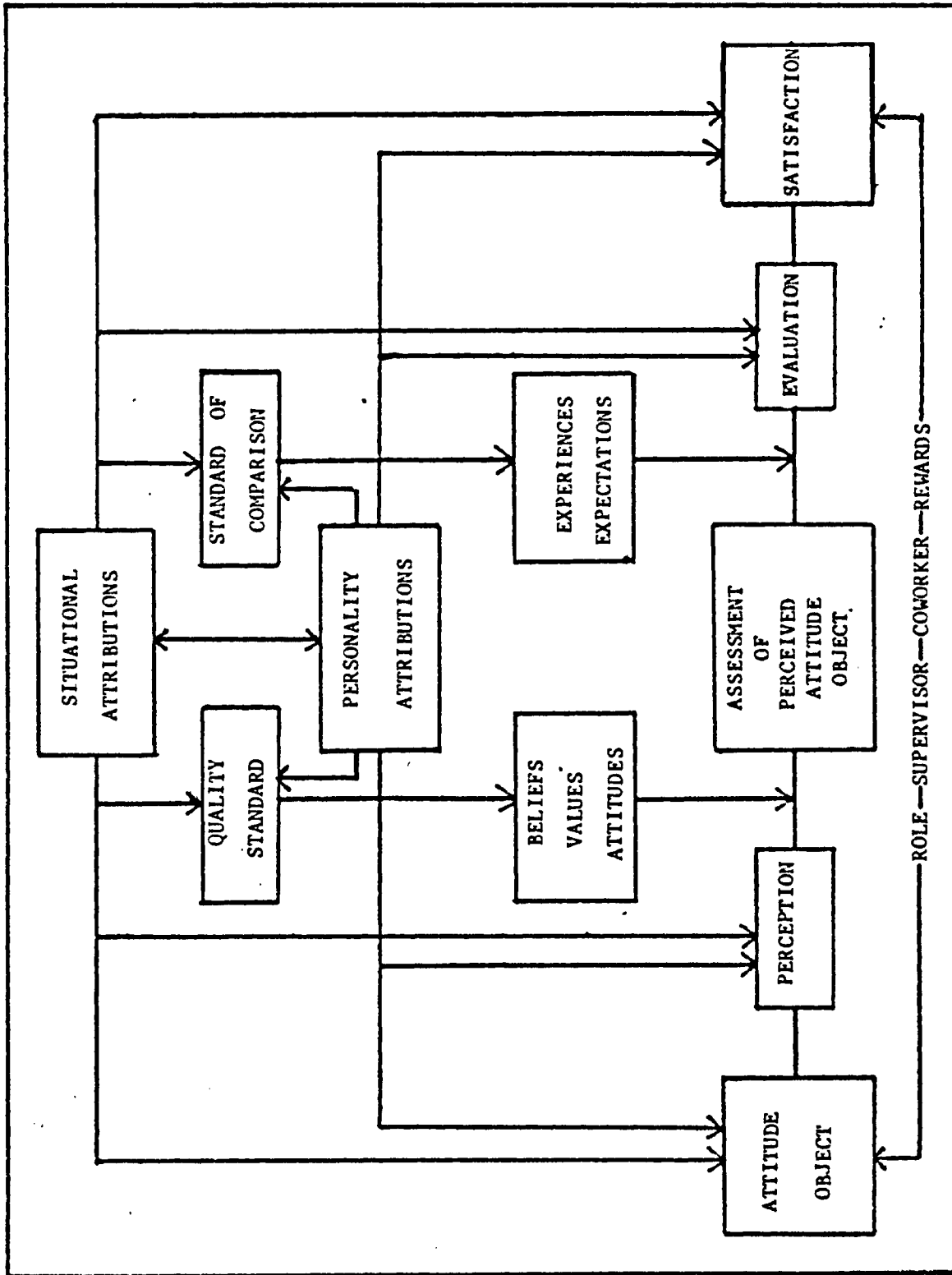


FIGURE 1  
CONCEPTUAL MODEL OF SATISFACTION  
(Adapted from Loetscher, 1981)



(e.g., satisfaction) by describing the evaluation process which includes the interaction of individual beliefs, values, expectations, and experiences. The conceptual framework attempts to reduce what Ross (1977) identified as the "fundamental attribution error" by integrating situational and personality attributions as equally important and influential on the potential impact of voluntary action on preferences, beliefs, judgements, and positive affect.

Volunteers are important to most sport organizations. The field of sport and recreation has its roots in volunteerism (Slack, 1979). Although volunteers are clearly an important and interesting topic for study, research which has been done on volunteers has tended to look at them as a secondary or concomitant variable; concentrating on characteristics of volunteers and how to make them more effective. Thus, our knowledge base for understanding volunteers is limited at present, particularly with respect to such issues as the psychological and situational factors which promote volunteer satisfaction. By studying what produces the feeling of positive affect we will better understand behaviour in volunteers. Additionally, empirical findings may yield results that lends support to the conceptual model of satisfaction in Figure 1. In an effort to contribute to the knowledge of voluntary

action the purpose of this thesis was to examine the interaction of personality and situational attributions on perceived satisfaction of volunteers in amateur sport organizations. The theoretical and practical significance of the personality and situational constructs relevant to volunteer satisfaction will be included in a review of the literature.

### Definition of Terms

#### Individual Attributions

Individual attributions are guided by personal ascriptive elements: ability, effort, task difficulty, and luck. These elements combine to define two dimensions of attribution: locus of control (internal and external) and locus of causality (stable and unstable). Thus, attributions involve causal and control dimensions. Control is concerned with "the behavioural effects of individual differences in perceived internal versus external control of outcomes" (Weiner, et al., 1972, p. 97). Causality is concerned with the level of aspiration or self determination in a situation. Attributions have motivational significance and are central in behaviour analysis. Judgement, decision-making, and inferences are determined by control and causality dimensions and, therefore, determine affect, expectations, and behaviour (Weiner, Russell, & Lerman,

1978).

### Intrinsic Motivation

Intrinsic motivation is a causality orientation resulting from the interaction of person and task characteristics, and contributing to physical and psychological benefits. Within attribution theory, intrinsic motivation results whenever self attribution or personal causation is perceived (Maddi & Kobassa, 1981). Intrinsic motivation is characterized by a belief in one's self as a causal agent in the environment. The need for competence and self-determination energizes intrinsically motivated behaviours (Deci & Ryan, 1985).

### Organizational Climate

Organizational climate is defined by the properties of the environment perceived by individuals involved in the environment. Perceived behaviours and policies serve as the basis for interpretation. Halpin (1966) defined organizational climate intuitively by using the analogy: "Personality is to the individual what climate is to the organization" (p. 131). Organizational climate was conceptualized and operationalized using a modified version of Halpin and Croft's (1963) Organizational Climate Descriptive Questionnaire (OCDQ). The OCDQ was chosen because of its frequent use in organizational climate research and

the interest of the developers to consider its application in various situations. The organizational climate perceived by volunteer sport administrators was determined by eight dimensions that were used to distinguish the features and quality of the organizational climate. The eight dimensions defined by Halpin are as follows:

Characteristics of  
Volunteer Organizational Members

**Disengagement:** this dimension focuses on group behaviour in a task oriented situation. It describes a group where achievement has no value because the role and method of accomplishing goals has no emotional significance for the group members.

**Hindrance:** refers to the group members perception that they are burdened with routine duties and demands which are unnecessary. The leader is perceived as hindering rather than facilitating their role in the organization.

**Esprit:** refers to morale; the organizational members get along together as individuals and seem to enjoy being members of the organization. Social needs are being satisfied in addition to a sense of accomplishment toward cooperative goal attainment.

**Intimacy:** refers to the enjoyment of friendly social relations. This dimension describes social need satisfaction which is not associated with organizational goal accomplishment.

Behaviour of the Leader

**Aloofness:** refers to behaviour which is formal and impersonal. Such an individual follows rules and policies in a manner which creates an emotional distance from the group members.

**Production Emphasis:** refers to leader behaviour which is characterized by close and

directive supervision. Communication is one-way, resulting in an insensitivity to feedback on the part of the leader.

**Thrust:** refers to leader behaviour marked by an attempt to motivate organizational members by setting a personal example of task accomplishment.

**Consideration:** refers to leader behaviour which is characterized by a tendency to treat organizational members "humanly". Understanding, appreciation, and concern for the welfare of the group outside of formal organizational rules and policies (Halpin, 1966, p. 150-151).

### Organizational Functioning

Organizational functioning involves organizational (group) goals and individual (personal) goals. The criteria most often applied to these functional dimensions are effectiveness and efficiency. The primary concern of a social organization is the accomplishment of cooperative purposes (effectiveness) and the satisfaction of individual motives (efficiency) (Bernard, 1964, p. 60). Organizational functioning is characterized by individual and organizational cooperation. For optimal functioning members must be able to "legitimately foster their own interest and satisfy needs that made membership desirable in the first place" (Mason, 1984, p. 180). In terms of voluntary organizations, existence (functioning) depends upon providing services (effectiveness) and developing human resources (efficiency).

### Social Interest

Social interest is defined by an individual's contribution to a common objective of a group. Characteristics that have emerged frequently to describe social interest are cooperation and empathy towards confronting problems (Stevick, Dixon, & Willingham, 1980). For an individual to contribute to the good of all a choice is made based on personal values and beliefs, implying an integration of altruistic and egoistic motives. Subjective expected utility is the basis of behavioural decision theory (Edwards, 1954; Feather, 1982; Fishbein, 1965). An assessment of worthiness is preceded by personal expectations of the experience and followed by a course of action. Social interest will occur if utility is expected (Bauman & Fisher, 1985). If volunteers perceive social and personal significance of the organization, social interest may be considered as synonymous with voluntary action.

### Social System

A social system is an aggregate of individuals that interact with each other and function in degrees of interdependence as an organized unit. A social system is motivated to obtain the goals of the organization as defined by organizational policy (Carr, 1955; Parsons, 1951). Operationally, the social system

was defined by conceptually independent but interactive dimensions: organizational climate and generalized personal attributions. The first dimension may be perceived as the sociological level of analysis and the second dimension the psychological level of analysis.

### Voluntary Action

Voluntary action is characterized by a contribution of energy and expertise which may be ends in themselves. Voluntary action is a function of perceived expected utility of the experience; therefore, a feeling of intrinsic gratification and satisfaction may be inherent in voluntary action. In an organization voluntary action may be goal-directed and take place under norms and guides of the organization. Under such circumstances voluntary action is the result of interest in social and personal significance of the organization. Individual expression and societal instrumentality characterize voluntary action in organizations (Mason, 1984, p. 51-57).

### Volunteers

Volunteers are individuals who pursue goals that are not primarily remunerative and which they are not forced to pursue (Smith, Baldwin, & White, 1980). Volunteers are the principal resources of volunteer organizations. Their resourcefulness is in terms of the giving of time, money, energy, and expertise.

### Volunteer Satisfaction

"Satisfaction is a pleasurable emotional estate resulting from the appraisal of one's [situation] as facilitating the achievement of one's ... [nonremunerative] values" (Locke, 1969, p. 316). Thus, volunteer satisfaction is defined as a general tendency toward positive or negative evaluation of stimuli that influence the way volunteers perceive their organizational environment. Operationally, an adapted version of Smith, Kendall, and Hulin's (1969) Job Descriptive Index (JDI) was used to measure the feelings a volunteer had about: the nature of the role, the characteristics and opportunities for rewards, the characteristics of supervision, and the relations with coworkers.

### Volunteer Sport Organizations

Volunteer sport organizations are defined by an "altruistic-income economy ... " (Mason, 1984, p. 52). The existence of volunteer organizations is dependent upon providing services (effectiveness) and developing resources (efficiency). Volunteer sport organizations are characterized by patterned relations of individuals that focus toward the goal of providing organized sport opportunities to the public. Volunteer sport organizations satisfy expressive needs and provide an instrumental social service.



## CHAPTER II

### REVIEW OF LITERATURE

This review of literature is concerned with presenting a general understanding of the following psycho-social dimensions: attribution, perceived organizational climate, and voluntary action. The interaction of these personality and situational dimensions may be represented by a social system approach to research (e.g., Getzels et al., 1986; Goodman & Pennings, 1980; Katz & Kahn, 1978; Lawler et al., 1980; Salancik & Pfeffer, 1977, 1978; Wall & Gruneberg, 1984). This approach to research has concentrated on business organizations; nevertheless, in the analysis of organizational behaviour, the social system concept is applicable regardless of the organization under investigation.

#### A Psycho-Social Perspective of Organizational Behaviour

Organizational behaviour research has a wide scope. Numerous researchers have studied relationships among organizational, psychological, and behavioural factors (cf. Bhagat, 1982; Ferris & Gilmore, 1984; Hackman & Oldham, 1976; Ivancevich & Donnelly, 1975; James & Jones, 1976; Sherman & Smith, 1984). Research

has tended to utilize a single unit of analysis (i.e., sociological or psychological), rather than adopting an integrated framework (e.g., Atkinson & Murray, 1982; King, Murray, & Atkinson, 1982; Loetscher, 1981; Oldham & Hackman, 1981) in identifying significant relationships among these dimensions.

A prominent examination of job attitudes has involved a need-satisfaction model. Based on Maslow's (1943) hierarchy of needs, researchers have argued that work tasks fail to challenge individuals and fulfill their desires for growth and stimulation. Numerous scholars (e.g., Argyris, 1957; Herzberg, 1966; Likert, 1961; McGregor, 1960) have focused upon content theories of the motivation of human behaviour in adapting Maslow's "need-satisfaction theory" for understanding organizational behaviour. The contribution of the psychological approach to the understanding of organizational behaviour is the recognition of individual differences and the belief that the ideal reality of human existence is the satisfaction of human needs. This perspective resulted in additional theorizing and measurements in organizational behaviour, which led to an understanding that individuals in organizations function under constraints that regulate behaviour and satisfaction. It is unlikely that organizations will be able to satisfy all their members' individual needs

(Salancik & Pfeffer, 1977).

Conceptual problems arise using a "need-satisfaction theory" in explaining individual behaviour in organizations. "Need theory" simplifies the explanation of behaviour, considering the individual but ignoring two critical dimensions: the cognitive decision-making ability of individuals and organizational elements. Need models appear to deny that individuals have the capacity to provide their own satisfactions by cognitively reconstructing situations (Salancik & Pfeffer, 1977; Staw, Bell, & Clausen, 1986). Individual members of organizations exist in an open social system and interact with the social structure of the organization which affects and is affected by individual behaviour. The rational decision-making process does not exclusively depend on personal needs. Individual values and beliefs direct and influence the motivations that precede behaviour.

The satisfaction of individuals in an open social system involves motivational and cognitive processes (Salancik & Pfeffer, 1977). Social organizations by their nature are integrated to accomplish cooperative purposes. Central to this perspective is the consideration of the human impact of the system on its individual members. Salancik and Pfeffer (1977) characterized need theories as ambiguous explanations

of work attitudes. Social information processing was adopted by Salancik and Pfeffer (1978) as a mechanism that determines how individuals respond to situations. Social information processing theory argues that attitudes are a product of how people socially construct the world around them. Individuals interpret situations in ways that are controlled by the context and meaning of their own actions (Dean & Brass, 1985; Deci, 1975; Hackman & Oldham, 1980).

The sociological approach is a macro perspective, assessing organizational behaviour with respect to structural and organizational factors. Research from this perspective has concentrated on job characteristics and attitude formation (e.g., Freidlander & Margules, 1969; Ivancevich & Donnelly, 1975; Pritchard & Karasick, 1973). The open-social system perspective (Katz & Kahn, 1978) concentrates on the organization and its environment. It is a broader understanding of how organizations function; however, it does not delineate specific relationships between variables (Korman & Vrendenburgh, 1984). Openness is a matter of degree that is left to be defined by the researcher.

A review of the literature from both the psychological and sociological perspectives points to the need for an integrated perspective (Staw, Bell, & Clausen, 1986). Remaining exclusive to one another the

result has been precise knowledge regarding narrowly defined circumstances. Knowing that individuals in organizations do not exist in a vacuum, these perspectives may be considered partial measures of organizational behaviour. The sociological view represents an incomplete assessment of organizational functioning because it ignores the influence of individual differences (Alderfer, 1977). The psychological approach neglects the relevancy of organizational characteristics and structure (James & Jones, 1976; Katz & Kahn, 1978). A more comprehensive theory to individuals in organizations will include a multi-level or social system analysis. A social system view of individuals in organizations is clarified by considering "personality x situational" interactions within the organizational setting (Getzels et al., 1968).

A social system perspective of individual affective reactions in organizations may be explained by the integration of the adaptive, dynamic organizational processes and individual orientations. This perspective emphasizes "person x environment" interactions (Sandler, Reese, Spencer, & Harpin, 1984, p. 189). The social system perspective is a valuable analytic framework enabling the presentation of the psychosocial factors of organizational behaviour. "One consequence of accepting the concept of [a social]

system and the dynamic and selective nature of the interaction with the environment is that in any change there is choice" (Guest, 1984, p. 189). A key issue, therefore, is to identify personality and situational dimensions that influence an individual's choice in his/her salient environment. For volunteer organizations, individual satisfaction may be particularly important if social interest is a determinant of voluntary action (Crandall, 1975; Crandall & Putman, 1980; Stevick et al., 1980).

Satisfaction is a positive affect containing a comparative value component between expectations and experiences (Loetscher, 1981). In a social system, satisfaction is influenced by the accomplishment of cooperative purposes. Organizations function on the basis of countless acts of cooperation. The persistence of cooperation depends upon the relationship between values and behaviour. When behaviours conform to values the individual is doing what he/she wants to do (Getzels et al., 1968; Schiebe, 1970). Inherent in voluntary activity is identification with the organization (Katz & Kahn, 1978; Vroom, 1964).

To determine whether volunteer satisfaction is the result of the interaction between organizational and personality factors perceived by the volunteer, motivational and cognitive elements must be integrated.

These characteristics of satisfaction identify the potential that a positive affect has for retaining and sustaining cooperation in the interest of organizational accomplishment (Atkinson & Murray, 1982; Loetscher, 1981; Vroom, 1964).

The adaptability and learned character of individuals is ignored when the social and psychological perspectives are not integrated (Atkinson, 1964). Empirical and theoretical research (cf. Atkinson & Murray, 1982; Getzels et al., 1968; King, Murray, & Atkinson, 1982; Loetscher, 1981; Salancik & Pfeffer, 1978; Staw, Bell, & Clausen, 1986; Weiner et al., 1972) emphasizes the processes of cognitive appraisal and social environments, rather than the content of personality orientations. In an effort to assess the complexity of organizational behaviour, a psycho-social approach will contribute to "knowledge...which is best advanced by research that attempts to integrate data from different levels of abstraction" (Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964, p. 397). A social system perspective removes interdisciplinary barriers by integrating various concepts and levels of analysis that contribute to a broader understanding of volunteer satisfaction in amateur sport organizations.

### Attribution of Causality: The Personality Dimension

The basis of attribution theory is the explanation of causation, and gaining an understanding of actions and beliefs. Cause may be attributed to a combination of internal (personality) and external (situational) dimensions. Individual and environmental factors that affect attributions have been identified theoretically and empirically (cf. Heider, 1958; Jones & Davis, 1965; Kelley, 1973; Rotter, 1966; Weiner et al., 1972; Wong & Sproule, 1984). Heider (1958) linked behaviour to cause by identifying ability and effort (internal) and task difficulty and luck (external) causal dimensions. The application of these dimensions, by Weiner et al. (1972), was based on the interaction between personal and environmental forces (i.e., control over conditions) and stable and unstable attributions (i.e., belief in knowledge of cause of an outcome). Jones and Davis (1965) concentrated on intentionality as a critical element of personal causality and identified the following preconditions to assessment of intentions: belief in knowledge of consequences and control over conditions. According to Deci and Ryan (1985) these internal conditions are the prerequisites for personal causation.

By introducing a causal schema which combined intrinsic (personal) and extrinsic (environmental)



dimensions, Kelley (1973) provided an understanding of the importance of environmental factors in a causal analysis. The combination of intrinsic and extrinsic dimensions that contribute to personal causation is evident in Weiner et al.'s (1972) model of achievement motivation and Wong and Sproule's (1984) discussion of a dual dimensional approach to attribution. The application of a causal schemata implies pre-conceptions from expectations of certain causes in certain contexts. For example, experiences in similar situations result in the formation of expectancies in future encounters with a similar stimulus (Weiner et al., 1972). The generalized expectancy of dual control in a social learning framework simply refers to the generalized belief that reinforcement occurs as a function of personal and external control (Wong & Sproule, 1984). Dual control is consistent with Heider's (1958) view of social causality where the additive function of internal and external dimensions increases or decreases internal causation. Wong and Sproule (1984) proposed that the relationship between control and causation is not synonymous, rather control involves the interpretation of causation. Thus, locus of control is somehow related to causal attributions.

The theory of attribution involves cognitive applications, however, it also demands theoretical

insight about motivations and emotional responses (Ross, 1977). It is a holistic approach where cognitive, affective, and motivational elements are valued equally. These elements form the operative view (i.e., psychological reality) of the individual. Consequently, perception of truth goes beyond information given (Schiebe, 1970).

Implicit in an attributional explanation of behaviour is a belief-affect analysis. Causation parallels beliefs and the importance of beliefs; therefore, is not purely logical. The basis of attribution is understanding why such beliefs are important and how they are derived. Many realms of human activity may be analysed in terms of beliefs and affect. "What a person does [behaviour] depends upon what that person wants [values] and what that person considers to be true or likely [beliefs] about the self and the world" (Schiebe, 1970, p. 1). The significance of a "belief-affect" analysis is to determine the "why" of behaviour (i.e., attributions of causality). The willingness to pursue a course of action depends upon an individual's confidence that expectancies will be met. Confidence is developed from successful experiences and based on the degree of certainty and internal control over outcomes (Schiebe, 1970; Deci, 1980).

Salient expectancies and reinforcement values are

closely dependent upon the nature of the psycho-social situation which presents possible courses of behaviour to a person. Once alternatives are identified, expectancies and reinforcement values are associated with the alternatives for preferred choices. Values and affect influence an individual's expressions. Beliefs that are related to affect are those that are significant to the individual. A fundamental distinction between beliefs and affect is that questions of fact ask "what is likely?" compared to questions which ask "what is preferable?" Affect is a learned predisposition from experiences, and a positive or negative emotional response that is generally not susceptible to change (Fishbein, 1965). Under certain stimulating conditions a motivational element of affect is characterized by the anticipation of a change in affect associated with a behavioural sequence (Rokeach, 1975). Thus, affective processes regulate behaviours by influencing choice. Affect may be considered an emotional response aroused or elicited by certain stimuli conditions in a salient environment.

An individual's attitude toward an object is a function of the strength of his beliefs about the object and the evaluative aspect of those beliefs ... it may be predicted that an individual's attitude toward any object is equal to the sum of the products of beliefs and their respective evaluations over all aspects of the objects (Fishbein, 1965, p. 17).

Attitudes are learned predispositions that are the sum of salient beliefs. They are relatively enduring organizations of interrelated beliefs that describe, evaluate, and initiate action with respect to an object or situation (Rokeach, 1975).

Allport's (1954) suggestion that attitudes may be considered as stable dispositions is important to consider when examining involvements that individuals value. The functioning of volunteer organizations is dependent upon a core of dedicated people. The desire to validate self-worth and effectiveness can be seen as a characteristic of voluntary action. Individuals desire to be active contributors to their environment: an element of ego involvement or personal causation is inherent in voluntary activity (deCharms, 1968).

Intention of behaviour (e.g., voluntary action) is significantly related to and determined by choice, desirability, and personal relevance. The more relevant a condition is for the individual "the stronger will be the correspondence between intention and disposition" (Jones & deCharms, 1957, p. 76). Intention is, therefore, contingent upon personal values. Theoretically, voluntary action is personal control over intention of action and may be perceived as intrinsically motivated by a need for achievement (deCharms, 1968).

The assessment of the attributions of volunteer satisfaction involves a consideration of the strength, direction, and affective component of attributions, all of which contribute to satisfaction. "Satisfactions accrue to the person from the expression of attitudes and behaviour reflecting his/her cherished beliefs and self image" (Katz & Kahn, 1978, p. 361). In understanding involvements that individuals value, attributions and affect may be significant factors to consider (e.g., Baumgardner, Heppner, & Arkin, 1986; Kelley & Michela, 1980; Liu & Steele, 1986; Norris & Neibuhr, 1984; Ryan & Grolnick, 1986; Spector, 1982).

The review of attribution theory involved a consideration of emotional, motivational, and cognitive components supported by the attitude-belief-affect description of response and behaviour. The strength of attribution theory is that it provides opportunities to explore wider social dimensions of attribution. The model of attribution presented is particularly applicable and valuable to volunteer organizations. An important function of attribution is control of the environment. Perception of controlability is an antecedent to personal causation (Fincham, 1983). For volunteer organizations, attribution of control and responsibility has a functional capacity in that the relevancy of the organization is increased, contribut-

ing to retention of volunteers and permanent relationships within a social system (Hewstone, 1983).

Volunteer satisfaction is a function of personal attributions of causation, feelings of competence, and self-determination. These individual dimensions are critical in maintaining intrinsic motivation (deCharms, 1968; Deci, 1980). Voluntary action is "free choice" behaviour, where individuals value either the context, process, or outcome of the activity. Voluntary action is a fundamental human activity that is valued on a personal and societal level (Connors, 1980; Mason, 1984). While the tendency of attributional research is to explain and enhance personal identity, the paradox of this "free choice" behaviour is that it takes place within the constraints of an organization. Hewstone (1983) and Ross (1977) have criticized attribution theorists for neglecting these social factors.

#### Organizational Climate: The Situational Dimension

Organizational climate is a measure of the essential attributes of an organizational setting (Litwin & Stringer, 1968). From a psycho-social perspective organizational climate is representative of the characteristic behavioural processes in a social system. Taguiri (1968) defined organizational climate as a total environmental quality within an organization,

conceived with the patterned relationships of persons and groups with belief systems, values, cognitive structures, and meaning. In terms of values, attitudes, and beliefs individuals are critical functioning elements of organizations, who create and are a part of the organizational climate (Mansfield, 1984). Thus, climate may be referred to as the atmosphere of feeling of authenticity in the environment perceived from the circumstances and surroundings that beset the organization.

The social system concept (Getzels et al., 1968), has emphasized the saliency of the dynamic aspect of organizations as a setting for individual behaviour. The social structure (climate) of an organization includes the interaction between individual and role dimensions. Unlike specific tasks, roles are situational; therefore, organizational climate may have an impact on the affective reaction of individual organizational members. "Affect ... involves subjective reactions to the aspects of the social situation to which attention has been drawn" (Green, Lightfoot, Bandy, & Buchanan, 1985, p. 174). In studies exploring the relationship between satisfaction and organizational climate directly, (e.g., Friedlander & Mangulies, 1969; Ivancevich & Donnelly, 1975; Pritchard & Karasick, 1973) climate was identified as a determinant

of satisfaction. Researchers have also operationalized situational dimensions as perceptual assessments of job characteristics (e.g., Hackman & Oldham, 1980; O'Brien, 1982). The importance for researchers and practitioners alike is an understanding of "how the organization is a psychologically meaningful environment for individual organizational members ... " (Payne & Pugh, 1976, p. 1126). Organizational characteristics may influence the form of motivational factors underlying satisfaction of individuals in an organization. The multi-dimensionality of organizational climate is a significant consideration when determining the applicability of climate as a situational dimension in a "personality x situation" effect on satisfaction.

Given the significance of organizational climate with respect to satisfaction it becomes important to consider the relationship from a psycho-social perspective. A significant feature of this perspective is that satisfaction of individuals in an organization may be related, individually or interactively, to personality and situational processes. The salient contribution of understanding the psycho-social characteristics of organizational climate is that "personality x situational" interactions are legitimized and reduced to manageable constructs for empirical and theoretical inquiry (Wall & Gruneberg, 1984).



Attribution of Satisfaction:  
A "Personality x Situation" Outcome

The concept and importance of satisfying experiences is not new. Job satisfaction has been extensively studied in the field of organizational psychology. One reason for this attention is that satisfaction is a means to the end of personal happiness. An individual's willingness to pursue a course of action depends greatly upon confidence that expected satisfaction will be met successfully (Locke, 1984).

Despite the voluminous research on job satisfaction, integration of individual and organizational variables has not been a frequent research approach. A great deal is known about the components of job satisfaction (e.g., Locke, 1969; Smith, Kendall, & Hulin, 1969), but the processes that contribute to satisfaction remain open to various interpretations.

The underlying facet of job satisfaction is intrinsically motivated tasks, roles, and jobs (Hackman & Oldham, 1980; Hopkins, 1983; Smith, Kendall, & Hulin, 1969). The importance of satisfaction in human services is critical for organization and individual enhancement. The impact of organizational structure as a salient contributor to the impact of organizations on individuals, has resulted in psycho-social studies of satisfaction which have identified broad similarities of what individuals desire in organization or work

environments (e.g., Dean & Brass, 1985; Hackman & Oldham, 1980; Sherman & Smith, 1984; Simonds & Orife, 1975; Smith, Kendall, & Hulin, 1969). Most organizations have a climate within which members perform their roles. Thus, climate is an obvious determinant of affective response. Why individuals respond as they do is a function of individual attitudes, values, and beliefs. Individuals have expectations based on the value of the experience and outcome (Hopkins, 1983).

Attributions are important in understanding affective responses in complex organizational systems (Rothbaum, Weisz, & Snyder, 1982). Interest for its own sake is especially important for volunteer organizations. "In effect, volunteers possess high levels of [psychological] growth need ... coming into the organization" (Dailey, 1986, p. 29). Voluntary activity is a valuable end in itself by providing the opportunity for self-expression and psychological growth. The basis of voluntary action is intrinsic satisfaction. The individual believes that the experience will meet expectations of personal satisfaction (Ministry of Supply & Services, Canada, 1977).

Satisfaction is an important consideration for understanding involvements that individuals value. Creating and promoting intrinsically motivated roles in volunteer organizations has the potential to increase

persistence of volunteers and create a homogeneous organization that shares the same values and works toward a cooperative purpose. Without a reasonable degree of satisfaction in a volunteer organization the cooperative involvement of individuals would not be initiated, retained, or enhanced.

#### Voluntary Action in Amateur Sport Organizations

Voluntary action is the decision to participate in an organization based on altruistic and ego-directed intrinsic motivation. Adler's (1959) social interest construct has common characteristics with voluntary action. Both constructs involve an optimistic and affirmative attitude within cognitive, affective, and behavioural processes (Crandall, 1975). From a behavioural perspective a true test of social interest is activity.

There are self-expressive and instrumental components to voluntary action. The self-expressive ego dimension is a function of the process of voluntary action. An activity must have some personal relevance (i.e., intrinsic value) or individuals will not volunteer their time, effort, expertise, and/or money.

Regardless of the fact that volunteers are fundamental to service organizations, there is very little organizational behaviour literature that focuses on the

psycho-social factors and processes which underlie voluntary action. Specifically, volunteer satisfaction has not been a favoured line of research.

Researchers studying volunteers have concentrated on gaining information regarding the appropriate profile of the volunteer. The Ministry of Supply and Services, Canada, published a report entitled People in Action (1977), for the National Sport and Recreation Centre. The report identified who volunteers are, their responsibilities, and duties in an attempt to provide "crucial information on volunteers" (p. 1). Smith and Tannenbaum (1963) compared the influence of groups at hierarchical levels in volunteer and employee groups; however, individual difference variables were not compared. Pearce (1980) found volunteers less willing to assume leadership roles; but motivation and attitudes were not examined for significant differences. In contrast, Slack (1979) investigated individual characteristics of volunteer sport administrators in determining their profile. He found volunteers were on average, married, middle-aged males, with upper socio-economic status. Generally, volunteer sport executives were involved in the sport for a number of years and were cross representatives of more than one sport, executive position, and non-sport organization. These studies provide descriptive data

of volunteer characteristics, relevant to volunteer retention. The volunteer profile has been clearly identified; but, the value of the volunteer experience to the individual has not been investigated.

A review of the literature on volunteer satisfaction produced three related studies. Sales (1982) stated "concern is not simply aimed at selecting the proper person to volunteer, but ... the ultimate maintenance of that person's commitment" (p. 1). In his study on volunteer judges in the Canadian Figure Skating Association (CFSA) Sales (1982) attempted to demonstrate what factors contributed to a judge's initial and continuing interest. Personal interest and needs were the catalysts for involvement and the desire for personal development was supported by altruism as motivators to begin and continue to volunteer. Social contact and support were not significant motivators for volunteer judges in the CFSA (Sales, 1982).

The need to understand attitudes and motivation of volunteers was also recognized by Pearce (1983). She reported attitudinal differences between volunteers doing the same work as employees. Volunteers reported that they worked for the rewards of social interaction and service to others. Volunteer work was more praiseworthy and more satisfying. No significant difference was found for intrinsic motivation, supporting the

contention that personal causation may be overemphasized by individuals and the significance of situational forces neglected.

Dailey (1986) focused on the personality, job characteristics, and attitudinal antecedents that underlie organizational commitment and satisfaction among volunteers. He found job satisfaction to be highly predicted by three job dimensions (task significance, skill variety, and task identity). The personality characteristics of need for achievement and affiliation were not significant predictors of satisfaction. Job satisfaction was also a significant predictor of organizational commitment. These studies confirm the notion that the dynamics of personality and situational processes in volunteer organizations is a significant area of study.

When looking at voluntary action from an attributional perspective, intrinsic motivation and cognitive assessment of the situation are psycho-social factors which must be considered. Voluntary action is "free choice" behaviour; therefore, in a behavioural analysis of voluntary action in amateur sport organizations, there is the potential for "personality x situational" factors to make significant theoretical and empirical contributions to the knowledge of volunteer satisfaction in amateur sport organizations.

### Summary

The preceding review of literature included specific personality and situational dimensions that are significant in a psycho-social analysis of volunteer satisfaction. Cognitive, motivational, and emotional factors were discussed in relation to attributions of satisfaction. For research on sport organizations the social system approach offers a valuable framework, integrating situational and personality attributions of organizational behaviour. Yet understanding in this area for volunteer sport organizations is limited. Human service agencies that depend on volunteers have focused on personal traits which are associated with the selection and retention of volunteers. Such a focus is a limited perspective of voluntary action that does not lead to optimal organizational functioning.

The recognition of the dynamic characteristics of volunteer organizations emphasizes the need for a comprehensive analysis of individuals in organizations. The application of generalized personal attributions and organizational climate as legitimate personality and situational dimensions is evident when the processes preceding individual reaction in organizations are understood from a social system perspective. The review of literature has identified and applied personality and situational constructs in relation to

attributions of volunteer satisfaction. The importance of volunteer satisfaction may be expressed by a psychosocial analysis of voluntary action in amateur sport organizations.



## CHAPTER III

### METHODOLOGY

This thesis related the individual attributions of personal causality and organizational climate to volunteer satisfaction. The purpose of this study was to identify the attributional properties, measured by "personality x situational" interactions, of volunteer satisfaction in amateur sport associations in the province of Ontario. A second purpose was to identify the way in which perceived personality and climate attributions contribute to volunteer satisfaction. The situational variables were operationalized by eight subtests of organizational climate. The subtests (see definition of terms) were combined to identify a profile of organizational climate (independent variable). The personality dimension (independent variable) was operationalized by four attributional elements: ability, effort, task difficulty, and luck which theoretically, interact to identify two attributional dimensions: locus of control and locus of causality.

Figure 2 aids in the conceptualization and formation of the hypotheses by providing an explanatory framework. The dependent variable, had four dimen-

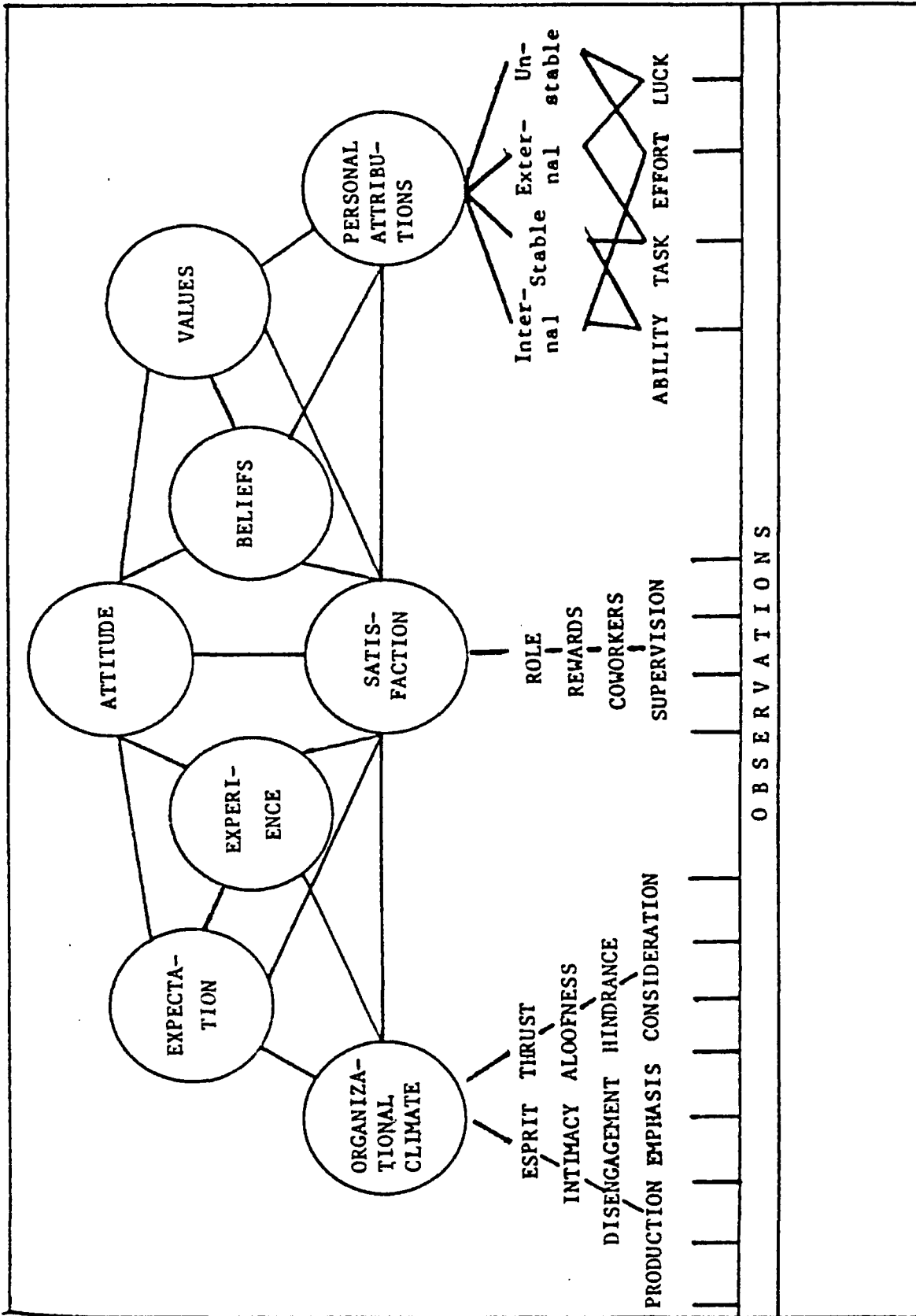


FIGURE 2  
PATH ANALYSIS

sions: role satisfaction, supervision satisfaction, coworker satisfaction, and reward satisfaction. The variability in the dependent variables can usually be explained using information from one or more of the independent variables. Questions about the relative importance of independent variables become particularly meaningful when inferences about causal relations among the operational and theoretical constructs are made (Kerlinger & Pedhazur, 1973, p. 281). This will identify how well the accumulated facts fit together into a cohesive, understandable whole and; identify information that is needed to fill in gaps, clarify, or refine the conceptual framework that supports the empirical test.

The following research problems and hypotheses were statistically analysed at the .10 level of significance. Since the purpose of this thesis was largely an exploratory analysis of the criterion of volunteer satisfaction the risk of accepting null hypotheses (which might be rejected) was more acceptable. In determining the relationship between the independent and dependent variables, the likelihood of recording a difference when there was no systematic difference was increased yet considered to be less serious for exploratory research based on subjective data (Welch & Comer, 1983, p. 162-164).

### Research Problems

This study was designed as an exploratory study to investigate factors associated with volunteer satisfaction, with an emphasis on specific dimensions of satisfaction, subjective characteristics of the organization, and individual-psychological characteristics. In light of the nature of this study, the following research problems and hypotheses were advanced:

1. Is there a significant difference in the contribution to volunteer satisfaction between perceived personality attributions and perceived organizational climate?

H<sub>01</sub>: There will be no significant difference in the contribution to each dimension of volunteer satisfaction between perceived personality attributions and organizational climate ( $p < .10$ ).

H<sub>a1</sub>: There will be a significant difference in the contribution to each dimension of volunteer satisfaction between perceived personality attributions and organizational climate ( $p < .10$ ).

H<sub>02</sub>: There will be no significant difference in the contributions to volunteer satisfaction between perceived personality attributions and organizational climate ( $p < .10$ ).

H<sub>a2</sub>: There will be a significant difference in the contributions to volunteer satisfaction between perceived personality attributions and organizational climate ( $p < .10$ ).

The following problems were stated to identify the way in which perceived "personality x situational" interactions contribute to volunteer satisfaction:

2. Do the perceived personality attributions show characteristics which relate to volunteer satisfaction?

Ho3: There will be no significant difference in the contribution to each dimension of volunteer satisfaction among the perceived personality characteristics ( $p < .10$ ).

Ha3: There will be a significant difference in the contribution to each dimension of volunteer satisfaction among the perceived personality characteristics ( $p < .10$ ).

3. Does perceived organizational climate show characteristics which relate to volunteer satisfaction?

Ho4: There will be no significant difference in the contribution to each dimension of volunteer satisfaction among the organizational climate characteristics ( $p < .10$ ).

Ha4: There will be a significant difference in the contribution to each dimension of volunteer satisfaction among the organizational climate characteristics ( $p < .10$ ).

4. Are there significant "personality x situational" interactions for each dimension of volunteer satisfaction?

Ho5: There will be no significant difference in the contribution to each dimension of volunteer satisfaction among the personality and organizational climate attributions in "individual x situational" interactions ( $p < .10$ ).

Ha5: There will be a significant difference in the contribution to each dimension of volunteer satisfaction among the personality and organizational climate attributions in "individual x situational" interactions ( $p < .10$ ).

#### Statistical Analysis

Satisfaction has been restricted to descriptions of commonly occurring patterned dimensions. Few re-

searchers have attempted to validate attributions purporting to contribute to satisfaction (Lefcourt, Martin, & Ware, 1984; Weiner et al., 1978, 1979). Clearly the world of attitudes is complex and requires multivariate methods of analysis. The Statistical Package for the Social Sciences (SPSSx) was used to apply multiple analysis of variance (MANOVA) and discriminant analysis statistical methods in order to identify empirical relations between the constructs of this study.

MANOVA was used to identify the different sources of variance in the dependent variables. The levels of satisfaction (see Figure 2) may be considered as distinct, yet interdependent, dimensions of satisfaction. MANOVA enabled the testing of the hypotheses with multiple independent and dependent variables. The total sum of products of the dependent variables was partitioned, according to the independent variables, into between groups and within groups sums of products. Tests of statistical significance were used to determine whether the dependent variables when considered simultaneously, were equal. The multi-dimensionality of the study is illustrated by Figure 2. MANOVA reflects the three dimensional space of multi-dimensional problems by considering all variables together. In MANOVA a wide range of hypotheses about

significant differences between groups can be tested, while considering the interaction of multivariate situations. Practically, some situational and personality dimensions may contribute to one dimension of satisfaction but not another.

The discovery of differences using MANOVA was enhanced by applying discriminant function analysis to the problem. "Discriminant function is a regression equation with a dependent variable that represents group membership" (Kerlinger & Pedhazur, 1973, p. 337). The relative importance of each independent variable and its dimensions was calculated for each dependent variable. Practically, discriminant analysis may determine how well the personality and situational independent variables contribute to each dimension of satisfaction. Multivariate methods of analysis are an important means of identifying differences and determining the importance of these differences in delineating the relations between "personality x situational" interactions and volunteer satisfaction (Kerlinger & Pedhazur, 1973, p. 336-341; 350-360).

#### Research Design

The path analysis (see Figure 2) conceptualizes the interrelationships between operational and theoretical constructs and their contributions to our

understanding of the dynamics of volunteer satisfaction. In Figure 2 organizational climate and personal attributes contribute to satisfaction. Organizational climate, personal attributes, and satisfaction are ascertained from the observational measures. The operationalized measures are directly related to empirical constructs derived from past research. Operational constructs provide factual information and theoretical formulations enable the opportunity for future investigation (Getzels et al., 1968). The theoretical and unobserved constructs (attitude, expectations, experience, beliefs, and values) conceptualized by theoretical definitions, express the relationship among theoretical, derived, and empirical constructs.

There are well established relationships among situational variables and among personality variables. To bridge the theory, operationalization, and definition gap, tentative-theoretical relationships must be identified as stable. The path analysis (see Figure 2) is a synthesis and extension of attributional theory (Heider, 1958), theory of organizational climate (Halpin, 1966), and job satisfaction (Smith, Kendall, & Hulin, 1969). Path analysis aids in the conceptualization and formation of hypotheses by providing an explanatory framework (Kerlinger, 1986, p. 309).



Figure 2 provides a theoretical model for delineating or directing observations. It is postulated that volunteer satisfaction is an attitudinal response explained by the nonobservational links among: values, beliefs, expectations, and experiences. These cognitive, emotional, and motivational dimensions are linked to generalized personal attributions and organizational climate. The model integrates theoretical dimensions and accounts for existing empirical evidence on attributional research.

#### Instrumentation

The Volunteer Sport Administrator Experience Questionnaire (VSAEQ) (Appendix A) was self-administered and adapted to include alphabetical rather than numerical scales to avoid evaluative interpretations of the scale rather than the statements.

Volunteer satisfaction was assessed using an adapted version of the Job Descriptive Index (JDI) (Smith, Kendall, & Hulin, 1969) (see Appendix A). The JDI has been described as the most carefully developed measure of job satisfaction (Locke, 1976). In its original form the JDI assesses five dimensions of job satisfaction that were derived from factor analytic research: work, supervision, pay, promotions, and coworkers. A total satisfaction score is determined by

adding the scores of each dimension. This study modified and adapted the questionnaire to fit four dimensions: role, supervision, coworkers, and rewards, within the volunteer sport environment. A pilot study helped to identify the appropriateness of the modified scale for the sample of volunteer sport administrators in this study.

The JDI asked the respondents to indicate their agreement with items for each dimension using the following scale: "Y" for "Yes" if they agreed with the item, "N" for "No" if they disagreed with the item, and "?" if they could not decide. The coding for the responses was 3 for "Yes", 1 for "?", and 0 for "No". A limitation of the JDI for measuring volunteer satisfaction was the fact that it was devised before the upsurge of interest in intrinsic job satisfaction (Locke, 1984).

The function of personality and situational attributions, individually and interactively, was measured using the Trent Attribution Profile (TAP) (Wong, Watters, & Sproule, 1978) and the Organizational Climate Descriptive Questionnaire (OCDQ) (Halpin & Croft, 1963), respectively.

The TAP is a measurement of attributions of causal beliefs in terms of attributions of control and causality of outcomes and responsibility. TAP is based

on Weiner et al's. (1972) dual dimensional approach to causal attributions in achievement situations. This approach classifies attributional elements (effort, ability, task difficulty, and luck) into two attributional dimensions (locus of control and locus of causality) originally identified by Heider (1958). Control and causal dimensions are determined independently but depend on interactions of the attributional elements. Thus, scores can be readily subjected to a multivariate analysis that may reveal the structure of an individual's attributional schema. The TAP was scored on a five-point Likert-type scale of importance with the middle score representing an undecided ranking.

The situational attributions were measured using an adapted and condensed version of the OCDQ (Halpin, 1966) (see Appendix A). Halpin and Croft (1963) established the OCDQ to measure organizational climates of schools. They suggested that their interest was in organizational climate as a general construct and should be applicable to various settings and situations. The OCDQ was reworded to fit the volunteer organization situation. The items on the OCDQ identify 8 dimensions: Disengagement, Hindrance, Esprit, Intimacy, Aloofness, Production Emphasis, Thrust, and Consideration. The dimensions were combined to estab-

lish a profile representative of organizational climates that are distinguished by their degree of "openness". Halpin and Croft (1963) identified the following six organizational climates:

1. Open Climate: high esprit, thrust, and consideration; low disengagement, hindrance, aloofness, and production emphasis; and moderate intimacy.

2. Autonomous Climate: high esprit, intimacy, aloofness, and thrust; low disengagement, hindrance, and production emphasis; and moderate consideration.

3. Controlled Climate: high esprit, hindrance, and production emphasis; low disengagement, intimacy, and consideration; moderate thrust and aloofness.

4. Familiar Climate: high disengagement, intimacy, and consideration; low hindrance, aloofness, and production emphasis; moderate esprit, and thrust.

5. Paternal Climate: high disengagement and production emphasis; low hindrance, intimacy, esprit, and aloofness; moderate thrust and consideration.

6. Closed Climate: high disengagement, hindrance, aloofness, and production emphasis; low esprit, consideration, and thrust; and moderate intimacy (p. 1-4).

The OCDQ was scored on a four-point Likert-type scale, on which respondents indicated the extent to which each statement characterized the organization. The response categories were: rarely occurs, sometimes occurs, often occurs, and very frequently occurs.

#### Sample

The sample (N=279) for this study was obtained from a list of volunteer administrators provided by 23 out of 70 sport organizations associated with the

Ontario Sports Centre. Each executive director of each sport association was contacted for a mailing list of volunteer administrators associated with their organization. The 23 sport associations which responded within the specified cutoff date are listed in Appendix B. The mailing list for the study included all names provided by the 23 sport organizations in an attempt to get a reasonable sample size for the proposed statistical analyses.

#### Procedure

While organizational behaviour measurements have been used in previous research, it was necessary to verify whether the dimensions and items of the selected and modified OCDQ items were relevant for the volunteer sport context. Volunteer organizations have unique characteristics, the most prevalent being, that voluntary activity is not financially remunerated. This is a contrast to financial and business organizations where organizational members are guaranteed remuneration for services and expertise.

Generally, members of a profit organization realize they may not gain personally rewarding experiences. In contrast, volunteer organizations are generally nonprofit organizations that strive to provide a service to the public and by their nature do not promote

economic dependence by organizational members. This distinction of emotional significance rather than economical dependence identifies intrinsic satisfaction as a paramount feature for the optimal functioning of volunteer organizations, and makes it necessary to test the appropriateness of the (N=32) OCDQ items for identifying the relationships between the constructs important to this study.

#### Validity and Reliability

An attempt to confirm the reliability and validity of the proposed instrumentation and statistical treatments was achieved by a pilot study. The results from the pilot study "reduced the danger of improper interpretation and explanation of results" (Kerlinger, 1986, p. 145). Ontario provincial sport bodies (Amputee Sports Association, Blind Sports Association, Cerebral Palsy Sports Association, and Wheelchair Sports Association) used in the pilot were not included in the final study sample. The validity of the test instrument was increased by ensuring content validity or the representativeness of the items in relation to the topic under investigation. Submitting the instruments to a small (N=9) group allowed revisions for establishing clear, concise, and unambiguous statements prior to the study. The instrument was compiled after an

extensive review of the literature. Consequently, for the purpose of the study, the instrument was presumed to be representative of the properties being measured (face validity). These measures of validity were empirically tested for the study sample using the proposed statistical methods. Through the application of MANOVA the validity of the questionnaire was tested to determine its ability to distinguish differences between the dimensions of satisfaction and the personality and situational constructs.

Construct validity of the measures explained what constructs accounted for the variance. Discriminant function analysis was implemented to "empirically differentiate the construct from other constructs that may be similar and ... point out what is unrelated to the construct" (Kerlinger, 1986, p. 421). Statistical analyses (viz., MANOVA, discriminant analysis) determined the appropriateness of the instrument, for the proposed sample of volunteer sport administrators, by verifying the content, face, and construct validity of the instrument.

Kerlinger (1986) identified two methods of improving reliability: unambiguous, clear instructions, and appropriate length which were attained for this study using recommendations from a small (N=9) pilot sample and consultation with committee members prior to the

final study.

### Collection of Data

A list of the executive volunteers from 23 provincial sport associations located at the Ontario Sports Centre permitted delivery of the questionnaire to the volunteers. A letter of explanation and instructions was attached to the questionnaire (see Appendix A). A follow-up was mailed to each volunteer two weeks after the initial distribution. All questionnaires used in the study were collected between October and December 1986. October 28, 1986 and December 9, 1986.

### Limitations of the Study

This study attempted to determine how well individual and situational attributes contributed to volunteer satisfaction. Included in the nature of the study there were certain conceptualization, practical, and operationalization limitations that were considered for their potential effects on the stated research problems and findings.

To understand the attributions of human behaviour, perceptions of values and beliefs are important. An individual's perceptions determine his/her social reality. Subjective self-reports provide indicators that are "... relative evaluations rooted in life



experiences .... satisfaction is the perceived difference between ... aspirations and expectations within one's current situation" (Loetscher, 1981, p. 23 & 25). Concepts of satisfaction vary with personality, experience, expectations, and the situation. People react differently to the same conditions, thus, limiting the generalizability of self-reports.

The practical limitations of a large scale survey includes design and implementation constraints. The design of an effective measurement of perceptual phenomena has reliability and validity limitations. Since the questionnaires were modified cross-study comparisons may only be inferred. Perceptions, expectations, feelings, and values are difficult to measure and define. Self-reports are individualistic, personal, and emotional responses, therefore, consistency and generalizability was limited by the nature of self-report data. Practical implementation or utility of the study was limited for volunteer organizations. Policy formation is not designed to affect perceptual phenomena directly. Volunteer organizations are established with the intention of providing a service to the public and meeting the organizations concrete goals, rather than satisfying volunteer members (Ministry of Supply & Services, Canada, 1977).

Although a social system perspective was adopted,

measurement and assessment was limited to conceptually defined organizational and personality dimensions. Thus, the influence of personal and situational variables was limited. Finally, the theoretical links to beliefs, preferences, expectations, and attitudes was not directly measured. Consequently, the applicability of these constructs was assumed.

#### Delimitations of the Study

The sample was delimited to one of convenience from 23 sport organizations associated with the Ontario Sports Centre. The conceptualization and operationalization of the independent and dependent variables was delimited by an analysis of previous research, which has tended to concentrate on job satisfaction rather than volunteer satisfaction. The OCDQ (Halpin & Croft, 1963) and JDI (Smith, Kendall, & Hulin, 1969) were both modified to fit the sample of the study. The operationalization of personal attributions was delimited to a previously tested instrument, the TAP (Wong, Watters, & Sproule, 1978). The applicability of these instruments to the specific setting was assumed.

A further delimitation of the research design of this study was the imposed cross-sectional nature of data collection that measures variables with different

time frames. The TAP (independent variable) measured contemporary judgement but the OCDQ (independent variable) and JDI (dependent variable) involved reminiscent judgement. These time frame differences may have contributed to error variance and limited the causality between the independent and dependent variables. Using a dynamic process (i.e., social systems analysis) with cross-sectional data, one must recognize that the variables are not static: situational and individual attributions may be affected or affect volunteer satisfaction.

## CHAPTER IV

### DEVELOPMENT OF THE SIX ORGANIZATIONAL CLIMATES

The following section discusses the construction of six organizational climates based on responses to the organization experience items (Section II) in the VSAEQ (see Appendix A). From Halpin's (1966) original pool of 64 test items a total of N=32 items was modified based on their relevance and adaptability to a volunteer organization environment. Decreasing the number of original items by 50% may reduce the sampling adequacy and degree of factorial determination of the items (Kim & Mueller, 1978). The items were parallel with the original OCDQ items with the exception of the terms, volunteer and president in place of teacher and principal, respectively. It was hypothesized that these 32 items, which volunteers used to describe the climate of their organization, would be assigned to eight organizational dimensions (esprit, thrust, production emphasis, disengagement, hindrance, intimacy, consideration, and aloofness) identified by Halpin (1966).

The first analysis related to the content and construct validity of 32 modified items from Halpin's (1966) original 64 OCDQ items. The question of how

well the modified OCDQ items reflected Halpin's OCDQ dimensions was answered by testing whether or not there was a significant difference between the item content of Halpin's dimensions and those obtained by the sample of volunteers. Three statistical methods were used to define the validity of Halpin's eight OCDQ dimensions: factor analysis of the 32 modified items, cluster analysis of the 8 organizational climate dimensions, and Varimax rotation of principal components analysis on the 8 organizational climate dimensions. In an attempt to verify the initial theoretical conception of the eight OCDQ dimensions, factor analysis was employed to confirm content and construct validity of the 32 items.

#### Confirmation of Halpin's Eight OCDQ Dimensions

The first objective was to evaluate the eight factor model in the presence of sampling errors. One basic assumption of factor analysis is that the observed correlation between variables is due to the sharing of common factors (Norusis, 1985). A criterion to test this assumption is how well the assumed common factors can reproduce the observed correlations. The eight-factor model may be confirmed when the residual between the estimated and observed correlations is small. This discrepancy between the observed and

expected correlations, if small, may be attributed to sampling variability.

The method of factor extraction employed was Generalized Least Squares (GLS), which produces, for a fixed number of factors, a factor pattern matrix that minimizes the sum of the squared differences between the observed and reproduced correlation matrices (ignoring the communalities). Correlations are weighted inversely by the uniqueness of the variables. Correlations involving variables with high uniqueness are given less weight (Norusis, 1985). After the number of factors was specified, the GLS estimates were used to obtain statistical estimates of the factor loadings for a population of subjects. GLS is a variation of the minimal residual method (MINRES; Harman, 1976). MINRES solutions are based only on non-diagonal coefficients, eliminating the need for repeated factoring until calculated communalities correspond closely to the initial estimates (Kass & Tinsley, 1979). Harman (1976) has suggested that this economical method of factor extraction may replace other prominent methods such as principal axis and maximum likelihood methods.

Confirmatory factor analysis provides validating information. The minimum requirement, a hypothesis regarding the number of common factors, was met in addition to hypothesizing what factors were likely to

load on which variables. "Factor analysis can not prove the existence of a particular causal structure from observations of a covariance structure, but it can assess the degree to which the plausibility of the factor model is confirmed" (Kim & Mueller, 1978, p. 46). Empirical confirmation is obtained by evaluating the requirements of the fit of expected and observed correlation coefficients.

Significance tests were employed to assess the fit of the observed and expected correlations. The results focused on sampling variability and the degree of empirical confirmation or reliability of the observed data. The GLS method of extraction provides a goodness of fit test based on a Chi-square transformation for the adequacy of the eight-factor model. A Chi-square of 272.9833 with 268 degrees of freedom and a .4041 level of significance was observed for the eight-factor 43 iteration GLS extraction. The observed significance level for Chi-squared indicated eight factors adequately represented the data. Since Chi-squared is directly proportional to the sample size, it must be noted that for such a large sample ( $N=279$ ), the goodness of fit test may have identified small discrepancies in fit to be statistically significant, resulting in the extraction of more factors than necessary (Norusis, 1985).

A test independent of statistical significance, the residual mean square, measures the discrepancy between the observed correlation matrix and estimated correlation coefficients (Harman, 1976). In general, if factors are orthogonal, the estimated correlation coefficients between the factors and the variables can be used to estimate the correlations between variables. A measurement of residuals indicated that 68 or 13% of the correlation coefficients between the factors and the variables were greater than .05. Thus, the variability between the observed and estimated correlation coefficients was low and the eight-factor model appeared to account for the observed covariation and fit the sample data.

Bartlett's test of sphericity was used to test whether the correlation matrix was an identity matrix. That is, testing for no observed correlations among the variables. The value of the test statistic was large (Bartlett's test of sphericity = 2102.7099) and the associated significance level was small (significance = .000), so it appeared unlikely that the population correlation matrix was an identity. The eight-factor model was judged appropriate for the data. Another goodness of fit measure was the determinant of the correlation matrix. Determinants close to zero indicate that one or more of the variables can be expressed



as a linear function of the other (Tabachnick & Fidell, 1983). The observed determinant of the correlation matrix (.0001429) indicated that the variables were not independent and could be represented by common underlying factors.

An indicator of the strength of the relationship among variables is the partial correlation coefficient. Partial correlations are estimates of correlations between the unique factors and should be close to zero. The Anti-Image Correlation (AIC) is the negative of the partial correlation coefficient. When the proportion of large coefficients is high the factor model may be inappropriate. The observed AIC was 104 or 10.5% > .09, which was small enough to consider the use of the eight factor model.

The Kaiser-Meyer-Olkin (KMO) and the Measure of Sampling Adequacy (MSA) measure the sampling adequacy between pairs of items and single items respectively (Kaiser, 1970, 1974). Small values indicate that factor analysis of the variables may not be a very good idea since correlations between pairs of variables cannot be explained by other variables. The KMO for this sample was .80155. The measure of adequacy for each individual variable (MSA) identified 30 items with a score of .60 or greater with half of these having values of .80 or greater. The goodness of fit statis-

tics appeared to satisfactorily confirm the eight factor model for the data.

Although confirmatory factor analysis imposes the number of factors to be extracted, the hypothesized eight factor model was not explained unambiguously. The substantive significance of the factor model was determined by measures of compatibility. To help evaluate whether the eight factor model was economically appropriate, the proportion of variance accounted for by the common factors was examined. The column labelled "COMMUNALITY" (see Table 1) provides an indication of the strength of the linear association among the variables. The communalities in Table 1 range from .20299 (OCDQ11) to .99900 (OCDQ30). The larger values indicate that the common factors explained a lot of the variance while small values indicated the uniqueness of the variable was greater than the common variance. All variables were retained regardless of the observed communality since the previous goodness of fit tests supported the eight factor model.

Table 2 identifies the total variance explained by each factor (EIGENVALUE) and the percent of variance explained by each factor. One criterion proposed for determining the number of factors to use in a model is eigenvalues equal to or larger than one should be

TABLE 1

LINEAR ASSOCIATION AMONG THE ORGANIZATIONAL  
CLIMATE ITEMS (N=32) AND DERIVED FACTORS

VARIABLE	COMMUNALITY
OCDQ1	.37349
OCDQ2	.49597
OCDQ3	.38939
OCDQ4	.42460
OCDQ5	.45946
OCDQ6	.42365
OCDQ7	.49411
OCDQ8	.34942
OCDQ9	.63720
OCDQ10	.38732
OCDQ11	.20299
OCDQ12	.67814
OCDQ13	.97206
OCDQ14	.49358
OCDQ15	.60179
OCDQ16	.51529
OCDQ17	.72708
OCDQ18	.79531
OCDQ19	.54858
OCDQ20	.51645
OCDQ21	.54033
OCDQ22	.44413
OCDQ23	.46251
OCDQ24	.56005
OCDQ25	.40906
OCDQ26	.52130
OCDQ27	.39194
OCDQ28	.43031
OCDQ29	.37258
OCDQ30	.99900
OCDQ31	.43614
OCDQ32	.48231

66  
TABLE 2

TOTAL VARIANCE EXPLAINED BY EACH FACTOR

FACTOR	EIGENVALUE	PCT. OF VAR.
1	5.78359	18.1
2	3.11963	9.7
3	1.83113	5.7
4	1.62647	5.1
5	1.47062	4.6
6	1.26625	4.0
7	1.15186	3.6
8	1.13356	3.5
9	1.08548	3.4
10	1.00293	3.1
11	.97228	3.0
12	.87623	2.7
13	.84396	2.6
14	.80597	2.5
15	.75199	2.3
16	.71294	2.2
17	.68506	2.1
18	.63694	2.0
19	.63080	2.0
20	.60000	1.9
21	.55550	1.7
22	.53217	1.7
23	.49726	1.6
24	.49551	1.5
25	.46190	1.4
26	.44374	1.4
27	.41972	1.3
28	.39902	1.2
29	.36650	1.1
30	.32853	1.0
31	.28128	.9
32	.23120	.7

included (Norusis, 1985). Ten factors have EIGENVALUES greater than 1.00 suggesting an upper limit of eight factors was an adequate representation of the data.

A criterion of substantive importance in confirming the eight factor model was the minimum contribution by a factor and the proportion of total variance explained by the last factor retained. Table 3 lists the percent of variance and cumulative percent of variance after GLS extraction of the eight factor model. Table 3 showed that 42.1% of the total variance was attributable to the eight factor model. The remaining 24 factors together accounted for the remaining 47.9% of the variance. The presence of unspecified environmental factors, conceptually unrelated to the domain of interest, may account for the unexplained variance. Variance estimations focus on some abstract properties of a matrix in order to account for as much variance as possible in the data. In the application of confirmatory factor analysis (i.e., accounting for the correlations), these assumptions are more flexible (Kim & Mueller, 1978). Variance criteria must be reconsidered because of the reasonably high degree of empirical confirmation when considering the structural constraints in the data (i.e., lack of randomness).

The purpose of this analysis was to confirm Halpin's (1966) factor-based scale and examine the

TABLE 3

GENERALIZED LEAST SQUARES FACTOR EXTRACTION:  
VARIANCE EXPLAINED FOR THE 8-FACTOR MODEL

FACTOR	PCT. OF VAR.	CUM. PCT.
1	6.6	6.6
2	11.0	17.6
3	7.8	25.3
4	5.1	30.4
5	4.1	34.5
6	3.1	37.5
7	2.4	39.9
8	2.2	42.1

cases in terms of the factors rather than in terms of each variable separately. Factor-based scales utilize only some of the information obtained from factor analysis, because even if factor loadings are uniform in the population they might not be in the sample. "The rule of thumb often used in this context is to consider factor loadings less than .30 as not substantial" (Kim & Mueller, 1978, p. 70). This criterion was justified in that the assumptions of confirmatory analysis were tested. The statistical deviations were not severe because the eight factor model was not expected to fit the data completely due to non-random measurement errors and unspecified environmental factors that may have accounted for some observed correlations. Since the eight factors did not account for more than 50% of the variance there was a basis for not considering the specific values obtained in the factor solution as optimal. The results of the factor analysis suggested what unobservable dimensions were underlying the variables. The combinations of observed factor loadings were understood to be less than a maximum representation of the data.

Since the confirmatory criteria supported a "liberal" eight factor model, varimax rotation was employed in an attempt to simplify the factor matrix for easy interpretation of the observed factors.

Varimax rotation identifies sets of uncorrelated factors which give the highest total of variance. This method attempts to minimize the number of variables that have high loadings on a factor by encouraging large and small loadings and suppressing the appearance of a general factor (Jackson, 1983; Norusis, 1985). Appendix C lists the varimax rotated solution for eight a priori factors. The coefficients are the weights or factor loadings assigned to each factor. They represent the unique contribution of each factor, and are the correlations between the factors and the variables. All loadings with an absolute value of .30 or greater were retained. The cluster of variables on each factor was used to confirm Halpin's (1966) eight organizational climate dimensions. Appendix D lists the specific items which make up the specific factors. Based on Halpin's (1966) description of the eight organizational dimensions and the varimax rotation for the GLS method of factor analysis (see Appendix C & D) the factors were labelled and described as follows:

Factor 1 (CONSIDERATION): Identifies the feelings of the president toward the other volunteers. Refers to the ability of the president to empathize with the volunteer's situation.

Factor 2 (ESPRIT): Identifies the feelings of volunteers in the organization about working in the organization and the atmosphere of the organization. Refers to individual judgement about social need satisfaction and role accomplishment. The general affective tone of the organization, concerned with trust, authenticity, and support.



Factor 3 (ALOOFNESS): Identifies the approachability of volunteers within the organization.

Factor 4 (PRODUCTION EMPHASIS): Refers to feelings of volunteers about the way things are done, clarity of procedure, performance standards, and organizational structure.

Factor 5 (HINDRANCE): Refers to volunteers feelings about routine duties, committee demands, and other requirements that obstruct rather than facilitate their role or duties.

Factor 6 (INTIMACY): Identifies the interpersonal feelings within the organization.

Factor 7 (THRUST): Identifies the way in which volunteers perceive policies, performance standards, pressure to perform, initiative, risk, and acknowledgement.

Factor 8 (DISENGAGEMENT): Refers to the emotional distance of the volunteers from the required roles, and goals of the organization. Identifies the tolerance of volunteers for the organization and other volunteers.

To determine what items pertained to each factor iterative cluster analysis was employed, using Ward's method and squared euclidean measures. The cluster analysis technique was used to identify homogeneous item groupings and confirm the a priori (four item per organizational climate dimension) clusters. An eight cluster solution was hypothesized to identify the variables that were similar to one another in relation to the eight factor based dimensions. Appendix E lists the grouped variables computed by Ward's method of cluster analysis. The cluster analysis results identified groups of items different from the eight a priori dimensions of four items each. Table 4 shows the relationship between the items for the a priori

TABLE 4  
CROSS CLASSIFICATION OF ORGANIZATIONAL CLIMATE A PRIORI  
AND DERIVED DIMENSIONS

ORIGINAL A PRIORI DIMENSION CLUSTERS		DERIVED CLUSTERS								
		I	II	III	IV	V	VI	VII	VIII	
I	Production Emphasis OCDQ22, 24, 25, 32				22, 24 32					25
II	Hindrance OCDQ3, 6, 9, 10		3, 6, 9, 10							
III	Esprit OCDQ5, 8, 12, 17			8		5, 12, 17				
IV	Consideration OCDQ14, 16, 21, 23				21	23				14, 16
V	Thrust OCDQ13, 15, 18, 26				18, 26	13, 15				
VI	Aloofness OCDQ20, 27, 28, 30							27	20	
VII	Disengagement OCDQ2, 4, 19, 31								2, 4, 31	19
VIII	Intimacy OCDQ1, 7, 11, 29			7				11, 29		1

dimensions and the derived clusters. The clusters were labelled using the dimensions identified by the confirmatory factor analysis.

The 32 items in Section II of the VSAEQ (see Appendix A) were included on the assumption of parallelism with Halpin's clustering of items. Confirmatory factor analysis and cluster analysis failed to identify the hypothesized clusters for the N=279 sample (see Table 4). Further data analysis was based on the item groups identified and labelled by confirmatory factor analysis and Ward's method of cluster analysis.

#### Analysis of the Eight Dimension Scores

The next step involved an assessment of construct validity to determine the validity of the eight organizational dimensions. Construct validity may be evaluated by investigating the psychological qualities that underly the measurement. Principal component analysis was employed to determine the degree to which underlying constructs account for the derived organizational climate dimensions. Each respondent's eight dimension scores were computed by summing item scores on each derived dimension, and dividing each of the eight sums by the number of items in the corresponding dimension (see Appendix E). This procedure gave eight subtest scores for 241 respondents. The raw scores

were converted to standardized Z scores. Only cases with valid values on all variables were included in the analysis. Thus, listwise deletion of cases with missing values omitted 38 cases from the analysis.

The correlations between the eight standardized dimensions listed in Table 5 indicated that the battery of dimensions measured relatively different behavioural types, fulfilling one criteria of validity for a factor-based scale. The battery as a whole should search for common behaviour to permit the description of the eight dimensions in terms of a few "general" factors and provide more knowledge about the organizational dimensions. These general factors should be related to the antecedent dimensions and to previous findings in organizational climate literature (viz., Halpin & Croft, 1963; Halpin, 1966).

The intercorrelations among the eight dimension scores were factored using a varimax rotation of principal component analysis. The unrotated factor loadings, eigenvalues, and estimates of variance attributed to each factor are listed in Table 6. The eigenvalues in Table 6 were sufficiently large (approximately 1.00) to warrant a 3 or 4 factorial solution. A three factor varimax rotation solution was believed to provide the best description of factors identified by the dimensions. The three factors explained 59.5% of the

TABLE 5  
CORRELATIONS BETWEEN EIGHT DERIVED DIMENSIONS, 32 ITEMS (N=241)

	Intimacy	Disengage- ment	Hind- rance	Esprit	Thrust	Aloof- ness	Considera- tion	Production Emphasis
Intimacy	1.00000							
Disengagement	.07788	1.00000						
Hindrance	.18914	.28846	1.00000					
Esprit	.05696	.45906	.20292	1.00000				
Thrust	.22610	.15273	.06059	.29219	1.00000			
Aloofness	.11667	.03494	.06733	.13434	.12900	1.00000		
Consideration	.33025	.27312	.04897	.55479	.15027	.22219	1.00000	
Production Emphasis	.01047	.18907	.16356	.40053	.09264	.25871	.40255	1.00000

TABLE 6  
UNROTATED FACTOR MATRIX FOR EIGHT DERIVED DIMENSIONS, 32 ITEMS (N=241)

D I M E N S I O N	F A C T O R S							
	I	II	III*	IV**	V	VI	VIIV	VIII
Esprit	.79	-.28	-.01	-.27	.01	.00	-.33	-.33
Consideration	.75	.09	-.25	-.15	-.45	.04	-.18	.34
Production Emphasis	.61	-.27	-.41	.21	.00	-.45	.36	-.04
Disengagement	.59	-.36	.42	-.10	.04	.45	.35	.05
Intimacy	.37	.75	.27	.11	-.38	-.01	.17	-.20
Aloofness	.38	.29	-.51	.46	.37	.40	-.06	-.03
Hindrance	.39	-.09	.59	.61	.13	-.21	-.22	.11
Thrust	.42	.43	.15	-.46	.59	-.21	.04	.12
EIGENVALUE	2.5	1.1	1.1	.95	.85	.66	.48	.30
Z OF VARIANCE	31.5	14.1	13.9	11.9	10.6	8.3	6.0	3.7

\* 3 FACTOR SOLUTION = 59.5% OF VARIANCE      \*\* 4 FACTOR SOLUTION = 71.4% OF VARIANCE

variance. Although a four factor solution was attempted, the solution produced one general principal component which provided less information about the composition of the battery of dimensions. The high communalities presented in Table 7 provided estimates of the reliability for the eight dimensions.

The three-factor varimax principal component solution for the eight dimensions is listed in Table 8. Production Emphasis, Consideration, Esprit, and Aloofness loaded highest on Factor 1. The examination of the items that composed the dimensions loading highly on Factor 1, identified that respondents were describing "Group Behaviour". Interaction with and the relationship between group members and the president in terms of social and task accomplishment described this factor. Halpin (1966) labelled the group factor "Esprit" characterized by the interaction between the group where there is an authentic effort toward social and task accomplishment.

Disengagement, hindrance, and esprit had high loadings on Factor 2. Esprit refers to the morale, enthusiasm, and effort with which volunteers work to accomplish tasks and goals. Disengagement and hindrance refer to behaviours that connote dominance, authority, resistance, and submission. Together these dimensions depict behaviour which is primarily oriented

TABLE 7  
COMMUNALITIES OF THE EIGHT  
DIMENSIONS, 32 ITEMS (N=241)

VARIABLE	COMMUNALITY
Intimacy	.77213
Disengagement	.65628
Hindrance	.50679
Esprit	.70477
Thrust	.38479
Aloofness	.49160
Consideration	.62928
Production	.61583
Emphasis	



TABLE 8

3 FACTOR VARIMAX ROTATION SOLUTION, 32 ITEMS (N=241)

DIMENSION	FACTOR		
	I	II	III
Production			
Emphasis	.76597	.13160	-.10865
Consideration	.71604	.15558	.30390
Esprit	.65632	.52015	.05873
Aloofness	.56603	-.31414	.26931
Disengagement	.25027	.77028	.01776
Hindrance	-.05469	.67536	.21835
Intimacy	-.00070	.05719	.87685
Thrust	.16899	.13946	.58033
% OF VARIANCE	31.5	14.1	13.9
FACTOR VALUES	1.95	1.73	1.32

towards the accomplishment of the organizations goals, and therefore, labelled "Social Control". Halpin's (1966) "social control" factor focused solely on the leader's orientation toward directing group behaviour. The cluster of variables in this study identified the interpersonal need for control over task and group accomplishment. Social control is defined as behaviour directed toward the interpersonal need for control represented by volunteer behaviour.

Intimacy and Thrust yielded high positive loadings on Factor 3. Intimacy refers to volunteer behaviour indicative of friendly social relations with each other, which describes individual social needs satisfaction. Thrust refers to behaviour which describes the effort, method, or way of acting toward the establishment of compatible relationships and cooperative purposes. This factor delineated the relationship between self and other members of the organization in an endeavour to establish interpersonal relationships. This factor is indicative of friendship, trust, respect, self awareness, and awareness of others. Halpin (1966) identified this factor as individual "friendly relations with the group" (p. 161). Thus, this factor was labelled "Social Needs".

The three factor solution identified by Halpin (1966) was supported by the varimax principal component

analysis for the sample of N=241 volunteers, but the internal structure of the items was altered. The item analysis confirmed the eight hypothesized dimensions identified in Section II of the VSAEQ (see Appendix A). The analysis at the dimension level identified the higher, or the more general components of all eight dimensions. The purpose of confirming and constructing the factor based scale was to describe the organizational climate of the organizations as perceived by each respondent in terms of Halpin's hypothesized eight organizational climate dimensions. The next section considers the items as a test battery for each individual respondent.

#### Identification of the Six Organizational Climates

The final post hoc validity test centred on the ability of the eight organizational climate dimensions to effectively separate and classify each of the volunteers into the six hypothesized climate groups (Open, Controlled, Autonomous, Closed, Paternal, and Familiar).

The first task involved computing the central tendency of the scores within each of the six sets for all respondents that grouped together in each of the six clusters. The average score was computed, dimension by dimension, for those profiles within each set.

These scores, listed in Table 9, represented the average estimates of profiles for each set.

The profile averages were viewed as descriptions of six different organizational climates. The labelling of the organizational climates was based on Halpin's (1966) ranking from Open to Closed (see Chapter III). The ranking of each cluster was based on each clusters average score compared to the average scores of each dimension for the total (N=241). By comparison each of the six clusters was labelled to depict a different organizational climate. Cluster by cluster each dimension was ranked as higher, lower, or similar to the overall group average. These rankings and Halpin's description of each climate led to the following cluster labels:

- Cluster 1: Open Climate
- Cluster 2: Controlled Climate
- Cluster 3: Autonomous Climate
- Cluster 4: Closed Climate
- Cluster 5: Paternal Climate
- Cluster 6: Familiar Climate

Based upon the content or behaviour tapped by the items and each of the eight factor based dimensions, the six climates which constituted the six average profiles are described below:

#### The Open Climate

High esprit, consideration, aloofness, hindrance, thrust, and intimacy; low production emphasis and disengagement.

TABLE 9

## PROFILE AVERAGES FOR SIX ORGANIZATIONAL CLIMATES

CLIMATE CLUSTERS	ORGANIZATIONAL DIMENSIONS						Pro- duction Empha- sis	
	Inti- macy	Disen- gement	Hin- drance	Esprit	Thrust	Aloof- ness		Con- sider- ation
CLUSTER 1	2.51	1.58	2.39	3.49	3.02	2.28	3.06	2.40
CLUSTER 2	1.93	1.75	1.89	3.43	2.84	1.90	2.64	3.05
CLUSTER 3	2.71	2.23	2.38	3.22	3.34	2.10	2.78	3.16
CLUSTER 4	2.08	2.23	2.29	2.84	3.08	1.91	2.09	1.68
CLUSTER 5	1.73	2.12	2.28	2.76	1.89	1.88	2.20	2.63
CLUSTER 6	2.50	2.73	2.38	2.23	1.70	1.63	1.92	1.45
Sample Mean	2.18	1.99	2.18	3.16	2.87	1.95	2.54	2.62

### The Controlled Climate

High esprit and production emphasis; low intimacy, hindrance, and disengagement; moderate thrust, consideration, and aloofness.

### The Autonomous Climate

High esprit, consideration, thrust, intimacy, aloofness, hindrance, production emphasis, and disengagement.

### The Closed Climate

High thrust, hindrance, and disengagement; low esprit, consideration, and production emphasis; moderate intimacy and aloofness.

### The Paternal Climate

High disengagement; low esprit, consideration, thrust, and intimacy; moderate production emphasis and hindrance.

### The Familiar Climate

High disengagement, intimacy, and hindrance; low esprit, consideration, thrust, aloofness, and production emphasis.

### Classification of the 241 Volunteers With Respect to Organizational Climate

A profile of eight scores was computed for each individual. The task was to see if the profiles themselves formed different clusters. By means of iterative cluster analysis the characteristics which volunteers shared and those on which they differed were determined. Cluster analysis is recommended to search for relatively homogeneous groups of individuals in which group membership and the number of groups is unknown (Norusis, 1985). The purpose was to cluster individuals with respect to the eight dimensions as criteria for establishing the organizational climates.

"In cluster analysis, the initial choice of variables determines the characteristics that can be used to identify subgroups" (Norusis, 1985, p. 168). Cases were grouped on the basis of their "nearness". The measure of dissimilarity and method of grouping were based upon squared euclidean distance and Farthest-Neighbour Algorithm (FNA). The objective of the FNA clustering method was to produce groups whose members were very similar or homogeneous clusters (Jackson, 1983). This method was chosen because it is reluctant to put into the same group any two points that are not very similar to one another (Jackson, 1983; Norusis, 1985).

It was hypothesized that the respondents' profiles would fall into six groups representative of Halpin's (1966) six organizational climates. Two-hundred and seventy-nine cases were entered into the cluster analysis, 38 cases were omitted because of missing values resulting in N=241 for the FNA cluster analysis. The cluster analysis provided the simplest and quickest method for classification (see Appendix F).

Discriminant analysis was then used to further assess the construct and criterion validity of the eight organizational dimensions determined by cluster analysis. A six group discriminant analysis was carried out to determine if the organizational dimen-

sions correctly classified the cases into the appropriate climate group. The stepwise discriminant analysis used in SPSSx Discriminant deleted all cases with any missing information. A total of 279 was reduced to N=269 unweighted cases for the discriminant analysis.

A summary of the classification results listed in Table 10 identified an 81.74% overall correct classification percentage for the grouped cases. In terms of organizational climate construction, 81.74% of the cases were correctly classified, suggesting satisfactory predictability of the item clusters (see Appendix D) for each climate group. Thus, the predictability of the dimensions for each of the six organizational climates was not negatively affected by non-discriminating variables (Ball, 1986).

Each row in Table 10, lists the number and percent of cases correctly classified and the cases misclassified from the N=260 sample of volunteers.

**Open Climate:** A total of N=15(57.7%) volunteers was classified correctly; N=4(15.4%) misclassified in the Controlled Climate; N=5(19.2%) misclassified in the Autonomous Climate; and N=2(7.7%) misclassified in the Closed Climate.

**Controlled Climate:** A total of N=84(92.3%) was correctly classified; N=3(3.3%) misclassified in the Open Climate; N=1(1.1%) misclassified in the Autonomous Climate; and N=1(1.1%) misclassified in the Closed Climate; and N=2(2.2%) misclassified in the Paternal Climate.

**Autonomous Climate:** A total of N=41(87.2%) was correctly classified; N=2(4.3%) misclassified in each of the Open, Controlled, and Closed Climates.



TABLE 10  
SUMMARY OF CLASSIFICATION RESULTS FOR SIX ORGANIZATIONAL CLIMATE GROUPS

ACTUAL GROUP	NO. OF CASES	PREDICTED GROUP MEMBERSHIP					
		1	2	3	4	5	6
GROUP 1: Open Climate	26	57.7%	15.4%	19.2%	7.7%	0.0%	0.0%
GROUP 2: Controlled Climate	91	3.3%	92.3%	1.1%	1.1%	2.2%	0.0%
GROUP 3: Autonomous Climate	47	4.3%	4.3%	87.2%	4.3%	0.0%	0.0%
GROUP 4: Closed Climate	49	6.1%	6.1%	4.1%	79.6%	4.1%	0.0%
GROUP 5: Paternal Climate	23	0.0%	26.1%	0.0%	0.0%	60.9%	13.0%
GROUP 6: Familiar Climate	5	0.0%	0.0%	0.0%	0.0%	20.0%	80.0%
UNGROUPED CASES	19	42.1%	10.5%	15.8%	26.3%	5.3%	0.0%

PERCENT OF "GROUPED" CASES CORRECTLY CLASSIFIED: 81.74%

Closed Climate: A total of N=39(79.6%) was correctly classified; N=3(6.1%) misclassified in both the Open and Controlled Climates; and N=2(4.1%) misclassified in both the Autonomous and Paternal Climates.

Paternal Climate: A total of N=14(60.9%) was correctly classified; N=6(26.1%) misclassified in the Controlled Climate; and N=3(13.0%) misclassified in the Familiar Climate.

Familiar Climate: A total of N=4(80.0%) was correctly classified; N=1(20.0%) misclassified in the Paternal Climate.

The moderate rate of correct classification for the Open (57.7%) and Paternal Climate (60.9%) indicated that other non-discriminating variables were present. The clustering of cases in these climates, based on the eight organizational dimension clusters (see Appendix E) was not optimal. Perhaps a wider range of discriminating variables would be more representative for these climates. The high percentage of correct classifications for the Controlled (92.3%), Autonomous (87.2%), Closed (79.6%), and Familiar (80.0%) Climates, suggested the eight discriminating variables (esprit, consideration, thrust, intimacy, aloofness, hindrance, production emphasis, and disengagement), adequately measured the six organizational climate constructs.

#### Summary

In comparing the relationship between a priori and derived dimensions the items used to identify organizational climate confirmed Halpin's (1966) climate cate-

gories for the N=241 sample of volunteer sport administrators. The association between Halpin's eight organizational dimensions and those identified in this study by factor and cluster analysis was tenuous. Both studies identified similar organizational dimension labels. The eight organizational dimensions identified by Halpin and Croft (1963) were also identified in the present study and were labelled according to the dimensions employed by Halpin and Croft. However, specific items that comprised the dimensions were not identical to those proposed by Halpin and Croft. In fact several items clustered on different dimensions. Conceptually, the closest dimension in Halpin and Croft's (1963) study was hindrance in the present study (see Table 4).

The objective of confirming six organizational climates for the sample was supported by the discriminant analysis results. On the basis of their eight organizational dimension scores, 81.74% of the cases were correctly classified. This suggested the eight dimensions determined by the factor and cluster analysis were satisfactory predictors for the organizational climates defined for this research study. It was demonstrated that the behaviours which define the organizational climate of volunteer sport organizations were conceptually similar to Halpin's (1966) eight organizational climate dimensions. In brief, the 32

adapted and modified OCDQ items identified eight dimensions of organizational behaviour. The profiles for the N=241 volunteers were classified with respect to six organizational climates.

The outward appearance (labels) identified similar dimensions, but the underlying structure of the factors reduced the communality between a priori dimensions and those derived in this study. The specific differences unique to each study may be explained by differences in the characteristics of each sample. These differences represent the discrepancy between volunteer organizations and other types of organizations in terms of effort, method, and way of accomplishing their goals. It would be misleading to faithfully accept the a priori factors based on previous research. Thus, it was judged appropriate to statistically analyse the climate items used in this study.

It was noted that while the dimensions and climates identified may be valid for volunteer organizations used in this sample, no two samples or individuals have identical perceptions. In determining the dimensions, mean scores of the volunteers were used to describe the climate on which volunteer perceptions would converge. There is, however, a great variability in terms of how volunteers interpret their organizational climate. These individual differences

may stem in part from past experiences and personality differences. In this sense the climate is different for every volunteer. Accordingly, each volunteers perception of the organizational climate is most relevant for volunteer satisfaction.

## CHAPTER V

### RESULTS AND DISCUSSION

The problems and hypotheses tested in this thesis were typical multivariate problems with multiple independent and dependent variables. The rationale for choosing MANOVA as the primary statistical technique for data analysis was based on the theoretical questions which were asked. The main research question was to discover whether behaviour, as reflected by the dependent variables (volunteer role satisfaction, supervision satisfaction, coworker satisfaction, and reward satisfaction) was related to the independent variables: perceived locus of control, perceived locus of causality, and perceived organizational climate. MANOVA was designed to analyse the effects of variables on a set of dependent measures and the relationships with each set of measures as they represent underlying constructs or dimensions (Bisken, 1983). MANOVA was judged as the appropriate method of data analysis because the dependent variables were conceptualized as measuring a single underlying construct.

There are two basic steps in the MANOVA procedure: first, test the significance of the difference between groups and second, if the differences are significant,

identify the location of the differences (Bray & Maxwell, 1982). Prior to the analysis of specific research questions using the SPSSx MANOVA technique, the assumptions underlying the use of MANOVA were tested for the sample. Tests of significance were performed on the dependent variables to test the following three assumptions: (a) Do the dependent measures have a multivariate normal distribution? (b) Are there equal variance-covariance matrices? (c) Is the experimental error uncorrelated with the treatment effects? When these assumptions are met MANOVA is an optimal statistical technique for determining the effects on dependent variables with a reliable margin of error (Bisken, 1983).

There are two approaches to analysis of variance models. "The multivariate approach considers the measurements on a subject to be from a multivariate normal distribution, and makes no assumptions about the characteristics of the variance-covariance matrix" (Norusis, 1985, p. 267). The univariate approach requires meeting assumptions (a) and (b). When these assumptions are met the univariate approach adds power to MANOVA results: that is, differences are more likely to be detected when they exist (Norusis, 1985). The following is a report of the multivariate significance for all research questions and related

hypotheses.

When using multiple scales it is appropriate to control for the other measures. Statistical control can be accomplished by using multivariate statistical methods. The multivariate distribution of these measures is an important issue for most multivariate statistical procedures (Watson, Watson, & Stowe, 1985). The univariate assumptions were tested for each research hypothesis separately, and are reported in the results section.

#### Multivariate Distributions of the Volunteer Satisfaction Measures

The dependent variable distributions were obtained using the SPSSx MANOVA procedure. Role satisfaction had a moderately positively skewed distribution. Supervision satisfaction and coworker satisfaction both had severely positively skewed distributions. Reward satisfaction showed a varied distribution with several peaks, the most severe being at the highest value. In violating the assumption of normality, the post hoc analyses were more conservative, thus, the probability of detecting a difference when there is one was decreased. The bias in the MANOVA results tended to increase the potential for Type II error. Amick and Crittenden (1975) examined the assumption of multivariate normality and indicated that it was fairly



robust. The level of significance ( $p < .10$ ) for the post hoc analysis was judged to be appropriate since the large alpha level decreased the potential for Type II errors. It was important to observe as many differences as possible because of the potential effects of ignoring variables which may contribute to different dimensions of volunteer satisfaction.

An additional test for normality involved observed and expected plotted scores. The patterns for each of the four dependent variables indicated that scores were not as small as expected. For role satisfaction, supervision satisfaction, and coworker satisfaction the low and high values were higher than expected. This was evidenced in the positive skewed distributions. For reward satisfaction the low scores were lower than predicted and the high scores higher than predicted. This was demonstrated by numerous peaks and valleys in the distribution. This finding may be explained by the fact that the reward measure was modified by combining nine of Smith, Kendall, and Hulin's (1969) original 18 items for promotion and pay satisfaction on the Job Descriptive Index (JDI).

The modified "reward" dimension seemed to measure dual components of reward satisfaction. A post hoc principal component analysis on reward satisfaction (9 items), confirmed that two principal components ac-

counted for 66.5% of the variance in this satisfaction dimension. The factor matrix supported an overall reward satisfaction component on which all items loaded positively and a bipolar component, dividing the items by absolute value (+,-). Figure 3 lists the bipolar component representing "intrinsic versus extrinsic" rewards. The overall satisfaction component suggested the measure also represented perceived reward satisfaction regardless of the perceived orientation of the reward.

#### Summary

The assumption of normality was rejected in this study for the adapted JDI dimensions used to measure volunteer satisfaction. Violation of the normality assumption underlying MANOVA was not considered severe because the sample was not based on statistical principles of a multivariate random sample. The research questions were based on specific conceptual relationships among the dependent and independent variables as they were derived from the belief and theoretical justification that volunteers are generally satisfied in their volunteer organization. The skewed distributions were validated as legitimate deviations from statistical convention for the MANOVA procedure on the basis of theoretical principles underlying the research

Figure 3

## Bi-polar Reward Satisfaction Component

- Item 4: Regular rewards
  - Item 5: Infrequent rewards
  - Item 6: Good chance for rewards
  - Item 7: Good opportunities for rewards
  - Item 8: Opportunities for rewards somewhat limited
- 

- Item 1: Satisfactory rewards
- Item 2: Less than I deserve
- Item 3: Bad
- Item 9: Underrewarded

hypotheses.

## RESULTS

The goal of this exploratory research study was to identify significant personality and situational relationship with volunteer satisfaction. In an attempt to determine the relationship among perceptions of personality attributions, organizational climate, and satisfaction of provincial volunteer sport administrators, the (VSAEQ) (see Appendix A) was used to measure the following:

1. Dimensions of satisfaction that had occurred throughout each volunteer's experience, (adapted from Smith, Kendall, & Hulin's JDI (1969)).
2. General achievement related attributions, measured by the Trent Attribution Profile (Wong & Sproule, 1984).
3. Perceived organizational climate, measured by an adapted and modified version of Halpin and Croft's (1963) OCDQ.

The two research objectives proposed for this study were:

1. To identify the attributional properties, measured by "personality x situational" interactions, of volunteer satisfaction in volunteer sport organizations.
2. To identify the way in which perceived personality and organizational attributions contribute to volunteer satisfaction.

In the following chapter descriptive results are presented followed by the analysis and discussion of results pertinent to the research questions and related

hypotheses.

#### Descriptive Results & Demographics

Four hundred and twenty five Volunteer Sport Administrator Questionnaires (see Appendix A) were mailed to volunteer sport administrators in 23 provincial sport associations in Ontario (see Appendix B). A total of 284 questionnaires were returned by the specified cut-off date. Five questionnaires were returned completely unanswered, thus, the final sample size was N=279 provincial sport volunteers for a 65.65% return rate.

Male respondents represented 72.4% (N=202) of the total sample, with the remaining 27.6% (N=77) females. The volunteers were between the ages of 30 to 49 (68.4% of the sample). Most of the volunteer sample was married (68.5%) and had at least some post secondary education (77.6%). Fifty-two percent of the sample had completed some type of post secondary education. Involvement in the sport ranged from 1 to 61 years with a sample mean of 17.9 years. Table 11 lists the number of respondents by volunteer executive position. It was noted that organizations may have more than one presidential position since within organizations the title of president and director were often synonymous.

The length of involvement with the provincial

TABLE 11  
VOLUNTEER POSITION FREQUENCY

POSITION	FREQUENCY
President	56
Vice President	41
Secretary	18
Secretary/Treasurer	8
Treasurer	17
Director	76
Other	63

sport association ranged from less than a year to 36 years. The average time of involvement was 7 years. The length of time volunteers, on average, had held their current position was 2.7 years. Ninety-three percent of the sample held their position for less than 6 years.

The intention of this thesis was to examine the relationships between the affective responses identified by four satisfaction dimensions with what Weiner et al. (1972) has identified as achievement related attributions and volunteer perceptions of their organization's climate. Volunteers were classified into one of six organizational climates based on the results of hierarchical cluster analysis. Each volunteer had a score on each of the four dependent variables: volunteer role satisfaction, supervision satisfaction, coworker satisfaction, and reward satisfaction and an average score on each of the causal attribution elements of ability, effort, task difficulty, and luck. In the following section the results and discussion pertaining to the research questions and hypotheses are presented.

#### Generalized Personality Attributions

This study emphasized general attributions and specific organizational climate perceptions in terms of

understanding volunteer satisfaction. The first research question addressed was: "Do the perceived personality attributions show characteristics which relate to volunteer satisfaction?" Associated with this research question was the third null and alternate hypothesis:

Ho3: There will be no significant difference in the contribution to each dimension of volunteer satisfaction among the perceived personality characteristics ( $p < .10$ ).

Ha3: There will be a significant difference in the contribution to each dimension of volunteer satisfaction among the perceived personality characteristics ( $p < .10$ ).

This hypothesis was assessed by analysing the multiple regression of each dependent variable in turn, with the personality attributions acting as multiple continuous independent variables. The result in Table 12 indicated that the perceived personality attributions, as covariates, did not show characteristics that related to dimensions of volunteer satisfaction. The regression coefficients in Table 12 failed to provide sufficient evidence to reject the hypothesis of no difference for the within subjects factor effect for Ho3 at the .10 level. None of the covariates had significance levels to support a causal personality attribution effect for the MANCOVA design. This was expected and supported by the univariate F-tests which did not identify any sources of potential variability



TABLE 12  
REGRESSION ANALYSIS FOR WITHIN CELLS ERROR TERM

DEPENDENT VARIABLE...ROLE SATISFACTION					
<u>COVARIATE</u>	<u>B</u>	<u>BETA</u>	<u>STD. ERR.</u>	<u>T-VALUE</u>	<u>SIG. OF T</u>
Ability	1.4154947419	.0856675554	1.35831	1.04210	.299
Effort	-.2179019326	-.0144725280	1.26707	-.17197	.864
Task Difficulty	-1.2604104928	-.0608154181	1.72226	-.73184	.465
Luck	-1.9698980524	-.1177823452	1.38796	-1.41927	.158
DEPENDENT VARIABLE...SUPERVISION SATISFACTION					
<u>COVARIATE</u>	<u>B</u>	<u>BETA</u>	<u>STD. ERR.</u>	<u>T-VALUE</u>	<u>SIG. OF T</u>
Ability	-.9989929013	-.0556752380	1.48409	-.67314	.502
Effort	-.2182898125	-.0133508326	1.38440	-.15768	.875
Task Difficulty	2.6538551903	.1179153853	1.88174	1.41032	.160
Luck	-.6253972788	-.0344337245	1.51648	-.41240	.681
DEPENDENT VARIABLE...COWORKER SATISFACTION					
<u>COVARIATE</u>	<u>B</u>	<u>BETA</u>	<u>STD. ERR.</u>	<u>T-VALUE</u>	<u>SIG. OF T</u>
Ability	-.3208193005	-.0170437424	1.56659	-.20479	.838
Effort	.9413322141	.0548810734	1.46136	.64415	.520
Task Difficulty	.6845836627	.0289950978	1.98634	.34465	.731
Luck	-.2126338598	-.0111600266	1.60079	-.13283	.894
DEPENDENT VARIABLE...REWARD SATISFACTION					
<u>COVARIATE</u>	<u>B</u>	<u>BETA</u>	<u>STD. ERR.</u>	<u>T-VALUE</u>	<u>SIG. OF T</u>
Ability	-.5424067845	-.0319258352	1.40144	-.38703	.699
Effort	.1357627529	.0087694628	1.30730	.10385	.917
Task Difficulty	-2.2337883000	-.1048220719	1.77695	-1.25709	.211
Luck	-1.1303171145	-.0657272999	1.43204	-.78931	.431

in the multivariate model for each dependent variable (role satisfaction  $F = 1.10976$ ,  $p = .354$ ; supervision satisfaction  $F = .61988$ ,  $p = .649$ ; coworker satisfaction  $F = .12709$ ,  $p = .972$ ; reward satisfaction  $F = .83458$ ,  $p = .505$ ). The observed significance levels for the univariate  $F$ 's were large enough to fail to reject the hypothesis of no differences for the within-subject causal attributional elements.

The Trent Attribution Profile (TAP) assesses people's causal beliefs directly but at the time of its construction, locus of control and locus of causality had not been clearly differentiated in the literature (Wong & Sproule, 1984). Recent studies have differentiated between sources of causality and assignment of responsibility (e.g., Baumgardner, Heppner, & Arkin, 1986; Ryan & Grolnick, 1986; Liu & Steele, 1986). Consistent with these past studies, locus of control and locus of causality were both identified as two significant generalized personal attribution dimensions in relation to the outcome of volunteer satisfaction.

Based on Weiner et al.'s (1972) model of causal attributions, the ability, effort, task difficulty, and luck attribution elements were classified according to locus of control and locus of causality dimensions. Thus, ability was internal and stable, effort was internal and unstable, task difficulty was external and

stable, and luck was external and unstable.

The covariates were blocked to form locus of control and locus of causality dimensions with four groups in each. The control groups were labelled; Internal, External, High Bilocal, and Low Bilocal. The causal groups were labelled: Stable, Unstable, High, and Low. Classification based on a standard deviation of .50 from the means of Internal, External, Stable, and Unstable attributional dimensions established cut-off means for each group in the locus of control and causality dimensions. The means were as follows: Internals  $\geq 8.13$ ; Externals  $\geq 4.58$ ; High Bilocals  $\geq 8.13$  and  $4.58$ ; Low Bilocals  $< 8.13$  and  $4.58$ ; Stable  $\geq 6.45$ ; Unstable  $\geq 6.18$ ; High  $\geq 6.45$  and  $6.18$ ; Low  $< 6.45$  and  $6.18$

A third attributional group was established as a result of the researchers interest in assessing all possible combinations of Weiner et al.'s (1972) causal attributions (ability, effort, task difficulty, and luck). This dimension was not included in testing the interaction hypothesis for Ho5 for practical and theoretical reasons. Practically, there was not a large enough sample for a  $4 \times 4 \times 4 \times 6$  factorial design, and theoretically, it was assumed by the researcher that the proposed new generalized attribution dimension could be measured by the Trent Attribution

### Profile.

The third dimension was labelled controlability. The four levels of controlability were: Factor X (high ability and luck), Factor Y (high effort and task difficulty), High (high Factor X and Factor Y), and Low (low Factor X and Factor Y). Again, classification was based upon a standard deviation of .50 from the means of Factor X and Factor Y to establish the following cutoff means: Factor X  $\geq$  5.97; Factor Y  $\geq$  6.64; High  $\geq$  5.97 and 6.64; Low  $<$  5.97 and 6.64.

Table 13 lists the number of volunteers in each group. For each generalized attribution dimension the low group had the greatest number of volunteers; Low Bilocal control N=107; Low cause N=116; and Low Controlability N=114. The sample of N=279 was reduced to N=239 with the deletion of 40 cases due to missing values.

As blocked independent variables, the covariates were assessed for their effect on the four volunteer satisfaction dimensions (role, supervision, coworker, and reward) for the purpose of assessing whether or not the personality attributions show characteristics which relate to volunteer satisfaction.

Four multivariate criteria identified a significant "Control x Cause x Controlability" interaction at the .10 level (Pillai's,  $F=1.56318$ ,  $p=.056$ ;

TABLE 13  
 FREQUENCIES FOR THREE  
 PERSONAL ATTRIBUTION DIMENSIONS (N=239)

LOCUS OF CONTROL		
	HIGH INTERNAL	LOW INTERNAL
HIGH EXTERNAL	19	59
LOW EXTERNAL	54	107
LOCUS OF CAUSALITY		
	HIGH STABILITY	LOW STABILITY
HIGH UNSTABILITY	23	49
LOW UNSTABILITY	51	116
CONTROLABILITY		
	HIGH FACTOR 'X'	LOW FACTOR 'Y'
HIGH FACTOR 'Y'	33	50
LOW FACTOR 'Y'	42	114

Hotelling's,  $F=1.60830$ ,  $p=.046$ ; and Wilks',  $F=1.58975$ ,  $p=.051$ ). Univariate and stepdown results identified two significant dependent variables; coworker and reward satisfaction (Table 14). Discriminant Reduction Analysis (DRA) showed a statistically significant association between the cells for the  $4 \times 4 \times 4$  factorial design and four dependent variables at less than the .10 level. Only one significant function was identified by the DRA,  $F\text{-value} = 1.58975$ , with 20 degrees of freedom, and  $p = .050$ . The successive removal of each function (see Table 15) did not identify significantly different values for Functions 2, 3, and 4. Only Function 1 determined the classification boundaries for the cells in the "Control x Cause x Controlability" interaction.

The significant function for the  $4 \times 4 \times 4$  factorial design was analysed using standardized discriminant weights (SDW) and canonical variate correlations (CVC). In Table 16, the SDW's and CVC's are listed for the single significant function. The magnitude of the SDW's indicated that coworker satisfaction made the largest contribution ( $SDW=1.08$ ) to cell separation for the interaction effect on Function 1. The CVC's indicated that coworker and reward satisfaction contributed significant variances (.91433 and .54660) to the discriminant function. It was judged

TABLE 14

## UNIVARIATE AND STEPDOWN SIGNIFICANCE

EFFECT...CONTROL BY CAUSE BY CONTROLABILITY

DEPENDENT VARIABLE	Univ. F	Sig. of F	Stepdown F	Sig. of F
Coworker Satisfaction	3.73743	.003*	3.73743	.003*
Role Satisfaction	.31766	.902	.46446	.802
Reward Satisfaction	2.57364	.029*	1.99234	.083*
Supervision Satisfaction	.56339	.728	.33598	.890

\* p &lt; .10

TABLE 15  
DIMENSION REDUCTION ANALYSIS

DIMENSION	WILKS' LAMBDA	F-VALUE	SIG. OF F
1 to 4	.80313	1.58975	.051*
2 to 4	.92656	.90998	.537
3 to 4	.99021	.23352	.965
4 to 4	.99762	.17034	.844

\*  $p < .10$



TABLE 16

## DISCRIMINANT ANALYSIS

	DEPENDENT VARIABLES			
	COWORKER SATISFACTION	ROLE SATISFACTION	REWARD SATISFACTION	SUPERVISION SATISFACTION
UNROTATED SDW <sup>1</sup> FUNCTION 1	1.08439	-.34300	.26919	-.22994
CVC <sup>2</sup> FUNCTION 1	.91433	.21922	.54660	.27590

SDW<sup>1</sup> = Standardized Discriminant Weights

CVC<sup>2</sup> = Canonical Variate Correlations

that for the blocked personality attributions (ability, effort, task difficulty, and luck), the coworker and reward satisfaction dependent variables best discriminated between the cells for the "Control x Cause x Controlability" interaction.

#### Summary

The perceived causal attributional elements (ability, effort, task difficulty, and luck) did not make significant contributions to the volunteer satisfaction dimensions. The blocked covariates, however, established three causal dimensions: locus of control, locus of causality, and controlability, that identified a significant difference in the contribution to volunteer satisfaction. Each source of causal belief interacted to show characteristics which reflected personal causal attributions for coworker and reward satisfaction. In summary, as covariates, ability, effort, task difficulty, and luck led to a failure to reject  $H_03$  at the .10 level. As blocked independent variables, however, the three attributional dimensions led to the rejection of  $H_03$  at the .10 level, thus, lending support for  $H_a3$  at the .10 level. The three personal attribution dimensions made significant contributions to positive volunteer satisfaction.

### Organizational Dimension Analysis

The second research problem addressed concerned the ability of perceived organizational climate to show characteristics which correspond to volunteer satisfaction dimensions (volunteer role, supervision, coworker, and reward). Associated with this research problem was the fourth null and alternate hypothesis:

Ho4: There will be no significant difference in the contribution to each dimension of volunteer satisfaction among the organizational climate characteristics ( $p < .10$ ).

Ha4: There will be a significant difference in the contribution to each dimension of volunteer satisfaction among the organizational climate characteristics ( $p < .10$ ).

To investigate the specific power of the organizational characteristics to affect the dependent variables: coworker satisfaction (CWRKRSAT), role satisfaction (ROLESAT), reward satisfaction (RWRDSAT), and supervision satisfaction (SPVSNSAT), multiple regressions of the eight organizational climate dimensions (Thrust, Production Emphasis, Intimacy, Disengagement, Consideration, Aloofness, Hindrance, and Esprit), were computed for each dependent variable. The results (see Table 17) listed significant effects by the multiple predictors on each dependent variable separately.

Adjustment in coworker satisfaction was best explained by Thrust, Esprit, Aloofness, and Disengage-

TABLE 17  
 REGRESSION EFFECT OF EIGHT ORGANIZATIONAL DIMENSIONS  
 ON EACH DEPENDENT VARIABLE

COVARIATE	COWORKER SATISFACTION		ROLE SATISFACTION		REWARD SATISFACTION		SUPERVISION SATISFACTION	
	BETA WT.	SIG. OF T	BETA WT.	SIG. OF T	BETA WT.	SIG. OF T	BETA WT.	SIG. OF T
PRODUCTION								
EMPHASIS	-.0262	.717	.0313	.4103	.682	.185	.0294	.3975
THRUST	.2400	3.7308	.1740	2.5641	.011*	.007*	.1220	1.8539
INTIMACY	-.0770	-1.1587	-.0691	-.9861	.325	.427	-.0355	-.5224
DISENGAGEMENT	-.1526	-2.2594	.0435	.6103	.542	.152	-.1062	-1.5376
CONSIDERATION	.0169	.2117	.1810	2.1492	.033*	.608	.2144	2.6261
ALOOFNESS	.1749	2.6024	.0060	.0847	.933	.926	-.0244	-.3550
HINDRANCE	-.0037	-.0583	-.0740	-1.1040	.271	.171	-.1349	-2.0768
ESPRIT	.3644	4.4162	.3117	3.5820	.000*	.047*	.2553	3.0261

\* P < .10

ment ( $p < .10$ ). The significant organizational dimensions for role satisfaction were Esprit, Thrust, and Consideration ( $p < .10$ ). Adjustment in reward satisfaction was best explained by Thrust and Esprit. Significant differences in supervision satisfaction were best explained by Esprit, Consideration, Hindrance, and Thrust ( $p < .10$ ) (see Table 17). These univariate results suggested where possible differences in the contribution of organizational climate characteristics to volunteer satisfaction may exist for the sample of volunteer sport administrators. To identify the way in which the organizational climate dimensions contributed to volunteer satisfaction, the underlying dimensions of the regression effect on the dependent variables were analysed.

SPSSx MANOVA identified one significant discriminant function for the regression effect. The measure of dispersion associated with the significant function was EIGENVALUE = .81847. Eigenvalues represent the variance explained by each function for the data. "Large eigenvalues are associated with good functions" (Norusis, 1985, p. 89). There was a strong association between the regression effect and the significant discriminant function (canonical correlation = .67089). The underlying function also accounted for 83.44% of the variance between the discriminant

function and grouping variables for the regression effect. It was judged by these results that there was only one significant underlying function for the regression effect.

Interpretation of the discriminant function involved assessment of the unique contribution of each organizational dimension in the context of the other dimensions. Standardized Discriminant Weights (SDW) indicated that coworker satisfaction (CWRKRSAT) and supervision satisfaction (SPVSNSAT) were the most important for the regression effect on the discriminant function. Canonical Variate Correlations (CVC) measured the correlation of each variate with scores on the significant discriminant function. Inspection of the CVC's indicated that all the dependent variables appeared important for determining differences for the regression effect (see Table 18).

The differences among the regression variables were also computed by SPSSx MANOVA. The CVC's indicated that Production Emphasis, Thrust, Disengagement, Consideration, Hindrance, and Esprit shared a variance with the underlying composite. The SDW magnitudes indicated the contribution of each organizational climate dimension to the composite. Thrust and Esprit made unique contributions in the context of the other organizational dimensions to the significant dis-

TABLE 18  
DISCRIMINANT ANALYSIS

	DEPENDENT VARIABLES			
	COWORKER SATISFACTION	ROLE SATISFACTION	REWARD SATISFACTION	SUPERVISION SATISFACTION
UNROTATED SDW <sup>1</sup> FUNCTION 1	-.40194	-.29057	-.19775	-.37695
CVC <sup>2</sup> FUNCTION 1	-.84587	-.75899	-.66222	-.81844

SDW<sup>1</sup> = Standardized Discriminant Weights

CVC<sup>2</sup> = Canonical Variate Correlations

criminant function (see Table 19). Using the SDW's and CVC's it appeared that Thrust and Esprit were the best discriminators for the significant discriminating function, described by coworker and supervision satisfaction.

### Summary

The eight organizational dimensions differed in their ability to contribute to volunteer satisfaction, supporting rejection of  $H_04$  at the .10 level. The way in which the organizational dimensions contributed to understanding volunteer satisfaction was established by following up the significant MANOVA with discriminant analysis. Coworker and supervision satisfaction were the two dependent variables which were best discriminated by the regression effect of the eight organizational climate dimensions. Significant contributions to the underlying dimension of coworker and supervision satisfaction were made by only two of the organizational dimensions. Esprit and Thrust made significant contributions to the coworker/supervision satisfaction function. The observed differences in the contribution of organizational climate characteristics to the dimensions of volunteer satisfaction led to the acceptance of  $H_{a4}$  at the .10 level.



TABLE 19

DISCRIMINANT WEIGHTS AND CORRELATIONS BETWEEN  
ORGANIZATIONAL DIMENSIONS AND DISCRIMINANT FUNCTION

ORGANIZATIONAL DIMENSIONS

	Pro- duction Emphasis	Thrust	Inti- macy	Dis- engage- ment	Con- sidera- tion	Aloof- ness	Hind- rance	Esprit
UNROTATED								
SDW <sup>1</sup>	-.04550	-.34500	.07886	.16370	-.22226	-.09572	.13832	-.55035
FUNCTION 1								
CVC <sup>2</sup>								
FUNCTION 1	-.42464	-.58757	-.58757	.53997	-.63544	-.12578	.36188	-.88817

SDW<sup>1</sup> = Standardized Discriminant Weights

CVC<sup>2</sup> = Canonical Variate Correlations

### Multivariate Analysis of Covariance

The third research question addressed was related to determining a significant difference in the ability of the perceived personality attributions (ability, effort, task difficulty, luck) and the perceived organizational climates (Open, Controlled, Autonomous, Closed, Paternal, Familiar) to contribute to volunteer satisfaction. Associated with this research problem were the first and second null and alternate hypotheses:

H<sub>01</sub>: There will be no significant difference in the contribution to each dimension of volunteer satisfaction between perceived personality attributions and organizational climate ( $p < .10$ ).

H<sub>a1</sub>: There will be a significant difference in the contribution to each dimension of volunteer satisfaction between perceived personality attributions and organizational climate ( $p < .10$ ).

H<sub>02</sub>: There will be no significant difference in the contribution to volunteer satisfaction between perceived personality attributions and organizational climate ( $p < .10$ ).

H<sub>a2</sub>: There will be a significant difference in the contribution to volunteer satisfaction between perceived personality attributions and organizational climate ( $p < .10$ ).

A 6 x 4 between subjects multivariate analysis of covariance was performed on the 4 dependent variables: ROLESAT, SPVNSAT, CWRKRSAT, and RWRDSAT. Adjustment was made for the four causal attribution covariates. The within subjects factors for the MANCOVA design were ability, effort, task difficulty, and luck. The MAN-

COVA technique includes statistical adjustment of the linear combination of dependent variables for the differences in the covariates. SPSSx MANOVA was used for the analysis with hierarchical adjustment of effects for non-orthogonality. The sample (N=279) of volunteer sport administrators was reduced to 167 with the listwise deletion of cases with missing values.

Prior to the multivariate tests of difference, the variables were assessed with respect to practical limitations of the statistical technique. Using between and within subjects factors required testing the validity of the MANCOVA design. The univariate assumptions in the within subjects design were assessed for all levels of the between subject factors on the basis of homogeneity of variance-covariance matrices for the variables in a particular effect (Norusis, 1985).

Variance-covariance homogeneity tests were computed for each of the six climate groups and four covariates. Significance levels supported the conclusion that for 5 of the 8 variables (reward satisfaction, ability, effort, task difficulty, and luck) the variance-covariance matrices were equal. Significance levels for role, supervision, and coworker satisfaction did not indicate a strong univariate homogeneity of variance result.

The Box M test was computed to test for equal

variance-covariance matrices across all levels of between subjects factors. The Box M was based on the determinant of the variance-covariance matrices for all six between subject cells in the design. The results of the multivariate test for equal variance-covariance matrices for the six climate factor groups, Box M = 280.29603,  $p = .000$ , indicated that there was reason to suspect that the variance-covariance matrices across all levels of between subject factors were not equal. It was noted that the Box M statistic is highly sensitive to deviations from normality (Norusis, 1985).

Bartlett's test for sphericity for an identity matrix was computed to further test the homogeneity of variance-covariance matrices for the within subjects design. Bartlett's test for sphericity for the within subjects effect was 109.58817,  $p = .000$ . Together the multivariate tests indicated that there was no reason to suspect the assumption of covariances of zero and equal variance-covariance matrices for the within subjects design.

A final issue pertinent to correlations between the dependent variables in the multivariate design involved testing for multicollinearity or singularity of the variance-covariance matrices. The DETERMINANT of the within-cell correlation matrix was .49274, which was sufficiently different from zero to reject multi-

colinearity and singularity. A determinant close to zero, "less than .0001" (Tabachnick & Fidell, 1983, p. 235), indicates that at least one of the variables may be expressed as a linear function of the other dependent variables (Norusis, 1985). That is, one dependent variable contains information that is redundant to the information available in the other dependent variables (Tabachnick & Fidell, 1983).

Additional information about the correlations between the dependent variables was obtained by a varimax rotation of principal components analysis (PCA). If PCA reveals that one of the variables can be expressed as a linear combination of the others, then redundancy in the dependent variables may be suspected (Norusis, 1985). The varimax rotated correlations between derived components and the dependent variables indicated that unique dimensions were measured by each dependent variable (see Table 20). The loadings indicated that the dependent variables, although correlated, were not redundant in the multivariate model. PCA helped to identify how the variables were related to each other and the number of unique dimensions being measured by the dependent variables. One principal component was identified with four unique dimensions of volunteer satisfaction.

Since there were no severe violations in the

TABLE 20

VARIMAX ROTATED CORRELATIONS BETWEEN  
COMPONENTS AND DEPENDENT VARIABLES

DEPENDENT VARIABLE	DERIVED COMPONENTS			
	1	2	3	4
ROLE SATISFACTION	.12714	.95400	.20604	.17685
SUPERVISION SATISFACTION	.12196	.20942	.94807	.20601
COWORKER SATISFACTION	.17876	.18161	.20823	.94430
REWARD SATISFACTION	.97195	.12127	.11491	.16554

variance-covariance assumption, MANOVA was judged to be an appropriate statistical technique to assess the first research question and related hypotheses. The hierarchical approach of adjusting the independent variables for non-orthogonality was employed. Testing the assumption of uncorrelated experimental error and treatment effects involved testing for no difference between the population means and hypothesized values.

The significance of the multivariate design was tested using four multivariate significance statistics. It has been suggested that as many significance tests as possible be computed, since "there is no general rule on the most appropriate significance test" (Bisken, 1983, p. 350). Three criteria for statistical inference computed by SPSSx MANOVA were: Pillais,  $F\text{-value}=.91453$ ,  $p=.552$ ; Hotellings,  $F\text{-value}=.91715$ ,  $p=.549$ ; and Wilks' Lambda,  $F\text{-value}=.91603$ ,  $p=.551$ . The similarity between the levels of significance suggested that any violations in the assumptions did not affect their robustness differentially. The observed significance levels were high which identified a low probability of observing a difference at least as large as the one found in the sample when there is no difference in the population (Bray & Maxwell, 1982).

Since it was difficult to interpret the effects of climate in the presence of within-subject covariates,

the dependent variables were adjusted for the covariates prior to the analysis of the between subject factor of organizational climate. The effect for climate was not based on the unweighted average of the six climate groups but rather, it was based on the unweighted average adjusted for the covariates. Thus, differences among the six climate groups on average ability, effort, task difficulty, and luck scores were assumed to be controlled. The climate effect was based on these adjusted dependent variable values. The significance tests were based on the assumption that the intercept in the regression equation for the unweighted average of the six climate groups and average ability, effort, task difficulty, and luck scores was zero.

The multivariate tests of significance for the climate effect were: Pillais,  $F\text{-value}=3.33158$ ,  $p=.000$ ; Hotellings,  $F\text{-value}=4.17561$ ,  $p=.000$ ; and Wilks' Lambda,  $F\text{-value}=3.76102$ ,  $p=.000$ . All significance criteria indicated that there were significant differences among the six organizational climates on the four dependent variables: volunteer role satisfaction (ROLESAT), supervision satisfaction (SPVSNSAT), coworker satisfaction (CWRKRSAT), and reward satisfaction (RWRDSAT). In the multivariate model, for the climate effect adjusted for the personal attribution covariates, the null



hypothesis of no difference in volunteer satisfaction for the six organizational climate groups was rejected at the .10 level.

The next step in the analysis process was to explain group differences in the multivariate analysis of covariance design. A series of follow-up techniques for significant MANOVA results has been suggested in the literature. The techniques used in this study focused on: (a) analysis of criterion variables using univariate F-tests, stepdown analysis, and discriminant analysis, (b) analysis of classification variables using univariate contrasts, associated marginal or cell means, and discriminant analysis, and (c) analysis of criterion and classification variables using profile analysis.

### Step 1: Analysis of Criterion Variables

#### Univariate F Tests

The significant univariate F-tests, listed in Table 21, for each of the four volunteer satisfaction dimensions, gave preliminary descriptions of where the differences were among the six climates for each dependent variable. Univariate F tests identified a significant effect for each dependent variable at the .10 level. An overall MANOVA test of significance supported a statistically significant association between the six organizational climate groups and four

TABLE 21

## SIGNIFICANCE OF THE 'CLIMATE X SATISFACTION' EFFECT

DEPENDENT VARIABLES	UNIVARIATE F	SIG. OF F	STEPDOWN F	SIG. OF F
SUPERVISION SATISFACTION	9.01768	.000*	9.01768	.000*
COWORKER SATISFACTION	10.03280	.000*	3.78558	.003*
ROLE SATISFACTION	8.58344	.000*	1.64772	.153
REWARD SATISFACTION	6.44227	.000*	1.13233	.346

\*  $p < .10$

levels of correlated volunteer satisfaction dimensions at  $p < .10$ , Multivariate  $F = 3.76103$ .

### Stepdown Analysis

Roy-Bargmann Stepdown Analysis (Norusis, 1985) was performed to resolve the problem of non-independence of the univariate F-tests. The stepdown procedure involved prioritizing the dependent variables. Ideally, the criterion of order is a theoretical one. In the absence of a priori theoretical or practical dependent variables the variables were prioritized on the basis of a statistical criterion, stepwise discriminant function analysis. The method or criteria for directing the stepwise discriminant function analysis was WILKS, which produced the smallest value of Wilks' lambda and the largest multivariate F (Norusis, 1985). The priority order of dependent variables identified by the discriminant analysis was, in descending order: supervision satisfaction (SPVSNSAT), coworker satisfaction (CWRKRSAT), role satisfaction (ROLESAT), reward satisfaction (RWRDSAT). Supervision satisfaction had the highest priority and was evaluated in terms of its relationship with the organizational climate independent variable after adjustment for the attribution covariates. The first stepdown F and univariate F ratio were identical. Each prioritized dependent vari-

able was adjusted for higher order dependent variables and the covariate effect.

The stepdown analysis listed in Table 21, identified coworker satisfaction as being significantly related to the climate classifications above and beyond the adjustment for five covariates (supervision satisfaction, ability, effort, task difficulty, and luck), stepdown  $F = 3.79$   $p = .003$ . Reward and role satisfaction tested with all other variates did not make a unique contribution to differences between the climate groups. The differences between the non-independent univariate  $F$ 's and the stepdown  $F$  was identified by the observed significance levels. The dependence between prioritized variables reduced the significance of role and reward satisfaction for identifying differences among organizational climate classifications.

### Discriminant Analysis

MANOVA can be viewed as a problem of finding linear combinations of the dependent variables that best identify significant differences (Norusis, 1985). MANOVA and DISCRIMINANT techniques are reciprocal mathematical analyses which ask, "do group assignments (independent variables) significantly affect an optimal linear combination of dependent variable means?" Discriminant analysis has been suggested as the appro-

priate follow-up technique for a significant multivariate analysis (Borgen & Seling, 1978). Once significant effects are identified the next appropriate step is to identify where or for what group the differences are significant. The discriminant analysis technique is able to identify the underlying dimensions of the data and determine the relative contribution of individual variables to the underlying dimensions (Borgen & Seling, 1978).

To determine the discrimination of the dimensions and dependent variables (supervision satisfaction, role satisfaction, coworker satisfaction, and reward satisfaction), organizational climate as a classification variable was analyzed using discriminant analysis. Table 22 contains several statistics for the discriminant functions. Column EIGENVALUE is the measure of dispersion associated with each function. The eigenvalue for Function 1 was .49235. The canonical correlation column lists the measure of strength of the association between the discriminant function and the grouping variables. The canonical correlation and eigenvalue for Function 1 were large enough to expect a significant contribution from Function 1 in identifying the differences between climate groups.

The canonical correlation squared represents the Proportion of variability explained by the differences

TABLE 22

UNDERLYING DIMENSIONS OF THE  
DEPENDENT VARIABLES

EIGEN VALUES AND CANONICAL CORRELATIONS				
FUNCTION	EIGENVALUE	PCT.	CUM. PCT.	CANON. COR.
1	.49235	89.90784	89.90784	.57438
2	.03344	6.10680	96.01464	.17989
3	.02035	3.71696	99.73160	.14124
4	.00147	.26840	100.00000	.03831
DIMENSION REDUCTION ANALYSIS				
DIMENSION	WILKS LAMBDA	F-VALUE	SIG. OF F	
1 to 4	.63453	3.76102	.000*	
2 to 4	.94694	.71195	.740	
3 to 4	.97861	.56515	.758	
4 to 4	.99853	.11538	.891	
AVERAGED F-TEST WITH (20,628) D.F.				
VARIABLES	F-VALUE	SIG. OF F		
1 to 4	8.61983	.000*		

\* p < .10

among groups (Norusis, 1985). Function 1 accounted for about 33% (.57438 squared) of the variability between climate groups. The importance of each function was established by examining the percentage of between groups variability attributable to each function. Function 1 accounted for 89.91% of the variance among climate groups. In comparison, Function 2 contributed only 6.11% of the total.

As shown in Table 22, only one function was significant as a criterion of climate group differences. Wilks' Lambda was used as the criterion to test if in the population, the means of all discriminant functions in all climate groups are really equal to zero. The significance level for the derived functions was based on a transformation of Wilks' Lambda to an F distribution. The value of Wilks' Lambda, its associated F-value and observed significance, are shown in Table 22. Four possible discriminant functions were derived, by SPSSx MANOVA, and examined for significant contributions to group differences.

The dimension reduction analysis showed a statistically significant association between organization climate groups and each satisfaction dimension at  $p < .10$ . The first row in the dimension reduction analysis tested for significant dispersion associated with each function. For the first discriminant function the

value of Wilks' lambda was .63453 with an F-value of 3.76102 and 20 degrees of freedom with an significance  $p < .10$ . The low observed significance level resulted in support for observed differences between the organizational climate groups.

Significance levels associated with the successive removal of one function at a time were high which indicated that when Function 1 was removed the remainder did not contribute to group differences. Only the first function determined the classification boundaries. All six organization climates (Open, Controlled, Autonomous, Closed, Paternal, Familiar) had similar values on Functions 2, 3, and 4. There was only one significant dimension on which the six climate groups differed. In addition an averaged F-test, "the calculated ratio of the averaged hypothesis means square" (Norusis, 1985, p. 207), supported the finding of one significant discriminant function (see Table 22).

In the context of interpreting the dependent variables in the MANCOVA design, discriminant analysis provided information concerning the number of dimensions that contributed to organizational climate group differences on the four satisfaction dimensions. From the four discriminant functions that were computed by MANOVA only a single significant function was observed.



A second method of interpreting the discriminant function involved an analysis of the discriminant function standardized weights (SDW) (Norusis, 1985; Tatsuoka, 1971). These weights represented the relative contribution of the variance to the discriminant function. The SDW's identified the largest standard coefficient for the significant function. The magnitude of the weights gave an idea of each dependent variable's contribution to climate group differences. All weights were close to or greater than .30 (see Table 23) indicating that all variables were equally important for organizational climate separation on Function 1. "By convention, correlations in excess of .30 (9% of variance) are usually considered eligible and lower ones are not" (Tabachnick & Fidell, 1983, p. 321).

Since the SDW's were influenced by intercorrelations among the other variables, canonical variate correlations (CVC) were interpreted. This method provided a measure of how much variance a given dependent variable shares with the underlying discriminant function (Bray & Maxwell, 1982). From Table 23 the CVC's indicated that each variable shares a variance with the underlying composite. Each dimension of volunteer satisfaction was significant in interpreting the substantive nature of the observed discriminant

TABLE 23

## DISCRIMINANT ANALYSIS OF THE MANCOVA DESIGN

	DEPENDENT VARIABLE			
	ROLE SATISFACTION	SUPERVISION SATISFACTION	COWORKER SATISFACTION	REWARD SATISFACTION
UNROTATED SDW <sup>1</sup> FUNCTION 1	-.34784	-.32744	-.39954	-.28574
CVC <sup>2</sup> FUNCTION 1	-.73989	-.74546	-.79610	-.63159

SDW<sup>1</sup> = Standardized Discriminant Weights

CVC<sup>2</sup> = Canonical Variate Correlations

function.

Using both the SDW's and CVC's, the dimensions were interpreted as one theoretically meaningful construct. It was concluded that, although each dependent variable was unique (see Table 20), they discriminate among climate groups as one function. This finding supported the underlying psychological and theoretical dimensions of previous satisfaction research reported in the literature. Smith, Kendall, and Hulin (1969) identified an overall construct of job satisfaction measured by 5 independent job descriptive dimensions. Three of these five dimensions were applicable to the present study, with instructional modifications for the volunteer sport environment. The fourth dependent variable, reward satisfaction, was an adaptation of nine items from the JDI (Smith, Kendall, & Hulin, 1969) pay and promotion dimensions of job satisfaction.

Smith, Kendall, and Hulin (1969) identified an overall job satisfaction score by summing the scores on the five JDI dimensions. The results of the criterion analysis indicated that for the sample of volunteer sport administrators, there appeared to be an overall volunteer satisfaction dimension, adjusted for the personal attribution covariates (ability, effort, task difficulty, and luck). The volunteer satisfaction function was consonant with Smith, Kendall, and Hulin's

(1969) overall job satisfaction measure; it appeared that the specific findings in the volunteer situation may have some similarities to other organizations.

#### Summary

The univariate and stepdown results identified where differences may have occurred in the MANCOVA design. Supervision and coworker satisfaction were identified as the significant stepdown dependent variables on which the climate groups were likely to differ. In the context of interpreting the significant MANCOVA design, discriminant analysis provided information concerning the minimum number of dimensions underlying organizational climate group differences on the dependent variables. One significant function was identified for the MANCOVA design. All of the dependent variables (role satisfaction, supervision satisfaction, coworker satisfaction, and reward satisfaction) made unique contributions to the underlying dimension, thus supporting previous findings (viz., Smith, Kendall, & Hulin, 1969) of an overall satisfaction dimension for the volunteer sport administrator sample. The next step in the analysis of the multivariate design involved determining the differences among the classification variable (organizational climate) on each dependent variable adjusted for the covariates.

## Step 2: Analysis of Classification Variables

The possibility of finding a difference in the ability of each dependent variable (role satisfaction, supervision satisfaction, coworker satisfaction, and reward satisfaction), to discriminate among all climate groups was addressed. Individual univariate contrasts were assessed after adjustment for all higher priority variables (determined by stepwise discriminant analysis). Individual hierarchical univariate contrasts for each organizational climate (Open, Controlled, Autonomous, Closed, Paternal, and Familiar), on all the dependent variables separately, were computed to evaluate the contribution of the dependent variables in isolating climate groups.

### Univariate Contrasts

The priority order of dependent variables developed for this analysis was: supervision satisfaction (SPVSNSAT), coworker satisfaction (CWRKRSAT), role satisfaction (ROL&SAT), and reward satisfaction (RWRDSAT). Supervision satisfaction had the highest priority and was evaluated in terms of its relationship with the organizational climate groups after adjustment for the four personality attribution covariates (ability, effort, task difficulty, and luck). Each successive dependent variable was evaluated after

adjustment for the four personality attribution covariates and higher order dependent variables.

The differences among climate groups on the dependent variables individually did not offer protection against Type I error, but in view of the exploratory design of this thesis, the principle choice in terms of the appropriate alpha level emphasized protection against Type II errors. That is, control of experimentwise error rate separately for each dependent variable was judged more important than controlling experimentwise error rate for all dependent variables simultaneously.

Table 24 lists the univariate contrasts for each climate group on the two significant dependent variables identified by the stepdown analysis. As ROLESAT and RWRDSAT did not make unique contributions to the composite dependent variable in the stepdown analysis, their univariate contrasts were not analysed. The COEFFICIENT column (see Table 24) represents the differences between the average of all six climate groups adjusted for the covariates and each climate on the significant stepdown dependent variables.

The univariate contrasts identified significant differences in supervision satisfaction, adjusted for the four personal attribution covariates, for the Controlled, Open, Paternal, and Familiar climates (in

TABLE 24

UNIVARIATE CONTRASTS FOR ADJUSTED STEPDOWN  
DEPENDENT VARIABLES AND COVARIATES

SUPERVISION SATISFACTION	INDEPENDENT VARIABLE					
	OPEN CLIMATE	CONTROLLED CLIMATE	AUTONOMOUS CLIMATE	CLOSED CLIMATE	PATERNAL CLIMATE	FAMILIAR CLIMATE
COEFFICIENT	5.91	6.03	1.89	-1.18	-3.71	-8.93*
T-VALUE	3.55	5.25	1.46	-.83	-2.12	
SIG. OF T	.001**	.000**	.146	.409	.035**	
COWORKER SATISFACTION						
COEFFICIENT	4.03	3.58	2.42	1.76	-1.59	-10.19*
T-VALUE	2.46	3.04	1.97	1.30	-.95	
SIG. OF T	.015**	.003**	.051**	.196	.343	

\* Significance level cannot be evaluated but would reach  $p < .10$   
\*\*  $p < .10$

descending order). For coworker satisfaction adjusted for supervision satisfaction and the four personal attribution covariates, the Controlled, Open, Autonomous, and Familiar organizational climates had significant differences.

### Marginal Means

For the prioritized ordering of dependent variables, identified by stepwise discriminant analysis, interpretation required obtaining marginal means adjusted for the four covariates and higher order dependent variables. The coefficients listed in Table 25, represent the marginal means of each climate for the significant adjusted stepdown dependent variable (CWRKRSAT). Marginal means for the climate effect with univariate but not stepdown differences are shown in Table 25.

The greatest contribution to the composite of volunteer satisfaction that best distinguished among the climate groups was SPVSNSAT, stepdown  $F = 9.02$ ,  $p < .10$ . Volunteers in the Controlled and Open climate groups had the highest supervision satisfaction (adjusted means 49.65 and 49.54 respectively). With differences to supervision already entered, coworker satisfaction made a unique contribution, stepdown  $F = 3.79$ ,  $p < .10$ . Volunteers in the Open and Controlled



TABLE 25

## ADJUSTED MARGINAL MEANS

	DEPENDENT VARIABLE							
	SUPERVISION SATISFACTION		COWORKER SATISFACTION		ROLE SATISFACTION		REWARD SATISFACTION	
	UNIV. F/ STEPDOWN F	UNIV. F	STEPDOWN F	UNIV. F	STEPDOWN F	UNIV. F	STEPDOWN F	
OPEN CLIMATE	49.54	47.29	48.95	40.00	41.84	14.79	16.43	
CONTROLLED CLIMATE	49.65	46.84	48.55	39.61	41.39	15.37	16.87	
AUTONOMOUS CLIMATE	45.51	45.68	45.42	38.67	38.50	14.91	14.83	
CLOSED CLIMATE	42.44	45.02	43.30	38.97	37.41	15.08	14.03	
PATERNAL CLIMATE	39.92	41.67	38.74	34.78	31.43	10.91	7.66	
FAMILIAR CLIMATE	34.70	33.08	27.66	35.42	28.03	11.48	4.53	

UNIVARIATE F - marginal means adjusted for covariates only

STEPDOWN F - adjusted marginal means for covariates and higher order dependent variables

climates had the highest coworker satisfaction (adjusted means 47.29 and 46.84 respectively). For both significant stepdown dependent variables, volunteers that perceived either an Open or Controlled climate reported the highest satisfaction. The descending order for the remaining four climates was: Autonomous, Closed, Paternal, and Familiar, for both significant stepdown dependent variables (SPVSNSAT and CWRKRSAT).

Univariate analysis revealed that a significant difference was present for both significant stepdown dependent variables. When the absolute differences between means was analysed, volunteers in an Open climate perceived the highest coworker satisfaction. Volunteers in the Controlled climate perceived the highest supervision satisfaction. Volunteers in the Paternal and Familiar climates ranked fifth and sixth in terms of both supervision and coworker satisfaction. The Familiar climate group had the lowest univariate/stepdown mean (34.70) for supervision satisfaction; as well as the lowest univariate mean (33.08) and stepdown mean (27.66) for coworker satisfaction (see Table 25).

From Table 25, supervision satisfaction had higher univariate means for the Open, Controlled, and Familiar climates and higher stepdown means for the Open, Controlled, Autonomous, Paternal, and Familiar climates.

Whereas coworker satisfaction had higher univariate means for the Autonomous, Closed, and Paternal climates and higher stepdown means for the Closed climate. Adjusted for higher order dependent variables coworker satisfaction decreased for the Open and Controlled climates and increased for the Autonomous, Closed, Paternal, and Familiar climates.

### Discriminant Analysis

To determine the organizational climate groups which were best discriminated by the derived function, the group means for the discriminant function (see Table 26) were evaluated by stepwise discriminant analysis. "With one significant function, inspection of group means along the significant dimension for each variable characterizes group differences" (Bray & Maxwell, 1982, p. 347). It was concluded, based upon the absolute differences between the group means for the canonical discriminant function (Ball, 1986), that the only significant function discriminated between Open, Controlled, Autonomous climates vs. Closed, Paternal, Familiar climates. In terms of the organizational dimensions the Open, Controlled, and Autonomous climates were all described by high esprit; and the Closed, Paternal, and Familiar climates were similar in terms of low esprit and consideration and high disen-

TABLE 26  
CANONICAL DISCRIMINANT FUNCTION EVALUATED  
AT ORGANIZATIONAL CLIMATE GROUP MEANS (Group Centroids)

ORGANIZATIONAL CLIMATE	CANONICAL DISCRIMINANT FUNCTION
Open	0.60033
Controlled	0.53545
Autonomous	0.03955
Closed	-0.56960
Paternal	-1.10005
Familiar	-2.13879

gement. Correlations between the four predictor variables and the discriminant function (see Table 27) showed that, for the discriminant function separating the Open, Controlled, and Autonomous vs. Closed, Paternal, and Familiar organizational climates, all four satisfaction dimensions (supervision, coworker, volunteer role, and reward) were primary predictors. The discriminant function seemed to separate climates in terms of high versus low esprit.

#### Summary

The univariate contrasts and marginal means identified significant differences for the relationship between organizational climate and the significant stepdown dependent variables. This result supported rejection of the null hypothesis of no difference in the contribution to each dimension of satisfaction between perceived personality and organizational climate at the .10 level. Thus, support was provided for the alternate hypothesis, in that significant differences were observed in the contribution of organizational climates to the dimensions of volunteer satisfaction adjusted for personality attribution covariates.

The Open and Controlled climates contributed to higher supervision and coworker satisfaction. Both

TABLE 27  
POOLED WITHIN-GROUPS CORRELATIONS BETWEEN DISCRIMINATING  
VARIABLES AND CANONICAL DISCRIMINANT FUNCTIONS

DEPENDENT VARIABLE	CANONICAL DISCRIMINANT FUNCTION
Supervision Satisfaction	.76351
Coworker Satisfaction	.75861
Role Satisfaction	.74538
Reward Satisfaction	.62868

significant stepdown dependent variables (SPVSNSAT and CWRKRSAT) reported univariate and adjusted means that decreased in terms of a specific ordering of organizational climates. The climates that contributed most to supervision and coworker satisfaction in descending order were: Open, Controlled, Autonomous, Closed, Paternal, and Familiar.

Discriminant analysis provided the underlying dimensionality of the variables, the relationship of the variables to the underlying dimensions, and the interrelationships among the variables and discriminant groups. Each of the four dependent variables made significant contributions to the discriminant function "Esprit" which best discriminated among the Open, Controlled, and Autonomous vs. Closed, Paternal, and Familiar organizational climates. Since the statistical tests satisfied a tenable nontrivial model for the organizational climate independent variable, the next step in the multivariate design was to identify differences among satisfaction scores for each organizational climate.

### Step 3: Simultaneous Analysis of Criterion and Classification Variables for MANCOVA

The design of the study did not encompass any theoretical structure for dependent variable ordering, nevertheless, there was an interest in making com-

parisons among the dependent variables. The stepdown analysis based on statistical criteria has inherent problems such as capitalization on chance and overfitting the data, especially if all variables are desired to be retained (Tabachnick & Fidell, 1983). The stepdown analysis did, however, provide a guide for identifying potentially important differences. Thus, the prioritized variables identified for the stepdown analysis were used in the same order for a profile analysis.

### Profile Analysis

A profile analysis of the satisfaction dimensions was examined by analysing the differences and similarities in the profile scores for each of the six organizational climates. A test of parallelism between the climate groups was performed by examining the differences between the satisfaction scores as joint dependent variables. The observed multivariate significance levels (Pillai's,  $F\text{-value}=.81742$ ,  $p=.658$ ; Hotellings,  $F\text{-value}=.81133$ ,  $p=.665$ ; and Wilks Lambda,  $F\text{-value}=.81437$ ,  $p=.662$ ) identified that the satisfaction scores in the six organizational climate groups (adjusted for ability, effort, task difficulty, and luck covariates) were similar. The differences among the satisfaction scores for the six climate groups were



not statistically significant. This was supported by the univariate F-test results. The differences between supervision and coworker satisfaction (F-value = .85890,  $p = .510$ ), coworker satisfaction and role satisfaction (F-value = .86568,  $p = .506$ ), and role satisfaction and reward satisfaction (F-value = .18609,  $p = .968$ ), were not significant at the hypothesized alpha level ( $p < .10$ ).

Given similar satisfaction scores for each climate group, a test of equal response means was examined. The observed significance level for each test statistic (Pillai's, Hotelling's, and Wilks') was identical: F-value = 1.81434,  $p = .147$ . Thus, equal response means among the six climate groups for the profile of satisfaction scores was observed for the sample of volunteer sport administrators. Univariate tests of difference identified significantly different means between role and reward satisfaction: univariate  $F = 3.29092$ ,  $p = .072$ . This significant difference may be explained by the fact that, consistent with Smith, Kendall, and Hulin (1969), the reward satisfaction dimension was based on half the number of items considered for the role, supervision, and coworker dimensions.

Since the profiles of the four satisfaction dimensions were identified as parallel and similar for each

of the six climate groups, the equality of the climate effects over all satisfaction responses was examined. An average satisfaction score, adjusted for the four personal attribution elements, was computed. A significant F statistic was observed for the climate effect ( $p < .10$ ), which identified significant differences in the means of the "average" across the six organizational climates.

A test of significant differences in the means of the "average" satisfaction response across the six climate groups involved computing F-values and parameter estimates. The F-values identified a significant climate effect for "average" (F-value = 15.42152,  $p = .000$ ). Parameter estimates showed that the means of "average" for the Open, Controlled, Autonomous, Paternal, and Familiar climate groups differed significantly from the mean response of all six climate groups on the "average" effect adjusted for the four covariates (see Table 28). The organizational climate groups did not contribute to the satisfaction profiles equally. Equal and parallel profiles of the prioritized dependent variables for the six climates supported the finding of one significant discriminant function.

Unequal climate effects for the "average" means supported rejection of the null hypothesis ( $H_02$ ) of no

TABLE 28

ESTIMATES FOR "AVERAGE" ADJUSTED FOR FOUR COVARIATES

EFFECT	COEFF.	STD. ERR.	T-VALUE	SIG. OF T
Open Climate	5.55	1.20	4.64	.000*
Controlled Climate	5.48	.84	6.51	.000*
Autonomous Climate	2.43	.93	2.61	.010*
Closed Climate	.66	1.05	.63	.532
Paternal Climate	-4.20	1.26	-3.34	.001*
Familiar Climate	-9.91**			

\*  $p < .10$ \*\* significance level cannot be evaluated but would reach  $p < .10$

significant differences in the contribution to volunteer satisfaction between perceived personality attributions (ability, effort, task difficulty, and luck) and organizational climate groups (Open, Controlled, Autonomous, Closed, Paternal, and Familiar).

The discriminant function analysis identified four significant dependent variables that were correlated but not redundant and the six organizational climate groups had similar and parallel satisfaction profiles. Thus, additional support for the underlying dimension of volunteer satisfaction and rejection of  $H_0$  at  $p < .10$  was obtained by an analysis of covariance design (ANCOVA). The dependent variables were summed to obtain an overall satisfaction score for each volunteer. A 6 x 4 between groups ANCOVA was performed using SPSSx. No intercorrelations among the covariates (ability, effort, task difficulty, and luck) were significantly associated with the dependent variable, covariate univariate  $F = .256$ ,  $p > .10$ . The main effect of climate was significantly related to volunteer satisfaction, main effect univariate  $F = 15.422$ ,  $p < .10$ .

#### Homogeneity of Regression

The final analysis in the evaluation of the criterion and classification variables in the multi-

variate design involved testing the homogeneity of regression coefficients across groups. In multivariate designs with covariates it is assumed that the relationship between covariates and dependent variables in any one group is the same as the relationship in any other group (Tabachnick & Fidell, 1983). To adjust for differences in covariates the regression between the dependent variables and covariates was calculated. For each subject the new adjusted linear combination of dependent variable responses represented the combination that would have been obtained if volunteers had the same average ability, effort, task difficulty, and luck scores.

An overall test of homogeneity of regression showed insufficient homogeneity of regression for the multivariate analysis of covariance design; multivariate  $F = 1.55392$ ,  $p < .10$ . The low observed significance identified a heterogeneous regression effect for the MANCOVA design. An interaction between the independent variable (organizational climate) and the ability, effort, task difficulty, and luck covariates was suspected. This interaction means that the effect of the covariates in adjusting the dependent variables was different for the six climate groups (Open, Controlled, Autonomous, Closed, Paternal, and Familiar). Consequently, the MANCOVA design was not an optimal

statistical strategy for assessing the relationship between organizational climate and personality attributions for volunteer satisfaction dimensions.

### Summary

Analysis of the criterion variables identified a significant association between organizational climate groups (Open, Controlled, Autonomous, Closed, Paternal, and Familiar) and the four dimensions of volunteer satisfaction (role, supervision, coworker, and reward), adjusted for the personality attribution covariates (ability, effort, task difficulty, and luck). Discriminant analysis detected an overall volunteer satisfaction dimension. Classification analysis resulted in a significant difference in the way in which the perceived organizational climates contributed to the volunteer satisfaction dimensions adjusted for the covariates. Volunteers in the Open and Controlled organizational climates reported the highest satisfaction for the two significant stepdown dependent variables (supervision and coworker satisfaction). The Paternal and Familiar climates reported the lowest volunteer satisfaction on these two dependent variables.

In terms of discriminating between the organizational climates on the underlying volunteer satisfac-

tion dimension, the significant function discriminated between Open, Controlled, Autonomous climates versus Closed, Paternal, Familiar climates. The overall volunteer satisfaction dimension distinguished between organizational climates described by high versus low esprit.

Simultaneous analysis of the criterion and classification variables indicated parallel and similar satisfaction profiles for the six organizational climates, but the contribution to the parallel profiles was not equal among climate groups. The identification of parallel and similar satisfaction profiles for the MANCOVA design supported the significant discriminant function of overall volunteer satisfaction. Analysis of covariance identified a significant main effect for organizational climate on the overall satisfaction dimension.

The overall MANCOVA design was not identified as an optimal statistical technique for measuring significant differences between personality attributions and organizational climate groups in their contribution to volunteer satisfaction. The regression effect of the four covariates (ability, effort, task difficulty, and luck) was not homogeneous across groups, suggesting an interaction between the covariates and organizational climate groups. This was supported by the

result for Ho3, which identified a significant "blocked" covariate effect. In essence the results of the MANCOVA design supported the main purpose of this research study: to identify significant "personality x situational" interactions for each volunteer satisfaction dimension.

#### "Personality x Situational" Interaction Analysis of Volunteer Satisfaction

The observed covariate-independent variable interaction supported the fourth research question, which focused on personality and situational interactions. Two of the independent variables that were formed by blocking the ability, effort, task, and luck covariates for testing Ho3 were used for the analysis of Ho5. The independent variables were analysed with climate in a 4 x 4 x 6 between subjects factorial design on the four dependent variables: role satisfaction (ROLESAT), supervision satisfaction (SPVNSAT), coworker satisfaction (CWRKERSAT), and reward satisfaction (RWRDSAT). The two attributional dimensions were locus of control (Internal, External, High Bilocal, and Low Bilocal), and locus of causality (Stable, Unstable, High, and Low). The major causal factors were ability, effort, task difficulty, and luck, which were classified according to the two causal dimensions. Ability is Internal and Stable; Effort is External and Unstable;



Task Difficulty is External and Stable; and Luck is External and Unstable. The six climates were labelled from factor and cluster analysis (Open, Controlled, Autonomous, Closed, Paternal, and Familiar).

Analysis of the fourth research question centred on determining significant "personality x situational" interactions for each dimension of volunteer satisfaction. Associated with this research question was the fifth null and alternate hypothesis:

Ho5: There will be no significant difference in the contribution to each dimension of volunteer satisfaction among the personality attributions and organizational climate in "individual x situational" interactions ( $p < .10$ ).

Ha5: There will be a significant difference in the contribution to each dimension of volunteer satisfaction among the personality attributions and organizational climate in "personality x situational" interactions ( $p < .10$ ).

The SPSSx MANOVA used for the analysis with hierarchical adjustment for non-orthogonality deleted all cases with any missing data. A total of 112 cases were deleted, leaving  $N = 167$  cases available for use in the MANOVA. The order of independent variables was control, cause, then climate.

#### Step 1: Assumptions of MANOVA

Prior to the multivariate tests of significance, the MANOVA design was assessed with respect to the assumptions of equal variance-covariance matrices,

multicollinearity, and singularity. The homogeneity of variance-covariance matrices for all levels of the between subjects factors was examined using the Box M test. Robustness of this test was not expected because Box M is highly sensitive to deviation from normality and unequal sample sizes (Norusis, 1985; Tabachnick & Fidell, 1983), which were present in this study.

Box M may be interpreted by an F-value and/or a Chi-square transformation. The multivariate test for homogeneity of variance-covariance computed: Box M = 211.97960 with an F-value of 1.52313,  $p < .10$ , and Chi-square = 146.96124,  $p < .10$ . The observed levels of significance led to a conservative rejection of the assumption of homogeneity of variance-covariance matrices. Since robustness of the MANOVA design was limited due to heterogeneity, hierarchical adjustment for nonorthogonality enabled the larger sample sizes to produce larger variances. The adjustment also resulted in conservative post hoc significance tests. Thus, observed significant mean differences were rejected with confidence, regardless of the equal variance-covariance violation (Tabachnick & Fidell, 1983).

The multicollinearity and singularity assumption was assessed using the determinant of the within cells correlation matrix. The observed determinant was sufficiently different from zero (DET = .52570) that

neither multicollinearity nor singularity was judged to be a problem.

There is no statistical or logical reason to use the MANOVA technique if the dependent variables are not correlated in the multivariate design. Bartlett's test for sphericity was used to test if the population matrix was an identity matrix: that is, all standard deviations are 1.0 and correlations are zero. The within cells correlations (see Table 29) indicated that the dependent variables in the multivariate design were correlated. Only the reward and supervision correlation was below .30 ( $r = .28780$ ). Bartlett's test of sphericity was 70.62553 with 6 degrees of freedom and a level of significance below the alpha level ( $p < .10$ ) proposed for this study's research hypotheses. Since the observed significance was small, correlations in Table 29 were judged to be statistically significant.

Principal components analysis (PCA) revealed additional information about the correlations between the dependent variables in the MANOVA design. The eigenvalues and percent of variance explained by each of the within cell correlations for the 4 x 4 x 6 factorial design are listed in Table 30. The first two principal components accounted for 70.2% of the variance, while the two remaining components accounted for the rest (29.8%) of the total. None of the eigen-

TABLE 29

WITHIN CELLS CORRELATIONS FOR THE CONTROL BY CAUSE BY CLIMATE DESIGN,  
WITH STD. DEVS. ON THE DIAGONAL

	Coworker Satisfaction	Role Satisfaction	Reward Satisfaction	Supervision Satisfaction
Coworker Satisfaction	7.37080			
Role Satisfaction	.31858	6.58982		
Reward Satisfaction	.35474	.31424	7.10838	
Supervision Satisfaction	.48102	.38083	.28780	7.49421

TABLE 30  
PRINCIPAL COMPONENT ANALYSIS  
EIGENVALUES OF WITHIN CELLS CORRELATION MATRIX

PRINCIPAL COMPONENT	EIGENVALUE	PCT. OF VAR.	CUM. PCT.
1	2.07409	51.85232	51.85232
2	.73424	18.35607	70.20839
3	.69491	17.37276	87.58115
4	.49675	12.41885	100.00000

values was close enough to zero to cause concern about the error matrix being singular (Tabachnick & Fidell, 1983).

Varimax rotation of the principal components simplified the interpretation of the relationship between the dependent variables and underlying components. The component scores, entered as a set of alternate dependent variables, transformed the correlated variables to a set of orthogonal principal components. Coworker satisfaction had a factor weight of .94926 on the fourth component, role satisfaction had a factor weight of .96628 on the second principal component, reward satisfaction had a weight of .97087 on the first principal component, and supervision satisfaction had a weight of .94902 on the third component. All of the dependent variables had weights below .25 on all but one component. Thus, it was argued that none of the dependent variables provided redundant information.

In summary, the tests of equal variance-covariance, multicollinearity, and singularity provided satisfactory support for the MANOVA design. The next step in the MANOVA design was the evaluation of differences among the cells in the 4 x 4 x 6 factorial design.

Step 2: Test of Significance for MANOVA

Three interaction effects were computed by SPSSx MANOVA. Since lower order effects are uninterpretable in the presence of interactions, the highest order effect, "Control x Cause x Climate", was interpreted first.

The significance of the 4 x 4 x 6 factorial design was assessed using multivariate significance criteria; Pillai's  $p = .881$ ; Hotellings  $p = .894$ ; and Wilks  $p = .888$ . The observed significance levels identified a low probability of observing a difference among the cells in the design on the four dependent variables. The similarity among the significance levels suggested that any violations in the assumptions of MANOVA did not affect the robustness of each test differentially. The multivariate tests of significance failed to identify a significant "Control x Cause x Climate" interaction at the .10 level.

Univariate F-tests, which identified the sources of variance that would have been produced if each dependent variable had been investigated in isolation, supported the finding of no significant 4 x 4 x 6 interaction. The observed significance levels were large enough (ROLESAT Univ.  $F = .89721$ ,  $p = .538$ ; SPVNSAT Univ.  $F = .71124$ ,  $p = .712$ ; RWRDSAT Univ.  $F = .77267$ ,  $p = .655$ ; CWRKRSAT Univ.  $F = .31411$ ,  $p =$

.976) to fail to reject the hypothesis of no difference for the "Control x Cause x Climate" factorial design.

Although insensitive to correlations, the Univariate F's were not statistically independent. The largest F-ratio occurred for the dependent variable that had the highest between cell difference relative to within cell variation. Role satisfaction had the largest F-value (ROLESAT F = .89721). Each successive F-value indicated the next highest between cell to within cell variation. Reward satisfaction (RWRDSAT F = .77267), supervision satisfaction (SPVSNSAT F = .71124), and coworker satisfaction (CWRKRSAT F = .31411) followed in successive order.

### Stepdown Analysis

To investigate the highest order interaction effect, the Roy-Bargmann Stepdown procedure enabled an analysis of the significance of the dependent variables in the context of the effects of higher order dependent variables. As discussed in the MANCOVA analysis for Hol, the power of the stepdown procedure is increased if there is a theoretical ordering of the dependent variables. The dependent variables were ordered based on a statistical criterion of univariate F-values from the MANOVA procedure. The order of entry was: ROLESAT, RWRDSAT, SPVSNSAT, and CWRKRSAT. The a priori



ordering also had post hoc theoretical meaning in the context of volunteer organizations. Since volunteering is a free choice behaviour, role satisfaction is necessary for volunteers to value their contribution. Reward satisfaction enhances volunteer persistence in an organization. Supervision satisfaction is necessary in volunteer organizations because volunteers contribute to the organization on the basis of self interest and personal values (Sales, 1982; Schiebe, 1970), and may withdraw from the organization if personal control is perceived as being threatened (Wong & Sproule, 1984). Coworker satisfaction had the lowest priority for the 4 x 4 x 6 factorial design which may be explained by the fact that volunteers perceive their role and duties as having a higher priority than socialization in the "Control x Cause x Climate" design.

The prioritized ordering of the dependent variables for the Roy-Bargmann Stepdown analysis did not identify any significant dependent variables at the .10 level. Role satisfaction, the highest priority dependent variable, had an equal Univariate and Stepdown  $F = .89721$ ,  $p = .538$ . Reward satisfaction adjusted for role satisfaction, Stepdown  $F = .97930$  had a significance of .466; supervision satisfaction adjusted for role and reward satisfaction, Stepdown  $F = .62001$ ,

had a significance of .794; coworker satisfaction adjusted for role, reward, and supervision satisfaction Stepdown  $F = .46344$ , had a significance of .910.

### Summary

The highest order interaction, "Control x Cause x Climate" did not indicate univariate, multivariate, or stepdown significance. No difference between the population means and hypothesized values for each cell in the design was observed. The result was a failure to reject  $H_0$  at the .10 level for the 4 x 4 x 6 factorial design.

The two personality measures, locus of control and locus of causality, with the situational variable, organizational climate, did not interact to make significant differences in satisfaction responses for the volunteer sample. Generalized expectancies of perceived cause and control of outcomes did not interact with specific organizational climates. Causal ascriptions had no direct bearing on locus of control. Failure to distinguish between cause and outcome regarding perceived controllability may result in misclassification of attributional elements (Wong & Sproule, 1984). The results for the volunteer sample suggested the "Control x Cause x Climate" interaction may not be applicable to understand the outcome of

volunteer satisfaction.

Analysis of Lower Order  
"Personality x Situational" Interactions

Since there was no significant 4 x 4 x 6 interaction, the generalized attribution independent variables (Locus of control and Locus of causality) were tested with climate separately for their interactive effect on the four dependent variables: volunteer role, supervision, coworker, and reward satisfaction. Two 4 x 6 factorial designs were analysed: "Control x Climate" and "Cause x Climate". These interactions were computed separately by SPSSx MANOVA after the omnibus 4 x 4 x 6 multivariate design. The two separate interactions will be reported and discussed together to facilitate comparisons between the two "personality x situational" interactions.

The assumption of uncorrelated experimental error and treatment effects for the "Cause x Climate" and "Control x Climate" interactions involved multivariate significance tests of no difference between the population means and hypothesized values (i.e., all differences equal to zero). The criteria for inferring population differences on the basis of sampling data (Tabachnick & Fidell, 1983) were, Wilks' Lambda, Hotelling's Trace criterion, and Pillai's criterion. All three observed significance levels were similar for

the "Cause x Climate" interaction: Pillai's F-value = 1.30676,  $p = .089$ ; Hotelling's, F-value = 1.32532,  $p = .079$ ; and Wilks', F-value = 1.31705,  $p = .084$ ; and similar for the "Control x Climate" interaction: Pillai's, F-value = 1.43888,  $p = .025$ ; Hotelling's, F-value = 1.49919,  $p = .015$ ; and Wilks', F-value = 1.43888,  $p = .020$ . For both interactions the multivariate significance criteria were similar, suggesting power and robustness for each 4 x 6 factorial design. Both interactions were significant at a level below .10. The "Control x Climate" interaction was more powerful in indicating significant differences in the dependent variables. Separately, the two generalized personal attributions differed as a function of climate group perception. In the presence of organizational climate, locus of causality had an effect and in the presence of organizational climate, locus of control had an effect.

### Step 1: Analysis of Criterion Variables

#### Univariate F Tests

Table 31, lists the analysis of variance results that would have been produced if, for each interaction, the dependent variables had been investigated in isolation. The value of univariate results in a multivariate analysis is that they may help determine (along with discriminant analysis) which variables contribute

TABLE 31

UNIVARIATE AND STEPDOWN SIGNIFICANCE FOR SIGNIFICANT  
MANOVA INTERACTIONS: CONTROL BY CLIMATE, CAUSE BY CLIMATE

	CONTROL BY CLIMATE				CAUSE BY CLIMATE			
	UNIV. F	SIG. OF F	STEPDOWN F	SIG. OF F	UNIV. F	SIG. OF F	STEPDOWN F	SIG. OF F
COWORKER SATISFACTION	2.05413	.020*	2.05413	.020*	1.57910	.108	1.01544	.440
ROLE SATISFACTION	1.61094	.087*	1.11314	.354	2.42513	.008*	2.42513	.008*
SUPERVISION SATISFACTION	1.03589	.424	1.94479	.029*	1.00234	.452	.98239	.470
REWARD SATISFACTION	1.33235	.200	.86952	.593	1.27866	.241	.96415	.487

\*  $p < .10$

to the overall difference, or on which dependent variables do the cells differ most (Norusis, 1985).

For the "Cause x Climate" interaction, only one univariate F-test reached the specified alpha level ( $p < .10$ ) for hypothesis testing. Role satisfaction had the largest univariate F-value = 2.42513,  $p = .008$ . For the "Control x Climate" interaction two dependent variables had significant values: coworker satisfaction F-value = 2.05413 with  $p = .020$ , and role satisfaction F-value = 1.61094,  $p = .087$ .

The univariate results were considered to be descriptive. The observed significance levels were not adjusted for the relationships among the four dependent variables. The largest F-values occurred for the dependent variables that had the highest between cell differences relative to within cell variation. Each successive F-value indicated the next highest between cell to within cell variation. Thus, dependent variables were prioritized on the statistical basis of their respective F-values (see Table 31).

### Stepdown Analysis

The Roy-Bargmann Stepdown procedure on SPSSx MANOVA enabled an analysis of the significance of the dependent variables in the context of the effects of higher order dependent variables. The dependent vari-

ables were ordered on a statistical criterion of univariate F-values (see Table 31). Based on MANOVA, the order of entry for the "Cause x Climate" interaction was: role satisfaction (ROLESAT), coworker satisfaction (CWRKRSAT), supervision satisfaction (SPVSNSAT), and reward satisfaction (RWRDSAT). The prioritized order for the "Control x Climate" interaction was: CWRKRSAT, ROLESAT, SPVSNSAT, and RWRDSAT.

The power of the stepdown procedure is increased if there is a theoretical ordering of the dependent variables. Although prioritizing was based on a statistical criteria, post hoc theoretical meaning was established for the dependent variable ordering of each effect.

In the context of volunteer organizations, role satisfaction had the highest priority for the "Cause x Climate" interaction. Prior to a volunteer's entry into an organization, the individual must evaluate the intention of the organization. The choice to volunteer is value laden by role acceptance and is, therefore, primary for volunteer satisfaction. In relation to generalized attributions, locus of causation "...is concerned with the source of causality; that is, either the cause resides in you, in some other people, or in the situation" (Wong & Sproule, 1984, p. 310). Role satisfaction priority was based on self and situational

evaluations in terms of stable and unstable attributional elements.

For the "Control x Climate" interaction coworker satisfaction had the highest priority. In terms of locus of control, the assignment of responsibility is based on internal and external attributions. Relationships among the volunteer sport administrator sample were a primary consideration for the "Control x Climate" effect. "The perception of control depends on a lot more than mere simple behaviour-outcome contingency" (Wong & Sproule, 1984, p. 310). The generalized expectancy of control refers to the belief that the reinforcement occurs as a function of personal and external control. In the presence of organizational climate, control over outcomes or self-efficacy was significant for coworker satisfaction.

The ordering of dependent variables for the Step-down analysis identified role satisfaction as the only significant dependent variable for the "Cause x Climate" effect. Since role satisfaction was the highest priority dependent variable the stepdown F was equal to the univariate F (2.42513,  $p = .008$ ). The Roy-Bargmann stepdown analysis identified two significant dependent variables for the "Control x Climate" interaction: coworker satisfaction (CWRKRSAT Univariate F & Stepdown F = 2.05413,  $p = .020$ ), and



supervision satisfaction adjusted for coworker and role satisfaction (Stepdown  $F = 1.94479$ ,  $p = .029$ ). In comparison with the "Cause x Climate" interaction, "Control x Climate" decreased the significance of ROLESAT and increased the significance of SPVSNSAT and CWRKRSAT.

### Summary

The significant difference tests between cells for both interaction effects were at a level below the alpha level ( $p < .10$ ) set for hypotheses testing. This result led the author to reject the null hypothesis of no difference for  $H_05$ . Univariate and stepdown analyses identified where the differences may have been for the significant interactions. Further analyses of dependent variables in the two multivariate designs were analysed to identify differences between cells in each interaction.

### Discriminant Analysis

The dependent variables were assessed in terms of the best linear combination that best identifies significant differences for both interaction effects. Using discriminant analysis the interaction of classification levels between the two independent variables for the "Cause x Climate" and "Control x Climate"

interactions were analysed.

Dimension reduction analysis for the "Cause x Climate" interaction with no functions removed identified significant discriminating power on the basis of all discriminating functions (Multivariate  $F = 1.31705$ ,  $p = .084$ ). Discriminating power was not significant for the successive removal of each discriminating function. The amount of between-group variability contributed by each discriminant function was determined by the size of the eigenvalues. The relative proportion of between cell variability contributed by function one for the "Cause x Climate" interaction was EIGENVALUE = .30070 for 50.81% of the total variance. No additional information was obtained from the remaining discriminant functions. For the "Control x Climate" interaction, dimension reduction analysis showed a statistically significant association between the interaction effect and dependent variables (Multivariate  $F=1.46993$ ,  $p=.020$ ). The successive removal of each function did not identify any additional discrimination power for the "Control x Climate" interaction. The relative proportion of between cell variability contributed by function one was EIGENVALUE = .41758, for 53.5% of the total variance. All remaining functions were equal for the interaction.

The interpretation of discriminant functions was

based on the examination of the loadings of predictor variables. The loading matrices contained canonical variate correlations (CVC) for both interactions. The loading matrix showed that the significant discriminating function was correlated most highly with coworker satisfaction ( $r = -.70820$ ) and role satisfaction ( $r = -.32596$ ) for "Cause x Climate"; and role satisfaction ( $r = .91674$ ), coworker satisfaction ( $r = .57366$ ), and supervision satisfaction ( $r = .44031$ ) for "Control x Climate" (see Table 32).

"Standardized discriminant weights reflect the unique contribution of each variate in the context of the other variates for a specific discriminant function" (Bray & Maxwell, 1983, p. 360). Correlations between dependent variables (canonical variates) and set of predictors identified which variables contributed most heavily to discrimination among groups, after adjusting for higher order dependent variables. The standardized discriminant weights (SDW) indicated that role satisfaction and coworker satisfaction were most important for cell separation on the discriminant function for the "Cause x Climate" interaction (ROLESAT = .88329; CWRKRSAT = .39767). The SDW for the "Control x Climate" interaction identified coworker, supervision, and role satisfaction as important for cell separation on the significant discriminant function

TABLE 32

DISCRIMINANT WEIGHTS AND CANONICAL COVARIATES  
FOR SIGNIFICANT MANOVA'S: CONTROL BY CLIMATE, CAUSE BY CLIMATE

EFFECT...CONTROL BY CLIMATE				
DISCRIMINANT FUNCTION 1	DEPENDENT VARIABLE			
	COWORKER SATISFACTION	ROLE SATISFACTION	REWARD SATISFACTION	SUPERVISION SATISFACTION
CVC <sup>1</sup>	-.70820	-.32596	-.14734	.21869
SDW <sup>2</sup>	-1.02340	-.33752	.08740	.81435
EFFECT...CAUSE BY CLIMATE				
CVC <sup>1</sup>	.57366	.91674	.12473	.44031
SDW <sup>2</sup>	.39767	.88329	-.29304	-.00302

(CWRKRSAT = -1.02340; SPVNSAT = .81435; and ROLESAT = -.33752) (see Table 32). Since the sample was highly homogeneous with respect to the predictor variables, it was deemed appropriate to have a low criterion to determine which variables to consider in interpreting the discriminant function (Tabachnick & Fidell, 1983). The findings from the CVC and SDW analyses suggested that maximum spread among cell separation was for role and coworker satisfaction (Cause x Climate) and coworker, supervision, and role satisfaction (Control x Climate). Coworker and role satisfaction (Cause x Climate) and role, coworker, and supervision satisfaction (Control x Climate) contributed most to the variance.

#### Summary

The magnitude of interaction differences on each dependent variable (Univariate F), the prioritized dependent variable differences (Stepdown F), the unique contributions of each variate in the context of other variates for the significant discriminant function (SDW), and the measure of correlation for each variate with scores on each discriminant function (CVC), identified unique significant differences in the "personality x situational" interactions on the volunteer satisfaction dimensions. These results supported the

rejection of  $H_05$  and acceptance of  $H_{a5}$  at the .10 level for both "Cause x Climate" and "Control x Climate" interactions. The following section reports the findings from an analysis of classification variables. To identify differences between cells for the interactions, univariate and adjusted cell means were analysed.

### Step 2: Analysis of Classification Variables

#### Cell Means

Interpretation of the significant prioritized step-down dependent variables involved an analysis of cell means adjusted for higher order dependent variables. The following results are based on the coefficients listed in Table 33. Shown are the significant univariate and Stepdown cell means (ROLESAT Univariate & Stepdown  $F = 2.42513$ ,  $p = .008$ ) for the "Cause x Climate" interaction and the univariate and adjusted stepdown cell means for the significant dependent variables identified for the "Control x Climate" interaction (coworker satisfaction, supervision satisfaction, and role satisfaction).

The greatest contribution to the composite dependent variable of volunteer satisfaction for the "Cause x Climate" interaction was role satisfaction. Volunteers in the Stable causal group and classified in the Open organizational climate had the highest role satisfac-

TABLE 33

ANALYSIS OF CELL MEANS FOR SIGNIFICANT  
 MAROVA'S: CONTROL BY CLIMATE, CAUSE BY CLIMATE

CELL	EFFECT...CONTROL BY CLIMATE				EFFECT...CAUSE BY CLIMATE			
	DEPENDENT		VARIABLE		DEPENDENT		VARIABLE	
	COWORKER SATISFACTION	ROLE SATISFACTION	SUPERVISION SATISFACTION	ROLE SATISFACTION	COWORKER SATISFACTION	ROLE SATISFACTION	SUPERVISION SATISFACTION	ROLE SATISFACTION
	UNIV./STEPDOWN F's	UNIV. STEPDOWN F	UNIV. STEPDOWN F	UNIV. STEPDOWN F	UNIV./STEPDOWN F's	UNIV. STEPDOWN F	UNIV. STEPDOWN F	UNIV./STEPDOWN F's
<u>INTERNAL</u>								
Open	51.25	42.50	40.83	52.25	48.79	43.75		
Controlled	48.77	42.85	41.89	50.15	47.60	39.00		
Autonomous	47.23	38.31	37.79	44.85	44.23	41.50		
Closed	51.00	42.00	40.41	43.67	40.45	39.00		
Paternal	38.00	28.50	30.61	33.00	38.96	33.50		
Familial	27.50	27.00	32.10	36.00	46.67	37.50		
<u>EXTERNAL</u>								
Open	51.60	43.40	41.63	47.20	43.33	42.25		
Controlled	45.45	36.46	36.44	50.00	50.64	43.50		
Autonomous	47.75	38.00	37.33	49.13	48.38	35.63		
Closed	43.67	35.17	35.66	43.75	45.48	36.90		
Paternal	45.67	38.33	38.26	46.67	46.68	28.00		
Familial	43.00	29.00	29.68	25.00	28.78	.00		
<u>HIGH BILOCAL</u>								
Open	42.00	39.50	40.47	51.00	52.17	39.50		
Controlled	52.00	45.00	43.12	50.00	45.51	41.33		
Autonomous	39.75	34.50	36.11	36.25	39.77	32.25		
Closed	27.50	38.50	43.60	42.50	49.85	36.33		
Paternal	38.50	31.00	32.93	33.00	38.04	41.50		
Familial	.00	.00	12.93	.00	29.64	.00		
<u>LOW BILOCAL</u>								
Open	48.00	41.29	40.55	49.57	47.78	41.50		
Controlled	48.94	42.29	41.29	49.06	46.59	41.94		
Autonomous	44.23	40.39	40.72	46.69	46.69	39.75		
Closed	41.56	35.67	36.76	40.67	43.11	35.89		
Paternal	36.44	29.89	32.44	40.89	47.08	29.89		
Familial	20.00	30.00	37.23	38.00	50.86	22.67		

tion (mean = 43.75). The stepdown analysis revealed only one significant dependent variable for the "Cause x Climate" interaction, the highest order dependent variable (ROLESAT  $p < .10$ ). Thus, univariate and stepdown means were identical for the "Cause x Climate" interaction analysis. Two empty cells were observed (Unstable/Familiar climate; and High/Familiar climate). The lowest volunteer role satisfaction was observed for the Low causal group in the Familiar climate (Stepdown mean = 22.67).

Analysis within the generalized attribution causal groups revealed that volunteers classified in the Stable causal group had highest role satisfaction in the Open climate (mean = 43.75) and lowest in the Paternal climate (mean = 37.50). For the Unstable group the Controlled climate reported higher role satisfaction (mean = 43.50) and the Paternal climate lowest (mean = 28.00). Within the High causal group the highest role satisfaction was reported for volunteers in the Paternal organizational climate (mean = 41.50) and lowest in the Autonomous climate (mean = 32.25). For the Low causal group, volunteers in the Controlled climate reported the highest role satisfaction (mean = 41.94), and volunteers in the Familiar climate had the lowest role satisfaction (mean = 22.67). Volunteers in the Stable, Unstable, and Low



causal groups had high role satisfaction when classified in the Open and Controlled organizational climates, and low role satisfaction for the Paternal and Familiar organizational climates. In comparison the High causal group reported high role satisfaction scores in the Paternal climate and low role satisfaction in the Autonomous climate.

Climate group comparisons indicated that for the Open, Autonomous, Closed, and Familiar climates the Stable causal group reported higher role satisfaction. Volunteers classified in the Controlled organizational climate had higher role satisfaction when classified in the Unstable causal group. Volunteers in the Paternal climate group reported higher role satisfaction classified in the High causal group (see Table 33).

The greatest contribution to the composite dependent variable of volunteer satisfaction that best distinguished among the "Control x Climate" cells was coworker satisfaction (CWRKRSAT Stepdown  $F = 2.05413$ ,  $p = .020$ ). Volunteers in the High Bilocal control group classified in the Controlled climate had the highest coworker satisfaction (mean = 52.00). With differences due to coworker and role satisfaction already entered, supervision satisfaction made a unique contribution (SPVNSAT Stepdown  $F = 1.94479$ ,  $p = .029$ ). Volunteers in the High Bilocal control group classified in the

Open climate had the highest adjusted mean for supervision satisfaction (52.17). Volunteers classified in the "External x Familiar" cell had the lowest supervision satisfaction (adjusted mean = 28.78). Within the generalized attribution control groups, volunteers classified as Internals had the highest and lowest supervision satisfaction when they perceived an Open organizational climate (adjusted mean = 48.79), and Paternal climate (adjusted mean = 38.96) respectively. The External control group reported higher supervision satisfaction when the Controlled climate was perceived (adjusted mean = 50.64) and lowest for the Familiar climate (adjusted mean = 28.78). The High Bilocal cells showed the highest and lowest supervision satisfaction in the Open (adjusted mean = 52.17) and Familiar (adjusted mean = 29.64) climates respectively. Volunteers classified as Low Bilocals reported higher supervision satisfaction when classified in the Familiar organizational climate (adjusted mean = 50.86) and lowest for those in the Closed organizational climate (adjusted mean = 43.11).

Although role satisfaction did not make a unique contribution to the stepdown analysis (Stepdown  $F = 1.11314$ ,  $p = .345$ ), it was included in the cell mean analysis for both univariate (Univariate  $F = 1.61094$ ,  $p = .087$ ) and stepdown means for the purpose of com-

parison (see Table 33).

Univariate cell means for the "Control x Climate" interaction are also listed in Table 33. Univariate analysis identified the highest satisfaction score (SPVNSAT mean = 52.25) for volunteers with higher Internality scores in an Open organizational climate. The lowest satisfaction score (CWRKRSAT mean = 20.00) was reported by Low Bilocals in a Familiar organizational climate. Volunteers in all generalized control attribution groups (Internal, External, High Bilocal, Low Bilocal) consistently reported high satisfaction scores when classified in the Open and Controlled climates, and low satisfaction scores when classified in the Familiar climate (see Table 33).

Stepdown adjustment did influence the absolute values for each cell. Only one cell (Low Bilocals in the Autonomous climate group) reported the same univariate and adjusted mean (46.69) for supervision satisfaction. Adjustment for higher order dependent variables did not significantly alter the rankings of the cells. One significant difference between rankings of univariate and stepdown means was observed for the Low Bilocal control group. When supervision satisfaction means were adjusted for higher order dependent variables, the rank of the Familiar Climate was altered from sixth to first.

### Summary

The univariate and stepdown analysis of cell means identified significant differences for both interaction effects in their contribution to the dimensions of volunteer satisfaction. These findings supported the researchers decision to reject Ho5 for both interaction effects separately. Thus, Ha5 was accepted at the .10 level since differences were observed in the contribution to univariate and prioritized volunteer satisfaction dimensions (role, supervision, coworker, and reward) between perceived personality attributions and organizational climate. Since separate criterion and classification analysis revealed significant "personality x situational" interactions, a simultaneous analysis of criterion and classification variables was computed. The final section of data analysis for the two significant interactions involved consideration of all dependent variable scores for all volunteers.

#### Step 3: Simultaneous Analysis of Criterion and Classification Variables for MANOVA

Each volunteer had a profile of four satisfaction scores which were hypothesized to relate to volunteer satisfaction. The ordering of the dependent variables for the stepdown analysis was based on the statistical criteria of absolute univariate F-values in the MANOVA design. This prioritized ordering was used to interpret

the profile analysis for each interaction effect. An analysis of significant differences involved an examination of the nature of the differences between the dependent variables for each cell.

### Profile Analysis

A test of parallelism asked the question, "are satisfaction scores, within each separate interaction effect similar across all cells?" The satisfaction variables were examined as joint dependent variables.

Univariate F-tests for the "Control x Climate" effect indicated that differences between coworker and roles satisfaction (CMINUSR) (F-value = 6.21524,  $p = .000$ ); role and supervision satisfaction (RMINUSS) (F-value = 7.77441,  $p = .000$ ); and supervision and reward satisfaction (SMINUSRW) (F-value = 92.69314,  $p = .000$ ) were significant at  $p < .10$ . Multivariate tests of significance also supported a "Control x Climate" interaction (Pillais  $F = 4.90069$ ,  $p = .000$ ; Hotellings  $F = 39.82405$ ,  $p = .000$ ; Wilks'  $F = 13.15762$ ,  $p = .000$ ). For the "Cause x Climate" interaction, differences between role and coworker satisfaction (RMINUSC) (F-value = 5.73883,  $p = .000$ ); coworker and supervision satisfaction (CMINUSS) (F-value = 1.51202,  $p = .078$ ); and supervision and reward satisfaction (SMINUSR) (F-value = 105.01235,  $p = .000$ ) were significant at  $p <$

.10. The multivariate criteria also supported a "Cause x Climate" interaction in relation to volunteer satisfaction (Pillais  $F = 4.65709$ ,  $p = .000$ ; Hotellings  $F = 44.40542$ ,  $p = .000$ ; Wilks  $F = 13.589751$ ,  $p = .000$ ).

The test of parallelism for the "Cause x Climate" interaction identified significant univariate test statistics for the prioritized dependent variables. Differences between role and coworker satisfaction (RMINUSC), coworker and supervision satisfaction (CMINUSS), and supervision and reward satisfaction (SMINUSRW), were not the same across the "Cause x Climate" cells. The multivariate tests of significance identified dissimilar profiles for the cells in both interaction effects. From the univariate and multivariate significance tests it was judged that the principle differences among satisfaction profiles occurred for all dimensions of satisfaction at the .10 level for both "personality x situational" interactions.

Since the hypothesis of parallel satisfaction profiles was rejected, estimates of the differences were examined for each cell. The differences between the prioritized dependent variables for the "Control x Climate" interaction are listed in Table 34. The differences for CMINUSR indicated the greatest absolute difference occurred for volunteers classified as Exter-

TABLE 34

## PROFILE ANALYSIS OF CELL MEANS FOR CONTROL BY CLIMATE

	ESTIMATES FOR CMINSR			ESTIMATES FOR RMINUSS			ESTIMATES FOR SMINSRW		
	COEFF.	T-VALUE	SIG. OF T	COEFF.	T-VALUE	SIG. OF T	COEFF.	T-VALUE	SIG. OF T
<b>INTERNAL</b>									
Open	8.75	2.18	.031*	-9.75	-2.55	.012*	32.50	7.35	.000*
Controlled	5.92	2.66	.009*	-7.31	-3.45	.001*	31.85	12.98	.000*
Autonomous	8.92	4.01	.000*	-6.54	-3.09	.002*	26.54	10.81	.000*
Closed	9.00	2.75	.007*	-1.67	-.54	.594	26.17	7.24	.000*
Paternal	9.50	1.67	.096*	-4.50	-.83	.406	28.50	4.56	.000*
Familial	.50	.09	.930	-9.00	-1.67	.098*	36.00	5.75	.000*
<b>EXTERNAL</b>									
Open	8.20	2.28	.024*	-3.80	-1.11	.268	32.20	8.14	.000*
Controlled	9.00	3.72	.000*	-13.55	-5.88	.000*	35.09	13.15	.000*
Autonomous	9.75	3.44	.001*	-11.13	-4.12	.000*	33.62	10.75	.000*
Closed	8.50	3.67	.000*	-8.58	-3.89	.000*	32.92	12.89	.000*
Paternal	7.33	1.58	.116	-8.33	-1.89	.061*	31.67	6.20	.000*
Familial	14.00	1.74	.083*	4.00	.52	.601	12.00	1.36	.177
<b>HIGH BILOCAL</b>									
Open	2.50	.44	.660	-11.50	-2.13	.035*	36.00	5.75	.000*
Controlled	7.00	1.51	.133	-5.00	-1.13	.259	32.00	6.26	.000*
Autonomous	5.25	1.31	.193	-1.75	-.46	.647	28.00	6.33	.000*
Closed	-11.00	-1.94	.055*	-4.00	-.74	.460	25.50	4.08	.000*
Paternal	7.50	1.32	.188	-2.00	-.37	.712	29.50	4.71	.000*
Familial	.00			.00			.00		
<b>LOW BILOCAL</b>									
Open	6.71	2.21	.028*	-8.29	-2.87	.005*	33.71	10.08	.000*
Controlled	6.65	4.83	.000*	-6.77	-5.17	.000*	31.79	20.95	.000*
Autonomous	3.85	1.73	.086*	-6.31	-2.98	.003*	33.85	13.79	.000*
Closed	5.89	2.20	.029*	-5.00	-1.96	.051*	26.67	9.04	.000*
Paternal	6.56	2.45	.015*	-11.00	-4.32	.000*	34.11	11.56	.000*
Familial	-10.00	-1.76	.080*	-8.00	-1.48	.141	33.00	5.27	.000*

nals in the Familiar climate (Coeff. = 14.00,  $p = .083$ ), suggesting that Externals in the Familiar climate had significantly higher coworker satisfaction compared with role satisfaction. The interaction effect showed that significant differences between coworker and role satisfaction existed for 17 of 24 cells in the design at the .10 level of significance (see Table 34). Internals in the Autonomous climate, Externals in the Controlled and Closed climates, and significant difference where  $p = .000$ . Only one significant difference was found for the High Bilocal control group. High Bilocals in a Closed climate reported significantly higher role satisfaction compared to coworker satisfaction (Coeff. = -11.00,  $p = .055$ ). High Bilocals in the Closed climate and Low Bilocals in the Familiar climate were the only cells to report higher role rather than coworker satisfaction.

Estimates of role and supervision satisfaction differences indicated that volunteers classified in the External control group in a Controlled climate had the greatest absolute difference (RMINUSS Coeff. = -13.55,  $p = .000$ ) which indicated significantly higher supervision satisfaction over role satisfaction. For role and supervision satisfaction differences, 14 of 24 cells had significant differences in the design. All difference estimates indicated higher supervision satis-



faction. For the High Bilocal cells only the Open climate ( $p = .035$ ) had significantly different role and supervision satisfaction scores.

For supervision and reward satisfaction differences, all but one cell reported significantly different scores at  $p < .10$ . This may be a result of the fact that reward satisfaction scores were determined by half the number of items. Total reward satisfaction scores were based on 9 items whereas role, supervision, and coworker satisfaction were based on 18 items each. The only group where the number of items did not make a difference was for Externals in a Familiar climate ( $p = .177$ ) where supervision and reward satisfaction scores were similar. From this result it was judged that Externals in the Familiar climate had lower supervision satisfaction scores than the other cells for SMINUSRW differences.

Difference estimates of prioritized dependent variables for the "Cause x Climate" design are listed in Table 35. Estimates for RMINUSC indicated that volunteers categorized as Stable in a Controlled climate and Unstable in an Autonomous climate had the greatest absolute differences between role and coworker satisfaction (Coeff. =  $-10.14$ ,  $p = .000$ ; and  $-10.13$ ,  $p = .001$ ) respectively. All differences indicated that coworker satisfaction was higher than role satisfac-

TABLE 35

## PROFILE ANALYSIS OF CELL MEANS FOR CAUSE BY CLIMATE

	ESTIMATES FOR RMINUSC			ESTIMATES FOR CMINUS			ESTIMATES FOR SMINUSRW		
	COEFF.	T-VALUE	SIG. OF T	COEFF.	T-VALUE	SIG. OF T	COEFF.	T-VALUE	SIG. OF T
<u>STABLE</u>									
Open	-6.25	-1.51	.132	2.50	.64	.525	32.50	7.35	.000*
Controlled	-10.14	-4.60	.000*	-.64	-.31	.759	31.85	12.98	.000*
Autonomous	-8.40	-3.22	.002*	2.40	.97	.335	26.54	10.81	.000*
Closed	-3.67	-1.09	.278	-2.17	-.68	.500	26.17	7.24	.000*
Paternal	-8.00	-1.37	.173	-3.00	-.54	.589	28.50	4.55	.000*
Familial	5.00	.86	.393	-16.50	-2.98	.003*	36.00	5.75	.000*
<u>UNSTABLE</u>									
Open	-8.00	-1.94	.055*	.75	.19	.849	32.20	8.14	.000*
Controlled	-7.10	-2.72	.007*	1.30	.52	.601	35.09	13.15	.000*
Autonomous	-10.12	-3.47	.001*	-3.25	-1.17	.243	33.62	10.75	.000*
Closed	-9.72	-3.91	.000*	5.81	2.46	.015*	32.92	12.89	.000*
Paternal	-8.00	-1.68	.095*	1.00	.22	.825	31.67	6.20	.000*
Familial	.00			.00			12.00	1.36	.177
<u>HIGH</u>									
Open	-7.00	-1.20	.232	-4.00	-.72	.472	36.00	5.75	.000*
Controlled	-7.33	-1.54	.126	-3.33	-.74	.463	32.00	6.26	.000*
Autonomous	-8.75	-2.12	.036*	5.00	1.28	.204	28.00	6.33	.000*
Closed	1.33	.29	.780	-7.33	-1.62	.107	25.50	4.08	.000*
Paternal	-8.00	-1.37	.173	10.50	1.89	.060*	29.50	4.71	.000*
Familial	.00			.00			.00		
<u>LOW</u>									
Open	-7.12	-2.44	.016*	-2.00	-.72	.472	33.71	10.08	.000*
Controlled	-5.52	-3.91	.000*	-1.76	-1.31	.192	31.79	20.95	.000*
Autonomous	-4.06	-1.97	.051*	-1.00	-.51	.611	33.85	13.79	.000*
Closed	-6.89	-2.50	.013*	-.89	-.34	.734	26.67	9.04	.000*
Paternal	-6.56	-2.38	.019*	-4.44	-1.70	.091*	34.11	11.56	.000*
Familial	-1.67	-.35	.727	-.67	-.15	.883	33.00	5.27	.000*

tion. Thirteen cells reported significant RMINUSC differences at the .10 level. Differences among causal groups reported that volunteers classified in the Stable causal group in the Controlled and Autonomous climates had significantly different role and coworker satisfaction scores. The Unstable and Low causal groups reported differences for the Open, Controlled, Autonomous, Closed, and Paternal climates while the High causal group reported RMINUSC differences in the Autonomous climate.

For coworker and supervision satisfaction differences, the greatest distinction was for volunteers classified as Stable in a Familiar climate (Coeff. = -16.50,  $p = .003$ ). For this cell, supervision satisfaction was significantly higher than coworker satisfaction. For the "Cause x Climate" interaction each causal group reported only one significant difference. A notable finding was that significant coworker and supervision satisfaction differences occurred for causal groups in Familiar and Paternal climates. That is, climates which were identified as not being conducive to personal efficacy and perceived satisfaction. The Unstable and High causal groups reported higher coworker satisfaction over supervision satisfaction in a Paternal climate. The Low and Stable causal groups reported significantly higher supervision satisfaction

in a Paternal and Familiar climate respectively (see Table 35).

For supervision and reward satisfaction differences, all cells reported significant differences (see Table 35). The absolute number of items for each satisfaction facet may have resulted in these differences. Supervision satisfaction was based on 18 items: thus, showing higher absolute satisfaction scores than reward satisfaction which was based on 9 items.

#### Summary

The profile analysis provided contrasts between the prioritized satisfaction dimensions. For the purpose of MANOVA, the interest was in the analysis of all dependent variables. The profile analysis enabled differences among the dependent variables to be examined in the context of significant interaction effects. The results of the profile analysis denoted significantly different satisfaction scores across the cells within the two "personality x situational" interactions. On the basis of the post hoc simultaneous criterion and classification analysis of the significant "Control x Climate" and "Cause x Climate" interactions,  $H_0$  was rejected and  $H_a$  was accepted at the .10 level of significance.

## DISCUSSION

The purpose of the preceding sections of this chapter was to present the findings of this research study in terms of the research hypotheses proposed in Chapter III. The empirical results presented were comprehensive, in illustrating the central purpose of the research study: the identification of a significant relationship between generalized personal attributions and specific organizational perceptions in terms of perceived satisfaction. Thus, the purpose of this section is to interpret and discuss the data in light of the proposed research questions and previous research.

## Generalized Personality Attributions

The general theory of causal attributions offers a plausible explanation under which volunteer satisfaction may be examined in an organizational setting. The attributional models of behaviour are based on a personality disposition characterized by the generalized tendency to attribute cause or control of outcomes to internal factors such as ability and effort or external factors such as task difficulty and luck (Heider, 1958; Rotter, 1966).

Following the work of Heider (1958) the results of this study were examined in terms of the perception of

causal attributional elements (viz., ability, effort task difficulty, and luck) and the effect of these attributions on perceptions concerning the outcome of satisfaction. The nature of the relationship among these causal attributional elements has been emphasized by Weiner et al.'s (1972) attributional model of achievement motivation. The model predicts that expectations may be explained by outcomes attributed to the four attributional elements. It is assumed that success and failure are primarily allocated to factors such as ability, effort, task difficulty, and luck. One aim of this research study was to determine whether the expectations of satisfaction of volunteers are related to causal attributions.

Kelley and Michela (1980) found that successful outcomes are attributed to ability and effort while unsuccessful outcomes have been attributed to task difficulty and luck. Baumgardner, Heppner, and Arkin (1986) in addressing the role of attribution in personal problem solving, found successful problem solving was perceived to be attributed to internal control, specifically due to effort. In terms of control and coping for volunteers it may be viewed that individuals volunteer (coping strategy) to make their life more satisfying. The present study did not find a significant regression effect for the four attribu-

tional elements on the outcome of volunteer satisfaction. The relative importance of the four causal factors in contributing to perceived satisfaction was examined by assessing the regression effect of the four attributional elements on each satisfaction facet. The analysis did not reveal a significant satisfaction and attributional interaction. Volunteers in this sample did not consider the causal factors of ability, effort, task difficulty, and luck to be responsible for satisfaction. These findings indicated that attributions made by volunteers about role, supervision, coworker, and reward satisfaction did not lend themselves to such a representation and means of solution.

What attributions did account for volunteer satisfaction? One plausibility, according to Weiner et al.'s (1972) model of achievement related behaviour, is that outcomes are allocated within three causal dimensions: locus of control, locus of causality, and controlability.

Theoretically and empirically the importance of internal personal control has been widely advocated. Studies have demonstrated the various virtues that are associated with an internal locus of control orientation. Ryan and Grolnick (1986) found that an internal locus of control was more prominent in children who perceived an autonomous classroom environment. Deci

(1975) has also emphasized the importance of autonomy and self-determination for the phenomena of intrinsic motivation. Liu and Steele (1986) found that the motive for making attributions is to affirm an efficacious self-image. Placing an emphasis on self-efficacy by illustrating the value of internal control, these studies reinforced the importance of ego-based, self-affirmation needs as motivators of attributional explanations of outcomes.

Contrary to these studies, the results of this present research study identified various causal attributions related to the outcome of volunteer satisfaction. In addition to extreme internal and external locus of control attributions, dual control attributions were observed. Wong and Sproule (1984) were particularly interested in middle range internal and external scores. Wong and Sproule (1984) identified "realistic" bilocals, who perceived self-efficacy in situations but also had accurate perceptions of the environment. Realistic bilocals endorse external alternatives but also perceive self-efficacy in situations. In this study the low bilocals perceived the degree of responsibility in terms of a realistic assessment of external alternatives in terms of achieving self-efficacy in a situation. These individuals may be identified as "cooperators who interact with the exter-



nal constraints to achieve realistic goals" (Wong & Sproule, 1984, p. 325).

High bilocals were also identified in this study. These individuals may be described in terms of what Wong and Sproule (1984) identified as "idealistic" bilocals. For these individuals external influences are not threatening to personal autonomy: they have an "unrealistic expectancy of success based on an overly optimistic view of external support" (Wong & Sproule, 1984, p. 344). Idealistic bilocals do their part towards achieving their desired outcome and at the same time expect external sources to provide what is needed to ensure the outcome.

Wong and Sproule (1984) discussed locus of control in terms of causal attributions. Locus of causality is the perceived knowledge of interpretation of the causes of outcomes (Weiner et. al. 1972). Kelley (1971) stated that "the purpose of causal analysis--is effective control" (p. 22). Consistent with Weiner et al. (1972) sources of causality were identified as either stable (ability, task difficulty) or unstable (effort, luck). In keeping with Wong and Sproule's "bilateral" explanations, this research study identified high and low causal groups. The high causal group perceived high stable and unstable attributional elements and the low causal group perceived low stable and unstable

attributional elements. Wong and Sproule (1984) theoretically examined the locus of control construct in terms of stable and unstable causes. Both stable and unstable causal attributions may have either an internal or external locus of control disposition.

Going beyond the locus of control--causality dimensions, Weiner (1979) identified a controlability dimension which he labelled perceived controlability-uncontrolability of an outcome. The attributional elements identified by the Trent Attribution Profile (TAP) (Wong & Sproule, 1984) have not previously been used to identify the factors related to the controlability dimension. For this present study, however, the attributional elements identified by the TAP were summed to identify the constructs related to the controlability dimension. It was assumed that "Factor X" occurred when volunteers perceived task difficulty and effort as reciprocal and "Factor Y" occurred when volunteers perceived ability and luck as reciprocal. High and low groups were also identified along with the two extreme controlability groups.

Consistent with previous theoretical and empirical research (viz., Weiner, et al. 1972; Wong & Sproule, 1984) ability, effort, task difficulty, and luck, as blocked covariates, identified three significant generalized attributions: locus of control, locus of

causality and controlability. A significant interaction effect (Control x Cause x Controlability) was related to the outcome of coworker and reward satisfaction. In addition to responsibility of an outcome (i.e., locus of control), the cause of an outcome and the controlability of outcome showed a significant relationship with coworker and reward satisfaction. These results confirm Liu and Steele's (1986) conclusion that the motive for making attributions about an outcome is not solely related to internal control.

The importance of the "Control x Cause x Controlability" interaction was more prominent for coworker and reward satisfaction. These findings suggest that locus of control (Internal, External, High Bilocal, Low Bilocal), locus of causality (Stable, Unstable, High, Low), and controlability (Factor X, Factor Y, High, Low) may most clearly differentiate satisfaction with the work group (coworkers) and work outcome (rewards). One implication of this finding is that attributions are important for assessing the circumstances and the state of volunteer satisfaction.

In terms of attributional research in organizational behaviour results have been contradictory. Previous research by Spector (1982) confirmed that individuals with an internal locus of control experience greater satisfaction. In contrast Norris and

Neibuhr (1984) found that the locus of control dimension did not have a significant regression effect in predicting Smith, Kendall, and Hulin's (1969) Job Descriptive Index (JDI) dimensions of satisfaction (pay, promotion, work, supervision, and coworker). The results of this study compare favourably with Norris and Neibuhr (1984) in that no significant regression effect for ability, effort, task difficulty, and luck was observed.

A significant interaction effect, "Control x Causality x Controlability" for coworker and reward satisfaction was found for a sample of volunteer sport administrators. In a similar fashion, Staw, Bell, and Clausen (1986) concluded that affective dispositions (e.g., general tendencies toward a positive or negative evaluation of stimuli) significantly predicted the satisfaction of individuals in their working environment. By using affective dispositions, Staw, Bell, and Clausen (1986) deemphasized the role of individual cognitive evaluations, which appears from the present research to be related to the outcome of satisfaction.

By examining three attributional dimensions in relation to volunteer satisfaction, it was argued that all combinations of generalized attributions represent a meaningful area of interest, reinforcing Kelley's (1971) proposal that all attributions are self-

confirming. The interaction of locus of control, locus of causality, and controlability had a significant relationship with coworker and reward satisfaction for volunteers. These findings underscore the importance of assessing combinations of attributional elements when concerned with the effect of personal attributions on dimensions of satisfaction.

In summary, contrary to previous research (viz., Kelley & Michela, 1980; Baumgardner, Heppner, & Arkin, 1986) the attributional elements did not contribute to perceived satisfaction. No significant differences were noted for any of the four volunteer satisfaction dimensions for the ability, effort, task difficulty, and luck variables. Coupled with Lui and Steele (1984) and Norris and Neibuhr (1982) parallel findings regarding the role of personal attributions for explaining outcomes, it appears that locus of control, locus of causality, and controlability may be a fruitful pathway for increasing knowledge on how satisfaction forms for volunteers. The results of this study confirmed the findings of previous research about the presence of generalized attributions in explaining outcomes and supported the hypothesis that there is a difference in the contribution to volunteer satisfaction among the perceived personality attributions.

Perceived Organizational Dimensions  
and Volunteer Satisfaction

The examination of organizational dimensions and volunteer satisfaction postulated whether perceived organizational climate showed characteristics which affected volunteer satisfaction. The findings related to this research problem stressed the importance of organizational characteristics and their relationship to emotional well-being. The alternate hypothesis of observed significant differences in the contribution to volunteer satisfaction among the organizational climate characteristics was supported by the identification of a significant discriminant function which was representative of coworker and supervision satisfaction. The importance of volunteer's perceptions of organizational characteristics appeared to be related to the variable of interest (viz., satisfaction). Esprit and thrust were the organizational dimensions that best discriminated the coworker/supervision satisfaction function. These two dimensions refer to individual judgement about trust, authenticity, and support in the organization in terms of policies, performance requirements, and pressure for role accomplishment.

The results of this study confirmed previous research that has emphasized the situational influence on job attitudes. Friedlander and Margules (1969) identified a significant relationship between satisfac-

tion with interpersonal relationships and opportunities for advancement. Pritchard and Karasick (1973) also identified a significant relationship between climate and job satisfaction in accordance with work group membership.

Recent research conducted by Hackman and Oldham (1980) has shown that satisfaction and motivation tend to be higher in jobs which offer opportunities for autonomy, responsibility, and intellectual challenge. According to job enrichment theory situations that contribute to worker satisfaction enhance the mood, and subsequently, organizational functioning. O'Brien (1982) found that job satisfaction was significantly predicted by the perceived job attributes of skill utilization, influence, variety, pressure, and interaction. The evidence reported from the present sample of volunteer sport administrators suggested a relationship between coworker and supervision satisfaction and perceived organizational esprit and thrust. Consistent with Hackman and Oldham (1980) and O'Brien (1982) an association between satisfaction and organizational attributes which emphasize social need fulfillment and role accomplishment was identified for the present sample of volunteer sport administrators.

The current findings may also be explained in terms of social-information processing, which is the

social construction of a specific environment. Salancik and Pfeffer (1977,1978) proposed that attitudes may be influenced by cognitive interpretations of the context and actions. Thus, information perceived as identifying an interesting experience may have a strong influence on job attitudes. Since perceptual measurements were used in this study, social information may have influenced the interpretation of perceived esprit and thrust in the organization.

In brief, the findings of this study suggested, in accordance with previous research, that perceived organizational dimensions (i.e., Esprit and Thrust) contributed to understanding satisfaction (i.e., coworker and supervision). Organizations that emphasize social need satisfaction and promote enjoyable role accomplishment may be described by an atmosphere where achievement has value for the group. Thus, the affective tone that may develop in the organization will promote satisfaction with salient members of the group (viz., coworkers and supervisor).

#### Volunteer Satisfaction and "Personality x Situational" Interactions

The third research question involved the analysis of the relationship between perceived personality attributions and perceived organizational climate. The present study failed to reject the null hypothesis of



no difference in the contributions between perceived personality and organizational climate. A heterogeneous regression effect of the four attributional elements (ability, effort, task difficulty, and luck) on each of the volunteer satisfaction facets for the six organizational climates (Open, Controlled, Autonomous, Closed, Paternal, and Familiar) was observed. Personal attributional elements were not uniform across organizational climates. Thus, the current inquiry confirmed the social systems argument proposed for understanding organizational functioning. This perspective was endorsed by psycho-social literature from the point of view of researchers interested in the relationship between the individual and the organization (e.g., Atkinson & Murray, 1982; Getzels et al. 1968; Loetscher, 1981). The failure to reject Hol further extended support for this area of research by demonstrating the influence of "personality x situational" interactions on satisfaction. The findings suggested that volunteers in Ontario provincial sport organizations were not equally satisfied with their volunteer situation. By examining the the sources of variance in volunteer perceptions of satisfaction it was postulated that personal attributions within organizational environments represent a meaningful area of interest. It was evidenced that there were dif-

ferences in the manner in which attributional elements affected perceptions of satisfaction within the six organizational climates. In short, "attributions" were unique for each volunteer.

The explanatory power of the variables used in this research compare favourably with job enrichment studies of Hackman and Oldham (1980). According to job enrichment theory the affect of organizational characteristics on employee reactions is often mediated by an individual characteristic labelled Growth Need Strength (GNS). Hackman and Oldham (1980) concluded that individuals with high GNS responded positively to job enriched activities and individuals with low GNS have adjustment problems with job enrichment activities. In conjunction with these individual differences, Hackman and Oldham (1980) defined "core" job task dimensions as skill variety, task identity, task significance, autonomy, and feedback. Individual differences were incorporated into the model by using GNS as the moderator of the degree to which changing a job's core dimensions would affect an individual's critical psychological states (experienced meaningfulness of work, experienced responsibility of outcomes of the work, and knowledge of the actual results of the work activities) and, thus, his/her personal and work outcomes (Hackman & Oldham, 1980). These core dimensions

have been treated as a homogeneous set of dimensions in terms of how people respond to varying levels of the dimensions as found in actual jobs.

In contrast to Hackman and Oldham (1980) this study identified considerable variance in response to organizational dimensions. A very complex relationship among organizational characteristics, generalized personality attributions, and volunteer satisfaction was endorsed. Situational differences interacted with personality differences in accounting for large portions of the criterion variance of volunteer satisfaction. The discussion that follows will examine the findings in light of the observed significant "personality x situational" interactions.

The fourth research question involved an analysis of the relationship between two dichotomous research orientations that were based on deductions from statistical inference. The empirical results provided strength for the argument that generalized personal attributions are linked to specific organizational perceptions, and together can be regarded as relating to the outcome of satisfaction.

How individuals respond to work or the determinants of job satisfaction has been a focus of organizational behaviour research. Given the importance of satisfaction to individual well-being and its cor-

relation with other outcomes (e.g. absenteeism and turnover) of concern to organizations this emphasis is understandable. There is a growing recognition that positive attitudes are important for motivation and optimal organizational functioning.

Caston and Briato (1985) tested a worker-to-job congruence model based upon the importance of intrinsic and extrinsic work place factors for individual respondents. They concluded that the importance placed on intrinsic or extrinsic characteristics affects the impact of these factors in determining job satisfaction. King, Murray, and Atkinson (1982) examined the impact of job attributes, biographic characteristics, and personality on job satisfaction. Results revealed that personality and job characteristics have strong independent and interactive associations with a multi-dimensional job satisfaction index. The results of this research supported these findings and provided additional support for an interactionist perspective for studying the relationship between individuals and their environments. By examining the component sources of variance in volunteers perceived satisfaction it was argued that "personality x situational" interactions represent a meaningful area of interest. In particular, the volunteer's perception of an Open or Controlled organizational climate appeared to relate to

satisfaction. In addition, findings confirmed the desire for self-efficacy in free choice activities. The "personality x situational" findings underscored the importance of assessing the functional significance of the organization for the individual when concerned with affective related variables.

The "personality x situational" hypothesis is a variant of a psycho-social argument for the relationship between individuals and their environments. From the pscho-social perspective, it is the significance or meaning of the environment to the individual that is the most important aspect of concern for the investigation of organizational outcomes. The influence of perceived organizational environment on outcomes is contingent on unique individual characteristics or conversely, the influence of individual characteristics on an outcome is contingent on unique characteristics of the environment. As a variant of this argument, the "personality x situational" hypothesis argues for the existence of moderating relations between psychological characteristics and sociological characteristics in the creation of outcomes in the work place. This research study has shown, that in the presence of generalized personality attributions, perceived organizational climate contributed to volunteer satisfaction and, that in the presence of organizational climate, generalized

personality attributions contributed to volunteer satisfaction.

All attributional groups in both "personality x situational" interactions the Controlled and Open climate groups reported the highest satisfaction levels and lowest when Paternal or Familiar climates were reported. In the presence of generalized attributions volunteer satisfaction decreased when organizations were characterized by socialization or mechanization features. This finding may be explained by what Ivancevich and Donnelly (1975) described as tall, medium, and flat organizations representing the steepness of an organizations structure. They found that salesmen in flat organizations perceived more satisfaction in terms of self-actualization and autonomy.

In this study, socialization was prominent in a Familiar climate and self-efficacy was secondary. In Paternal climates opportunities for self-efficacy and responsibility were hindered by restrictions, constraints, lack of trust, and excessive controls. In contrast, an Open climate did not hinder opportunities to be causal agents in the environment. This autonomy allows volunteers to experience personal control in their volunteer experience and gives them confidence in their ability to perform their volunteer role. Volunteers who perceived a Controlled climate also perceived

an atmosphere characterized by trust, authenticity, and support in addition to an organizational structure which clarifies procedures and enhances role accomplishment.

The results suggested that volunteers perceived their organizational climate in a way that "fits" with deCharms' (1968) theoretical assumption of "origin" versus "pawn" perceptions of efficacy. deCharms (1968) argued that in an "origin" climate the perceptions of autonomy and self-determination are emphasized. This cognitive approach to understanding behaviour concentrates on providing opportunities for self-efficacy. Thus, it is the process or voluntary action that is important for developing a positive affective response (viz., satisfaction).

Sales (1982) also found that personal interest and needs were the catalysts for involvement. The desire for personal development was the strongest motivator supported by altruism. This research study did not measure volunteer's reasons of involvement. Seligman (1975), however, stated that "joy accompanies and motivates effective responding..." (p. 98). An interpretation of this statement relative to volunteers is that voluntary action is a function of perceived and expected utility of the experience. Thus, a feeling of intrinsic motivation and satisfaction may be charac-

teristic of voluntary action.

An Assessment of the "Cause x Climate" Interaction  
and Volunteer Satisfaction

Locus of causality involves determining the cause of an outcome. Voluntary action being free choice behaviour, the challenges and choices that are sought must enable volunteer's to perceive him or herself as a causal agent in the organization. To have choice is to have autonomy. Thus, volunteers engage "...in behaviours that interest one and that one expects to be accompanied by spontaneous feelings of effectance" (Deci, 1985, p. 112). In terms of an attributional explanation it is assumed that individuals work within their internal and external environments to be effective. Voluntary behaviour is influenced by internal structures that are continually reinforced and refined to reflect ongoing experiences (Deci, 1985).

For the "Cause x Climate" interaction the only significant volunteer satisfaction dimension was role satisfaction. There were no significant differences found on the supervision, coworker, and reward satisfaction dimensions. This finding may be explained by Deci and Ryan's (1985) discussion of personal causation. Individuals are vulnerable to forces in the organizational environment. This vulnerability is a means of conditioning and identifying role functioning.



Deci and Ryan (1985) recognized that individuals, vulnerable to external forces, attempt to be causal agents in their environment. When people are self-determining, they make choices to become involved. Thus, the act of volunteering has a theoretical internal locus of causality where "people understanding the activity to be something they want to do for its own sake" (Deci & Ryan, 1985, p. 57). A central feature of self-determination is flexibility. By assessing the qualitative aspect of the role and considering the presence or absence of various situational controls, a volunteer can make inferences about the extent to which a behaviour or role will be self-determined. When situations allow one to perceive a sense of competence and self-efficacy, volunteers receive internal reinforcement in the form of perceived satisfaction.

In terms of generalized attributions of the cause of an outcome, role satisfaction was highest for volunteers in the Stable causal group in an Open organizational climate. In contrast to Heider (1954) who identified internal (ability and effort) versus external (task difficulty and luck) causes, Weiner et al. (1972) identified causal attributions that integrate internal and external elements in each of the Stable and Unstable dimensions. Personal determination is perceived when the internal elements overcome the

external barriers. For example, personal determination of a Stable cause may occur when ability is perceived to be more powerful than the task difficulty.

Role satisfaction was the highest when volunteers perceived ability and task difficulty causal elements in an Open organizational climate. These results compare with research by Ivancevich and Donnelly (1975) and Sales (1982) that identified opportunity for self-development, autonomy, and self-actualization as motivators and satisfiers of individuals in organizations. One implication of the results of this study is that the perception of an opportunity to test one's ability at a task or role generates a perception of an organizational climate that promotes confidence and self-determination.

Unique to this study, was the observation that the High causal group (high Unstable and Stable scores) did not report high role satisfaction in either a Controlled or Open organizational climate. The High causal group was more satisfied with their volunteer role in a Paternal climate and was least satisfied in an Autonomous climate. Wong and Sproule (1984) described "optimistic" bilocal attributions as a belief in internal control over outcomes and expectations of the appropriate external contributions for achieving a desired outcome. In terms of locus of causation, dual

belief is represented by the perception of Stable (ability and task difficulty) and Unstable (effort and luck) causes as determinants of an outcome.

The identification of high role satisfaction in a Paternal climate for the High causal group may also be explained in the context of coping ability. These volunteers perceived and desired Stable and Unstable causal dimensions. Unstable elements or the variability of a cause was not perceived as threatening. Rather these elements (effort and luck) were perceived as necessary for role satisfaction in a Paternal organizational climate. Role satisfaction in a Paternal climate may be the result of the flexibility of individuals in the High causal group to attribute outcomes to either stable or unstable causes. Such a disposition may be optimal in situations where excessive external constraints are imposed by the organization. In the presence of a Paternal climate, Unstable and Stable dimensions were necessary for role satisfaction to be optimal for this sample of volunteer sport administrators. Personal determination occurs when internal control overcomes external barriers to a preferred outcome (Deci & Ryan, 1985). Thus, the results of this study suggested that when effort is more powerful than luck, and ability is more powerful than task difficulty, Paternal organizational climates

may contribute to role satisfaction.

An Assessment of the "Control x Climate" Interaction  
and Volunteer Satisfaction

For the "Control x Climate" interaction the greatest difference occurred for coworker and supervision satisfaction. The interaction analysis indicated that regardless of locus of control (Internal, External, High Bilocal, Low Bilocal) coworker and supervision satisfaction were highest for the Controlled or Open organizational climate and lowest in the Closed, Paternal, or Familiar climates. The result is consistent with past research on the relative contribution of perceived organizational climate and other job attributes to perceived satisfaction. O'Brien (1982) found that job satisfaction was significantly predicted by the perceived job attributes of skill utilization, influence, variety, pressure, and interaction. Skill utilization was the strongest predictor of job satisfaction. The Open and Controlled organizational climates identified in this present study were also characteristic of the job attributes identified by O'Brien (1982). The results indicated that high Esprit was a characteristic of both Open and Controlled climates. Esprit reflects the affective tone of the organization characterized by social need satisfaction and role accomplishment.

A situational explanation of these multivariate findings limits the impact of personality dispositions. Simonds and Orife (1975), King, Murray, and Atkinson (1982), and Dean and Brass (1985) all concluded that both the situation and individual variables account for variation in perceptions. "In predicting or evaluating human behaviours one must consider the whole person and his entire environment" (Simonds & Orife, 1975, p. 612). The present research study sought to determine the influences of organizational climate and personal dispositions on the perception of volunteer satisfaction. More precisely differences in "personality x situational" interactions on dimensions of volunteer satisfaction were based on generalized attributions of locus of control and organizational climate.

The findings of this research study indicated that, in the presence of organizational climate, locus of control related to perceived volunteer satisfaction. Coworker satisfaction was highest for the High Bilocal control group in a Controlled organizational climate. These findings may be explained by what Wong and Sproule (1984) identified as a dual dimensional approach to coping. Wong and Sproule (1984) were particularly interested in "Bilocals" or individuals who perceived personal efficacy (internal control) in situations but also had accurate perceptions of en-

environmental influences (external control). There are two basic coping strategies: emotional focused coping (personal adaptation to the situation) and problem focused coping (instrumental attempts to change the situation) (Wong & Sproule, 1984). Attempts to control the environment or self are coping processes that may or may not be effective. Locus of control deals with perceived self-efficacy and external influences which are both related to the coping strategies.

The High Bilocal control group, characterized by a belief in shared internal and external responsibility for an outcome, reported the highest coworker satisfaction. As Wong and Sproule (1984) contended, "Bilocals" are not threatened by external influences. Thus, these results would be anticipated if volunteers attributed coworker satisfaction to Internal and External factors. From a social systems view of organizational behaviour (e.g., Getzels et al., 1968; Katz & Kahn, 1978) High Bilocals coexist in the Controlled organizational climate to achieve organizational goals and personal autonomy is developed according to the individual's role in achieving certain goals in the social system. Bilocals assume responsibility of working productively within constraints by altering what they can and accepting what they cannot (Wong & Sproule, 1984). Such an explanation is synonymous with the social system's

view of organizational behaviour in which exercising autonomy is balanced by accepting certain forms of external control.

In support of this research study's findings, Wong and Sproule (1984) hypothesized that Bilocals would be better liked by coworkers since friendship is voluntary interdependence requiring cooperation, dependence, trust, and sharing. Bilocals do not consider help from coworkers to be degrading. They are better problem-solvers, and are more adaptive. "Given that most of life's situations are subject to internal and external control, belief in shared control is clearly more realistic" (Wong & Sproule, 1984, p. 332). Organizations are complex, therefore, interdependencies and shared control are important for organizations that emphasize trust, cooperation, accomodation, and maintenance of harmony.

A bilocal disposition in complex circumstances was supported by Rothbaum, Weisz, and Snyder (1982) who found that perceived and desired internal control decreased with perceived or desired complexity. Since individuals willingly join volunteer organizations and submit to formalization for personal gain, external control that restricts freedom may be favourable if it actually helps the individual achieve desirable goals. In a Controlled organizational climate external stan-

standardization and formalization may be favourable if they are perceived as enhancing coworker satisfaction. This may be true since the Controlled climate was also characterized by social and role satisfaction or Esprit. In brief, the High Bilocal control disposition permitted a thorough analysis of "personality x situational" interaction in terms of a social system perspective with respect to coworker satisfaction.

The analysis of supervision satisfaction, for the "Control x Climate" interaction, reported the highest satisfaction for an Internal locus of control disposition in an Open organizational climate. This result is supported by previous research that has stressed and demonstrated the importance of an internal locus of control orientation (e.g., Baumgardner, Heppner, & Arkin, 1986; Deci & Ryan 1985; Kelley & Michela, 1980; Ryan & Grolnick, 1986). In the context of organizational research King, Murray, and Atkinson (1982) found that individuals with an internal locus of control reported greater satisfaction with their jobs. They also reported that more variance in job satisfaction was accounted for when job characteristics (e.g., situational variables) were also considered. Sherman and Smith (1984) hypothesized that the structural characteristics of the organization itself may have a strong impact on levels of intrinsic motivation if the



organization approaches the mechanistic end of the structural continuum. Their study concluded that as structure became mechanistic, intrinsic motivation and thus, personal determination (i.e., internal control), declined. Centralization, hierarchy, standardization, formalization, and size reduced intrinsic motivation while integration had a positive influence on intrinsic motivation. The results of the present research study support Sherman and Smith's (1984) hypothesis and results. Perceived self-efficacy in terms of responsibility of an outcome was more significant for supervision satisfaction than external influences or simultaneous internal and external influences (e.g., Bilocal).

Internals desire control over their environment and they perceive external elements as barriers to personal efficacy. Individuals who desire self-determination find it difficult to take orders, subsequently, they become dissatisfied in subservient or dependent situations (e.g., Closed organizational climate) (Wong & Sproule, 1984). This study found that Internal volunteers perceiving an Open organizational climate reported the highest supervision satisfaction. Although organizations impose limits, goals, and procedures, the required subordination and cooperation were not observed as threats in the perceived Open climate.

Consequently, supervision was not threatening to self-efficacy. In addition this research study also found that for Internals in a Paternal climate, supervision satisfaction was lowest. In corroboration with previous empirical and theoretical research this study confirmed the significance of the situation for an internal locus of control. The importance of an internal locus of control was emphasized in an Open climate where personal autonomy, individual decision-making, and personal responsibility as emphasized. The importance of an Open climate for an Internal locus of control parallels deCharms' (1968) conceptualization of an "origin climate" where autonomy and acceptance are afforded within the context of a firm consistent structure.

For all locus of control groups, joining an organization is a form of external aid to enhance autonomy. Voluntary action demands relinquishing certain freedoms. Organizations may dictate the terms that must be fulfilled. Regardless of whether external aid is blatantly restrictive and oppressive, or facilitative, it is the perception of external elements that influences the belief in positive or negative external aid (Wong & Sproule, 1984).

In summary, factors that may undermine the choice to volunteer (e.g., organizational climate) must be

carefully considered in an analysis of behaviour characterized by free choice. In the interest of increasing voluntary activity in the context of a sport organization, it is important that the individual perceives an Open organizational climate. In the presence of greater decentralization and cooperative decision-making an Internal locus of control disposition should relate to supervision satisfaction in voluntary sport organizations.

#### Volunteer Satisfaction in Amateur Sport Organizations

This study found that generalized personality attributions of locus of control and locus of causality interacted with perceived organizational climate to relate to volunteer satisfaction. Perceptions of the organization were meaningfully related to a volunteer's perception of satisfaction. Furthermore, these relationships remained even after individual differences in generalized personal attributions were controlled. The results suggested that volunteer organizations that are conducive to self-efficacy will promote satisfaction regardless of generalized personal dispositions. In an attempt to extend the knowledge about volunteers and how to effectively and efficiently manage these individuals, the following discussion applies organizational behaviour constructs to the

study of volunteer attitude formation.

Research on volunteers has tended to concentrate on recruitment procedures and personal characteristics restricted to demographics (e.g., Ministry of Supply and Services, Canada, 1977; Pearce, 1980; Slack, 1979; Smith & Tannenbaum, 1963). Recent research (e.g., Dailey, 1986; Pearce, 1983; Sales, 1982) on volunteer organizations has emphasized the importance of personality and situational characteristics for understanding volunteer satisfaction and motivation. Endorsed by Dailey's (1986) findings regarding the role of job characteristics, and Sales' (1982) and Pearce's (1983) research on the role of personal characteristics for explaining volunteer behaviour, this study argued for a research approach to volunteerism that emphasizes personality and situational variables. A psycho-social perspective may increase knowledge of volunteerism beyond the analysis of the decision to volunteer to include factors that drive volunteer activity well after the decision to volunteer and donate time, energy, and expertise has been made. The importance of situational characteristics and personality dispositions in terms of volunteer satisfaction should not be underestimated in human service organizations, even though it is not costly for dissatisfied volunteers to quit. The results of this study provided evidence that

the experience of autonomy is a significant contributor to satisfaction and a measurable target for volunteer organizations.

## CHAPTER VI

### CONCLUSIONS AND RECOMMENDATIONS

In the first five chapters of this study volunteer satisfaction as illustrated by volunteers in provincial sport organizations in Ontario was studied. An average picture of the volunteer sample was constructed using selected demographic, personality, and organizational data. The purposes of this final chapter are to summarize this study, to assess the theoretical and practical applications for the development of volunteer organizations, and to provide recommendations for further research.

#### Summary

The findings of this exploratory study suggested that volunteers in Ontario provincial sport organizations are not equally satisfied with their volunteer situations. In addition the observed differences were not uniform for all dimensions of volunteer satisfaction. The differences were related to perceived organizational climate and generalized personal attributions. In Chapter V the results and discussion sections explained the findings in light of the proposed hypotheses and previous research in the area of be-

haviour and organizational functioning.

The results of this study were discussed in terms of extending knowledge in the area of organizational behaviour research by demonstrating the influence of "personality x situational" interactions on volunteer satisfaction. These findings reinforced recent research that has emphasized a psycho-social approach in explaining outcomes. According to Wong and Sproule (1984) these results can be interpreted based on the process whereby generalized attributions influence specific perceptions which then result in an outcome of perceived satisfaction. In terms of organizational climate, as the organization approached socializing and mechanistic characteristics a decrease in perceptions of satisfaction resulted. This may be explained by what Hackman and Oldham (1980) described as reduced autonomy, freedom, and increased formalization.

The highest satisfaction was reported by volunteers in an Open organizational climate followed in descending order by the Controlled, Autonomous, Closed, Paternal, and Familiar climates. This finding was different from the order of desirability identified by Halpin and Croft (1963). In their identification of six organizational climates they hypothesized the following order for optimal organizational functioning: Open, Autonomous, Controlled, Familiar, Paternal, and

Closed. The main difference between this study and Halpin and Croft (1963) occurred between the Closed and Familiar climates. The significance of the contribution of the Closed organizational climate to volunteer satisfaction was greater than a Familiar climate. In contrast, Halpin (1966) stated "the Closed climate marks a situation in which group members obtain little satisfaction in respect to either task-achievement or social needs" (p. 180). The low priority of the Familiar climate in this research study supported the findings by Sales (1982) who concluded that socialization or intimacy was not a motivator for individuals who volunteer to judge for the Canadian Figure Skating Association.

A potential implication of these findings is if a perceived Familiar climate is related to low satisfaction, this may require a need for increased controls, formalization, and centralization. Thus, a Familiar climate may breed a Paternal climate because of low satisfaction. In this study, however, a Paternal climate did not relate to high satisfaction scores. Volunteers classified in a Paternal climate may have perceived excessive constraints. The findings of this study isolated two preferred organizational climates (Open or Controlled) for optimal individual-organizational fit. Satisfaction in an Open climate



compared to a Familiar climate includes task and social need satisfaction in an autonomous environment, while Familiar climates are characterized by high socialization and disengagement from goal accomplishment. Highly satisfied volunteers in a Controlled climate perceived an organization with standardized procedures and formalization that facilitated the accomplishment of desired outcomes rather than hindering them as in the case of a perceived Paternal climate. These comparisons isolated the importance of perceptions of individuals in organizations when examining organizational functioning.

Perhaps the most important implication of the findings of this study is that the functioning of voluntary organizations depends on the fit between the organization and the individual. Any factor that might undermine the individual-organizational fit must be carefully considered. In an attempt to increase voluntary action, in the context of volunteer sport organizations, there may be trade-offs between organizational goals and designing situations to provide volunteer satisfaction. Since human behaviour is based in part on models of satisfaction (see Figure 1) the characteristics of a Controlled organizational climate, greater decentralization of authority and decision making, with formalized and standardized procedures,

should positively affect volunteer satisfaction.

### Conclusions

This study provided support for the view that "personality x situational" interactions occupy an intervening role in organizational functioning, where the point of intervention is between the individual and the situation and where individual and organizational dispositions influence individual perceptions of desired outcomes. The results of this study indicated that the variables used to study volunteer satisfaction were associated with generalized personality attributions and perceived organizational climate. Thus, the research demonstrated that major psycho-social constructs used to study behaviour and organizational characteristics also functioned in a similar fashion relative to volunteers in sport organizations. This study supported the conceptual model of satisfaction (see Figure 2) which was built around a psycho-social approach to organizational functioning. The following conclusions were made relative to the specific research objective of Chapters IV and V:

1. The objective of Chapter IV was to compare the resultant climate factors with Halpin and Croft's (1963) original construction of the Organizational

In comparing the relationship between Halpin and Croft's (1963) organizational climates and those identified in this study, correspondence was limited to the labelling of the eight organizational dimensions and six organizational climates. Adapted and modified questions from Halpin and Croft's (1963) OCDQ items were used in this research study to assess the organizational climate of 23 volunteer sport organizations in Ontario. Based on factor analysis, cluster analysis, and principal component analysis, similarities and differences between the results of this study and those of Halpin and Croft (1963) were identified.

This study confirmed Halpin and Croft's (1963) eight dimensions and six climates for the volunteer sample. Very little correspondence was found, however, between the original a priori scales and those derived in the present study. An item analysis revealed marginal overlap between a priori and derived dimensions. An analysis of a three factor principal components varimax rotational solution, showed that three factors did compare favourably with Halpin and Croft's (1963) description of the underlying dimensions of the original OCDQ dimensions. The major discrepancy was the "Social Control" factor for the volunteer sample

was not identified as leader behaviour. The major components of Halpin and Croft's teacher and principal sample were individual, group, and leader behaviour. Knowing that factors and clusters of items are situationally specific, the volunteer situation seemed to depict an atmosphere that facilitated cooperative rather than directive control. The president is a volunteer first and a supervisor second. Volunteers did not perceive supervision emanating from one group member. The president's role is to facilitate the group process when the need arises. The president of a volunteer organization can empathize with the "volunteer role" because he/she operates under the same conditions. Thus, communality of factors based on outward appearances or labels may be misleading. The item clusters identified by Halpin and Croft (1963) and hypothesized for this study were not identified in the analysis of the 32 adapted and modified OCDQ items. Thus, it was concluded that the meaningfulness of organizational characteristics are situational in nature.

Compared to Halpin and Croft's (1963) sample of teachers and principals, volunteers interpreted the organizational questions differently. Only the hindrance dimension was identical between volunteers in this study and Halpin and Croft's sample. Hindrance

refers to feelings about routine duties, committee demands, and other requirements that obstruct rather than facilitate roles or duties. For the teachers in Halpin and Croft's study, hindrance referred to burdens placed on teachers by the principal, whereas for the volunteer sport administrators in this study, hindrance was not a result of behaviour, rather it was the result of administrative burdens. In both Halpin and Croft's (1963) study and this present study, hindrance relates to perception of whether individuals are enjoying a sense of accomplishment in their role in the organization. Thus, a time frame of over twenty years has not altered the importance of excessive structure in preventing autonomous modes of behaviour and creating a loss of morale, cooperation, and loyalty within the organization.

Discriminant analysis was computed to further test the ability of the derived dimensions (Esprit, Aloofness, Thrust, Production Emphasis, Consideration, Hindrance, Intimacy, and Disengagement) to discriminate among the six organizational climates (Open, Controlled, Autonomous, Closed, Paternal, and Familiar). It was concluded that the derived dimensions correctly classified 81.74% of the N=269 cases included in the discriminant analysis. Thus, the 32 modified OCDQ items did not significantly reduce the sampling ade-

quacy and the degree of factorial determination of the eight organizational dimensions. The derived dimensions were satisfactory predictors for classifying volunteers into an appropriate perceived organizational climate. It was concluded that the eight dimensions had acceptable construct validity for each organizational climate.

Further, it was concluded that the organizational dimensions identified the Open climate with a 57.7% accuracy, the Autonomous climate with a 87.2% accuracy, the Closed climate with a 79.6% accuracy, the Paternal climate with a 60.9% accuracy, and the Familiar climate with an 80% accuracy. Of specific interest to this study was the finding that 91 of the 241 cases in the discriminant analysis perceived a Controlled organizational climate and 84 or 92.3% of this group were correctly classified.

2. The objective of Chapter V was to assess the satisfaction of volunteers in 23 sport organizations in the province of Ontario. The analysis involved generalized personality attributions, organizational climate, and volunteer satisfaction measures.

To determine whether significant differences among two or more groups on perceived volunteer satisfaction existed or not, MANOVA and discriminant analysis statistical techniques were utilized. The results indicated that individuals grouped on the basis of

generalized attributions and perceived organizational climate showed significant differences in their perception of volunteer satisfaction.

In terms of a personality disposition explanation of volunteer satisfaction, the ability, effort, task difficulty, and luck attribution covariates did not contribute to explaining the four dimensions (volunteer role, supervision, coworker, and reward) of satisfaction. Empirical support for an attributional analysis of outcomes was obtained when the covariates were grouped according to dimensions identified in the literature: locus of control (Internal, External, High Bilocal, Low Bilocal), locus of causality (Stable, Unstable, High, Low), and controlability (Factor X, Factor Y, High, Low). It was concluded that generalized personality attributions related to volunteer role satisfaction, supervision satisfaction, coworker satisfaction, and reward satisfaction for the sample (N=279) of volunteer sport administrators. As a result of an analysis of the eight organizational dimensions it was concluded that Esprit and Thrust were the only dimensions that had a significant regression effect on a satisfaction function described by supervision and coworker satisfaction. The perception of organizational atmosphere and structure had significant relationships with the volunteer's sense of satisfac-

tion with other members of the organization. When the organization supports and respects volunteers, autonomous functioning and self-efficacy will flourish. Volunteers will feel more confident and competent in an organization when they perceive themselves as being supported for determining their own outcomes.

The Volunteer Sport Administrator Experience Questionnaire (VSAEQ) (see Appendix A) was constructed to identify significant "personality x situational" interactions for each of the four volunteer satisfaction dimensions. Based on MANCOVA, it was concluded that generalized personality attributions were likely to interact with perceived organizational climate to relate to volunteer satisfaction. Analysis of the homogeneity of regression for the attributional covariates (ability, effort, task difficulty, and luck), indicated that the regression effect could not be controlled because it was not homogeneous across all six organizational climates (Open, Controlled, Autonomous, Closed, Paternal, and Familiar). Based on this finding it was assumed that a "personality x situational" interaction was appropriate for the analysis of volunteer satisfaction.

Two significant MANOVA's supported the conclusion that volunteers evidenced links between perceptions of organizational climate, generalized personal attribu-



tions, and dimensions of satisfaction. Two separate personality dispositions, locus of control and locus of causality, interacted with perceived organizational climate to relate to the outcome of volunteer satisfaction. The "locus of causation x organizational climate" interaction was significant for volunteer role satisfaction. For the "locus of control x organizational climate" interaction, significant differences occurred for coworker and supervision satisfaction.

In reference to specific causal dimensions and organizational climate interactions it was concluded that volunteers in the "Stable x Open" cell reported the highest role satisfaction. This indicated that attributing the cause of an outcome (viz., volunteer role satisfaction) to ability and task difficulty provided the opportunity for self-determination (i.e., developing self-efficacy) when an Open organizational climate was perceived. For the locus of control dimensions it was concluded that High Bilocals in a Controlled organizational climate reported the highest coworker satisfaction, and Internals who perceived an Open climate reported the highest supervision satisfaction. A flexible locus of control, characterized by valued internal and external elements, related to coworker satisfaction when procedural guidelines, standardization, and formality enhanced goal ac-

complishment. Personal responsibility for an outcome related to supervision satisfaction when there was a perceived opportunity to experience personal control over outcomes. For volunteers the Open and Controlled organizational climates enabled personal and organizational goal attainment in an autonomous situation. These climates enable volunteers to be active, responsible, and instrumental in the functioning of the organization. In general, it was concluded that regardless of generalized personal attributions personal responsibility and effectance is important for volunteer satisfaction.

#### Recommendations

The assessment of the research objectives and hypotheses of this research study has offered potential areas of investigation for future research. The following recommendations relate to future research obligations involving theoretical and practical concerns in the area of organizational behaviour, and in particular volunteer sport organizations.

#### Theoretical Concerns

This study has shown that generalized personality attributions and organizational climate relate to volunteer satisfaction attitudes. The concept of

satisfaction in connection with a "personality x situational" interaction provided an excellent basis for integrating traditional micro and macro areas of organizational studies. In terms of organizational behaviour theory, knowledge about satisfaction of individuals in organizations may be enhanced if the background and development of the individual and situation is known. Studies focusing on either personality or situational variables should perhaps use an interactive approach. In evaluating the implications of this research study, one should keep in mind that there are several potential levels of future investigation.

This study assumed a theoretical correspondence between individual and organizational dispositions, and attitudinal or behavioural antecedents. The present study did not, however, examine the exact derivation of individual attributions and organizational characteristics, or the mechanisms by which they can affect attitudes. It was assumed that personality and situational characteristics interact to influence the way individuals perceive satisfaction dimensions. There was no data on the cognitive processes and objective measures for the volunteer sport administrator sample (N=279). These questions warrant further research.

Future studies may build a convincing interactive argument to show causal direction about the interaction

between personality and situational variables. Prospective studies on volunteer organizations should derive hypotheses which included multiple personality and situational classification measures such as measures of ability and values, subjective and objective measures of organizational structure, and multiple behavioural measures.

The argument that satisfaction is related to different personality and organizational factors suggested a revision in the conceptual model of satisfaction (see Figure 2). A possibility is that locus of causality and locus of control are two separate or independent generalized attribution dimensions. Another possibility is that they are interactive. This research identified an interaction between locus of control and locus of causality in the absence of perceived organizational climate, however, in the presence of organizational climate locus of causality and locus of control did not interact to relate to satisfaction. Additional research is needed to sort out whether such sources of variability are better explanations of outcomes than simple main effect models.

Although the results of this study might be interpreted as encouraging for researchers and practitioners interested in the measurement of volunteer satisfaction, further investigation of "personality x situa-

tional" interactions is needed. Several limitations concerning the present study should be remedied in future research. Foremost is the fact that the cross-sectional, nonexperimental design of the study did not demonstrate causality between the independent and dependent variables. Causal relationships between volunteer perceptions of generalized personal attributions, organizational climate, and satisfaction can only be inferred. Thus, studies, which explore a causal examination are needed.

It is difficult to ignore that there may be a reciprocal relationship between satisfaction and "personality x situational" interactions. Generalized personal attributions and organizational climate may affect and be affected by perceived satisfaction. Causal direction is difficult to assess and study. These and related questions should be ideal for a merging of the psychological and sociological tradition of organizational behaviour. Additional research should test the "personality x situational" hypothesis with varied samples of volunteers and settings. Future studies should also simultaneously examine volunteers who have dropped out of an organization and those who remain. Conceivably, volunteers who drop out of volunteer organizations may: (a) have perceived the organizational climate as hindering, (b) have a per-

sonality disposition that is not congruent with the organization, or (c) have personality and situational concerns that impede volunteer satisfaction.

### Practical Concerns

In terms of practical issues, the most obvious implication of the results concerned the finding that satisfaction is related to personality and situational characteristics. This finding implies that it may be extremely difficult to increase satisfaction. Situational redesign efforts may fail, since they do not consider individual dispositions. Satisfaction is a positive affective response to a stimulus that is influenced by an individual's past experiences and present expectations (Loetscher, 1981). The complexity of this response may be explained by considering the importance of providing opportunities for self-determination and demonstrating ability. Through better or more extensive measurement of individual dispositions, organizational roles could be tailored to individual characteristics.

An individual-organizational fit is necessary but not sufficient for optimal organizational functioning. Organizations should concentrate on more than sustaining volunteer membership; they should also enhance the volunteer experience. Since voluntary action is free

choice behaviour it is characterized by intrinsic motivation. Thus, volunteer organizations may be more affected by the psychological features of the organizational environment. Volunteers who perceive little opportunity to initiate behaviours, set their own goals, and act autonomously will not receive internal reinforcement (viz., satisfaction). When treated as "pawns" in a highly internal rewarding system, there is no personal justification to remain in the organization (deCharms, 1968; Deci & Ryan, 1985). Volunteers may be more sensitive to dimensions of satisfaction (e.g., role, supervision, coworker, and rewards). Organizations that emphasize outcomes without considering the volunteer experience may be effective in achieving immediate organizational goals but inefficient in failing to meet individual needs. Optimal organizational functioning depends on achieving personal needs and cooperative goals (Bernard, 1964). For intrinsically motivated persons it is the action (i.e., process) not the outcome that is satisfying.

Voluntary behaviour is certainly of interest for sport organizations, since volunteers are fundamental to service organizations. The successful functioning of volunteer organizations will be enhanced if organizations capitalize on the fact that people volunteer for more than altruistic reasons. Situations that

provide the opportunity for personal development should not have problems in recruiting, maintaining, and enhancing individual cooperation in the interest of organizational accomplishment (Dailey, 1986; Sales, 1982).

Implicit in voluntary action is the freedom of choice and control within the constraints of norms and guides of an organization. In an organization, satisfaction is influenced by the accomplishment of cooperative purposes. The persistence of cooperation depends upon the relationship between values and behaviour. Volunteer organizations often require a variety of individuals to serve multiple roles, thus, it may be important to search for the proper mix of personalities in the organization. These are the kind of questions that are raised as one probes the role of personality and situational dispositions in organizational behaviour.

Voluntary action is a function of personal and social significance of the activity. Organizations must realize that volunteering is an act of social interest and that the decision to volunteer is based on the assessment of the goals and values of the organization. Maintaining volunteer interest is an ongoing process where the individual understands the focus of the organization and personal responsibilities to the



program, and whereby the organization fulfills its responsibilities to the individual.

One clear practical implication from the current findings is that organizations that are valued because of their altruistic goals (i.e., providing a social service) may fail to provide individual fulfillment (i.e., developing human resources) for its organizational members. Volunteer organizations demand continuous care for optimal organizational functioning. Efforts of the organization must include seeing that volunteers achieve personal goals through voluntary activity. Volunteer perceptions of their organizational climate are important for both personal satisfaction and organizational functioning. Voluntary organizations are contingent on the decision of individuals to join, stay, or leave. Thus, the opportunity for self-determination, autonomy, and acceptance must be afforded within the context of the organization.

#### Implications for Volunteer Sport Organizations

Individuals in the field of physical and health education, sport, and recreation must assist organizations by conveying the implications of empirical and theoretical research to practitioners. The human resources are available but it is up to the field to

convey this responsibility to the individuals with knowledge and ability.

Sport and recreation services are helping professions which are struggling for legitimation in the area of social services. The dependence on public funds to adequately supply the demand has increased the accountability of social services in monetary terms. In all social service organizations, in particular sport organizations, there are insufficient financial resources to employ professional staff from the grass root programs to the national programs. The logical alternative is volunteerism.

An objective of sport organizations must be to minimize the potential conflict for volunteer members. Volunteer satisfaction is characteristic of an organizational framework that provides privileges and obligations congruent with the expectations and goals of the individual and the organization. The major role of voluntary sport organizations is the delivery of services while providing a situation where communication and assistance enables the awareness of personality and situational influences on volunteer satisfaction.

While volunteer sport organizations should continue to try and attract volunteers they must also focus attention on why individuals volunteer. Empiri-

cal results favoured the importance of generalized personal attributions and organizational climate characteristics in relation to volunteer satisfaction. The initial decision to volunteer may result from the individual's belief in and identification with organizational goals. Thus, recruitment of volunteers may be based on the connection between personal and organizational beliefs. It is possible that satisfaction results from organizational perceptions; however, satisfaction may be much more affected by the psychologically proximate features of the individual and organization. Thus, maintenance and enhancement of volunteers may be much more sensitive to organizational dimensions that are meaningfully related to internal reinforcements from the belief that one can control or produce a desired outcome. The opportunity for self-efficacy may enhance the intensity and persistence of volunteers, thus, achieving cooperative organizational purposes (effectiveness) and developing human resources (efficiency). The organizational elements of recruitment, maintenance, and enhancement of volunteers may be different. Empirical verification on this possibility would be a useful addition to the literature on managing volunteer organizations.

APPENDICES

General Information Form

Please check one item per question.

1. Gender: Male \_\_\_\_\_ Female \_\_\_\_\_

2. Age: Less than 20 \_\_\_\_\_  
 20-24 \_\_\_\_\_  
 25-29 \_\_\_\_\_  
 30-34 \_\_\_\_\_  
 35-39 \_\_\_\_\_  
 40-44 \_\_\_\_\_  
 45-49 \_\_\_\_\_  
 50-54 \_\_\_\_\_  
 55-59 \_\_\_\_\_  
 60-64 \_\_\_\_\_  
 65 and over \_\_\_\_\_

3. Marital Status: Never Married \_\_\_\_\_  
 Married \_\_\_\_\_  
 Widowed \_\_\_\_\_  
 Divorced/Separated \_\_\_\_\_

4. Highest level of formal education completed.

Elementary School \_\_\_\_\_

Some High School \_\_\_\_\_

Completed High School \_\_\_\_\_

Some post secondary education \_\_\_\_\_  
 (trade, business, college, university)

Completed post secondary education \_\_\_\_\_  
 (diploma/degree)

5. What is the sport association with which you are a volunteer-executive member? \_\_\_\_\_

6. How long have you been involved with the sport? \_\_\_\_\_ years.

7. What is your volunteer executive position with the sport?

President \_\_\_\_\_

Vice President \_\_\_\_\_

Secretary \_\_\_\_\_

Secretary/Treasurer \_\_\_\_\_

Treasurer \_\_\_\_\_

Director \_\_\_\_\_

Other (please explain) \_\_\_\_\_

8. How long have you been involved with the provincial association?  
 \_\_\_\_\_ years.

9. How long have you held your current position with your provincial  
 sport association? \_\_\_\_\_ yrs.

\_\_\_\_\_ months

**VOLUNTEER SPORT ADMINISTRATOR EXPERIENCE  
QUESTIONNAIRE**

This section of the questionnaire is to obtain information regarding general individual experiences.

**INSTRUCTIONS:** For each of the following statements please rate the importance of each of the four reasons according to your judgement.

Please circle the appropriate letter, using any letter only once per statement.

- Note that: A means extremely or most important  
 B means very important  
 C means fairly important  
 D means a little bit or slightly important  
 E means not at all important

For example, consider the following statement:

		<u>Importance Scale</u>				
		Most	Very	Fairly	Slightly	Not At All
One's height is the result of:						
Nutrition		A	ⓑ	C	D	E
Exercise		A	B	C	ⓓ	E
Parent's Height		ⓐ	B	C	D	E
Climate		A	B	C	D	ⓔ

Thus, if you believe that parent's height is "most important" you would circle A; If you believe nutrition is "very important" you would circle B; If you believe exercise is "slightly important" you would circle D; and if you believe climate is "not at all important" you would circle E.

		<u>Importance Scale</u>				
		Most	Very	Fairly	Slightly	Not at All
1. Most scientific inventions are the result of:						
a) Chance happenings		A	B	C	D	E
b) The inventor's intelligence		A	B	C	D	E
c) Easy, routine scientific work		A	B	C	D	E
d) Much time and effort by the inventor		A	B	C	D	E

	<u>Importance Scale</u>				
	Most	Very	Fairly	Slightly	Not at All
2. My good marks in school were due to:					
a) Easy marking by the teacher	A	B	C	D	E
b) Hard work on my part	A	B	C	D	E
c) Good luck	A	B	C	D	E
d) My academic skills	A	B	C	D	E
3. When a person is popular, it is because:					
a) Of lucky breaks	A	B	C	D	E
b) He or she tried hard	A	B	C	D	E
c) Of their social skills	A	B	C	D	E
d) It's easy to be popular	A	B	C	D	E
4. When I did not do well in a class in school, it was because:					
a) I didn't try hard enough	A	B	C	D	E
b) The teacher was very demanding	A	B	C	D	E
c) Of my lack of skills in that subject area	A	B	C	D	E
d) Of unlucky breaks	A	B	C	D	E
5. If my financial situation were to get worse, it would probably be due to:					
a) Difficult circumstances	A	B	C	D	E
b) My poor judgement	A	B	C	D	E
c) Unlucky breaks	A	B	C	D	E
d) My lack of effort	A	B	C	D	E
6. When people fail school, it is because of:					
a) Lack of academic skills	A	B	C	D	E
b) Bad breaks	A	B	C	D	E
c) Lack of effort	A	B	C	D	E
d) Harsh judgement by the teacher	A	B	C	D	E
7. Most wealthy people are rich because:					
a) Of their skill at making money	A	B	C	D	E
b) They worked very hard	A	B	C	D	E
c) Of lucky breaks	A	B	C	D	E
d) It's easy to make money	A	B	C	D	E
8. When I have a good time at a party, it is because:					
a) It was a good party	A	B	C	D	E
b) I'm a good mixer	A	B	C	D	E
c) It was a lucky day	A	B	C	D	E
d) I make an effort to have fun	A	B	C	D	E

Importance Scale

Most    Very    Fairly    Slightly    Not at  
All

- |  |   |   |   |   |   |
|--|---|---|---|---|---|
| 9. My future financial successes will be because:            |   |   |   |   |   |
| a) Of hard work on my part                                   | A | B | C | D | E |
| b) Of lucky breaks   | A | B | C | D | E |
| c) Of my skill to make money                                 | A | B | C | D | E |
| d) It's not hard to make money                               | A | B | C | D | E |
| 10. When people dislike me, it is usually because:           |   |   |   |   |   |
| a) I don't try hard enough to be friendly                    | A | B | C | D | E |
| b) Luck isn't on my side                                     | A | B | C | D | E |
| c) It's hard to be liked by everyone                         | A | B | C | D | E |
| d) I lack the social skills                                  | A | B | C | D | E |
| 11. Most poor people have little because:                    |   |   |   |   |   |
| a) Of bad breaks   | A | B | C | D | E |
| b) It's difficult to get ahead                               | A | B | C | D | E |
| c) They don't work hard enough                               | A | B | C | D | E |
| d) Of lack of financial skills                               | A | B | C | D | E |
| 12. The fact that some people are not well-liked is because: |   |   |   |   |   |
| a) They don't know how to get along with others              | A | B | C | D | E |
| b) It's hard to be popular                                   | A | B | C | D | E |
| c) They don't try to be friendly                             | A | B | C | D | E |
| d) They have had bad breaks                                  | A | B | C | D | E |

The following section is to obtain information on your organizational experiences.

**INSTRUCTIONS:** For each of the following statements indicate the extent to which each statement characterizes your organization using the following response categories:

- A means Very frequently occurs
- B means Often occurs
- C means Sometimes occurs
- D means Rarely occurs

Occurrence Rating

Very                      Some-  
frequently    Often            times            Rarely

- |  |   |   |   |   |
|--|---|---|---|---|
| 1. Volunteers invite other volunteer members to visit them at home.        | A | B | C | D |
| 2. There is a minority group of volunteers who always oppose the majority. | A | B | C | D |



	<u>Occurrence Rating</u>			
	Very frequently	Often	Some-times	Rarely
3. Sufficient time is given to do administrative paperwork.	A	B	C	D
4. Volunteers exert group pressure on nonconforming volunteers.	A	B	C	D
5. In meetings, there is the feeling of "let's get things done".	A	B	C	D
6. Administrative paperwork is burdensome in this organization.	A	B	C	D
7. Volunteers have fun socializing together while volunteering their time to the organization.	A	B	C	D
8. Most of the volunteers here accept the faults of their colleagues.	A	B	C	D
9. Volunteers have too many committee requirements.	A	B	C	D
10. Routine duties interfere with the role of volunteering.	A	B	C	D
11. Volunteers do their administrative paperwork by themselves.	A	B	C	D
12. Volunteers in this organization show a lot of spirit.	A	B	C	D
13. The president goes out of his/her way to help.	A	B	C	D
14. The president helps solve personal problems.	A	B	C	D
15. The president sets an example by working hard him/herself.	A	B	C	D
16. The president does personal favours.	A	B	C	D
17. The morale of the volunteers is high.	A	B	C	D
18. The president uses constructive criticism.	A	B	C	D
19. Volunteers socialize together in small select groups.	A	B	C	D
20. The president regularly communicates with everyone.	A	B	C	D

Occurrence Rating

	Very frequently	Often	Some- times	Rarely
21. The president helps settle minor differences.	A	B	C	D
22. The president schedules the duties.	A	B	C	D
23. Everyone contributes in organizational decision-making.	A	B	C	D
24. The president corrects mistakes.	A	B	C	D
25. The president talks a great deal.	A	B	C	D
26. The president explains his/her reasons for criticism.	A	B	C	D
27. The rules set by the supervisor are never questioned.	A	B	C	D
28. The president runs meetings like a business conference.	A	B	C	D
29. Volunteers work together on the administrative paperwork.	A	B	C	D
30. Meetings are organized according to a tight agenda.	A	B	C	D
31. Volunteers talk about leaving the organization.	A	B	C	D
32. The president insures that everyone works to their full capacity.	A	B	C	D

For the following items please indicate your agreement using the following scale:

- Y for "yes" if you agree with the item.
- N for "no" if you disagree with the item.
- ? if you cannot decide.

1. Think of your present role as a volunteer. What is it like most of the time?

VOLUNTEER ROLE

- |                   |                 |                                     |
|-------------------|-----------------|-------------------------------------|
| Fascinating _____ | Respected _____ | Challenging _____                   |
| Routine _____     | Hot _____       | On your feet _____                  |
| Satisfying _____  | Pleasant _____  | Frustrating _____                   |
| Boring _____      | Useful _____    | Simple _____                        |
| Good _____        | Tiresome _____  | Endless _____                       |
| Creative _____    | Healthful _____ | Gives sense of accomplishment _____ |

Item response scale: Y for "yes" if you agree with the item.  
N for "no" if you disagree with the item.  
? if you cannot decide.

2. Think of the kind of supervision that you get as a volunteer. How well does each of the following words describe this supervision?

3. Think of the majority of the volunteers you work with; or people you meet through your volunteer position. How well does each of the following words describe these people?

SUPERVISION

CO-WORKERS

Asks my advice \_\_\_\_\_  
 Hard to please \_\_\_\_\_  
 Impolite \_\_\_\_\_  
 Praises good work \_\_\_\_\_  
 Tactful \_\_\_\_\_  
 Influential \_\_\_\_\_  
 Up-to-date \_\_\_\_\_  
 Doesn't supervise enough \_\_\_\_\_  
 Quick tempered \_\_\_\_\_  
 Tells me where I stand \_\_\_\_\_  
 Annoying \_\_\_\_\_  
 Stubborn \_\_\_\_\_  
 Knows job well \_\_\_\_\_  
 Bad \_\_\_\_\_  
 Intelligent \_\_\_\_\_  
 Leaves me on my own \_\_\_\_\_  
 Around when needed \_\_\_\_\_  
 Lazy \_\_\_\_\_

\_\_\_\_\_ Stimulating  
 \_\_\_\_\_ Boring  
 \_\_\_\_\_ Slow  
 \_\_\_\_\_ Ambitious  
 \_\_\_\_\_ Stupid  
 \_\_\_\_\_ Responsible  
 \_\_\_\_\_ Fast  
 \_\_\_\_\_ Intelligent  
 \_\_\_\_\_ Make enemies easily  
 \_\_\_\_\_ Talk too much  
 \_\_\_\_\_ Smart  
 \_\_\_\_\_ Lazy  
 \_\_\_\_\_ Unpleasant  
 \_\_\_\_\_ Allow others no privacy  
 \_\_\_\_\_ Active  
 \_\_\_\_\_ Narrow interests  
 \_\_\_\_\_ Loyal  
 \_\_\_\_\_ Hard to meet

4. Think of the opportunities for rewards that you have as a volunteer. How well does each of the following words describe these opportunities?

OPPORTUNITIES FOR REWARDS

Satisfactory rewards \_\_\_\_\_  
 Less than I deserve \_\_\_\_\_  
 Bad \_\_\_\_\_  
 Regular rewards \_\_\_\_\_  
 Infrequent rewards \_\_\_\_\_

\_\_\_\_\_ Good chance for rewards  
 \_\_\_\_\_ Good opportunities for rewards  
 \_\_\_\_\_ Opportunities for rewards somewhat limited  
 \_\_\_\_\_ Underrewarded

**THANK YOU FOR YOUR COOPERATION!**

## APPENDIX B

List of Sport Associations for the N=279  
Sample of Volunteer Sport Administrators

PROVINCIAL SPORT ASSOCIATION	N
Ontario Badminton Association	46
Ontario Basketball Association	5
Boxing Ontario	7
Federation of Broomball Associations	14
Ontario Cricket Association	30
Ontario Curling Association	11
Ontario Cycling Association	30
Ontario Equestrian Federation Inc.	18
Ontario Amateur Football Association	14
Ontario Women's Hockey Association	9
Ice Skating Association of Ontario	7
Judo Ontario	12
Men's Provincial Lawn Bowling Assoc. of Ontario	3
Ontario Amateur Netball Association	2
Orienteering Ontario	5
Ontario Ringette Association	6
Ontario Rowing Association	12
Squash Ontario	7
Canadian Amateur Swimming Assoc. (Ont. Section)	9
Ontario Table Tennis Association	7
Ontario Underwater Council (SCUBA)	4
Ontario Volleyball Association	12
Ontario Amateur Wrestling Association	7
MISSING	2

## APPENDIX C

## Varimax Rotation for 32 OCDQ items (N=241)

	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7	Factor 8
OCDQ24	.68701	.06137	.10698	.05021	.01716	.02985	.11443	-.01586
OCDQ21	.54355	.17795	.17019	.06727	.08958	-.11249	.14445	.15200
OCDQ22	.53191	.20835	.15690	.09234	.03659	.03781	.04530	.00501
OCDQ14	.49943	-.07643	.23361	.03265	.10639	.21757	.18054	.07712
OCDQ16	.45093	-.04881	.13959	-.09843	.05886	.38469	.11013	-.07138
OCDQ25	.35359	-.19176	-.00079	.01465	.04542	.13249	-.06115	.07002
OCDQ32	.29480	.25841	.26550	.26183	-.05039	.00791	.26325	-.00308
OCDQ17	.10471	.78263	.17086	.10695	-.08124	.03776	.08565	-.12206
OCDQ12	.04169	.72401	.21608	.09438	-.06828	.15806	.07853	-.06468
OCDQ23	.12672	.41503	.14459	.06319	-.18645	-.10904	.00469	-.13590
OCDQ5	.06630	.36529	.11846	.23464	.01262	-.13688	.24192	-.12569
OCDQ29	.16245	.29983	-.00469	.19098	-.00395	.22398	.17939	-.03132
OCDQ13	.21979	.21812	.92209	.04564	-.06299	.08613	.10958	-.01142
OCDQ15	.28079	.19142	.60709	.09939	-.01452	-.04656	.18651	-.04433
OCDQ20	-.34247	-.22023	-.44209	-.06045	.03260	-.06812	-.17917	.09708
OCDQ11	-.06684	-.00870	-.16695	.10612	-.12080	.07442	.03291	.10105
OCDQ30	.08818	.13757	.05229	.98022	-.01209	-.00502	.09257	-.00043
OCDQ28	.09115	.20908	.18839	.40150	-.09658	-.09183	.27665	.00065
OCDQ9	.01932	-.06655	-.05662	-.05359	.77114	.08735	-.01680	.03255
OCDQ10	.07047	-.02033	-.04198	.06294	.53210	-.07339	-.02930	.09297
OCDQ6	.08191	-.03274	.05652	-.03410	.48797	.18301	.07425	.13887
OCDQ3	-.05229	-.19590	.04878	-.21408	.33905	.02060	-.03931	.09353
OCDQ19	-.01182	-.11269	-.07861	-.03590	.10571	.64976	.02194	.22251
OCDQ7	.05054	.31576	.05993	.04252	.01732	.56662	-.04202	-.00250
OCDQ1	.16550	.09777	.10911	-.04083	.03467	.44242	-.01645	.00135
OCDQ18	.25397	.13561	.21573	.13904	.01738	-.00400	.79881	-.00394
OCDQ26	.36212	.02858	.24455	.16855	-.12332	.04166	.41362	-.12799
OCDQ27	.10623	.19063	-.05414	-.03843	.11397	.10681	.25892	.24704
OCDQ2	.09736	-.15598	-.01769	.04135	.11420	.11072	-.03906	.58740
OCDQ4	-.02800	-.00075	-.02817	.00591	.08971	.07165	.03132	.54206
OCDQ31	.00729	-.26878	-.13002	-.06318	.28163	.20037	-.06298	.37260
OCDQ8	.02131	.24728	-.01657	.12701	-.01488	.14526	.07153	-.34183

Factor Based Item Groups

Varimax Rotation of Generalized Least Squares Factor Analysis

FACTOR 1

- OCDQ24: The president corrects mistakes.
- OCDQ21: The president helps settle minor differences.
- OCDQ22: The president schedules the duties.
- OCDQ14: The president helps solve personal problems.
- OCDQ16: The president does personal favours.
- OCDQ25: The president talks a great deal.
- OCDQ26: The president explains his/her reasons for criticism.
- OCDQ20: The president regularly communicates with everyone.

FACTOR 2

- OCDQ17: The morale of the volunteers is high.
- OCDQ12: Volunteers in this organization show a lot of spirit.
- OCDQ23: Everyone contributes in organizational decision-making.
- OCDQ5 : In meetings there is the feeling of "let's get things done".
- OCDQ7 : Volunteers have fun socializing together while volunteering their time to the organization.

FACTOR 3

- OCDQ13: The president goes out of his/her way to help.
- OCDQ15: The president sets an example by working hard him/herself.
- OCDQ20: The president regularly communicates with everyone.

FACTOR 4

- OCDQ30: Meetings are organized according to a tight agenda.
- OCDQ28: The president runs meetings like a business conference.

FACTOR 5

- OCDQ9 : Volunteers have too many committee requirements.
- OCDQ10: Routine duties interfere with the role of volunteering.
- OCDQ6 : Administrative paperwork is burdensome in this organization.
- OCDQ3 : Sufficient time is given to do administrative paperwork.

FACTOR 6

- OCDQ19: Volunteers socialize together in small select groups.
- OCDQ7 : Volunteers have fun while volunteering their time to the organization.
- OCDQ1 : Volunteers invite other volunteers to visit them at home.
- OCDQ16: The president does personal favours.

FACTOR 7

- OCDQ18: The president uses constructive criticism.
- OCDQ26: The president explains his/her reasons for criticism.

FACTOR 8

- OCDQ2 : There is a minority group of volunteers who always oppose the majority.
- OCDQ4 : Volunteers exert group pressure on nonconforming volunteers.
- OCDQ31: Volunteers talk about leaving the organization.
- OCDQ8 : Most of the volunteers here accept the faults of their colleagues.

## APPENDIX E

Cluster Analysis of 32 Items  
for Eight Derived Dimensions

## PRODUCTION EMPHASIS

- Item 28: The president runs meetings like a business conference.
- Item 30: Meetings are organized according to a tight agenda.

## HINDRANCE

- Item 3: Sufficient time is given to do administrative paperwork.
- Item 6: Administrative paperwork is burdensome in this organization.
- Item 9: Volunteers have too many committee requirements.
- Item 10: Routine duties interfere with the role of volunteering.

## ESPRIT

- Item 7: Volunteers have fun socializing together while volunteering their time to the organization.
- Item 8: Most of the volunteers here accept the faults of their colleagues.

## CONSIDERATION

- Item 18: The president uses constructive criticism.
- Item 21: The president helps settle minor differences.
- Item 22: The president schedules the duties.
- Item 24: The president corrects mistakes.
- Item 26: The president explains his/her reasons for criticism.
- Item 32: The president insures that everyone works to their full capacity.

## THRUST

- Item 5: In meetings there is the feeling of "let's get things done".
- Item 12: Volunteers in this organization show a lot of spirit.
- Item 13: The president goes out of his/her way to help.
- Item 15: The president sets an example by working hard him/herself.
- Item 17: The morale of the volunteers is high.
- Item 23: Everyone contributes in organizational decision-making.

## ALOOFNESS

- Item 11: Volunteers do their administrative paperwork by themselves.
- Item 27: The rules set by the supervisor are never questioned.
- Item 29: Volunteers work together on the administrative paperwork.

## DISENGAGEMENT

- Item 2: There is a minority group of volunteers who always oppose the majority.
- Item 4: Volunteers exert group pressure on nonconforming volunteers.
- Item 20: The president regularly communicates with everyone.
- Item 31: Volunteers talk about leaving the organization.

## INTIMACY

- Item 1: Volunteers invite other volunteer members to visit them at home.
- Item 14: The president helps solve personal problems.
- Item 16: The president does personal favours.
- Item 19: Volunteers socialize together in small select groups.
- Item 25: The president talks a great deal.

## APPENDIX F

Cluster Analysis of N=241 Cases  
with respect to six derived organizational climates

**Cluster 1: Open Climate**

Cases: 1,27,58,60,77,81,82,93,109,112,124,127,132,133,141,151,  
161,190,191,197,206,207,210,240

**Cluster 2: Controlled Climate**

Cases: 2,4,5,7,12,15,16,17,20,21,23,24,32,35,36,39,40,43,46,47,  
48,49,50,53,61,62,67,69,70,73,75,76,79,80,85,88,89,91,92,  
95,97,101,103,104,106,120,123,129,136,138,139,142,144,146,  
147,148,150,155,157,158,160,162,163,169,171,172,175,177,178,  
183,185,192,194,196,201,203,204,211,213,215,219,220,221,222,  
223,225,230,233,235,238,241

**Cluster 3: Autonomous Climate**

Cases: 3,8,10,13,18,25,29,31,37,38,41,52,56,63,65,68,71,84,87,90,  
105,110,113,114,121,130,131,134,137,143,145,153,167,168,  
174,182,187,188,193,200,202,208,218,224,229,237,239

**Cluster 4: Closed Climate**

Cases: 6,9,11,22,26,28,30,33,34,44,45,55,59,64,66,74,83,86,98,99,  
107,115,116,118,119,122,125,135,140,154,156,159,164,165,166,  
173,180,181,184,186,189,198,199,205,209,214,216,227,231,  
232,236

**Cluster 5: Paternal Climate**

Cases: 14,19,42,54,78,94,96,117,126,128,152,170,176,179,195,217,  
226,228,234

**Cluster 6: Familiar Climate**

Cases: 6,51,57,72,100,102,108,111,149,212



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## VITA AUCTORIS

Name: Lisa Margaret Kikulis  
Place and Date of Birth: Leeds, England  
December 20, 1962

Education

S.S.H.G.D. Westview Centennial Secondary High School, 1981  
B.P.H.E. University of Toronto, 1985  
M.H.K. University of Windsor, 1987