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A SITUATIONAL ANALYSIS OF THE
LEADERSHIP STYLE OF
HIGH SCHOOL ATHLETIC CONVENERS

by

John Scott Musselman

A Thesis
submitted to the Faculty of Graduate Studies
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

1976

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1976

ABSTRACT

A SITUATIONAL ANALYSIS OF THE
LEADERSHIP STYLE OF
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The purpose of this study was to examine the leadership style of high school athletic association league conveners in relation to some of the situational variables cited in the literature as well as some which are unique to this situation.

Sixteen coaches' groups from the Southwestern Ontario Secondary Schools Association (SWOSSA) were asked to participate. The members of each group were tapped for their perception of the sport-athletic orientation of their league; the performance of their group; and Hemphill's dimensions of polarization, stratification, viscosity, hedonic tone, and participation. The conveners were tapped for their leadership style (Fiedler's LPC), their perception of the leader-member relations (Fiedler's GAS) as well as Hemphill's five dimensions.

Through stepwise multiple regression analysis, it was revealed that human relations oriented leaders are better suited to this situation than are task oriented leaders. The convener's perception of acceptance (GAS) was directly related to the members' perception of performance, athletic orientation, an informal status hierarchy, and

hedonic tone. Moreover, the LPC score of the leader was directly related to the members' perception of unity of purpose (polarization) an informal status hierarchy and the leader's perception of acceptance. Thus, groups exhibiting both a lack of dysfunctional conflict regarding goal direction and status hierarchy as well as conformity with societal norms governing performance, and athleticism tended to choose, accept, and perform well for a human relations oriented leader. Those groups with task oriented leaders exhibited greater degrees of dysfunctional conflict as well as lower levels of performance and were more sport oriented.

The results of this study offered support for Fiedler's data relating to the interaction of the leader's style and the various situational variables in both interacting and counteracting groups. Thus, not only are the practical implications of the study significant, but the theoretical as well. A link has been established which relates this specific situation to the literature pertaining to the leadership and administrative theory. This link will help to guide future research in the area of "grass roots" sport and athletic administration.

DEDICATION

To my loving wife, Mary Lou, whose
sacrifice, support, and inspiration made
this accomplishment possible.

ACKNOWLEDGEMENTS

I would like to express my deep appreciation to Dr. Richard Moriarty and Dr. John LaGaipa, the members of my committee, for their guidance and counsel throughout the completion of my Master's degree.

I am also indebted to Dr. Nabih Mikail and Mr. Mike Baillargeon for their assistance in the computer programming and statistical analysis of the data. To Dr. P. J. Galasso for his patience, understanding, and support during the write-up of the thesis and to Miss Elena Silvaggi for her invaluable contribution to the final preparation of this text.

Finally, I would like to thank my advisor Dr. Gordon Olafson not only for his counsel and guidance but also for his willingness to let me find my own way. Herein, as he has recognized, lies the true value of education.



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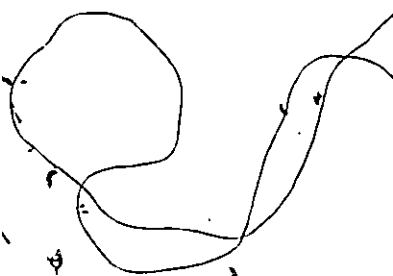
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CHAPTER I

REVIEW OF THE LITERATURE

Introduction

During the past twenty-five years, the study of administration has witnessed the profound effects of a "new movement" of educators dedicated to the development of a comprehensive, universal approach to administrative theory.¹ The initiation of this effort was predicated upon the realization that:

the "g-factor" in all forms of administration is sufficiently large to justify the study of administration qua administration²

The search for a general theory of administration, by no means predisposes the concept of specificity which becomes abundantly clear when the role of leadership within the evolving theory of administration is considered. Lippam has defined this role as "paralleling if not antedating the ...development of administrative theory,"³ while Andrews has carried it a step further by suggesting that the terms "leadership" and "administration" very closely parallel each other in meaning.⁴ In light of this relationship the concept of specificity with respect to different situations is supported by Pierce and Merrill:

the process of leadership can be analyzed and understood only when consideration is given to the... situation in which it arises⁵

This concept of situational specificity is further supported by Petrullo:

...leadership is a function of the situation and its requirements and the followers and their expectations as well as the qualities of the leader⁶

The quest for a general theory of administration, which will account for the situational factor, implies the need for a reciprocal theory-practice relationship. This relationship is required to facilitate the dynamic process of observing and formulating hypotheses which when heuristically derived will add to the theoretical body of knowledge and expose new practical problems for study.⁷

In answer to this need, this investigation will represent one of the inaugural attempts to involve the "grass roots" level of sport or athletic administration in the evolution of leadership theory. The study will focus upon the leadership style of high school athletic association league conveners as it interacts with the situational variables within the groups of coaches responsible for the administration of each sport.

In an effort to establish the theoretical frame of reference which will orient this study, the remainder of this chapter elaborates upon: (1) the historical perspective of the development of theory in administration; (2) the present status of administrative theory; (3) the role of leadership in the presently developing theories; (4) the

primary research tool for this investigation, Fiedler's model.

Historical Perspective of Administrative Theory

In examining the literature which preceded this "new movement" in administrative thought there has been:

...a gradual transition from an emphasis on the need to meet organizational production goals to a realization of the importance of the individual within the bureaucratic framework of modern organizations.⁸

Since a rather complete account of this evolution can be found in the works of Olafson,⁹ Spaeth,¹⁰ Getzels et al,¹¹ Griffiths,¹² and Gross,¹³ the presentation here will be brief.

Getzels et al identify what they feel to be the three main eras or "points of view" in the study of administration in the 19th century as: (1) the managerial emphasis; (2) the human relations emphasis; and (3) the social science emphasis.¹⁴ The managerial emphasis, dominant in the early years of the twentieth century, was significant in that it marked the beginning of the systematic study of administration. This era focused upon the standardization of techniques and methodologies involved in task performance; promoted the introduction of the specialization or delegation of administrative function; and, most importantly, neglected the interpersonal and human element of the organization.¹⁵

The effect of this neglect of the human element was manifested in a antagonistic reaction from Follet,

Mayo, Rothsberger, Dickson, and other prestigious members of the human relations era. The literature produced during this time revealed the importance of interpersonal relations within an organization which, in turn, proved to be a catalyst in the shift of emphasis from production to the human relations approach.¹⁶

With the realization that an understanding of human relations was necessary for the effective and efficient operation of an organization, and further that human behaviour was an integral aspect of the social sciences, Barnard recognized the clear and explicit need for a general theory of administrative relationships placed in the context of the social science of behaviour.¹⁷

Barnard, widely considered "the first outstanding theoretician in the field of administration,"¹⁸ authored The Functions of the Executive and Organization and Management "in which he attempted to develop a common understanding of administration as it exists within formal organizations."¹⁹ He was the first to place the study of administration within the context of the social sciences; to recognize the important interaction between the formal and informal factions of the organization;²⁰ to postulate that administration is generalizable across organizations;²¹ to postulate that leadership, communication, decision making, authority, and responsibility comprise the basic aspects of executive ability;²² and to recognize leadership as a function of at least three variables--the individual,

the group of followers, and the conditions.²³

Barnard provided direction in the study of administration and leadership. His work was supplemented by Simon who in 1945 published Administrative Behaviour in which he advocated the shifting of emphasis from the principles of administration to the value-free study of the conditions under which competing principles are applicable.²⁴

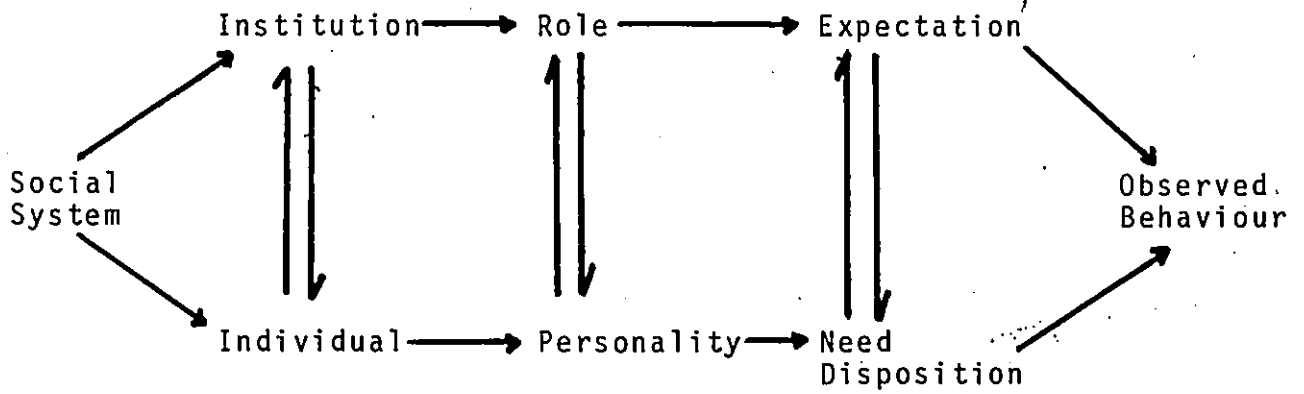
The innovations of Barnard and Simon sparked the organization of the National Conference of Professors of Educational Administration (NCPEA);²⁵ the Cooperative Program in Educational Administration (CPEA);²⁶ and the University Council for Educational Administration (UCEA)²⁷ between the years 1947 and 1956. The gathering of all these enthusiasts of the "new movement" into the various conferences and associations facilitated the very valuable processes of interaction and exchange of ideas. These educators, administrators, sociologists, and psychologists provided constructive criticism for each other that resulted in a general trend toward rooting this new administrative science within the context of the social sciences.

Present Status of Administrative Theory

As Getzels et al suggest, a prime force in the development of administrative theory to date has been Talcott Parson's theory of social action. "Although he has not written extensively on administration, he has greatly influenced, directly or indirectly, many who have."²⁸

Some of the fundamental bases of existing theories in administration such as goal direction, formal versus informal organizations and conflict all have their roots in Parsonian sociology.²⁹ Getzels' model which is deeply rooted in Parsonian theory, attempts to integrate the normative (nomothetic) or social dimension of a social system with the personal (idiographic) or psychological dimension (see Fig. 1). The nomothetic dimension deals with the goal-oriented institutions of a social system and the expectations of that social system of the incumbents of the various roles within said institutions. The idiographic dimension deals with the psychological aspects of the interaction of the individual's personality and need disposition (as it relates to the environment and social system as a whole) as he/she functions within the role of the institution and thus the social system. The general equation for this relation is $B = f(R \times P)$ where B is observed behaviour, R is an institutional role and P is the personality of the particular role incumbent.³¹ Getzels' hypotheses state that: (1) the publicly prescribed nomothetic level of interaction is enacted in two separate idiographic situations by the subordinate and the superordinate. Integration or overlap of the perception of the expectations of these two individuals is the primary independent variable affecting the functioning of the administrative process. (2) Three sources of conflict within the administrative setting are: (a) role personality conflict, (b) role conflict

NOMOTHETIC DIMENSION



IDIOPHIC DIMENSION

FIGURE I

The Normative and Personal Dimensions
of Social Behaviour³⁰

and (c) personality conflict.

For a more indepth discussion regarding Getzels' model the reader is advised to consult other sources.³² The general direction of the theory is what is important here. The theory attempts to integrate the individual and the institution; the informal and the formal; it takes into account many variables including societal norms and requirements, geographical demands and restrictions, political attitudes, task, interpersonal relationships and so on. Each of these variables exists in a cause-effect relationship with one or more of Getzels' nomothetic or idiographic variables. This is exactly the direction advocated by Barnard and Simon.

Getzels' work has been cited as an example of the general trend apparent in the development of a "well-developed, comprehensive theory of administration."³³ This trend, which has been traced from the beginning of the century, is perhaps best summed up by Spaeth:

Administrative theory, when developed and empirically tested, will be part of a general theory of social action, and a theory of administrative behaviour will be part of a general theory of human behaviour.³⁴

The Role of Leadership

The study of leadership, as an entity unto itself, followed a similar pattern to that of administrative theory. As Olafson points out:

Prior to the early 1950's, the personal attributes of the leader were the central focus of leadership research. The trait approach to leadership, as it is known, concentrated upon the identification of the innate potentialities of the leader as contrasted to those of the non-leader.³⁵

The innate potentialities were generally considered as traits such as intelligence, scholarship, dependability, activity, social participation, socio-economic status, sociability, initiative, persistence, self-confidence, alertness, insight, cooperativeness, popularity, adaptability and verbal facility.³⁶

As has been noted, Barnard, as early as 1940, recognized that "leadership appears to be a function of at least three complex variables--the individual, the group of followers, and the conditions."³⁷ This idea was postulated by several scholars during the following decade, most notably Gibb³⁸ and Stogdill.³⁹ It was not, however, until the early 1950's that the situational approach to leadership became widespread.

The theory behind the situational approach is quite complex in nature as Barnard's original speculation suggested. Early in the development of the situational approach, leadership was viewed by Hemphill as:

...the behaviour of an individual directing group activities and that adequacy of leadership is an evaluation of the correspondence between the individual's behaviour and the behaviour demanded by the situation.

The complexity of this approach becomes even more apparent when reviewing a statement made by Hemphill some

thirteen years later:

A major difficulty in the study of administrative behaviour is the fact that every administrative situation varies from every other situation. This fact may lead to conflicting conclusions about administration; it may be impossible to tell to what extent behaviour is a function of the situation or of the administrator... When situations are compared, the variables involved are not only difficult to control; they may even be unknown to researchers.⁴¹

It is important to note that the "trait" approach to leadership has not been totally abandoned in favour of the situational approach. Rather, traits have been incorporated into this new approach as part of the situation. As Pierce and Merrill note:

Perhaps one of the chief results of the research is the conclusion drawn that the study of personal characteristics, per se, is only one aspect of the study of leadership.⁴²

A more common label for this method of research is the "behavioural approach" which "parallels the situational approach to administration."⁴³ It does not, however, deny the fact that certain leadership traits do play a role in the overall situation. Halpin states:

Nor does the term 'leader behaviour' suggest that this behaviour is determined either innately or situationally. Either determinant is possible, as is any combination of the two, but the concept of leader behaviour does not itself predispose us to accept one in opposition to the other.⁴⁴

The development of research methodologies then has seen the trait approach grow into the situational approach which in turn evolved into what is today accepted as the behavioural approach. The important points about the

behavioural approach are: (1) that it does account for the leader, the situation and the followers. This is imperative since:

...the leader and situation are not disparate entities, since from the followers' standpoint the leader is an element in the situation as well as one who shapes it by setting the stage and creating expectations.⁴⁵

(2) It is a more reliable method of research in that:

...it focuses upon observed behaviour rather than upon a posited capacity inferred from this behaviour. No presuppositions are made about a one-to-one relationship between leader behaviour and an underlying capacity or potentiality presumably determinative of this behaviour.⁴⁶

Gordon clarifies this by stating:

One of the essential characteristics of the behavioural approach is the insistence on observable and verifiable phenomena that may serve, at least in part, as evidence for anything to be recognized as knowledge, principle, or finding. For example, instead of asking about a man's traits..., the behaviouralist is more likely to ask--What does he do?--What does he say?--What does he not say.⁴⁷

From the Ohio State Leadership Studies, which commenced in 1945, came not only the realization that fruitful research in the area of leadership must focus upon "examining and measuring performance or behaviour rather than traits,"⁴⁸ but also the recognition of "a need for priorities in order to direct the path of research."⁴⁹ The initial response to this need was made by Morris and Seeman who, in 1950, initiated the development of a paradigm that:

...stresses the fact that the group and individual variables which are commonly examined in leadership studies may be viewed in the following ways: as results of the leader's behaviour; as concomitants, determiners, or conditioners of the leader's behaviour; and as criteria for evaluation.⁵⁰

✓ As Olafson further notes:

As a consequence of this paradigm, numerous monographs and publications on leadership behaviour have been produced by The Ohio State Bureau of Business Research... Instruments such as the Organizational Climate Description Questionnaire (OCDQ), the Principal Behaviour Description Questionnaire (PBDQ), the Responsibility, Authority, and Delegation Scales (RAD), and the Leader Behaviour Description Questionnaire (LBDQ) have been designed to observe and analyze the behaviour of leaders in highly organized groups such as the navy, industry and education.⁵¹

The paradigm was further revised in 1957 by Shartle who developed a model for predicting organizational behaviour. For a more complete discussion regarding both the original paradigm and Shartle's revision, the reader is directed to other sources.⁵²

A second and somewhat different response to this need was published some seven years later in the form of Halpin's paradigm for research on administrator behaviour. In his own words, Halpin describes the paradigm as follows:

It provides the basis for a systematic classification and critique of existent and ongoing research on administrator behaviour, and is designed to suggest fruitful lines of inquiry for new research... it may help us to spot missing elements in our research knowledge about administration and to achieve a closer integration between empirical findings and theoretical analysis.⁵³

The paradigm is predicated upon the two assumptions:

(1) That apart from educational administration, hospital administration; business administration, public administration, etc., there is administration qua administration; and that this is a domain worthy of study; and (2) that greater strides will be made at this juncture if research efforts are focused upon the "behaviour of administrators" rather than upon either administrative behaviour or the totality referred to as "administration".⁵⁴

Briefly, Halpin's paradigm is intended to focus research upon the behaviour of the administrator and in turn relate this to changes in organizational achievement and maintenance.⁵⁵ Halpin complains that research has been restricted to administrator variables, intra-organizational variables and extra-organizational variables (Panel III) as they relate to administrator behaviour (Panel II), (see Fig. 2). He adds that:

Studies of this kind provide useful information, but this information is of limited value unless one proceeds to the next step of determining the relationships between the behaviour predicted in Panel II (from the variables in Panel III) and the criteria in Panel IV. Research confined to the variables in Panel III or even to those in Panel II and III tends to become frustratingly circular because it fails to tackle the criterion issue.⁵⁶

Research which has both evolved from and contributed to the development of the body of literature reviewed may be attributed to the work of countless contributors. However, two prominent factions tend to emerge as outstanding contributors in the specific area of administrator behaviour within groups and organizations. The first, as previously mentioned, banded together in 1945 as part of the Bureau of Business Research at the Ohio State University to begin the Ohio State Leadership Studies. From this

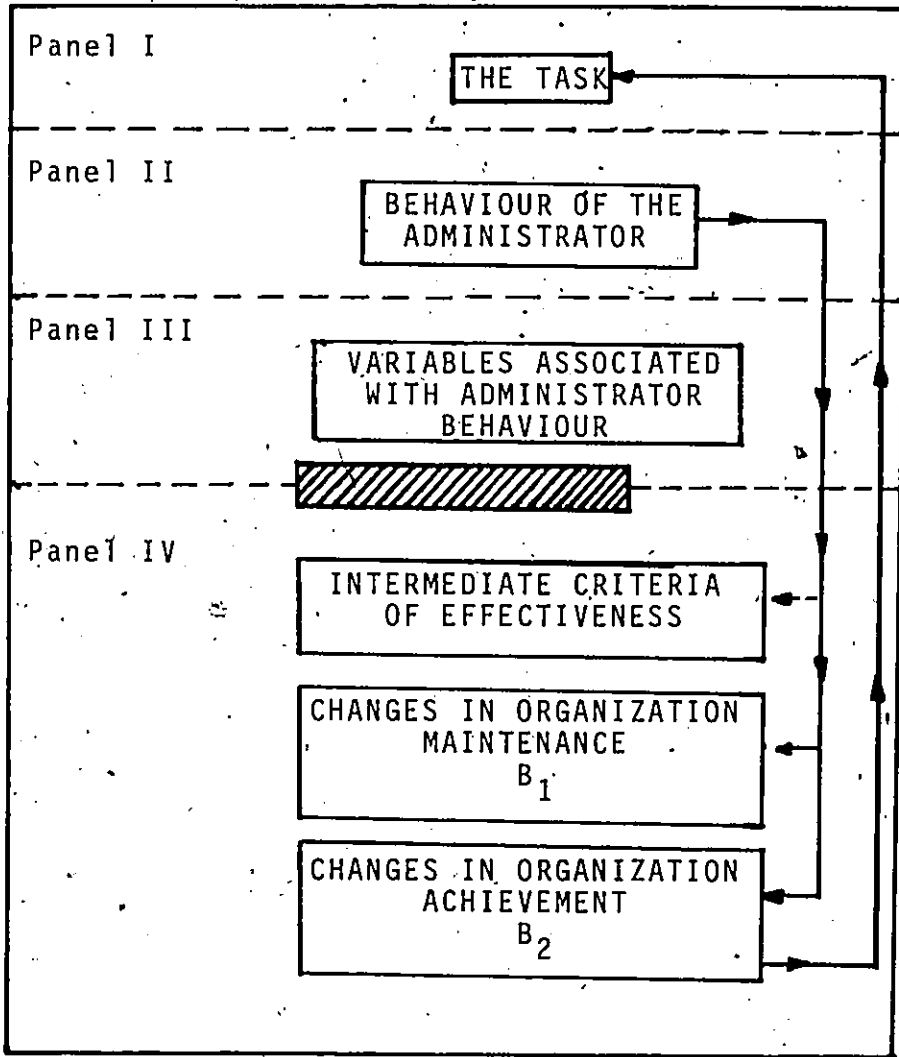


FIGURE II

CONDENSED VERSION OF HALPIN'S PARADIGM⁵⁷

organization came the work of Morris and Seeman whose paradigm, later revised by Shartle, served as the impetus for Hemphill to begin work on the Leader Behaviour Description Questionnaire (LBDQ) in an attempt "to develop an objective method for describing how a leader carries out his activities."⁵⁸

The LBDQ, in its initial stages, consisted of nine tentative dimensions of leader behaviour including integration, communication, production emphasis, representation, fraternization, organization, evaluation, initiation and domination.⁵⁹ Halpin and Winer then modified the instrument through factor analysis, which resulted in the emergence of four factors: consideration, initiating structure, production emphasis, and social awareness. The first two factors, consideration and initiating structure, together accounted for eighty-three percent of the total factor variance.⁶⁰ Though these two factors remain the primary parameters tapped by the LBDQ, Stogdill further revised the instrument to include measures of tolerance of uncertainty, integration of the group, persuasiveness, tolerance of member freedom of action, and predictive accuracy and reconciliation of conflicting demands.⁶¹ The resultant Leader Behaviour Description Questionnaire Form XII has been used repeatedly to study administrator behaviour as perceived by the administrator, his superiors, and his subordinates across a great many situations within formal organizations.

The second prominent faction is represented by a vast task force of researchers under the pioneering direction of Fred E. Fiedler. Fiedler began his work in 1952 at which time he sought "to propose a theoretical framework for understanding leadership effectiveness."⁶²

In reviewing the body of literature assembled prior to 1952, Fiedler was able to discern two major styles of leadership which had been revealed:

One of these is a leadership style which is primarily task-oriented, which satisfied the leader's need to gain satisfaction from performing the task. The other is primarily oriented toward attaining a position of prominence and toward achieving good interpersonal relations.⁶³

Fiedler's work concentrated on task groups, as he explains:

...we are here concerned with task groups rather than social groups, that is, with groups which exist for the purpose of performing a task, and which generally exist only as long as they do so effectively. This contrasts with social groups or therapy groups which exist to promote the psychological well-being, enjoyment, or adjustment of the individuals who are members of the group.⁶⁴

In an effort to classify the various types of task groups, he developed a taxonomy which divided task groups into three classifications: (1) Interacting groups - which are characterized by the fact that members are required to closely coordinate their activities in order to complete their tasks. Individual tasks are often interdependent to the extent that each individual, for the successful completion of his task, depends upon other individuals for the successful completion of their tasks. The example of

"a basketball team which requires men to get and pass to others who are in a position to shoot a basket" is illustrative of this point;⁶⁵ (2) Co-acting groups - also are involved in the completion of a common task but with much less interdependence on the part of each individual member. A prime example of a co-acting group is a bowling team in which each individual's score, while not dependent upon that of each of his teammates, becomes a part of the team total in deciding the overall outcome of the match;⁶⁶ (3) Counteracting groups - are describes as groups into which each individual has brought a vested interest in an outside group or organization for the purpose of negotiating with representatives from other groups or organization. The group does share a common goal in that it is assembled for the purpose of reaching a mutually satisfactory decision. They are indeed counteracting, however, in that each individual member's perception of the task or decision is, to a large extent, a product of his affiliation with the outside group he is representing.⁶⁷

As Fiedler points out, the situational conditions which have been shown to affect leader behaviour are markedly different across the three classifications (see Fig. 3). In addition, since most of the research to date has concentrated upon interacting groups, the possibilities for research within the remaining classifications are considerable.⁶⁸

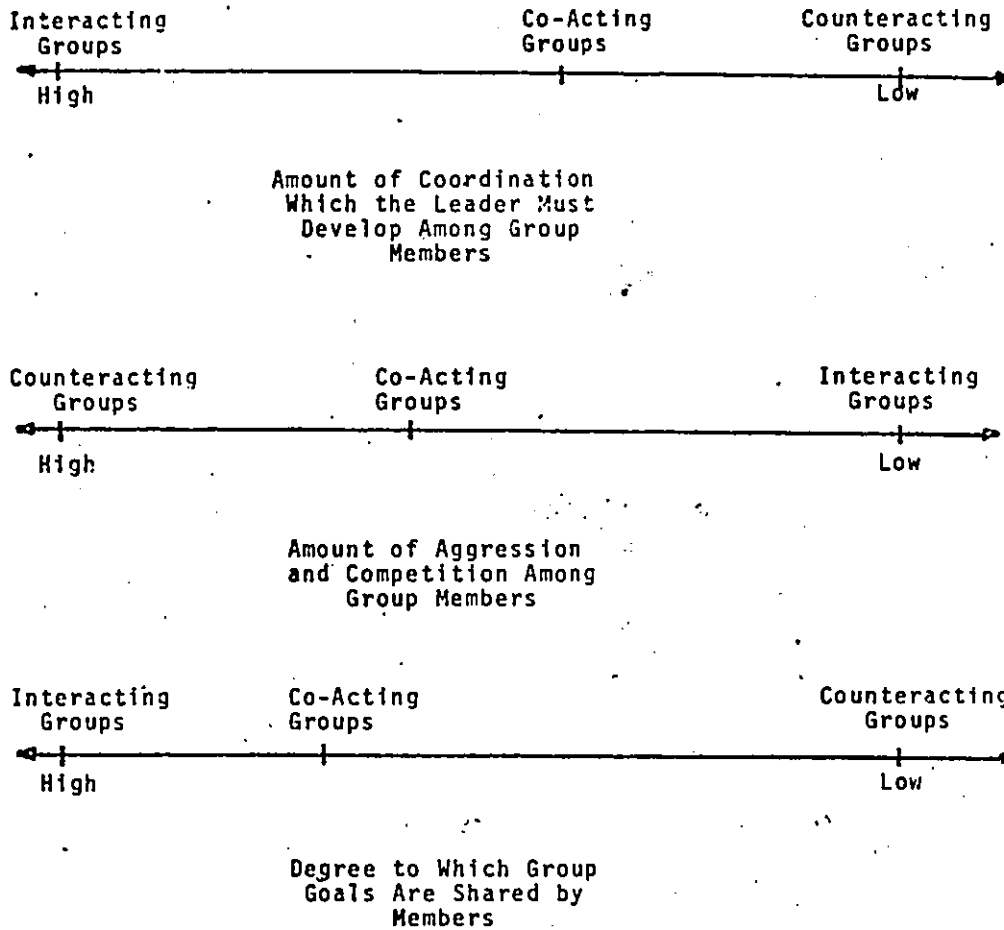


FIGURE III

SCHEMATIC COMPARISON OF INTERACTING, CO-ACTING AND COUNTERACTING GROUPS IN THREE DIMENSIONS⁶⁹

Fiedler's Model

Fiedler's proposed Model of Leadership

Effectiveness was originally published after more than fifteen years of historical research which encompassed more than 55 separate studies. It is predicated on the assumption that leadership effectiveness is primarily a function of the interaction of two variables. These are: (1) the style of the leader in question and (2) the situation in which he is involved.

It is important to note that Fiedler's terminology "leadership style" is quite different from that of "leadership behaviour" employed by those involved in the Ohio State Leadership Studies. The difference lies primarily in the level of psychological manifestation being sought by the investigator. Leader behaviour examines the superficial manifestation of the individual's need-structure within the confines of his formal leadership role. As previously pointed out, its description is dependent only upon observable behaviour which, it is felt, minimized the chance of error in interpretation. Leadership style on the other hand, examines the actual underlying motivational need structure of the individual. As Fiedler explains:

By leadership behaviour we generally mean the particular acts in which a leader engages in the course of directing and coordinating the work of his group members. This may involve such acts as structuring the work relations, praising or criticizing group members, and showing consideration for their welfare and feelings. Leadership style will be defined here as the underlying need structure of the individual which motivates his behaviour in various leadership situations. Leadership style thus refers to the consistency of goals or needs over different situations.⁷⁰

As can be seen, the concept of leadership style offers greater potential than leadership behaviour in the area of predicting leadership effectiveness across different situations. This is true because "important leadership behaviours of the same individual differ from situation to situation, while the need structure which motivates these behaviours may be seen as constant."⁷¹

The Leadership Style Measure

The technique used to tap this behaviour actually evolved from the search for a tool to be used in the operational measurement of interpersonal relations. After discovering that psychological therapists' reputed levels of competence were positively correlated ($r=.59$) with the degree to which they described their patients as similar to themselves, Fiedler labeled the measure assumed similarity and interpreted it as indicating psychological warmth, acceptance and permissiveness. Support for this interpretation, obtained from a second study involving members of a fraternity house, induced Fiedler to examine the concept as it related to performance of small task groups.⁷²

We hypothesized that team effectiveness would be in large part determined by the interpersonal relations between members of the group, especially between leader and followers, and that we could measure relevant aspects of these interpersonal relations by means of assumed similarity scores or related indices.⁷³

Fiedler's initial research in this area utilized an instrument with which a subject was asked to think of

all the individuals with whom he had ever worked and then to describe his most preferred co-worker (MPC) as well as his least preferred co-worker (LPC) via a set of bipolar adjective items set on an Osgood semantic differential scale. The difference between the perception scores (MPC & LPC) for each item was then squared. The sum of these squares (D^2) was then found for which the square root (D) indicated a low assumed similarity between opposites which showed that the individual perceived his most preferred co-worker and least preferred co-worker as relatively dissimilar. The instrument was later revised as it was found necessary to tap only the LPC score of an individual to obtain a valid measure of his leadership style.⁷⁵

The significance of the LPC score in relation to an individual's leadership style was determined only after many years of intensive research. The high LPC leader, it has been shown, is in effect "telling us that the person with whom he is least able to work on a common task might still be reasonably nice, intelligent, competent, etc. It is as if he were saying that he is distinguishing between the person and the way he works. The low-LPC leader, who describes his least preferred co-worker in a very negative, rejecting manner says in effect that the person with whom he cannot work is uncooperative, unintelligent, incompetent, etc. The implicit personality theory of the high-LPC person thus separates work performance

and personality, while the implicit personality theory of the low-LPC person links an individual's poor performance on a joint task with undesirable personality characteristics.⁷⁶ Fiedler postulated that the ASO and LPC scores attained by individuals would show systematic and consistent relations in some way, with various standard personality and attitude test scores. Repeated efforts, however, to discover these relationships were fruitless.⁷⁷ It was not until a factor analysis was performed on the results of 81 assorted personality and attitude tests in relation to high and low LPC individuals, that any significant results were found. Three factors did lead uniquely for each group.

Low LPC individuals: (1) tended to differentiate between stereotyped social objects, vis., most and least preferred co-workers and ideal self; (2) are task-oriented and critical of others in a work situation; (3) prefer to be with others in their task and social activities. High LPC individuals: (1) tend to be conservative; (2) show high interest in social and physical activities and low in task-orientation; (3) seek to maintain pleasant interpersonal relations within task situations.⁷⁸

Further study in this area revealed a significant difference in the number of positive statements made about the self and the most preferred co-worker. The low-LPC individual tended to be more positive in these statements as well as significantly more negative in his statements

regarding his least preferred co-worker.⁷⁹

The results of further studies indicated that the environment created by a high-LPC leader tends to be of a quasi therapeutic nature. Moreover, his group tended to exhibit greater levels of cohesiveness and satisfaction with both the task and the members themselves and lesser levels of anxiety and tension than those of low-LPC leaders.⁸⁰

Psychological correlates were found, which contributed significant information to the developing concept, in a study of two groups during the course of a space flight simulation. The crew of the low ASO (low LPC) leader "showed significantly higher pulse rates and body temperatures and two members of the low ASO crew showed definite neurotic symptoms not previously present."⁸¹ This finding is consistent with the earlier finding that high ASO (high LPC) leaders worked toward maintaining pleasant interpersonal relation within the group, showed sensitivity to the feelings of others, and in general related more like a peer than a superior.

In terms of behavioural correlates which Fiedler terms "the most important clue to the interpretation of LPC scores"⁸² studies indicate that "the behaviour associated with high and with low LPC or ASO scores systematically changes as the situation becomes more difficult for the leader."⁸³ Fiedler noted in a group creativity study that:

...in the socially strained situation, the low-LPC leader manifested a higher rate of task relevant behaviours while the high-LPC leader manifested a higher rate of relationship oriented and task irrelevant comment.⁸⁴

Further to this:

...the high-LPC leader generally behaves in a positive, relaxed, tension-relieving, and supportive manner in the pleasant group condition while the low-LPC leader tends to behave in a more supportive, more active, and less rejecting, with drawing, and antagonistic manner in the unpleasant situation.⁸⁵

As Fiedler had originally postulated and further study continued to support, it appeared that differences between high and low LPC individuals were related to differences in attitudinal orientation and motivational indices. Low-LPC leaders were indeed shown to be task oriented while high-LPC leaders were shown to be human relations oriented. Studies relating need satisfaction in stressful situations showed that:

...the high-LPC subjects tended to improve in adjustment if they had experienced interpersonal success regardless of whether they felt they had succeeded in the task. The low LPC subjects tended to improve in adjustment scores if they had experienced task success regardless of their perceived interpersonal success.⁸⁶

In terms of personal evaluation, a study of individuals involved in negotiation processes revealed that:

...the low-LPC person evaluated his experiences in terms of the task success while the high-LPC person did not....

This does not mean, however, that the high-LPC leader will be unaffected by success. On the contrary, since he is motivated to achieve a prominent position and good interpersonal relationships, he will react very strongly to the extrinsic rewards which success may bring. The low-LPC leader, on the other hand, will obtain his rewards from the intrinsic satisfactions of doing the job, and he will, therefore, be less concerned about others' evaluations of his performance.⁸⁷

Further support linking ASO and LPC scores to personality and attitudinal factors emerged from a study "which reported a significant correlation between ASO and need-achievement scores of .34."⁸⁸ The analysis of these data lead the investigators to conclude that:

...the high-LPC individual will seek need gratification by trying to create situations in which he will gain good interpersonal relations and prominence. In contrast, the low-LPC leader will seek need gratification by trying to create situations in which he will experience success in the task he is asked to perform.⁸⁹

The Situation

As the literature has emphasized "leadership effectiveness...depends as much on the group situation as it does on the leader."⁹⁰ In accordance with this, Fiedler has identified three situational variables which are of central importance to a leader's effectiveness within the group. These, in order of importance, are:

1. Position Power-----Least Important
2. Task Structure
3. Leader-Member Relations-----Most Important

Position power refers to "the degree to which the position itself enables the leader to get his group to comply with and accept his direction and leadership."⁹¹

In other words it refers to powers of official praise and sanction, controls of hiring, firing, remuneration, promotions, etc. Although position power does form an integral part of the situation, studies by Fiedler et al have shown that its manipulation alone does not significantly affect leadership effectiveness.⁹²

Task structure represents the degree to which the task of the group is defined. This concept incorporates such variables as decision verifiability, goal clarity, goal path multiplicity and solution specificity.⁹³ The degree to which the task can be defined interacts with position power in that a highly defined task with specific steps and instructions and only one possible solution will enhance position power. Should a group member err in this procedure it can be quickly and easily spotted, corrected and appropriate sanctions can be applied. On the other hand, in a highly ambiguous and vague task, which requires the creative interaction of group members who may in fact possess qualifications and status nearly equal to those of the leader, position power is negated. There exists no step by step recipe regarding the performance of the task; no one set solution and thus the leader is not in a position to direct, reward, and sanction.

Leader Member Relations, unlike position power and task structure which are determined by the organization, is in part dependent upon the leader's personality. This variable in essence refers to the degree to which the leader is accepted by the members of his group. It must be noted that:

while the attainment of a leadership position may well be highly fortuitous, and while the acceptance of the appointed leader may be overwhelmingly favoured by the institutional machinery at work in any organization, the leader-member relationship seems nonetheless to be the most important single element in determining the leader's influence in a small group.⁹⁴

This is true because, as Fiedler explains, "the leader, because he is liked and trusted, is able to obtain his men's compliance with a minimum of effort."⁹⁵

Good leader-member relations, while not a guarantee of effective leadership, does indeed enhance the probability of achieving this goal. Fiedler in a study of this concept demonstrated that:

the relationship between leader ability and group performance tends to be highly positive in groups in which the leader is accepted, while it tends to be zero or slightly negative in groups not accepting their leader.⁹⁶

The term leader ability here is taken from Hemphill and is defined as the proportion of effective and successful leadership acts to the number of attempted leadership acts.⁹⁷

Fiedler's model of leadership effectiveness is based upon the complex interaction of the four variables: position power, task structure, leader-member relations and leadership style. The first three variables interact to regulate the situation in that, as each variable becomes more favourable (i.e., position power is strong, task is highly structured, leader-member relations are good), the favourableness of the situation for the leader is improved and vice versa. The favourableness of the situation, in turn, interacts with the leadership style of the leader and affects group performance.

The data has shown that a directive or task oriented leader (low LPC) is most effective, as regards group

performance, in a situation which is either very favourable or very unfavourable to the leader. Those situations exhibiting a moderate degree of favourableness for the leader are best suited to a non-directive or human relations oriented (high LPC) leader. Figure IV illustrates graphically the interaction of the three situational variables while Figure V illustrates the effect of the interaction between the situation and the leader's style on group performance.

In view of the fact that this study is concentrated upon groups with unstructured tasks and weak leader position power (octants 4 and 8), the remainder of this section will concentrate on literature resulting from research conducted on these types of groups.

In a controlled study of sixteen groups of Dutch male college students involved in tasks of creativity, Fiedler et al found a significantly positive correlation between LPC and group performance (defined as creativity) ($r=.75$, $P .10$) in groups with a relaxed and pleasant atmosphere (good leader member relations) (octant 4). Conversely a negative correlation was found ($r=.72$, $P .05$) in groups exhibiting unpleasant interpersonal relations (or poor leader member relations) (octant 8).¹⁰⁰

The results of this study clearly indicated that high LPC leaders were most effective (in terms of group performance), in situations involving good leader member relationships (octant 4) while low LPC leaders were most

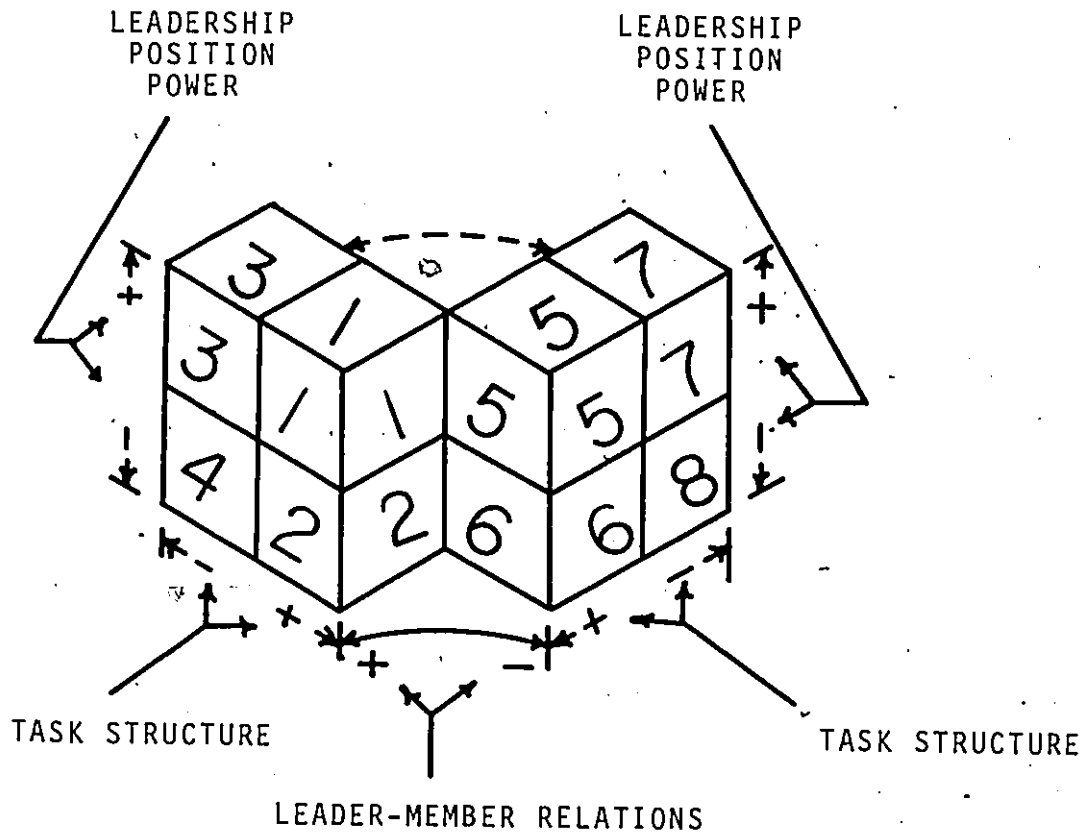


FIGURE IV

In this diagram groups are classified into octants one through eight according to their rating on the three situational variables. The octants range in favourableness from 1 (task structure--high; position power--high; leader-member relations--good), to 8 where all three variable measures are low.98

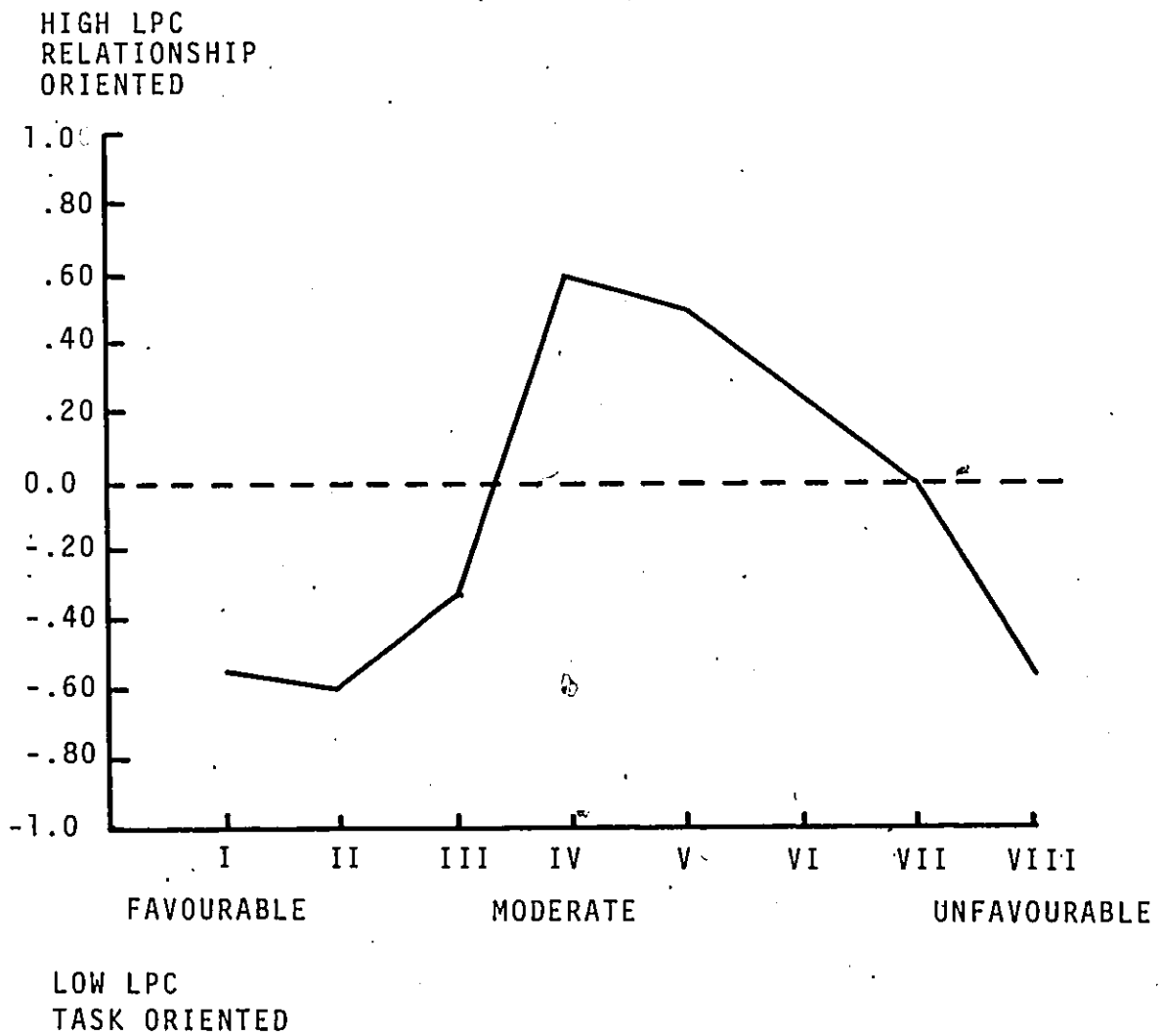


FIGURE V

This diagram shows the interaction of the three situational variables and how it affects the leader's style's (LPC) correlation with group performance.⁹⁹

effective in situations involving poor leader member relations. Since octant 4 exhibits moderate situational favourableness (due to unstructured task and weak position power) and octant 8 exhibits an unfavourable situation, support was gained for the model.

In an attempt to validate the previous study, Fiedler et al embarked upon an elaborate study in which hypnotism was used to subconsciously manipulate the LPC of the leader. The groups, eight in all, were tested for creativity using TAT cards under each of three conditions of the leader; high LPC, normal (no hypnosis), and low LPC. The results were correlated with measures of Leader Member relations (group atmosphere scores as perceived by group members and the leader) to determine the effect of leadership style on group performance.

While the hypnotic aspect of the study failed to produce any significant results, the normal LPC scores of the leaders did correlate in the expected directions with group performance, but significantly only with reference to the group leader's group atmosphere score (see Table A). Further investigation within a leadership training study revealed the same results (see Table B) and in so doing lead the investigators to conclude: (1) relationship oriented leaders (high LPC) perform best in groups which are relatively pleasant and relaxed (good leader member relations); (2) task oriented leaders perform best in groups which are relatively tense and unpleasant (poor leader

TABLE A

Groups Divided On Basis of Score of	Group Atmosphere Scores		
	Top 1/3	Mid 1/3	Lower 1/3
LEADERS	.64	-.33	-.72*
MEMBERS	.27	-.28	-.62

*P .05

CORRELATION BETWEEN LEADER'S LPC
AND GROUP CREATIVITY IN HYPNOSIS STUDY¹⁰²

TABLE B

	Leader's Group Atmosphere Scores		
	Top 1/3	Mid 1/3	Lower 1/3
FIRST DAY	.28	.10	.03
SECOND DAY	.89*	.67	-.03
THIRD DAY	.14	.19	-.40
FOURTH DAY	.37	-.08	-.60

*P .025

CORRELATIONS BETWEEN LEADERS LPC SCORES AND
GROUP CREATIVITY UNDER HIGH AND LOW LEADER
GROUP ATMOSPHERE SCORES IN THE
LEADERSHIP TRAINING STUDY¹⁰³

member relations); (3) the leader's perception of the group climate (as determined by the group atmosphere scale) and thereby his perception of his acceptance by the group is more significant in determining the most effective style of leadership than is the group climate perception of the group members.¹⁰⁴

While the literature dealing with the theory of administration and leadership within formal educational organizations is extensive, that dealing with the specifics of even physical education is limited at best. Research in administrative theory relating to physical education has dealt primarily with the formal structure associated with departments and faculties at the high school and university levels. Specific studies on leadership have been focused on these same areas.

In examining the literature dealing specifically with leadership style and behaviour within the context of sport or athletic organizations, even less relevant research is to be found. With the exception of Fiedler¹⁰⁵ and Stogdill who studied the interaction of leadership style, group atmosphere, and productivity of a high school basketball team; and the leadership patterns found within a university football team respectively, little noteworthy research has been undertaken dealing with the relatively informal and unstructured groups which function in organizations found in sport.

Summary

Administrative theory has evolved from the "scientific management" era of the early twentieth century, catalyzed by the demand of the "new movement" in the early 1950's to today's search for a comprehensive macro-theory of administrative science rooted in the behavioural sciences.

Leadership, an integral part of administrative science, has evolved simultaneously from the personal trait approach of the early twentieth century to today's more comprehensive situational and behavioural approach.

Two major forces within the development of a body of literature on leadership have been the Ohio State Bureau of Business research and a task force of researchers under the coordination of Fred E. Fiedler. The former, beginning in 1945, concentrated its efforts on studying the clearly observable leader behaviour or the superficial manifestation of the individual's need structure within the confines of his formal leadership role. The latter, beginning in 1952, has concentrated its efforts on studying leadership style or the actual underlying motivational need structure of the individual.

The literature to date has dealt extensively with most aspects of administrative theory; including leadership, within the formal structure of business, military and educational organizations. To a more limited extent, the peculiarities of physical education departments and faculties

with regard to leadership, have been studied and thus added to the growing body of literature on leadership.

Very little work, however, has been directed toward the role of leadership at the informal and unstructured levels of educational minor sport. Herein lies fresh ground which may well hold a wealth of knowledge for education, physical education, athletic and sport administrators. It is this fresh ground that this study is intended to break. In so doing, it is hoped that a new perspective may be opened to the developing body of administrative theory.

FOOTNOTES--CHAPTER I

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CHAPTER II

THE PROBLEM AND ITS BACKGROUND

The discipline of physical education involves not only the interaction of many subdisciplines such as physiology, motor learning, biomechanics, social psychology, health, history and philosophy, but it may also be conceptualized as incorporating the subfields of education, recreation, sport, and athletics. With such a multiplicity of subunits it is easy to see that the administrative processes are complex. Subsequently the demands on leaders must also be quite varied, at least to the degree that is illustrative of any other subfield of administration. To complicate matters, physical education, as a discipline, is somewhat of an infant with its various organizations, bodies, and groups still engaged in a struggle for academic justification as well as academic and public respect.

Specifically within the context of sport, athletic, and recreational organizations another extremely complex variable is presently at work. As Ellul points out, our technological society is bound in a work ethic and does not recognize recreation, sport, and play as a universally accepted pasttime unless participation is governed by the

same competitive and production conscious attitude that governs the rest of society.¹ The first half of this decade, however, has exhibited a growing concern among both educators and psychologists over the effect of this societal norm on the youth and their participation in minor league and educational sport and athletic programs.

The demands placed on the leaders of these sport, athletics, and recreational organizations by the interaction of these complex variables are significant. In view of this, these situations certainly do not warrant the lack of empirical research exhibited in the review of the literature. Rather, research similar in nature to that which has evolved administrative theory to its present position must be undertaken upon these organizations. The reasons are twofold. Firstly, the practicing administrators of these organizations deserve the attention of scientists in a reciprocal relationship so that they too may reap the benefit of:

a frame of reference that will create some order of what otherwise might appear to be a disorganized situation that invites something of the order of trial and error behaviour.²

Secondly, the knowledge gained from studying such organizations can only enhance the growing body of knowledge incorporated in administrative theory. If, as the literature strongly suggests, a generalizable macro-theory of administration is in the process of evolving then literature gleaned from research covering all aspects of administration within various types of organizations must be taken into

consideration. Moreover, if physical educators and athletic, sport, and recreation administrators are to reap maximum benefit from this theory, then they must make contributions based upon data from their organizational situations.

This philosophy posed the problem of locating a starting point with both practical and theoretical significance to sport, athletic, and recreation organizations. A partial solution to this problem was found in the work of the Sport Institute for Research through Change Agent Research (SIR/CAR).³ In its initial projects with several youth-oriented voluntary sport and athletic organizations,⁴ Moriarty's task force achieved positive results in clarifying goal direction and attainment through its three phase change agent research methodology. The importance of this success, however, goes beyond the practical implications of the feedback provided to the organizations involved. The SIR model, which guides the organizational audit phase of the SIR/CAR method, is a refinement of Moriarty's research design model, which in turn, was adapted from the research model of Stogdill and the time sequence model of Halpin.⁵ A perusal of these three models will reveal a distinct similarity between their theoretical roots and those of Getzels' "Normative and Personal Dimensions of Social Behaviour."⁶ Herein lies the important theoretical significance of SIR/CAR's work in that it provides the vital link between this situation and administrative theory.

The establishment of the significance of research findings gleaned from the efforts of SIR/CAR, with respect to both theory and practice, led to the final consideration of selecting a sample which offered maximal returns in the initial endeavour specific to leadership in educational and minor league sport and athletic organizations. A primary factor in this consideration was an observation made in both of SIR/CAR's initial endeavours. With both the Little League baseball study⁷ and the Minor Hockey study⁸ it was observed that the behaviour exhibited by coaches in a game situation was highly correlated with the behaviour exhibited by both players and fans. This led to the conclusion that the personal goals of coaches, as a significant group within the organization, had a sizeable effect on the attainment of the overall organizational goals. A second factor was that within the Southwestern Secondary Schools Athletic Association (SWOSSA), the individual leagues are primarily organized and administered by the group of coaches within each league, headed by a convener. These groups of coaches are primarily responsible for the routine administrative tasks as well as the agreement on and presentation of policy recommendations to the association executive. If then, Getzels' model in which administration is depicted as the integration of the nomothetic and the idiographic dimensions of the organization is to be accepted, the leadership role within these groups of coaches must be considered of primary importance.

The choice of Fiedler's contingency model as the primary research tool is based upon: (1) Fiedler's concept of leadership style being a manifestation of the underlying psychological need structure of an individual, permits its measurement in an informal unstructured setting where observation of leader behaviour, either directly by the investigator or through the group, is difficult to obtain; (2) The model has been proven valid and reliable in informal groups and accounts for variations in parameters such as position power and task structure; (3) The model has been used almost exclusively in conjunction with interacting task groups and, as Fiedler expressed, requires further work in conjunction with co-acting and counteracting groups. This study should prove valuable in this area since the groups involved exhibit characteristics of all three classifications.

Statement of the Problem:

While Fiedler's contingency model draws relationships among the four variables eluded to earlier, the literature does not relate any of these variables to other significant group dimensions and situational variables found within athletic or sport organizations. Furthermore, there are several basic phenomena concerning an athletic league governing group which have yet to be investigated. With this in mind, the purpose of this study may be stated as follows:

1. To identify, and analyze any possible trends pertaining to, the leadership style of high school athletic conveners.
2. To identify some situational variables relevant to these groups which show a relationship to any of Fiedler's four crucial variables.
3. Upon identification of any significant relationships, to formulate hypotheses and recommendations for further study in this area.

Definition of Terms

The following terms will be used in the study:

1. LPC - Defined as the leadership style exhibited by the designated leader and ranging from task oriented to human relations oriented.
Operationally defined as the score obtained on Fiedler's LPC scale.⁹
2. Designated Leader - The group member chosen, appointed or elected as the formal leader of the group. Operationally defined as the league convener.
3. Leader Member Relations - The degree to which the leader is accepted by the group.
Operationally defined as the convener's score on Fiedler's Group Atmosphere Scale.¹⁰
4. Group Performance - Defined as a function of the effectiveness and efficiency with which the group

performs its task (in this case solves problems). Operationally defined as the group members' response to the group performance scale. (Developed by author.)

5. Polarization - The degree to which a group is oriented and works toward a single goal which is clear and specific to all members. Defined as the group members' score on Hemphill's Group Dimensions Description Questionnaire-- items 111 to 122.¹¹
6. Sport-Athletic Orientation - The group's placement on a continuum with extremes of sport (play, social, emotional development and fun stressed) as opposed to athletics (winning, excellence, and work stressed). Operationally defined as the group members' response to the sport-athletic orientation scale. (Developed by author.)
7. Stratification - The degree to which a group orders its members into status hierarchies. Operationally defined as the group's response to Hemphill's Group Dimensions Questionnaire-- items 31-42.¹²
8. Participation - The degree to which members of a group apply time and effort to group activities. Operationally defined as the group members' responses to Hemphill's Group

Dimensions Description Questionnaire--items
101-110.¹³

9. Viscosity - The degree to which members of the group function as a unit. It is reflected by the absence of dissension and personal conflict among members. Operationally defined as the group members' responses to Hemphill's Group Dimensions Description Questionnaire--items 76-87.¹⁴
10. Hedonic Tone - The degree to which group membership is accompanied by a general feeling of pleasantness or agreeableness. Operationally defined as the group members' responses to Hemphill's Group Dimensions Description Questionnaire--items 43-47.¹⁵

Hypotheses

1. With respect to leadership style (LPC), the within group variance of the conveners will not be significant.
2. There will be no significant relationship between LPC scores of conveners and any of group performance, polarization, sport-athletic orientation, participation, stratification, hedonic tone, leader-member relations, or viscosity.
3. There will be no significant relationship between leader-member relations and any of the aforementioned situational variables.

4. There will be no significant relationship between the league's position on the sport-athletic continuum and any of the aforementioned situational variables.

Need For The Study

As was previously stated, the athletic and sport administrator is in a precarious position. He is still involved in the process of justifying his existence and to do so he must provide a valuable and needed service.

With today's growing concern over the desirability of organized competition for young people as well as a changing value system as regards spectator activity, leisure activity, and participative activity, the administrator must be in a position to know how to maximize the creative and personnel resources available to him. By examining some of the interrelationships which exist among variables found within the organizational settings of athletics, sport and recreation, those involved will be in a much better position to maximize the performance of these personnel resources, as well as prepare younger individuals to assume responsible positions as effective leaders. This study may well represent the first step toward achieving this goal. In the process it may also contribute insight and knowledge into the role that athletic administration can fulfill with respect to the evolution of a universal theory of leadership effectiveness.

Limitations of the Study

Due to the descriptive nature of this study, in that it will attempt to identify and describe relationships which have never been examined in this context, the number of definite conclusions reached will be limited. Moreover, no attempt will be made to generalize any findings beyond the specific sample to be examined.

It is proposed, rather, that the findings of this study will serve to guide future research in the area of leadership in physical education, athletic, sport, and recreation administration. It is hoped that significant insights will be gained and specific questions raised as to leadership and its related variables, both unique to this situation, and in general.

These limitations are recognized as they must be for the inaugural endeavour in any area of research.

FOOTNOTES--CHAPER II

¹Jacques Ellul, The Technological Society (New York: Alfred A. Knopf Inc., 1964), pp. 381-383.

²Arthur P. Coladarci and Jacob W. Getzels, The Use of Theory in Educational Administration, Monograph Number 5 (Stanford, California: Stanford University Press, 1955), p. 8.

³Sports Institute for Research--Using the three phase methodology of Change Agent Research (CAR), SIR performs an organizational audit followed by a series of information feedback clinics and finally an organizational reaudit to aid the organization in the recognition of conflict areas and the promotion of change to maximize effectiveness and efficiency in goal achievement.

⁴Sports Institute for Research, Windsor Minor Hockey as Viewed by Change Agent Research (1973) and Change Agent Research for Citizenship, Sportsmanship and Manhood (1974), Richard J. Moriarty and James H. Duthie, Coordinators (Unpublished Research Reports, The University of Windsor).

⁵R.J. Moriarty, "The Organizational History of the Canadian Intercollegiate Athletic Union Central (CIAUC) 1906-1955" (Unpublished Doctoral Dissertation, The Ohio State University, Columbus, Ohio, 1971), pp. 5-16.

⁶Supra, p.

⁷Sports Institute for Research, Change Agent Research for Citizenship, Sportsmanship and Manhood, Moriarty and Duthie, Coordinators, pp. 133-154.

⁸Sports Institute for Research, Windsor Minor Hockey as Viewed by Change Agent Research, Moriarty and Duthie, Coordinators, p. 25.

⁹Fred E. Fiedler, A Theory of Leadership Effectiveness (New York: McGraw Hill Book Co., 1967), pp. 268-269.

¹⁰Ibid., p. 269.

11 John K. Henphill, Group Dimensions: A Manual for
Their Measurement (Columbus, Ohio: Bureau of Business
Research, Monograph #R-87, 1956), p. 4.

12 Ibid., p. 4.

13 Ibid., p. 4.

14 Ibid., p. 4.

15 Ibid., p. 4.

CHAPTER III

METHODOLOGY

As has been noted, the choice of Fiedler's model as the primary research tool was based on the fact that the measurement of leadership style (LPC) is designed to tap the underlying need disposition which motivates the individual leader's behaviour. This concept, as well as the related situational factors of leader member relations, position power, and task structure were adaptable and in fact have been used to study groups similar in nature to those being examined in this study.

In an effort to realize the second purpose of the study, that of identifying some situational variables which showed a significant relationship to the variables in Fiedler's model, the process of selecting instruments involved two tasks. Firstly, the literature regarding small group dimensions was perused to select those dimensions which had been previously shown to be of significance within the setting of small, informal, unstructured, problem solving groups. Secondly, the literature concerning the present environment of sport and athletics was perused to determine the most significant environmental factors affecting the operation of these groups.

In selecting the instruments needed to study the group dimensions at work within the groups, two practical factors were of primary importance. Firstly, the technique of observation could not be considered a viable alternative for these particular groups and secondly, the time factor, with respect to the respondents was critical. For these reasons, it was necessary to find and/or develop efficient instruments which tapped member observation.

The Variables

Fiedler's model involves as a primary parameter, leadership effectiveness which is operationally defined as a measure of group performance. It is apparent then that the first variable to be considered must be group performance.

In light of the fact that the method used in studying this parameter within unstructured, problem solving groups has predominantly been one of either (a) direct observation or (b) evaluation of solutions by a panel of independent judges, an efficient instrument to tap member perception had to be constructed. A further problem was posed in that while the literature offered criteria, it lacked a valid instrument.

A partial solution to this problem led directly to the selection of three of the group dimensions to be examined. Of the thirteen group dimensions included in the Group Dimensions Description Questionnaire¹ developed by

Hemphill, three (hedonic tone, $r=.48$; participation, $r=.40$; viscosity, $r=.41$) correlated positively at the .05 level of significance with group performance in problem solving groups. These dimensions offered a built-in validity indicator for the group performance questionnaire which was to be constructed. In addition to this, it was felt that the study of these dimensions along with stratification and polarization would offer the greatest returns for the initial endeavour to study these particular groups. Viscosity (degree to which group functions as a unit) and polarization (unity and clarity of goal direction) are important to any group in which the leadership role is threatened by low position power and task structure. Participation (level of involvement by all members), hedonic tone (pleasure associated with membership) and stratification (hierarchical structure) all were judged to offer significant insights via not only their interaction with each other and the variables of Fiedler's contingency model, but also with the most relevant major variable found in the literature concerning the present environment of sport and athletics. This variable was deemed to be sport athletic orientation.

The reasons for the selection of this variable were rooted in both administrative theory and the practical environment. The works of SIR/CAR,² John McMurtry³ and others have revealed a growing controversy over the various advantages and disadvantages of our sport and.

professional athletic ideologies as regards participation at various levels. This particular investigation sought to examine the interaction of this variable with respect to the other dimensions mentioned as well as the leadership style and situational variables. In so doing, it was hoped that insights could be gained into the effect that placement on this continuum might have on leadership style and effectiveness.

The Instruments

Fiedler's model and Hemphill's dimensions have been adequately discussed in terms of why they were chosen for this study. The purpose of this section, then, is to discuss the development of the group performance questionnaire and the sport-athletic orientation scale.

Sport-Athletic Orientation Scale

The development of this scale, for the purpose of assessing each group's league as to its orientation toward either an amateur sport league or a professional athletic league, was based upon Moriarty's Professional-Amateur Dichotomy (see Fig. VI). For the purpose of this study, the two factions of this dichotomy formed the extremes of the sport-athletic continuum. Placement on this continuum was determined by the score obtained on the sport-athletic scale.

The scale was designed to tap the primary parameters which, as identified by Moriarty, include the means, task,

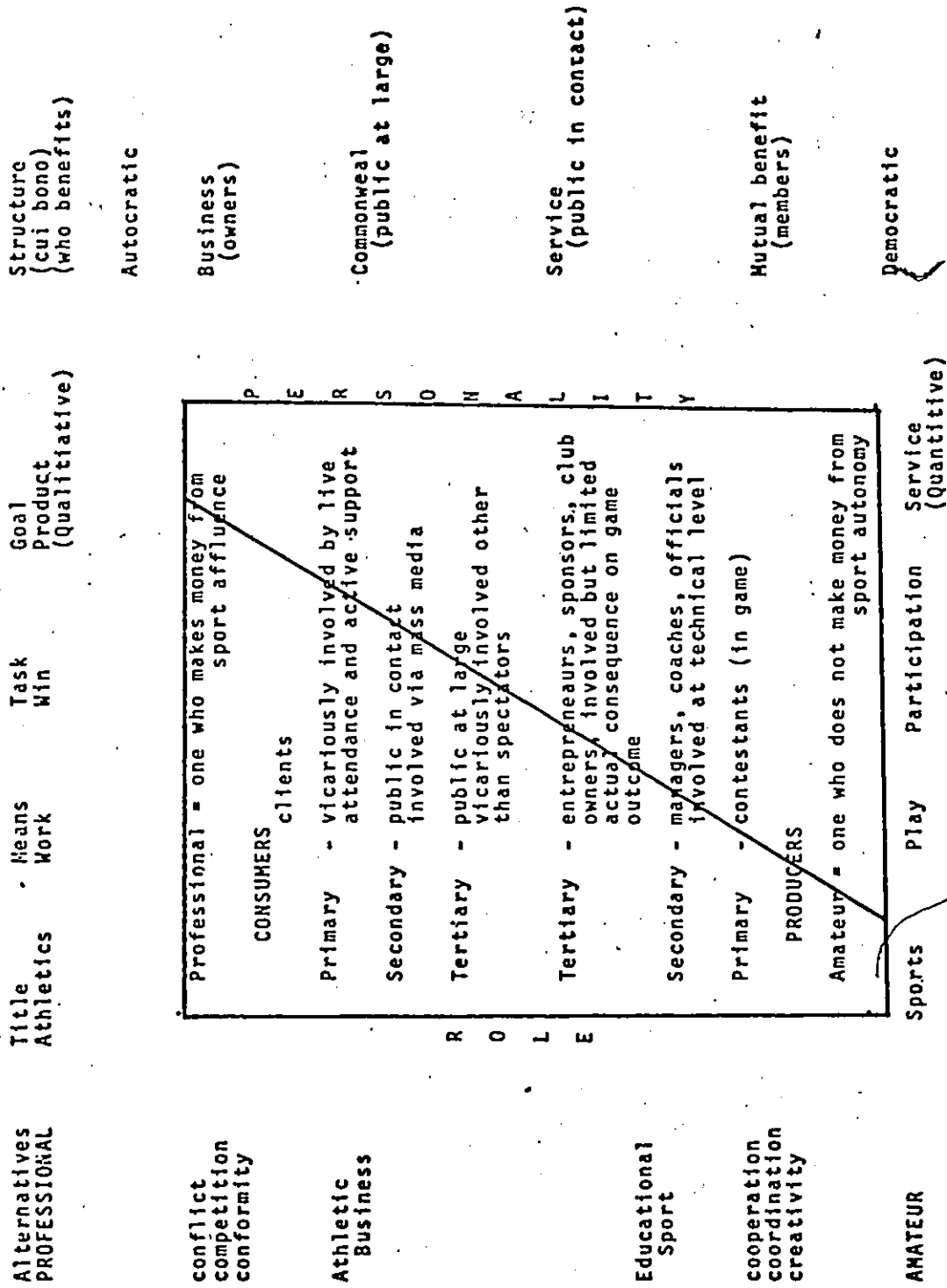


FIGURE VI - Condensed Version of Professional-Amateur Dichotomy

goal and structure (who benefits) of organizations classified by the dichotomy. Professional athletic organizations are characterized by: means=work, task=win, goal=product, and structure=autocratic business or commonweal. Amateur sport organizations, on the other hand, are characterized by: means=play, task=participation, goal=service, and structure=democratic mutual benefit or service.

The actual questionnaire (see appendix F) was developed from these criteria and suitably adapted to the realities of a high school athletic association. The items were then submitted to a panel of three independent judges for an examination of content validity. Reliability was determined on a post hoc basis via a split half reliability test.

The determination of construct validity involved two separate procedures. Firstly, a panel of independent judges, consisting of two principals from each of the three associations, were asked to rate each of their association's leagues as athletic, athletic-sport, or sport, based on the criteria presented in appendix F. The results were then compared with those obtained on the sport-athletic orientation scale. The second indicator of construct validity requires the assumption that athletic orientation increases goal complexity. This assumption is based on the fact that an athletically oriented league is involved with the primary goal of administering the sport as well as the sub-goals of excellence, publicity, consumerism, etc. As Guetzko has

has shown in a laboratory situation, goal complexity is positively correlated with the degree of specialization and stratification within the group.⁵ An indication then of a positive correlation between the results obtained on the sport-athletic orientation scale and the stratification scale would be accepted as evidence of construct validity for the former.

Group Performance

This scale was based on the following criteria (see appendix G):

1. The amount and type of conflict evident in the group. This is based on the premise, as Olsen points out, that conflict and change may be considered a joint entity which can produce either functional or dysfunctional consequences for the group.⁶ (Items 5 and 9)

2. Interest in modifying and evaluating the group processes. This refers to the members' interest in developing a coherent, total group product.⁷ (Items 10 and 12)

3. Members' identification and concern about the health of the group and its processes. (Item 2)

This criterion relates to the members' recognition of an intimate relationship between their personal competence and the group's effectiveness. It is manifested by a degree of concern regarding group health and operation.⁸

4. The recurrence of problems. (Items 6 and 8)
This refers to the members' experience of psychological

success and is related to their perception of their ability to define their goals as well as the paths to their goals.⁹

5. Confidence in the group. (Item 3)

This confidence is developed through success in achieving the tasks presented to the group. Argyris further notes that confidence tends to act as a catalyst in increasing the attractiveness of a group.¹⁰

6. The ability to recognize the need for change. (Items 4 and 11) Stemming from evidence assimilated by Argyris which indicates that effective groups quickly recognize the need for and encourage both individual and group change.¹¹

7. The members' general experience with the group in solving problems and running the league. (Items 1 and 7) These items were designed to tap the general, overall attitude toward the group's performance, which was gained as a result of direct experience.

Reliability was determined post hoc through split half correlation. The determination of validity, on the other hand, presented a greater problem. While content validity was readily assessable via a panel of three independent judges, construct validity was suspect. However, as has been discussed, some evidence of construct validity would be secured through obtaining the correlation of the scores obtained on this scale with those obtained on Hemphill's scales of hedonic tone, participation and viscosity.

It is important to note here the reason for post hoc determination of validity and reliability for those scales which were developed by the author for this study. The sample available for this study was already judged to be limited. In light of this, it was felt that the return offered by a pilot study could not justify the further limitation of the sample size and possible contamination of the available sample that it would cause.

Collection of Data

The groups chosen to participate in this study included the men's basketball, football, hockey, wrestling, soccer, and volleyball leagues operating within the Southwestern Ontario Secondary Schools Athletic Association. This, when broken down, represented a total possible sample of six coaches' groups within each of three leagues (WSSA, ECSSA and KCSSA) or a total of 18 groups.

The sports were limited to team sports which operate through a scheduled season culminating in a championship playoff. This limitation was imposed to avoid any possible differences in task structure which may have been incurred through the inclusion of sports not scheduled in this manner.

The instruments were packaged along with uniform instructions for their completion (see appendices A, B, C) in plain manilla envelopes which were then coded as to group by an anonymous recorder. These codings were not made known to the investigator to insure the anonymity of the respondents.

Treatment of the Data

The data were transferred from the answer sheets to the IBM X28-7327-6U/M050 Fortran coding form. From this point, they were transferred to an IBM A714 Fortran statement card.

Statistical Analysis

The data were subjected to the following statistical analysis:

1. Pearson Product Moment correlation coefficients were calculated for each pair of variables.

2. Stepwise Multiple Regression equations were calculated for each of the three dependent variables.

(1) Least Preferred Co-worker scores.

(2) Group Atmosphere scores.

(3) Athletic Continuum Orientation.

3. The R-Square was calculated for all possible regression models.

4. Students' t's were calculated to test for significance across the following groups:

DEPENDENT VARIABLE	CONDITION (tested for significant difference)	INDEPENDENT VARIABLE (tested for significant difference)
A. GAS	High Low	Group Performance Group Performance
B. GAS	High Low	LPC LPC
C. LPC	High Low	Group Performance Group Performance
D. LPC	High Low	GAS GAS

5. Chi Square was calculated to test for the following:

- (a) Equal distribution of LPC scores.
- (b) Normal distribution of LPC scores.
- (c) Homogeneity of LPC scores.

In view of the fact that Multiple Regression analysis will be the principle statistical tool of this investigation, it is important that the basic concept be understood.

Algebraically, the Multiple Linear Regression equation may be expressed:

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 \dots b_kx_k$$

where Y = dependent variable

x_k = independent variables

b_k = estimated regression slope

a = estimated regression intercept

The resulting equation will estimate the relative contribution made by each independent variable on the observed variance of the dependent variable.

Testing of Hypotheses

In multiple regression analysis the testing of the hypothesis involves the determination of the probability that any relationship found is not due to chance. Since the relationship is defined by the slope of the regression plane (β_1) the hypotheses may be stated algebraically:

$$H_0 : \beta_1 = 0$$

$$H_1 : \beta \neq 0^{12}$$

The alpha (α) or significance level determines the probability of rejecting H_0 when in fact H_0 is true.¹³ The significance level is arbitrarily set according to the consequences attached to making this Type I error. In this instance $\alpha = .10$ which is high. Due to the exploratory nature of this study, however, it would be of little consequence to make a Type I error as compared to that of making a Type II error. In this type of error the experimenter fails to reject H_0 when in fact H_1 is true and in doing so he may be discouraging future fruitful research.

FOOTNOTES--CHAPTER III

¹John K. Hemphill, Group Dimensions: A Manual for Their Measurement, Research Monograph Number R-87 (Bureau of Business Research: The Ohio State University, 1956).

²Sports Institute for Research, Change Agent Research for Citizenship, Sportsmanship and Manhood (1974) and Windsor Minor Hockey as Viewed by Change Agent Research (1973), Richard J. Moriarty and James Duthie coordinators (Unpublished Research Reports, The University of Windsor).

³John McMurtry, Investigation and Inquiry into Violence in Amateur Hockey (Toronto: The Ontario Ministry of Community and Social Services, 1974), p. 40.

⁴Sports Institute for Research, Change Agent Research for Citizenship, Sportsmanship and Manhood, Moriarty and Duthie coordinators, p. 74.

⁵Harold Guetzkow, "Differentiation of Roles in Task Oriented Groups," Group Dynamics, eds. Dir. Cartwright and A. Zander (New York: Harper & Row Publishers, 1968), p. 517.

⁶M. E. Olsen, The Process of Social Organization (New York: Holt, Rhinehart and Winston, 1968), p. 133.

⁷Chris Argyris, Intervention Theory and Method (Reading, Mass.: Addison-Wesley, 1970), p. 44.

⁸Ibid., p. 44.

⁹Ibid., p. 44.

¹⁰Ibid., p. 45.

¹¹Ibid., p. 45.

¹²T. H. Wonnacott; R. J. Wonnacott, Introductory Statistics (New York: John Wiley & Sons, 1969), pp. 255-284.

¹³Ibid., p. 170.

CHAPTER IV

RESULTS: ANALYSIS AND INTERPRETATION

For the successful completion of this study, the limited sample size dictated the need for an unusually high rate of return of the questionnaires. As Table I indicates, this was achieved with the total number of usable returns (111) representing 84.7% of the 131 questionnaires originally distributed. Also to be noted from Table I is the fact that of the 16 leagues available to participate in this study (ECSSA and KCSSA not being involved in hockey), all conveners completed and returned the instruments. With this prerequisite met, data from all 16 groups were eligible for inclusion in the analysis.

As is presented in Table II, the final sample consisted of 16 groups of coaches (leagues) with the N for each group ranging from 5 to 10 coaches. Also presented in Table II are the mean raw scores attained by each group for each variable being examined. It is important to remember that the mean raw scores for the Least Preferred Co-worker (LPC) and Group Atmosphere Scale (GAS) variables are by design attainable from only the group leaders, thus explaining the presence of only whole numbers.

Table III presents further simple statistics computed

SPORT	WSSA		ECSSA		KCSSA		TOTAL		
	SENT	RET'N	SENT	RET'N	SENT	RET'N	SENT	RET'N	
FOOTBALL	10	8	7	6	7	7	24	21	
BASKETBALL	10	9	8	7	10	8	28	24	
HOCKEY	8	8	0	0	0	0	8	8	
WRESTLING	8	7	6	5	7	7	21	19	
SOCCER	9	9	7	6	7	6	23	21	
VOLLEYBALL	10	10	7	6	10	6	27	22	
TOTAL	55	51	35	30	41	34	131	114	
TOTAL RETURN					114				
TOTAL RETURN (PERCENT)					87%				
NUMBER UNUSABLE					3				
TOTAL USABLE					111				
TOTAL USABLE (PERCENT OF TOTAL DISTRIBUTED)					84.7%				
TOTAL USABLE (PERCENT OF TOTAL RETURNED)					97.3%				

TABLE I
TOTAL NO. OF TEAMS IN POPULATION SAMPLE

GROUP	LPC	GAS	S-A	GP	VISCID.	HT	PART.	POLAR.	STRAT.
N=8	60	66	33.75	43.12	41.37	19.25	29.25	41.12	34.87
N=6	79	53	28.65	38.83	41.00	15.66	30.00	39.00	33.83
N=6	41	63	34.83	44.66	42.59	19.50	28.33	39.00	30.87
N=7	64	73	35.29	43.28	40.57	21.28	30.71	47.00	35.85
N=7	43	52	26.85	37.14	30.14	16.71	28.14	34.00	42.71
N=8	70	72	34.00	42.12	44.12	19.87	31.00	38.25	35.25
N=10	91	39	26.70	41.70	39.90	18.00	27.40	43.80	27.10
N=6	97	67	30.16	43.50	41.50	18.16	33.16	48.16	32.83
N=6	41	74	29.00	45.83	48.15	18.33	32.50	40.00	35.33
N=7	67	62	29.14	44.42	32.57	17.85	24.71	43.14	40.43
N=5	62	75	23.80	51.00	51.80	11.20	31.40	27.20	25.60
N=7	75	70	26.00	46.42	49.28	21.00	32.00	42.28	32.14
N=9	15	44	27.88	41.55	38.77	17.22	27.44	39.00	30.33
N=6	42	40	26.83	36.33	36.00	18.33	27.33	40.83	32.50
N=5	67	69	25.00	43.60	42.00	18.00	28.20	41.40	34.60
N=8	82	53	34.62	47.75	47.25	20.87	28.87	46.37	27.62

TABLE II
Mean Raw Scores For Each Variable

VARIABLE	SUM	MEAN	UNCORRECTED S.S.	CORRECTED S.S.	VARIANCE	STANDARD DEVIATION
SPORT ATH.	3279.00	29.541	9945.00	2581.568	23.469	4.844
GROUP PER	4767.00	42.946	209517.00	4993.676	43.579	6.601
POLARIZE	4639.00	41.793	201361.00	7484.234	68.039	8.249
STRATIF.	3812.00	34.342	139892.00	6978.991	81.627	9.035
PARTICIP.	3249.00	29.270	98245.00	3145.892	28.550	5.343
VISCID.	4608.00	41.514	201218.00	9923.730	90.216	9.499
HED. TONE	2107.00	18.982	41053.00	1057.964	9.618	3.101
LFC	6938.00	62.505	485640.00	51983.748	472.580	21.739
GAS	6744.00	60.757	426552.00	16808.432	152.804	12.361

N=111

TABLE III

SIMPLE STATISTICS FOR ALL VARIABLES

from the results obtained from the entire sample and not broken down into the 16 groups.

Reliability coefficients for the two scales developed by the author for this study were determined via the split half method using the Spearman Brown prophecy formula as outlined in Garrett.¹ The resultant coefficients for the Group Performance Scale (.89) and the Sport-Athletic Continuum Scale (.69) were both acceptable.

The validation criteria for these two scales were also met with success. As is outlined in Table IV the correlation coefficients for the group performance score and the three group dimensions indicated by Hemphill as having previously shown a statistically significant positive correlation with group performance are close to or greater than those reported by Hemphill.

TABLE IV

DIMENSION	HEMPHILL'S FINDING	PRESENT FINDING
Participation	$r = .40^*$	$r = .37^*$
Viscidity	$r = .41^*$	$r = .69^*$
Hedonic Tone	$r = .48^*$	$r = .42^*$

*Significant at .05 level

VALIDITY CRITERIA FOR GROUP PERFORMANCE SCALE

In the case of the sport-athletic continuum scale, the groups were divided into three categories based on the

three independent judges' ratings. These results were then compared with the observed findings as shown in Table V. The resulting agreement was determined to be 75%.

TABLE V

RATING	JUDGES' RESULTS	OBSERVED RESULTS	% AGREEMENT
Highest 5 Groups	1 3 4 6 16	1 3 4 6 16	100%
Middle 6 Groups	2 5 10 11 12 13	2 5 8 9 10 13	66%
Lowest 5 Groups	7 8 9 14 15	7 11 12 14 15	60%
OVERALL			75%

COMPARISON OF JUDGES' RATINGS OF SPORT-ATHLETIC
ORIENTATION WITH OBSERVED RESULTS

Further evidence of validity was also provided by the GAS regression equation presented later in this chapter. Previously, it was reported that increases in goal complexity require greater levels of stratification. Moreover, it was assumed that athletic orientation represented a more complex goal than did sport orientation. The GAS equation, by positively relating group performance, sport-athletic orientation and stratification to GAS is, in effect, offering support for both of these contentions. Thus, some support for the validity of the sport-athletic orientation scale is evidenced.

By testing the correlation coefficients of the Least Preferred Co-worker (LPC) and the Group Performance scores across octants 4 and 8 of Fiedler's contingency model in an effort to test the applicability of this model to this situation, no statistically significant results were obtained (see Table VI).

TABLE VI

GAS	$r_{LPC, GP}$
70	-.20
53	.16

*significant at .10 level

EFFECT OF GAS ON $r_{LPC, GP}$

In light of the suspicion that insufficient sample size may have been a contributing factor in this finding, a series of students' t tests were performed to further investigate these relationships. The findings (see Table VII) indicate some support for the fact that Fiedler's model applies to this situation similarly to its application in the reported literature.

The results showed that the highest and lowest 5 groups on the parameter GAS were indeed significantly different in their interpretation of both group atmosphere and group performance. The leaders of these groups, however, showed no significant difference in their leadership styles.

GROUPS TO BE TESTED	VARIABLES TO BE TESTED	Df	t VALUE	SIGNIFICANCE LEVEL
HIGH GAS vs LOW GAS	GAS	8	8.87	.05
HIGH GAS vs LOW GAS	GROUP PERFORMANCE	8	3.20	.05
HIGH GAS vs LOW GAS	LPC	8	0.55	NOT SIGNIFICANT
HIGH LPC vs LOW LPC	LPC	8	7.36	.05
HIGH LPC vs LOW LPC	GAS	8	0.45	NOT SIGNIFICANT
HIGH LPC vs, LOW LPC	GROUP PERFORMANCE	8	1.02	NOT SIGNIFICANT

TABLE VII

t Tests Indicating Interaction of Group Performance, LPC and GAS

On the other hand, the highest and lowest 5 groups on the parameter LPC revealed no significant difference in their interpretation of either group atmosphere or group performance, but were represented by significantly different styles of leaders. Table VIII defines the correlation coefficients for each pair of variables.

In examining the results of the regression analysis from a macroscopic point of view (see Table IX), it can quickly be seen that all 8 regressors had a significant effect in the reduction of the sums of squares for only two of the three dependent variables. In the case of LPC as the dependent variable, the F value for reduction in the total sum of squares in the analysis of variance table was equal to 2.066 which was significant at the .045 level. For dependent variable GAS, the F value was determined to be 4.355 ($P < .0003$). With sport athletic orientation as the dependent variable, however, F was equal to 1.339 with probability $F = .232$ which does not fall within the alpha limits set for this study.

In terms of the percent reduction in the total sum of squares of the dependent variable which can be explained via the regression equation, the equation for LPC explains 14% while the equation for GAS explains 25.5% ($R\text{-square} = .255$).

Table X presents a preliminary breakdown of the role played by each independent variable as a contributor to the reduction in the sum of squares of the dependent variable. The F value calculated for the sequential sums

	SPORT ATH.	GROUP PER	POLARIZE	STRATIF.	PARTICIP.	VISCID.	RED. TONE	LPC	GAS
SPORT ATH.									
GROUP PER	.03								
POLARIZE	.06	.56							
STRATIF.	.05	-.49	-.48						
PARTICIP.	.05	.37	.35	-.30					
VISCID.	.00	.69	.54	-.62	.42				
RED. TONE	.01	.42	.42	-.42	.30	.57			
LPC	.12	.14	.25	+.05	.10	.15	.15		
GAS	.27	.33	.12	-.06	.72	.28	.28	.18	

TABLE VIII
CORRELATION COEFFICIENTS FOR ALL VARIABLES

DEPENDENT VARIABLE	SOURCE	Df	SUMS OF SQUARES	MEAN SQUARE	F-VALUE	PROB > F	R-SQUARE	SIGNIFICANT
LPC	Regression	8	15.340	1.918	2.066	0.045	0.140	YES
	Error	102	94.660	0.928				
	Corrected Total	110	110.000					
CAS	Regression	8	28.008	3.501	4.355	0.0003	0.255	YES
	Error	102	81.992	0.804				
	Corrected Total	110	110.000					
SPORT ATHLETIC ORIENTATION	Regression	8	10.453	1.307	1.339	0.232	0.095	NO
	Error	102	99.547	0.976				
	Corrected Total	110	109.999					

TABLE IX
ANALYSIS OF VARIANCE TABLE FOR ALL SOURCES OF VARIANCE
RELATIVE TO EACH DEPENDENT VARIABLE

DEPENDENT VARIABLE	SOURCE	SEQUENTIAL S.S.	F-VALUE	PROB F	STANDARDIZED B VALUE	T FOR H:0 B = 0	PROB T
LEADER STYLE (LPC)	POLARIZE	3318.483	7.566	0.007*	0.305	2.526	0.012*
	STRATIF.	1972.105	4.496	0.034*	0.285	2.325	0.020*
	GAS	1181.650	2.694	0.099*	0.108	1.020	0.310
	VISCID.	468.042	1.067	0.304	0.152	0.979	0.669
	SPORT ATH.	167.551	0.382	0.545	0.059	0.613	0.547
	GROUP PER	80.274	0.183	0.673	-0.056	-0.411	0.684
	HED. TONE	61.189	0.139	0.710	0.043	0.373	0.711
	PARTICIP.	0.005	0.000	0.992	0.000	0.003	0.992
	GROUP PER	11.933	14.845	0.000*	0.290	2.336	0.020*
	SPORT ATH.	7.578	9.428	0.003*	0.248	2.871	0.005*
GROUP ATMOSPHERE (GAS)	HED. TONE	2.567	3.193	0.073*	0.185	1.745	0.080*
	STRATIF.	2.200	2.737	0.097*	0.156	1.344	0.178
	POLARIZE	1.038	1.291	0.257	-0.175	-1.533	0.124
	PARTICIP.	1.227	1.526	0.217	0.102	1.062	0.290
	LPC	0.986	1.226	0.269	0.093	1.020	0.310
	VISCID.	0.476	0.593	0.550	0.111	0.770	0.550
	GAS	8.146	8.346	0.004*	0.301	2.871	0.005*
	VISCID.	0.744	0.762	0.611	-0.079	-0.500	0.623
	POLARIZE	0.729	0.747	0.606	0.108	0.849	0.597
	LPC	0.455	0.466	0.503	0.062	0.613	0.547
SPORT ATHLETIC ORIENTATION	HED. TONE	0.173	0.178	0.677	-0.049	-0.421	0.677
	GROUP PER	0.169	0.173	0.680	-0.058	-0.415	0.682
	STRATIF.	0.021	0.021	0.878	0.019	0.150	0.875
	PARTICIP.	0.012	0.013	0.904	0.012	0.115	0.904

*H₀ REJECTED

TABLE X

ANALYSIS OF VARIANCE TABLE SHOWING REGRESSION COEFFICIENTS AND STATISTICS OF FIT OF INDEPENDENT VARIABLES FOR EACH DEPENDENT VARIABLE.


of squares tests the null hypothesis dealing with the contribution of each individual independent variable over and above the effects of the variables preceding that source in the regression equation (i.e., additional information about the dependent variable not accounted for by preceding sources). The t test associated with determining whether or not $\beta = 0$ is in effect testing the null hypothesis dealing with the regression line for the dependent variable on that particular independent variable for fixed values of the other independent variables in the model.² In terms of making decisions regarding the significance of the overall models then, the value associated with the sequential sums of squares will reveal any variables which make a significant contribution to the reduction in the sum of squares of the dependent variable. At the same time the t test associated with the values (also referred to as the partial regression coefficients) will reveal information regarding the interaction of the independent variables as they functionally relate to the dependent variable. Cases in which the Null Hypothesis regarding the contribution made by each independent variable and that regarding its role as a partial regressor were not treated in a like manner, raised suspicions as to the presence of a masking effect created by interaction among the independent variables.³ Such occurrences required the performance of a stepwise regression procedure to eliminate the non-significant variables causing the masking effect.

As is evident, for the dependent variable LPC, the independent variables polarization ($F_{SS}=7.566$, $P<.007$) ($t=2.526$, $P<.012$) and stratification ($F_{SS}=4.496$, $P<.034$) ($t=2.325$, $P<.020$) were significant in terms of both their contributions to the overall reduction of the sum of squares and their role as partial regressors. Independent variable GAS, on the other hand, showed a significant contribution to the reduction in the sum of squares ($F_{SS}=2.694$, $P<.099$) however it was not significant as a partial regressor ($t=1.020$, $P<.310$).

For dependent variable GAS, group performance ($F_{SS}=14.845$, $P<.000$) ($t=2.366$, $P<.020$), sport-athletic orientation ($F_{SS}=9.428$, $P<.003$) ($t=2.871$, $P<.005$) and hedonic tone ($F_{SS}=3.193$, $P<.073$) ($t=1.745$, $P<.080$) showed significance in both categories while stratification ($F_{SS}=2.737$, $P<.097$) ($t=1.344$, $P<.178$) revealed a split decision.

Sport-athletic orientation as a dependent variable was affected by only one statistically significant regressor; that being GAS ($F_{SS}=8.346$, $P<.004$) ($t=2.871$, $P<.005$). In view of the fact that this dependent variable did not produce a statistically significant regression equation for the whole eight variable model (Table VIII), this was to be expected.

The results thus far did indeed indicate the need to proceed with the stepwise regression procedure. Not only did evidence exist to confirm the presence of a masking



effect, the information gleaned from the analysis of the data thus far was not deemed sufficient.

The stepwise procedure begins by selecting the best one variable regression model and proceeds to add the next best significant variable as long as a minimum two percent increase in the coefficient of determination (R-square) is attained. The results are presented in Tables XI, XII, and XIII.

For the dependent variable LPC (Table XI), the best one variable regression model was represented by independent variable polarization ($F=7.432$, $P<.0075$) which can be attributed with 6.3% of the reduction in the total sum of squares. The next best variable (stratification) was then added to form the best two variable model ($F=6.118$, $P<.0034$) which produced an R-square improvement of .39 for a total R-square of .102 (10.2% of the reduction). The third and final variable which could be added while still producing the minimum 2% improvement in R-square and maintaining a statistically significant regression equation was GAS ($F=5.072$, $P<.0029$) (R-square=.124 or 12.4%).

For the dependent variable GAS (see Table XII), the best one variable regression model was represented by the variable group performance ($F=13.263$, $P<.0007$) (R-square=.109 or 10.9%). The best two variable model was represented by the addition of sport-athletic orientation ($F=11.644$, $P<.0001$). The addition of this variable produced an improvement in R-square of .68 for a total R-square of .177

VARIABLES IN MODEL	MEAN SQ. F-VALUE	PROB. F	SEQUENTIAL S.S. F-VALUE	PROB. F	PARTIAL S.S. F-VALUE	PROB. F	B VALUE	T	PROB T	R-SQUARE
POLARIZE	7.432	.0075	7.432	.0075	7.432	.0075	.252	2.726	.0075	.0638
POLARIZE	6.1184	.0034	7.675	.006	11.957	.0011	.274	3.458	0.001	
STRATIF.			4.561	.033	4.561	.033	.250	2.135	0.033	.102
POLARIZE			7.802	.006	10.781	.001	.341	3.283	.001	
STRATIF.	5.072	.0029	4.637	.031	4.632	.031	.222	2.152	.031	.124
CAS			2.778	.094	2.778	.094	.151	1.666	.094	

TABLE XI

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE L.P.C.

VARIABLES IN MODEL	MEAN SQUARE F-VALUE	PROB. > F	SEQUENTIAL S.S. F-VALUE	PROB. > F	PARTIAL S.S. F-VALUE	PROB. > F	B VALUE	T	PROB > T	R-SQUARE
GROUP PER	13.263	.0007	13.263	.0007	13.263	.0007	.32937	3.642	.0007	0.109
GROUP PER	11.644	.0001	14.243	.0005	13.566	.0006	.32159	3.683	.0006	0.177
SPORT ATH.			9.046	.0036	9.046	.00036	.26260	3.008	.00036	
GROUP PER			14.523	.0005	6.886	0.009	.2503	2.624	.0097	
SPORT ATH.	8.957	.0001	9.223	.0033	9.206	0.003	.2623	3.034	.0034	.201
UED. TONE			3.124	.0763	3.124	0.076	.1686	1.767	.0753	
GROUP PER			14.756	.0004	9.4000	.00031	.31195	3.066	.00031	
SPORT ATH.	7.506	.0001	9.372	.0031	8.579	.0044	.25193	2.928	.0044	
UED. TONE			3.174	.0740	4.709	.0303	.21374	2.170	.0303	.221
STRATIF.			2.721	.0981	2.721	.0981	.16807	1.649	.0981	

TABLE XII

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE GAS

VARIABLES IN MODEL	MEAN SQ. F-VALUE	PROB. > F	SEQUENTIAL S.S. F-VALUE	PROB. > F	PARTIAL S.S. F-VALUE	PROB. > F	B VALUE	T	PROB > T	R-SQUARE
GAS	8.717	.0041	8.717	.0041	8.717	.0041	.272	2.952	.0041	.074

TABLE XIII

STEPWISE REGRESSION PROCEDURE FOR DEPENDENT VARIABLE SPORTATH.

(or 17.7%). The next variable to be added was hedonic tone ($F=8.957$, $P<.0001$) which improved R-square by an additional .24 for a total of .201 (or 20.1%). The final variable to be added, thus achieving the best possible regression model for this independent variable, was stratification ($F=7.506$, $P<.0001$). This variable added the minimum requirement of a 2% improvement in R-square for a total R-square of .221 (or 22.1%).

In the case of the dependent variable being sport-athletic orientation (Table XIII), only one variable produced a statistically significant reduction in the total sums of squares and thus only a one variable model was accepted by the stepwise regression procedure. That variable GAS ($F=8.717$, $P<.041$) produced an R-square of .074 which accounts for only 7.4% of the reduction in the total sum of squares of the dependent variable.

In the above cases the partial regression coefficient (β value) associated with each independent variable was statistically significantly different from zero.

The best regression models for each dependent variable are presented in equation form along with the coefficient of determination in Table XIV. It should be noted here that the coefficients of determination are lower than those presented in Table VIII. The reason for this is explained simply in terms of cost-benefit ratio. With respect to none of the dependent variables did the addition of one more variable increase the coefficient of determination a minimum of 2%. The cost then of obtaining measures

EQUATION	COEFFICIENT OF DETERMINATION
$\text{LPC} = -9.721 + 0.341 (\text{Polarize}) + 0.22 (\text{Stratif.}) + 0.151 (\text{GAS})$	12.4%
$\text{GAS} = 0.00 + 0.312 (\text{Group Per}) + 0.252 (\text{Sport Ath.}) + 0.214 (\text{Hed. Tone}) + 0.168 (\text{Stratif.})$	22.1%
$\text{SPORT ATH.} = 0.000 + 0.272 (\text{GAS})$	7.4%

TABLE XIV

Best Regression Equations For Each Dependent Variable

of the variables required to raise the coefficient of determination to the levels presented in Table VIII would far outweigh the benefits obtained by so doing.

Interpretation of the Data

Table XV presents a summary of the decisions made regarding the original four null hypotheses presented in Chapter II. Of these four null hypotheses, one was rejected and two were partially rejected at the .10 level of significance based on the data.

To begin with, the data indicate, not surprisingly, that the conveners are not a homogenous group with respect to their leadership style. They rather have shown themselves to be normally distributed about the sample mean.

The regression equation for dependent variable LPC indicates that from a starting point of -9.271, the LPC score increases .341 units for each unit increase in the polarization score; .222 units for each unit increase in the stratification score and .151 units for each unit increase in the group atmosphere score. The implication follows that greater degrees of unity of purpose and stratification (hierarchical division) promote the induction of a human relations (high LPC) oriented convener who in turn will perceive the group atmosphere pleasant and accepting. Increases in these three parameters would increase the favourableness of the situation for the leader to a moderate level at best. According to Fiedler's model, moderate favourableness should result in a human relations

NULL HYPOTHESIS	DECISION
WITH RESPECT TO LEADERSHIP STYLE (LPC), THE WITHIN GROUP VARIANCE OF THE CONVENERS WILL NOT BE SIGNIFICANT	REJECTED
THERE WILL BE NO SIGNIFICANT RELATIONSHIP BETWEEN LPC SCORES OF THE CONVENERS AND:	REJECTED
GROUP PERFORMANCE	REJECTED
POLARIZATION	REJECTED
SPORT-ATHLETIC ORIENTATION	REJECTED
PARTICIPATION	REJECTED
STRATIFICATION	REJECTED
HEDONIC TONE	REJECTED
LEADER-MEMBER RELATIONS	REJECTED
VISCIDITY	REJECTED
THERE WILL BE NO SIGNIFICANT RELATIONSHIP BETWEEN LEADER MEMBER RELATIONS, AND:	REJECTED
GROUP PERFORMANCE	REJECTED
POLARIZATION	REJECTED
SPORT-ATHLETIC ORIENTATION	REJECTED
PARTICIPATION	REJECTED
STRATIFICATION	REJECTED
HEDONIC TONE	REJECTED
LEADERSHIP STYLE	REJECTED
VISCIDITY	REJECTED
THERE WILL BE NO SIGNIFICANT RELATIONSHIP BETWEEN SPORT ATHLETIC ORIENTATION AND:	REJECTED
GROUP PERFORMANCE	REJECTED
POLARIZATION	REJECTED
LEADER MEMBER RELATIONS	REJECTED
PARTICIPATION	REJECTED
STRATIFICATION	REJECTED
HEDONIC TONE	REJECTED
LEADERSHIP STYLE	REJECTED
VISCIDITY	REJECTED

TABLE XV

Decisions Regarding Null Hypotheses

oriented leader producing an increase in group performance. This is born out in part by the series of student t tests indicating that significantly different groups in terms of group atmosphere were indeed significantly different in the same direction in terms of group performance.

The regression equation for dependent variable GAS indicates that starting from the origin, the GAS score increases .312 units for each unit increase in group performance; .252 units for each unit increase in the sport-athletic orientation; .214 units for each unit increase in hedonic tone; and .168 units for each unit increase in stratification. The implications of this equation offer some interesting contrasts. Firstly, the most important consideration in the interpretation of the group atmosphere by the convener is group performance. This is theoretically understandable in that a group which is operating smoothly with a minimal amount of dysfunctional conflict and with members who care about and are confident in the well-being and stability of the group, would expect to be perceived as favourably accepting its leader. The sport-athletic continuum scale, it will be remembered, is structured such that a high score indicates an orientation towards athletics. The relationship indicated by this equation is one in which the second most important factor in the leader's perception of a pleasant group atmosphere is that of athletic orientation. The third variable, hedonic tone, indicates an expected positive relationship between the

degree of pleasurable associated with group membership as perceived by the members and the degree of acceptance perceived by the leader within his group. The final variable, stratification, indicates a positive relationship between the level of hierarchical division within the group and the leader's perception of acceptance.

The final equation relating to the dependent variable sport-athletic orientation reveals an increase in this orientation of .272 units per unit increase in the convener's perception of the group atmosphere. This was to be expected in view of the relationship revealed in the equation pertaining to group atmosphere and the absence of more significant variables in the sport-athletic equation. In view of this inverse relationship and the absence of more than one independent variable in addition to the negligible coefficient of determination, the sport-athletic orientation as a dependent variable will be deleted from further discussion.

Summary

Of the original 131 questionnaires distributed, 84.7% were returned in usable form. Included in these returns were the instruments sent to the conveners of all sixteen groups asked to participate. The mean raw scores for each group and the simple statistics regarding each variable are presented in Tables II and III.

The two instruments (group performance scale and

the sport-athletic orientation scale) developed by the author for this study were both successful in meeting the criteria designed into the study as indicators of validity and reliability.

In an effort to study the interaction of the three variables LPC, GAS, and group performance to see if the patterns of interaction reported by Fiedler would manifest themselves in this study, the correlation coefficients for LPC and group performance were calculated for groups with significantly different group atmosphere scores. In that no significant results were obtained via this procedure, a different approach was taken. As Table VII indicates, groups rating high on the group atmosphere scale also rated significantly higher on the group performance scale than did low GAS groups thus indicating a direct relationship between situational favourableness and group performance. The variable LPC, however, could not be convincingly tied into this relationship, since the LPC of high and low GAS groups was not significantly different and the group performance of high and low LPC groups was not significantly different. The support for the applicability of Fiedler's model was found in that if the relationships were identical to those reported by Fiedler the latter two tests would not necessarily reveal significant differences.

The chi square performed to test for homogeneity among the sixteen conveners with respect to leadership style revealed that the conveners were normally distributed but

were not a homogenous group. This finding led to the rejection of the first null hypothesis.

A macro-examination of the regression analysis revealed that with all eight independent variables included, dependent variables LPC and GAS produced statistically significant models at $P = .045$ and $P = .0003$ respectively. The coefficients of determination for these models were calculated to be 0.140 (14%) and 0.255 (25.5% respectively). In that dependent variable sport-athletic orientation did not produce a statistically significant model, the remaining parts of the chapter, while still reporting on sport-athletic orientation, focused attention on LPC and GAS.

The best possible regression model for dependent variable LPC included independent variables polarization, stratification, and GAS which accounted for 12.4% of the reduction in sums of squares. For dependent variable GAS the best possible regression model included independent variables group performance, sport-athletic orientation, hedonic tone and stratification accounting for 22.1% of the reduction in sums of squares. These findings led to the partial rejection of the second and third hypotheses.

FOOTNOTES--CHAPTER IV

¹Henry E. Garrett, Statistics in Psychology and Education (New York: David McKay Company, 1966), p. 339.

²Robert G. Steel, James H. Torrie, Principles and Procedures of Statistics (New York: McGraw-Hill Book Co., 1960), pp. 279-280.

³Ibid., p. 277.

CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION AND RECOMMENDATIONS.

The science of administration is currently involved in the evolution of what is hoped to be a general theory of administration. Physical educators as well as sport and athletic administrators must become involved in this process to a greater degree as the development of a reciprocal theory-practice relationship requires input regarding every practical situation in which it is hoped that benefit will be derived. The present situational behavioural approach to leadership recognizes this requirement implicitly. Since the interrelationships of situational and behavioural variables reported in the literature regarding other administrative and leadership situations are not necessarily generalizable across all situations, there exists a need for those involved in administrative environments to examine both variables identified in previous research and those which appear to be unique to their particular areas. Only when data regarding the interaction of behavioural and situational variables within all situations have been analyzed, will there be the possibility of realizing the objective of a generalizable theory of administration.

A perusal of the existing literature revealed a significant contribution from the field of education and a limited contribution from physical education. Even more limited was the contribution relating to the "grass roots" administrative level of educational or minor sport and athletic organizations. Moreover, the literature relating specifically to the study of leadership within these organizations was non-existent.

This lack of empirical research pertaining to leadership situations found within the informal unstructured branches of sport and athletic organizations served to motivate the undertaking of this study. The importance of the leadership roles and the environmental variables with which they interact is currently being evidenced by a young but growing body of literature based upon related data gleaned from organizations of this nature. Many questions pertaining to the practical situations peculiar to sport and athletic organizations and the theoretical relationships of the patterns of variable interaction within these situations to those reported across other situations remain unanswered. What variables, unique to these situations, are at work? How do these variables interact with those common to other situations? What relevance is there to be found within the existing literature for the practitioners in these organizations?

No one study, particularly the inaugural endeavour in any specific situation, could hope to answer all of these

questions conclusively. The patterns of variable interaction are far too complex and the number of environmental factors far too great to anticipate examining all combinations and permutations. It is far more practical to delimit the scope of the objectives to a realizable level. This study reflected such a delimitation in that it sought only to define some of the patterns of behavioural and situational variable interactions within this specific context. In so doing, it was felt that implications for the application of theoretically based interrelationships could be initiated. Moreover, new questions were sought which would serve as hypotheses to guide further research into an area which truly exhibited a need.

Summary

The major purpose of this study was three-fold. Firstly, to identify and analyze any possible trends pertaining to the leadership style of high school athletic association conveners. Secondly, to identify some situational variables relevant to these groups which show a relationship to any of Fiedler's four crucial variables; and finally, upon identification of any significant relationships, to formulate hypotheses and recommendations for further study.

The following null hypotheses were posited to direct this investigation:

1. With respect to leadership style (LPC), the within group variance of the conveners will not be significant.

2. There will be no significant relationship between the LPC scores of the conveners and any of group performance, polarization, sport-athletic orientation, participation, stratification, hedonic tone, leader member relations or viscosity.

3. There will be no significant relationship between leader-member relations and any of the aforementioned variables.

4. There will be no significant relationship between the league's sport-athletic orientation and any of the aforementioned situational variables.

The data were subjected to several different statistical analysis techniques. To begin with, the two scales (Sport-Athletic Orientation and Group Performance) developed by the author for this study were tested for reliability and validity via criteria designed into the study for that purpose. Reliability coefficients were calculated via the split-half reliability method using the Spearman Brown prophecy formula. The resultant reliability coefficients of .69 (sport-athletic orientation) and .89 (group performance) were both deemed acceptable. The validity criteria involved the following operations. For group performance, validity was determined by comparing the simple correlation coefficients between the group performance score and Hemphill's group dimensions of viscosity, participation, and hedonic tone with those coefficients obtained by Hemphill in an earlier study.¹ In each case

the coefficients were close to or greater than those reported by Hemphill. The criteria for the sport-athletic orientation scale involved a comparison of the rank-order placement of the sixteen leagues obtained via the scale with that obtained from a panel of three independent judges. The resulting agreement between the two methods was seventy-five percent.

The second step involved the analysis of the interaction of the variables leadership style (LPC), leader-member relations (GAS) and group performance to determine if the pattern of interaction obtained in this study was similar to that reported by Fiedler. The initial attempt at using the technique reported by Fiedler of calculating correlation coefficients for LPC and group performance for opposite extremes of GAS (which would alter the situational favourableness from low to moderate) was inconclusive in that the coefficients were not significant. In light of the fact that an insufficient sample size may have been a contributing factor, an alternative technique was employed. Using a series of student t tests, it was found that significantly different groups in terms of leader-member relations were also significantly different in terms of group performance. Stated differently, as the situational favourableness moved from low to moderate, group performance improved significantly which Fiedler's model has suggested would be the case. Fiedler's model, however, views group performance as a function of both LPC and GAS in that, as he

states, a high LPC leader will be most effective in terms of group performance in a situation of moderate favourableness. The data presented here, unfortunately, is unable to confirm this pattern of interaction because the t tests can only incorporate two of the three variables. A third consideration must also be taken into account. Fiedler's model is based upon data collected solely from interacting groups. The groups involved in this study incorporate some characteristics counteracting groups as well. The implications involved here will be discussed more thoroughly later in this chapter.

The next phase of the analysis involved performing a chi-square test on the conveners' LPC scores to determine if in fact they were a homogeneous group with respect to their leadership style. The results clearly indicated that their scores were normally distributed about the sample mean which led directly to the rejection of the first null hypothesis.

The final stage involved the regression analysis which was divided into two parts. Firstly, a macro-analysis was performed in which all independent variables were included in the regression analysis for each dependent variable. This led to the partial rejection of the second and third null hypotheses since a significant reduction in the sums of squares of both dependent variables LPC and GAS was found to be caused by regression. Since a masking effect was observed in both of these models, the decision

was made to proceed with the second part, a stepwise procedure. This procedure accepted into the regression model only variables which succeeded in making a contribution to the reduction in the sum of squares of the dependent variable which was unattributable to any other source in the model and which attained a minimum improvement in the coefficient of determination of two percent. With respect to the dependent variable LPC, the significant regressors were found to be polarization, stratification, and leader member relations. For dependent variable GAS, group performance, sport-athletic orientation, hedonic tone and stratification were included in the model as significant regressors. The coefficients of determination for these models were twelve point four percent and twenty-two point one percent respectively.

Conclusions

The results of this study appear to support the following contentions. Firstly, Fiedler's concept of leadership style being a manifestation of the underlying psychological need structure of an individual did indeed serve to distinguish among the leaders of these high school athletic association league groups of coaches. Moreover, the patterns of interaction among Fiedler's four crucial variables of LPC, group atmosphere (as perceived by the leader), task structure, and position power in conjunction with group performance that were observed in this study do

not contradict those patterns reported by Fiedler. The significance of the correlation coefficients dealing with these interactions presented in Table IV cannot be accepted. However, while the t tests reported in Table V incorporate only two of the three variables involved, the results show nothing to contradict the fact that Fiedler's stated hypothesis regarding the pattern of interaction of these variables may well be supported by these data. This finding alone represents support for the view that a generalizable theory of leadership effectiveness is applicable within the confines of a high school athletic association league.

Upon close examination of the regression equations for the dependent variables LPC and GAS, the following interactions were noted. To begin with, leadership style regressed upon (in order of importance) polarization, stratification and the leader's perception of group atmosphere. In other words, groups which were oriented toward a single goal which was clear and specific to all members and, to a lesser extent, tended to perceive status hierarchies appeared to select a human relations oriented convener who viewed himself as accepted by the group. With respect to the leader's perception of group acceptance as the dependent variable, conveners who interpreted their group's acceptance of themselves as high appeared to associate this interpretation with: (1) a high level of performance; (2) a group which is athletically oriented; (3) members who perceived group membership as a pleasant and agreeable experience; and

(4) a group which tended to order itself into status hierarchies.

Based on these findings, the following conclusions in terms of their respective original null hypotheses, appear to be justified:

1. These high school athletic association league conveners are not a homogeneous group with respect to their leadership style.
2. Within these groups, there is a relationship between the leadership style of the convener and the degree of polarization, the level of hierarchical stratification, and the leader-member relations as perceived by the convener.
3. Within these groups, there is a relationship between the leader-member relations, as perceived by the convener and the level of group performance, the sport-athletic orientation of the group, the level of hedonic tone, and the level of hierarchical stratification as perceived by the members.

Discussion

While recognizing the limitations imposed by the descriptive nature of this study, optimism is generated for both the practical and theoretical implications of these data.

In terms of the practical implications, it is interesting to note that the variables selected as regressors in both significant equations point to the

hypothesis that a relationship exists between the status quo of the groups and the type of leader they selected. High degrees of polarization and stratification indicate the presence of little dysfunctional conflict regarding the recognition and acceptance of the group's ultimate goal as well as each member's relative position in the status hierarchy. Thus, groups which exhibited this consensus and security in the knowledge of their goal direction and their members' relative internal status, tended to prefer the relationship oriented, quasi therapeutic, considerate atmosphere created by a human relations oriented leader who, in turn, perceived the leader-member relations in the group as favourable. This finding is in support of Fiedler's contention that groups of high LPC leaders exhibit greater levels of cohesiveness and satisfaction with both the task and the members themselves.²

The variables selected with respect to the dependent variable GAS further support the status quo hypothesis. The GAS equation included the variables of group performance, sport-athletic orientation, hedonic tone and stratification. The first two of these relate to the contention by Ellul, cited earlier,³ that our technological society's work ethic requires a high level of performance in both work and leisure. He adds that the performance and competitive demands of athletics, as opposed to sport, satisfies this requirement. In essence then, the leaders of these groups, by positively relating their perception of leader-

member relations to the level of group performance and athletic orientation, are conforming to the societal norms governing this situation. The remaining variables hedonic tone and stratification relate to the members' perception of satisfaction associated with group membership and the absence of uncertainty regarding status hierarchy as they pertain to the convener's perception of the leader-member relations.

The term status quo then refers to the relative absence of dysfunctional conflict within the group regarding goal direction and status as well as the recognition of societal norms governing performance and athleticism. In both equations (see Table XIV), the parameters were positively related to the dependent variables. Moreover, the equations were linked by the presence of stratification in both and the selection of GAS as a significant regressor for the dependent variable LPC. It would seem justified then to conclude that smoothly functioning groups, relative to the criteria presented above, tended to select, accept, and perform well under a human relations oriented leader.

With specific reference to the literature reviewed in Chapter I, the findings of this study offer some interesting insights. To begin with, as previously noted, these findings support Fiedler's contention that there is a positive correlation between the leader's LPC score and the level of cohesiveness and satisfaction with both the task and the members, as perceived by the members. In addition,

support exists for Fiedler's findings in both the Dutch male college student study⁴ and the hypnotic study.⁵ With specific reference to groups inhabiting octants 4 and 8 of his model, Fiedler found a positive correlation between LPC and group performance in those groups which by virtue of good leader member relations, low position power, and unstructured tasks project a moderately favourable situation for the leader and thus fit into octant 4. Conversely, he noted a negative correlation between LPC and group performance in similar groups in which poor leader member relations made the situation very unfavourable and thereby placed them in octant 8. The findings presented here reveal a similar pattern. LPC and GAS are positively linked by virtue of the LPC equation. GAS and group performance are positively linked by virtue of the GAS equation. Thus, as the leader-member relations improved and transferred the group to octant 4, both the group performance and the LPC score of the leader increased. The similarity, however, ends here in that the converse is not true. The regression equations indicate, through a lack of negative relationships, that these high school athletic league groups of coaches are not well suited to a task oriented (low LPC) leader. Unlike Fiedler's finding that a low LPC leader was most effective in terms of group performance in those groups exhibiting the very unfavourable situation characteristic of octant 8, the findings of this study indicate that groups such as these selected a task oriented leader and

were, in general, less effective.

The most plausible hypothesis with which to test this phenomenon appears to be rooted in Fiedler's limited findings regarding counteracting groups. This classification is characterized by groups involved in bargaining and negotiation and, as Fiedler et al have found, produce the best results under a task oriented leader who perceives the leader-member relations as good or a human relations oriented leader who perceives the leader-member relations as poor.⁶ Fiedler postulated that tense situations, found in counteracting groups not accepting their leader, are eased by the human relations oriented leader which allows the group members to perform more effectively.

Consistent with this train of thought, the data presented in this study suggest that the classification of these groups, in terms of whether they are interacting or counteracting, is in part dependent upon the degree of polarization and stratification. The LPC regression equation indicates that groups experiencing conflict over goal direction and clarity (polarization), as well as uncertainty or rejection of any defined status hierarchy tended to choose a task oriented leader who perceived himself as not accepted by the group. This perception of non-acceptance, in turn, was related in the GAS equation to the members' perception of poor group performance, sport orientation, poor hedonic tone and little or no stratification. Thus it would appear that these groups were

involved in an internal negotiation process over goal direction and they perceived no status hierarchy to aid in the influence of fellow members. The acceptance of this reasoning satisfies Fiedler's criterion requirements for classification as counteracting groups. Moreover, the group's selection of a task oriented leader whose perception of leader-member relations is poor, and their concomitant perception of poor group performance are consistent with Fiedler's hypothesis regarding counteracting groups.

It is hypothesized, then, that the groups involved in this study may be classified as to being either interacting or counteracting by virtue of the group's degree of polarization and stratification. A low score on these parameters indicates not only a change of the group's task from that of operating the league to that of negotiating goal direction, but also reflects a state of anarchy in that no member or members are recognized as having superior status with which to influence the rest of the group toward consensus. Moreover, the indicated tendency to select a task oriented leader and then not accept him serves to perpetuate the ineffectiveness of the group performance. This hypothesis is consistent with Fiedler's finding that counteracting groups are most effective under a human relations oriented leader who is not accepted or a task oriented leader who is.

Admittedly, the data presented in this study do not support the conclusive determination of cause-effect

relationships among the variables involved in the regression equations. Rather it has been possible to conclude only that relationships do exist. However, a theory-practice bond involves the development of new hypotheses for future study. Implicit in this goal is the responsibility of researchers to seek out cause-effect relationships which appear to be supported in the literature, upon which to base hypotheses for further study. The remainder of this chapter will represent an attempt to accomplish just that.

As has been noted, the data presented in this study indicate that the leadership position in these coaches groups is best suited to a human relations oriented leader. A hypothesis has been suggested to account for the fact that task oriented leaders are not effective in those coaches groups inhabiting octant 8, which is contrary to what Fiedler's data regarding interacting groups suggests. The reason for this phenomenon appear to be rooted in both the situation and the psychological determinants of leadership style. As noted in Chapter I, Fiedler contends that the implicit personality theory of the high LPC person separates work performance and personality while the low LPC individual links poor performance with undesirable personality characteristics. This results in low LPC individuals being task oriented and critical of others in a work situation while high LPC individuals seek to maintain pleasant interpersonal relations. It was further noted that the results from a study of aircraft crews indicated

that high LPC leaders relate to the group more like a peer than a superior.

The groups involved in the present study, according to the data presented, generally rejected a task oriented leader and accepted a human relations oriented leader. This, in light of Fiedler's contentions, is not at all surprising. These coaches' groups are in effect peer groups. The members, for all intents and purposes, possess relatively similar backgrounds in terms of education and interest in the sport they coach. Their coaching credentials, in effect, are distinguished only by experience and won-lost record. Moreover, the convener is either chosen or emerges from the group itself. Thus, it is not surprising that the response to a convener who is task oriented to the detriment of social relationships and critical of performance is rejected. Nor is it surprising that a human relations oriented convener who maintains good interpersonal relations and relates as a peer is accepted.

Carried one step further, this point provides insight into the relationships suggested by the other institutional variables involved in the regression equations. Fiedler has noted that human relations oriented leaders will be concerned with performance to the extent that it affects interpersonal relations within the group. This explains the dominant position of group performance as an independent variable in the GAS equation. It is also theoretically justifiable to label the remaining variables in this

equation as causes or independent variables as they affect the dependent variable GAS. Athletic orientation, as noted before, connotes social conformity and hedonic tone is self explanatory. Stratification refers to the recognition and acceptance of an informal status hierarchy within the group. The stability provided by this in conjunction with the fact that the leader, in all probability, was chosen from the upper end of the hierarchy lends credence to its acceptance as an independent variable.

The LPC equation, on the other hand, presents difficulty in associating specific variables with either a cause or effect role. The relationship of GAS and LPC in this equation is the easiest to interpret. Since these groups appear to be most suitable to human relations oriented leaders, it is likely that this parameter affects the leader-member relations. It must also be determined, however, how polarization and stratification relate to LPC. In other words, do highly polarized and stratified groups choose human relations oriented leaders or do human relations oriented leaders encourage highly polarized and stratified groups?

The answer to this question, it is felt, lies partially in the work of Fiedler. Highly polarized groups which also exhibit informal status hierarchy would, in all probability select a convener from the upper end of the status hierarchy. In terms of Fiedler's view of a task oriented individual being critical in a task situation, it

is highly doubtful that a person exhibiting this characteristic would be placed in the upper end of the status hierarchy, let alone chosen as the convener, in an informally structured peer group. Thus, a human relations oriented convener who, in the interest of maintaining good interpersonal relations, would perpetuate the group goal and maintain the status quo would be accepted. Consideration of the alternative to this situation, that concerning a group exhibiting low degrees of polarization and stratification, requires the assumption that a task oriented leader would, by definition, be highly motivated toward a clear personal perception of the group goal. The lack of consensus on the part of the group regarding this goal, as well as the lack of an informal status hierarchy, would, as previously hypothesized, constitute a counteracting group. Furthermore, the lack of an informal status hierarchy would facilitate a situation in which the designated leadership role was more accessible to all members. Consequently it is likely that the task oriented individual, by virtue of his goal perception and motivation, would be in a position to strive for and attain the position of convener. Since the task oriented leader, as previously discussed, would not be accepted by the group, the situation would not be conducive to his style. The result would include the perpetuation of conflict over goal direction as well as poor group performance.

The significance of these insights is twofold.

Firstly, it has been demonstrated that the leadership style of the convener does interact with certain situational variables and is important in regard to the effectiveness of these groups. Secondly, and more importantly in terms of succeeding research efforts in this area, the data have presented sufficient evidence to indicate that Fiedler's model and thus the theoretical base involved in its evolution has relevance to this specific situation. The acceptance of this postulate infers implicitly that data regarding the variables at work within these informal unstructured groups of high school athletic association league coaches may be entered into a reciprocal theory-practice relationship with those being employed in the evolution of a general theory of administrative science.

In terms of Halpin's paradigm, the initial steps toward the establishment of this theory-practice relationship have been taken. Some of the variables associated with administrator behaviour at work within this situation have been identified (Panel III). Concepts such as polarization, stratification, leader-member relations, group performance, and hedonic tone serve as links to indicate that insights may be gleaned from the literature and that feedback may be provided as a contribution to the body of knowledge. Unique concepts such as sport-athletic orientation provide evidence to support the situational behavioural approach to leadership theory as well as to stimulate the imagination of prospective researchers in this area.

The success of Fiedler's LPC measure of leadership style demonstrated that the behaviour of the administrator (Panel II) can be accurately assessed in this specific situation which, not unlike other situations, inhibits the accuracy of direct observation of behaviour.

Finally, and most importantly, a step has been taken toward relating the behaviour of the administrator to an intermediate criterion of effectiveness. The group performance scale developed for this study satisfied the criteria designed to provide a cursory indication of validity. Moreover, if the evidence relating to its interaction with leadership style and situational favourableness can be accepted, not only is support for the validity of this scale enhanced, the overall applicability of the situational behavioural approach to administrative theory in this situation is supported.

Recommendations

The results of this study provide evidence to support the following contentions:

1. Empirical research in this situation based on the developing body of literature dealing with administrative and more specifically leadership theory can be fruitful.
2. There is a definite need for further exploration into specific areas within the informally structured administrative groups of educational and minor sport.

With respect to the data presented in this study along with the literature currently in existence dealing

with both administrative theory and sport, athletics and recreation, the following questions appear relevant.

1. What situational variables and/or variables associated with administrator behaviour exist within these types of groups which have not been accounted for in this study?
2. Based upon the present concern being expressed over the desirability of highly competitive athletics for participants at various age levels, how will changes in sport-athletic orientation affect:
 - (a) behaviour of the administrator
 - (b) changes in organization maintenance
 - (c) changes in organization achievement
 - (d) the task

Based upon the data presented in this study, the following hypotheses for further study appear justified with respect to the high school athletic association league groups of coaches involved in this study.

1. Coaches groups characterized by a high degree of unity of purpose and goal clarity toward an athletic orientation tend to informally structure themselves into a status hierarchy from which they will choose, accept, and perform well under a human relations-oriented leader.
2. Coaches groups may be classified as predominantly interacting with the degree of polarization and informal stratification to a large extent determining to what

extent counteracting characteristics will be brought into effect.

3. Task-oriented leaders, in general, are less effective in terms of group performance than human relations-oriented leaders in these groups.

Clearly then, a considerable amount of fruitful research awaits researchers interested in assimilating a body of literature relating the practical situations in these types of organizations to the general theory of administration. With this in mind, the following recommendations appear to have high priority:

1. A replication of this study involving the variables determined to be significant here in conjunction with a different set of situational variables to be gleaned from the literature pertaining to both administrative and leadership theory and sport and athletics.
2. The investigation of a much larger sample which will serve to strengthen the power of statistical inference as well as permit the study of the effects of changes in societal norms and local conditions.
3. An investigation dealing with similar groups across different levels of educational athletic associations as well as minor league sport and community recreation organizations.
4. An investigation of similar groups involved in the administration of women's athletic associations.

5. A comparative study of group leaders in sport and athletic organizations with group leaders in volunteer and service groups involved in other areas of endeavour.
6. Investigations designed to test the specific hypotheses derived from these results and presented earlier in this chapter.

FOOTNOTES--CHAPTER V

¹Supra, p. 71.

²Supra, p. 23.

³Supra, p. 42.

⁴Supra, p. 28-30.

⁵Supra, p. 30-31.

⁶Fred E. Fiedler, A Theory of Leadership Effectiveness (New York: McGraw-Hill Book Co., 1967), p. 223.

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APPENDIX A

Dear Sir,

I am writing you, as a fellow Physical Educator, with the hope of obtaining your assistance in a matter which may well prove to be of great importance to the future of our profession.

Enclosed you will find a series of questions which are designed to tap information which only you can provide, this information relates to the leadership style exhibited by high school athletic conveners and how this style interacts with the various dimensions at work within the group of coaches connected with a particular sport. The importance of this study lies mainly in the fact that the results will help guide us toward the most efficient means of achieving a more satisfying and effective administration of high school athletics. This, I should think, is a goal we should never cease trying to attain.

I would like to make it clear that there are no right or wrong answers connected with any of the items, and no value judgments can or will be made regarding the responses. Moreover, since the questionnaires are coded only as to the group to which you belong (i.e. WSSA hockey coaches), complete anonymity is guaranteed.

The groups which are being requested to take part include:

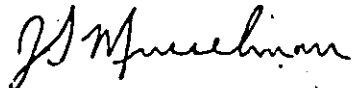
WSSA hockey	ECSSA hockey	KCSSA hockey
WSSA football	ECSSA football	KCSSA football
WSSA basketball	ECSSA basketball	KCSSA basketball
WSSA wrestling	ECSSA wrestling	KCSSA wrestling
WSSA soccer	ECSSA soccer	KCSSA soccer
WSSA volleyball	ECSSA volleyball	KCSSA volleyball

I would like to ask that you read the instructions for the questionnaires carefully, and respond to the items involved. This process can easily be completed in 20 minutes or less. Then simply place the forms in the envelope as I will be around to pick them up on Thursday May 2, or Friday May 3. This is necessitated by the current mail strike.

Your cooperation is strictly voluntary and it will be extremely appreciated as it is vitally important to the completion of my Master's Degree that I obtain a full sample.

If you have any questions please do not hesitate to call Dr. Gordon A. Olafson, at the University of Windsor, or myself at 254-7024.

Sincerely,



John S. Musselman
Graduate Student
Faculty of P.E.E.
University of Windsor

APPENDIX B

IMPORTANT

Please read each of the following items carefully and respond by marking the descriptive adjective which most accurately describes your immediate and first reaction. This is NOT a test. There are no right or wrong answers. Simply respond in accordance with the way you see the league in which you coach (for the first 10 items), and the group of coaches with whom you work (for the remaining items) .

The term league constitutes the league in which you coach , while the term group refers to the group of coaches involved in running the league. Please respond to all items relative to the 1973 - 74 academic year .


APPENDIX C

IMPORTANT

The first two scales in the following pages (LPC and GAS) are accompanied by instructions for their completion . In completing the remaining items , read each carefully and respond by marking the descriptive adjective which most accurately describes your immediate and first reaction . This is not a test .

There are no right or wrong answers . . Simply respond in accordance with the way you see the league in which you coach and the group of coaches with whom you work.

The term league constitutes the league of which you are convener , while the term group refers to the group of coaches involved, with you, in running the league . Please respond to all items Relative to the 1973 - 74 academic year.



APPENDIX D

LPC

People differ in the ways they think about those with whom they work. This may be important in working with others. Please give your immediate, and first reaction to the items below.

Listed below are pairs of words which are opposite in meaning, such as Very Neat and Not Neat. You are asked to describe someone with whom you have worked by placing an "X" in one of the eight spaces on the line between the two words.

Example

Very Neat: 8 : X : 6 : 5 : 4 : 3 : 2 : 1 : Not Neat
 Very Neat : Quite Neat : Somewhat Neat : Slightly Neat : Slightly Untidy : Somewhat Untidy : Quite Untidy : Very Untidy

To describe a person as "Quite Neat" simply place an "x" as shown in the example.

Now think of the person with whom you can work least well. He may be someone you work with now, or he may be someone you knew in the past. Also, he may be related to any job or task.

He does not have to be the person you like least well, but should be the person with whom you had the most difficulty in getting a job done. Describe this person as he appears to you.

- Pleasant : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Unpleasant
- Friendly : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Unfriendly
- Rejecting : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Accepting
- Helpful : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Frustrating
- Unenthusiastic : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Enthusiastic
- Tense : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Relaxed
- Distant : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Close
- Cold : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Warm
- Cooperative : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Uncooperative
- Supportive : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Hostile
- Boring : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Interesting
- Quarrelsome : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Harmonious
- Self-Assured : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Hesitant
- Efficient : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Inefficient
- Gloomy : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Cheerful
- Open : _____ : _____ : _____ : _____ : _____ : _____ : _____ : Guarded

APPENDIX E

Group Atmosphere Scale

Describe the atmosphere of your group by checking the following items

- | | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 | |
|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|----------------|
| 1. Enthusiastic | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | Unenthusiastic |
| 2. Friendly | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | Unfriendly |
| 3. Accepting | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | Rejecting |
| 4. Satisfying | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | Frustrating |
| 5. Productive | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | Nonproductive |
| 6. Warm | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | Cold |
| 7. Cooperative | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | Uncooperative |
| 8. Supportive | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | Hostile |
| 9. Interesting | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | Boring |
| 10. Successful | _____ | _____ | _____ | _____ | _____ | _____ | _____ | _____ | Unsuccessful |

(completed by conveners only)

APPENDIX F

EXTREMELY VERY QUITE RATHER SLIGHTLY

- | | | | | | | |
|-----|--|-------|-------|-------|-------|-------|
| 1. | How important are gate receipts in helping the league to cover expenses? | _____ | _____ | _____ | _____ | _____ |
| 2. | How important is winning in this league? | _____ | _____ | _____ | _____ | _____ |
| 3. | How important is the character development of the athletes? | _____ | _____ | _____ | _____ | _____ |
| 4. | How keen is the competition in this league? | _____ | _____ | _____ | _____ | _____ |
| 5. | How important are play-offs (or championship tournament) in this league? | _____ | _____ | _____ | _____ | _____ |
| 6. | How important is the league's media image in making decisions in this league? | _____ | _____ | _____ | _____ | _____ |
| 7. | How conscious is this league of fan support and/or spectator attendance? | _____ | _____ | _____ | _____ | _____ |
| 8. | How much importance do teams attach to spending maximum possible time at practice? | _____ | _____ | _____ | _____ | _____ |
| 9. | How essential is it that a central committee or governing group be consulted with regards to decisions concerning league play? | _____ | _____ | _____ | _____ | _____ |
| 10. | How important is the welfare of the participating athletes considered in making decisions in this league? | _____ | _____ | _____ | _____ | _____ |

SPORT-ATHLETIC ORIENTATION SCALE

(completed by coaches only)

APPENDIX G

GROUP PERFORMANCE SCALE

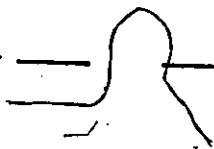
(completed by coaches only)

Please check the appropriate response to each item, as it pertains to your group.

	ALWAYS	MOSTLY	SOME TIMES	ALMOST NEVER	NEVER
1. Group meetings run efficiently.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I am proud to be a member of this group.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. This group is capable of handling any problem.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. This group is quick to recognize the need for change.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Conflict which arises in our group is sound, creative, and productive.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Policy decisions, once made require further debate and amendment before they are totally accepted.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Our sport runs as smoothly as can be expected.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Problems that are thought to be solved, reappear and have to be dealt with again.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Our group can't agree on problem solutions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Meetings do not accomplish the set task satisfactorily.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Changes are not made until the problem reaches serious proportions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Group members work together for the good of the league.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

APPENDIX H
GROUP DIMENSIONS

	<u>Definitely True</u>	<u>Mostly True</u>	<u>Not Sure</u>	<u>Mostly False</u>	<u>Definitely False</u>
1. The group is directed toward one particular goal.	_____	_____	_____	_____	_____
2. The group divides its efforts among several purposes.	_____	_____	_____	_____	_____
3. The group operates with sets of conflicting plans.	_____	_____	_____	_____	_____
4. The group has only one main purpose.	_____	_____	_____	_____	_____
5. The group knows exactly what it is to get done.	_____	_____	_____	_____	_____
6. The group is working toward many different goals.	_____	_____	_____	_____	_____
7. The group does many things that are not directly related to its main purpose.	_____	_____	_____	_____	_____
8. Each member of the group has a clear idea of the group's goals.	_____	_____	_____	_____	_____
9. The objective of the group is specific.	_____	_____	_____	_____	_____
10. Certain members meet for one thing and others for a different thing.	_____	_____	_____	_____	_____
11. The group has major purposes which to some degree are in conflict.	_____	_____	_____	_____	_____
12. The objectives of the group have never been clearly recognized.	_____	_____	_____	_____	_____
13. The opinions of all members are considered as equal.	_____	_____	_____	_____	_____
14. The group's officers hold a higher status in the group than other members.	_____	_____	_____	_____	_____
14. The older members of the group are granted special privileges.	_____	_____	_____	_____	_____



	<u>Definitely True</u>	<u>Mostly True</u>	<u>Not Sure</u>	<u>Mostly False</u>	<u>Definitely False</u>
15. The group is controlled by the actions of a few members.	_____	_____	_____	_____	_____
16. Every member of the group enjoys the same group privileges.	_____	_____	_____	_____	_____
17. Experienced members are in charge of the group.	_____	_____	_____	_____	_____
18. Certain problems are discussed only among the group's officers.	_____	_____	_____	_____	_____
19. Certain members have more influence on the group than others.	_____	_____	_____	_____	_____
20. Each member of the group has as much power as any other member.	_____	_____	_____	_____	_____
21. An individual's standing in the group is determined only by how much he gets done.	_____	_____	_____	_____	_____
22. Certain members of the group hold definite office in the group.	_____	_____	_____	_____	_____
23. The original members of the group are given special privileges.	_____	_____	_____	_____	_____
24. There is a high degree of participation on the part of the members.	_____	_____	_____	_____	_____
25. If a member of the group is not productive he is not encouraged to remain.	_____	_____	_____	_____	_____
26. Work of the group is left to those who are considered most capable for the job.	_____	_____	_____	_____	_____
27. Members are interested in the group but not all of them want to work.	_____	_____	_____	_____	_____
28. The group has a reputation for not getting much done.	_____	_____	_____	_____	_____
29. Each member of the group is on one or more active committees.	_____	_____	_____	_____	_____

	<u>Definitely True</u>	<u>Mostly True</u>	<u>Not Sure</u>	<u>Mostly False</u>	<u>Definitely False</u>
30. The work of the group is well divided among members.	_____	_____	_____	_____	_____
31. Every member of the group does not have a job to do.	_____	_____	_____	_____	_____
32. The work of the group is frequently interrupted by having nothing to do.	_____	_____	_____	_____	_____
33. There are long periods during which the group has nothing to do.	_____	_____	_____	_____	_____
34. There are several members of the group who generally take the same side on any group issue.	_____	_____	_____	_____	_____
35. Certain members are hostile to other members.	_____	_____	_____	_____	_____
36. There is constant bickering among members of the group.	_____	_____	_____	_____	_____
37. Members know that each one looks out for the other one as well as himself.	_____	_____	_____	_____	_____
38. Certain members of the group have no respect for other members.	_____	_____	_____	_____	_____
39. Certain members of the group are considered uncooperative.	_____	_____	_____	_____	_____
40. There is a constant tendency toward conniving against one another among parts of the group.	_____	_____	_____	_____	_____
41. Members of the group work together as a team.	_____	_____	_____	_____	_____
42. Certain members of the group are responsible for petty quarrels and some animosity among other members.	_____	_____	_____	_____	_____
43. There are tensions between subgroups which tend to interfere with the group's activities.	_____	_____	_____	_____	_____

	<u>Definitely True</u>	<u>Mostly True</u>	<u>Not Sure</u>	<u>Mostly False</u>	<u>Definitely False</u>
44. Certain members seem to be incapable of working as part of the group.	_____	_____	_____	_____	_____
45. There is an undercurrent of feeling among members which tends to pull the group apart.	_____	_____	_____	_____	_____
46. Personal dissatisfaction with the group is too small to be brought up.	_____	_____	_____	_____	_____
47. Members continually grumble about the work they do for the group.	_____	_____	_____	_____	_____
48. The group does its work with no great vim, vigor, or pleasure.	_____	_____	_____	_____	_____
49. A feeling of failure prevails in the group.	_____	_____	_____	_____	_____
50. There are frequent intervals of laughter during group meetings.	_____	_____	_____	_____	_____

APPENDIX I

Column	Variable
1 & 2	Group Code No.
3	Role (Coach=1, Convener=0)
4 & 5	Sport-Athletic Continuum Placement
6 & 7	Group Performance Score
8 & 9	Polarization Score
10 & 11	Stratification Score
12 & 13	Participation Score
14 & 15	Viscosity Score
16 & 17	Hedonic Tone Score
18 & 19	LPC Score
20 & 21	Group Atmosphere Score

STATISTICAL ANALYSIS SYSTEM

ORS	ROLE	SPORTATH	GROUPPER	POLARIZE	STRATIF	PARTICIP	VISCID	MEDTONE	LPC	GAS
----- GROUP=1 -----										
1	C	33	49	50	31	37	45	18	60	66
2		31	42	17	53	23	29	16	60	66
3		32	44	41	30	26	40	20	60	66
4		39	50	39	37	27	43	22	60	66
5		32	37	33	38	20	45	16	60	65
6		30	43	40	26	35	46	23	60	66
7		33	39	44	25	34	42	20	60	66
8		38	42	44	25	34	42	20	60	66
9		38	42	44	25	34	42	20	60	66

ORS	ROLE	SPORTATH	GROUPPER	POLARIZE	STRATIF	PARTICIP	VISCID	MEDTONE	LPC	GAS
----- GROUP=2 -----										
1	C	89	45	48	32	37	45	20	79	53
2		25	41	48	23	35	51	20	79	53
3		31	42	43	42	25	43	22	79	53
4		23	27	45	47	21	30	14	79	53
5		32	35	24	49	27	29	15	79	53
6		32	43	45	40	34	48	21	79	53

ORS	ROLE	SPORTATH	GROUPPER	POLARIZE	STRATIF	PARTICIP	VISCID	MEDTONE	LPC	GAS
----- GROUP=3 -----										
1	C	30	47	49	24	29	44	18	41	63
2		28	26	39	31	27	40	20	41	63
3		32	42	45	34	29	40	19	41	63
4		31	44	33	27	27	41	22	41	63
5		29	44	34	27	27	41	19	41	63
6		30	46	34	34	35	43	20	41	63

ORS	ROLE	SPORTATH	GROUPPER	POLARIZE	STRATIF	PARTICIP	VISCID	MEDTONE	LPC	GAS
----- GROUP=4 -----										
1	C	36	44	44	26	37	35	18	64	73
2		34	43	47	32	37	46	18	64	73
3		33	43	47	32	37	46	18	64	73
4		36	43	45	31	25	45	25	64	73
5		37	44	41	24	24	46	18	64	73
6		34	35	37	24	24	44	18	64	73
7		37	40	37	25	20	36	22	64	73
8		37	40	37	25	20	36	22	64	73

ORS	ROLE	SPORTATH	GROUPPER	POLARIZE	STRATIF	PARTICIP	VISCID	MEDTONE	LPC	GAS
----- GROUP=5 -----										
1	C	25	41	42	47	28	25	18	43	52
2		22	35	25	44	24	24	18	43	52
3		22	35	25	44	24	24	18	43	52
4		25	36	31	53	21	39	13	43	52
5		31	42	28	46	21	23	15	43	52
6		18	34	31	41	30	31	14	43	52
7		22	43	45	28	29	21	17	43	52
8		22	43	45	28	29	21	17	43	52

STATISTICAL ANALYSIS SYSTEM

ORS	ROLE	SPORTATH	GRUPPER	POLARIZE	STRATIF	PARTICIP	VISCID	HEDTONE	LPC	GAS
GROUP=6										
1	0	34	41	30	35	31	45	19	70	72
2	0	30	42	41	36	26	47	19	70	72
3	0	31	43	32	40	26	51	20	70	72
4	0	32	47	44	27	12	47	21	70	72
5	0	33	43	46	31	31	51	21	70	72
6	0	44	35	30	44	23	27	15	70	72
7	0	29	33	34	35	27	43	18	70	72
8	0	36	43	39	38	41	42	19	70	72
GROUP=7										
1	0	26	35	41	49	20	31	15	91	39
2	0	26	37	43	41	20	24	17	91	39
3	0	28	40	39	42	20	42	19	91	39
4	0	23	40	34	22	11	52	23	91	39
5	0	29	37	34	44	28	33	18	91	39
6	0	32	46	55	37	37	46	19	91	39
7	0	26	52	55	31	44	54	17	91	39
8	0	28	33	24	39	16	20	15	91	39
9	0	22	44	41	29	27	46	21	91	39
10	0	27	37	52	43	25	32	15	91	39
GROUP=8										
1	0	30	46	56	20	30	50	21	97	67
2	0	24	56	48	28	39	54	22	97	67
3	0	34	48	48	30	40	47	15	97	67
4	0	26	44	48	37	29	41	19	97	67
5	0	35	27	31	42	31	19	18	97	67
6	0	32	43	45	40	21	29	15	97	67
GROUP=9										
1	0	33	51	38	26	27	55	19	41	74
2	0	33	43	32	40	35	44	20	41	74
3	0	25	30	40	47	43	44	16	41	74
4	0	20	45	50	37	28	55	21	41	74
5	0	29	44	34	30	34	47	16	41	74
6	0	32	53	44	32	28	41	19	41	74
GROUP=10										
1	0	29	41	38	42	24	26	18	67	69
2	0	32	42	37	48	24	24	19	67	69
3	0	28	54	40	34	24	32	22	67	69
4	0	30	40	50	33	19	41	16	67	69
5	0	32	53	44	35	24	29	19	67	69
6	0	22	39	44	37	27	37	18	67	69

ORS	ROLE	SPORTATH	GRUPPER	POLARIZE	STRATIF	PARTICIP	VISCID	HEDTONE	LPC	GAS
GROUP=6										
1	0	30	46	56	20	30	50	21	97	67
2	0	24	56	48	28	39	54	22	97	67
3	0	34	48	48	30	40	47	15	97	67
4	0	26	44	48	37	29	41	19	97	67
5	0	35	27	31	42	31	19	18	97	67
6	0	32	43	45	40	21	29	15	97	67
GROUP=9										
1	0	33	51	38	26	27	55	19	41	74
2	0	33	43	32	40	35	44	20	41	74
3	0	25	30	40	47	43	44	16	41	74
4	0	20	45	50	37	28	55	21	41	74
5	0	29	44	34	30	34	47	16	41	74
6	0	32	53	44	32	28	41	19	41	74
GROUP=10										
1	0	29	41	38	42	24	26	18	67	69
2	0	32	42	37	48	24	24	19	67	69
3	0	28	54	40	34	24	32	22	67	69
4	0	30	40	50	33	19	41	16	67	69
5	0	32	53	44	35	24	29	19	67	69
6	0	22	39	44	37	27	37	18	67	69

ORS	ROLE	SPORTATH	GRUPPER	POLARIZE	STRATIF	PARTICIP	VISCID	HEDTONE	LPC	GAS
GROUP=6										
1	0	34	41	30	35	31	45	19	70	72
2	0	30	42	41	36	26	47	19	70	72
3	0	31	43	32	40	26	51	20	70	72
4	0	32	47	44	27	12	47	21	70	72
5	0	33	43	46	31	31	51	21	70	72
6	0	44	35	30	44	23	27	15	70	72
7	0	29	33	34	35	27	43	18	70	72
8	0	36	43	39	38	41	42	19	70	72
GROUP=7										
1	0	26	35	41	49	20	31	15	91	39
2	0	26	37	43	41	20	24	17	91	39
3	0	28	40	39	42	20	42	19	91	39
4	0	23	40	34	22	11	52	23	91	39
5	0	29	37	34	44	28	33	18	91	39
6	0	32	46	55	37	37	46	19	91	39
7	0	26	52	55	31	44	54	17	91	39
8	0	28	33	24	39	16	20	15	91	39
9	0	22	44	41	29	27	46	21	91	39
10	0	27	37	52	43	25	32	15	91	39
GROUP=8										
1	0	30	46	56	20	30	50	21	97	67
2	0	24	56	48	28	39	54	22	97	67
3	0	34	48	48	30	40	47	15	97	67
4	0	26	44	48	37	29	41	19	97	67
5	0	35	27	31	42	31	19	18	97	67
6	0	32	43	45	40	21	29	15	97	67
GROUP=9										
1	0	33	51	38	26	27	55	19	41	74
2	0	33	43	32	40	35	44	20	41	74
3	0	25	30	40	47	43	44	16	41	74
4	0	20	45	50	37	28	55	21	41	74
5	0	29	44	34	30	34	47	16	41	74
6	0	32	53	44	32	28	41	19	41	74
GROUP=10										
1	0	29	41	38	42	24	26	18	67	69
2	0	32	42	37	48	24	24	19	67	69
3	0	28	54	40	34	24	32	22	67	69
4	0	30	40	50	33	19	41	16	67	69
5	0	32	53	44	35	24	29	19	67	69
6	0	22	39	44	37	27	37	18	67	69

Obs	ROLE	SPORTATH	GRUPEP	POLARIZE	STRATIF	PARTICIP	VISCID	HEDTONE	LPC	GAS
1	0	24	57	58	12	30	50	23	62	75
2	1	24	48	45	32	35	52	13	62	75
3	1	24	20	46	26	14	47	19	62	75
4	1	25	47	41	30	10	48	20	62	75
5	1	25	52	44	33	24	53	21	62	75

Obs	ROLE	SPORTATH	GRUPEP	POLARIZE	STRATIF	PARTICIP	VISCID	HEDTONE	LPC	GAS
1	0	27	52	45	23	25	46	25	75	70
2	1	30	42	41	5C	24	41	19	75	70
3	1	27	39	34	43	23	40	20	75	70
4	1	26	47	34	31	21	44	22	75	70
5	1	24	53	32	2C	20	55	18	75	70
6	1	29	45	41	4C	22	55	21	75	70
7	1	27	47	41	19	39	49	22	75	70

Obs	ROLE	SPORTATH	GRUPEP	POLARIZE	STRATIF	PARTICIP	VISCID	HEDTONE	LPC	GAS
1	0	28	40	16	52	29	20	12	44	44
2	1	30	45	47	12	35	42	20	44	44
3	1	26	34	47	31	31	42	20	44	44
4	1	23	36	43	33	26	41	19	44	44
5	1	29	30	28	43	17	26	16	44	44
6	1	27	52	50	16	27	49	19	44	44
7	1	32	38	71	28	30	29	16	44	44
8	1	19	47	34	29	27	44	16	44	44
9	1	35	37	37	29	2E	39	12	44	44

Obs	ROLE	SPORTATH	GRUPEP	POLARIZE	STRATIF	PARTICIP	VISCID	HEDTONE	LPC	GAS
1	0	27	35	40	35	28	34	18	42	40
2	1	26	43	40	35	34	46	18	42	40
3	1	26	39	48	39	23	37	17	42	40
4	1	28	27	43	25	24	20	20	42	40
5	1	33	32	36	42	25	24	17	42	40
6	1	21	42	39	19	30	47	22	42	40

Obs	ROLE	SPORTATH	GRUPEP	POLARIZE	STRATIF	PARTICIP	VISCID	HEDTONE	LPC	GAS
1	0	25	44	41	31	31	35	20	67	69
2	1	26	46	51	34	25	51	20	67	69
3	1	26	52	47	31	31	45	17	67	69
4	1	21	36	33	44	25	31	14	67	69
5	1	27	40	33	33	29	48	19	67	69

Obs	ROLE	SPORTATH	GRUPEP	POLARIZE	STRATIF	PARTICIP	VISCID	HEDTONE	LPC	GAS
1	0	35	48	48	32	27	40	20	82	83
2	1	39	40	48	21	33	51	16	82	83
3	1	35	45	45	20	33	44	21	82	83
4	1	34	48	36	32	22	51	25	82	83
5	1	31	52	41	31	22	46	21	82	83
6	1	35	56	56	27	33	56	17	82	83
7	1	37	43	41	27	34	44	22	82	83
8	1	37	52	53	31	28	55	25	82	83

VITA AUCTORIS

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1973
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TEACHING EXPERIENCE

1973-74 Teaching Assistant
University of Windsor
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Graduate Scholarship

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1974- Administrative Assistant
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