

3385

NATIONAL LIBRARY

BIBLIOTHÈQUE NATIONALE

OTTAWA



OTTAWA

NAME OF AUTHOR..... H. DAVID HEMPHILL

TITLE OF THESIS..... THE STRUCTURE OF INTERACTION

..... AT SCHOOL BOARD MEETINGS

..... UNIVERSITY..... UNIVERSITY OF ALBERTA

DEGREE..... Ph. D. YEAR GRANTED..... 1968

Permission is hereby granted to THE NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

The author reserves other publication rights, and neither the thesis nor extensive extracts from it may be printed or otherwise reproduced without the author's written permission.

(Signed)..... *H. D. Hemphill*

PERMANENT ADDRESS:
 683 Charleswood Rd.
 Winnipeg 20
 Manitoba

DATED..... *Dec. 30* 19 *68*

THE UNIVERSITY OF ALBERTA

THE STRUCTURE OF INTERACTION

AT SCHOOL BOARD MEETINGS

by



H. DAVID HEMPHILL

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

EDMONTON, ALBERTA

NOVEMBER, 1968

UNIVERSITY OF ALBERTA
FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "The Structure of Interaction at School Board Meetings," submitted by H. David Hemphill in partial fulfilment of the requirements for the degree of Doctor of Philosophy.

Donnelly
.....
Supervisor

.....
Ernest Hodgson
Brendan J. Rule

Max G. Abbott
.....
External Examiner
.....

Date *Oct. 10, 1968*
.....

ABSTRACT

The purposes of this study were (1) to describe the interaction roles of the superintendents, secretary-treasurers and chairmen in school board meetings, and (2) to relate these roles to a selected number of personal and administrative unit characteristics.

The conceptual and theoretical framework for the study was a synthesis of role and small group theory. The concepts of performed role, sent role, and role congruence were defined as were the four instrumental roles of advisor, informer, information seeker, and advice seeker and the four expressive roles of protagonist, exemplar, antagonist and deviant.

The basic data were obtained from the direct observation by two trained coders of approximately eight hours of meeting interaction for each of eleven administrative units in central Alberta. Bales' Interaction Process Analysis was the coding technique utilized. The interaction data were weighted to overcome disagreement between coders, and the twelve interaction categories were collapsed into six. These data were supplemented by information from personal data questionnaires and Department of Education reports.

Analyses of these data indicated that the instrumental role both performed by and sent to the administration participants (superintendent and secretary-treasurer) was that of informer. The superintendent was the informer in the areas of pupil personnel,

staff personnel, educational program and school plant. The secretary-treasurer was the informer in finance and extra-system relations. The roles of information and advice seeker were both performed by and sent to the chairman in all task areas. The role of advisor could not be clearly assigned to the incumbents of any of the three focal positions, and the lack of sufficient expressive interaction (less than 6 per cent of the total) made the assignment of the expressive roles to the incumbents of any position tenuous. Further analyses indicated that the superintendent's proportion of participation tended to vary directly with his tenure and experience, whereas the proportion of participation of other meeting participants tended to vary inversely with their tenure and experience.

The congruence of roles (correspondence between performed and sent roles) through the task areas for all three focal positions were high. The interaction role congruence analyses suggested that (1) a meeting participant's behavior more closely complemented the behavior other participants directed toward him when his interaction was limited in amount and number of task areas, and (2) contrary to the theoretical hypotheses, the superintendent's behavior less closely corresponded to the behavior of others toward him as his tenure and experience increased.

It is suggested that this study demonstrated the relevance of the concepts of performed role, sent role and role congruence to the study of small group interaction. However, further research with more

rigorous design is required before the relationships between these concepts can be clearly established as sound theory.

ACKNOWLEDGEMENTS

The development and completion of this study would not have been possible without the assistance and cooperation of a number of individuals and organizations. First of all, the writer wishes to acknowledge with appreciation the participation of the eleven boards and their administrative officers.

Second, the support of the University of Alberta and particularly the Department of Educational Administration is gratefully acknowledged.

Of the many individuals who offered help during the course of the study, special appreciation is extended to Dr. D. A. MacKay, supervisor, and Drs. E. D. Hodgson and B. G. Rule for their counsel and guidance. Finally, the writer wishes to express his appreciation to Drs. S. Hunka, F. Enns, D. Friesen and M. G. Abbott for their helpful comments in the initial and concluding stages of the research.

TABLE OF CONTENTS

CHAPTER	PAGE
I. INTRODUCTION TO THE PROBLEM	1
Introduction	1
School Boards	1
School Board Meetings	2
The Problem	3
Statement of the problem	3
Sub-problems	3
Significance of the problem	4
Implications for practice	4
Bases for further research	5
Delimitations	6
Limitations	6
Definition of Terms	8
Organization of the Remainder of the Thesis	8
References for Chapter I	10
II. CONCEPTUAL AND THEORETICAL FRAMEWORK	11
Interaction	11
Structure	11
Dimensions	12
Interaction Roles	13
Roles	13
Role complementarity	13

CHAPTER	PAGE
Small group roles	14
Instrumental roles	14
Expressive roles	16
Task area roles	17
Role Congruence	21
Performed role	21
Sent role	22
Interaction role congruence	22
Task area role congruence	24
Hypotheses	24
Hypothesis 1	25
Hypothesis 2	25
Hypothesis 3	25
School Board Interaction Studies	25
The Thomas study	25
The Brubacher study	26
The Matthews study	28
Summary	28
References for Chapter II	30
III. RESEARCH DESIGN	33
The Variables	33
Interaction	33
Categories	34

CHAPTER	PAGE
Coding	34
Task areas	38
Personal characteristics	40
Unit characteristics	40
Data Collection	41
The sample	41
Interaction data	41
Coders	41
Procedure	43
Personal data	43
Administrative unit data	43
Data Analyses	43
Interaction	43
Interaction profile	44
Interaction categories	44
Interaction roles	45
Instrumental roles	47
Expressive roles	47
General and specific roles	47
Performed and sent roles	49
Congruence of roles	49
Interaction	49
Task area	51

CHAPTER	PAGE
Reliability	51
Task area	51
Meeting participant	53
Interaction categories	53
Validity	60
External	60
Internal	62
Description of the Sample	62
Administrative units	62
Meeting participants	65
Superintendents	65
Secretary-treasurers	65
Chairmen	69
Members	69
Interaction	69
Relationships among personal variables	71
Superintendents	71
Secretary-treasurers	71
Chairmen	75
Members	75
Relationships between personal and unit variables	75
Summary	79
References for Chapter III	80

CHAPTER	PAGE
IV. INTERACTION ROLES	82
Proportion of Interaction	82
Superintendents	82
Secretary-treasurers	84
Chairmen	85
Members	86
Summary	86
Proportion of Interaction and Personal	
Characteristics	89
Superintendents	89
Secretary-treasurers	91
Chairmen	93
Members	95
Summary	95
Proportion of Interaction and Unit	
Characteristics	98
Instrumental Roles	102
Performed	102
Advisor	102
Informer	104
Information seeker	104
Advice seeker	104
Sent	105

CHAPTER	PAGE
Advisor	105
Informer	105
Information seeker	105
Advice seeker	107
Expressive Roles	107
Performed	107
Protagonist	107
Antagonist	109
Sent	109
Exemplar	109
Deviator	109
Summary	110
References for Chapter IV	114
V. CONGRUENCE OF ROLES	115
Task Area Role Congruence	115
Congruence and personal characteristics	116
Congruence and unit characteristics	117
Interaction Role Congruence	119
Task area	119
Superintendents	119
Secretary-treasurers	121
Chairmen	123
Congruence and personal characteristics	125

CHAPTER	PAGE
Superintendents	125
Secretary-treasurers	125
Chairmen	128
Congruence and unit characteristics	128
Hypothesis Testing	131
Hypothesis 1	131
Superintendents	132
Secretary-treasurers	132
Chairmen	132
Hypothesis 2	132
Superintendents	132
Secretary-treasurers	132
Chairmen	133
Hypothesis 3	133
Superintendents	133
Secretary-treasurers	133
Chairmen	133
Discussion	133
Summary	134
References for Chapter V.	135
VI. SUMMARY, CONCLUSIONS AND IMPLICATIONS	136
Summary	136
The research project	136

CHAPTER	PAGE
Theoretical framework	136
Research background	137
Research design	138
The findings	139
Roles	139
Role congruence	141
Conclusions	142
Limitations	142
Task area	143
Interaction	145
Role congruence	147
Implications	148
For practice	148
For research	150
Research design	151
Theory construction	151
References for Chapter VI	154
BIBLIOGRAPHY	155
APPENDIX A. Data Collection Instruments	162
APPENDIX B. Comparison of Personal Characteristics of Focal Position Incumbents on Administrative Unit Variables	166

CHAPTER	PAGE
APPENDIX C. Comparison of Per Cent of Interaction of Focal Position Incumbents on Administrative Unit Variables	171
APPENDIX D. Performed Roles of Focal Position Incumbents	182
APPENDIX E. Sent Roles of Focal Position Incumbents	191
APPENDIX F. Comparison of Indices of Interaction Role Congruence of Focal Position Incumbents on Administrative Unit Variables	200

LIST OF TABLES

TABLE	PAGE
I. Categories for Interaction Process Analysis	35
II. Comparison of Interaction Categories for the Present Study with those of Bales	46
III. Sample Determination of Roles from Initiated Interaction of Administrative Unit One in Personnel Task Area	48
IV. Sample Determination of Congruence of Interaction Roles of Administrative Unit One in Personnel Task Area	50
V. Task Area Inter-Coder Reliabilities	52
VI. Task Area Coder Consistency Between Direct Observation and Audio Tape	53
VII. Meeting Participant Inter-Coder Reliabilities	54
VIII. Meeting Participant Coder Consistency Between Direct Observation and Audio Tape	54
IX. Interaction Category Inter-Coder Reliabilities	55
X. Interaction Category Coder Consistency Between Direct Observation and Audio Tape	55
XI. Calculation of Weighting System for Interaction Profiles	58
XII. Chi Square Test for Independence of Raw and Weighted Interaction Profiles of Meeting Fifteen Recorded by Two Coders	59

TABLE

PAGE

XIII.	Comparison of Interaction Profiles of Four School Board Studies	61
XIV.	Comparison of Interaction Profiles of This Study and a Selection of Non-School Board Studies	63
XV.	Comparison of the Interaction Profiles of the Eleven Boards Comprising the Sample	64
XVI.	Classification of Administrative Units by Admin- istrative Type, Enrollment Size, Meeting Size, and Superintendent's Appointment	66
XVII.	Description of Meeting Participants by Nominal Variables	67
XVIII.	Description of Meeting Participants by Continuous Variables	68
XIX.	Number of Meetings, Time and Number of Acts in the Interaction Sample of Each Administrative Unit	70
XX.	Distribution of Interaction Through Task Areas, By Administrative Unit	72
XXI.	Intercorrelations of Personal Characteristics of Superintendents	73
XXII.	Intercorrelations of Personal Characteristics of Secretary-Treasurers	74

TABLE

PAGE

XXIII.	Intercorrelations of Personal Characteristics of Chairmen	76
XXIV.	Intercorrelations of Personal Characteristics of Members	77
XXV.	Summary of the Significant Differences of Personal Characteristics of Focal Position Incumbents on Administrative Unit Variables	78
XXVI.	Mean Per Cent of Board Interaction by Participant and Task Area	83
XXVII.	Per Cent of Aggregate Board Interaction by Participant and Task Area	88
XXVIII.	Correlations of Per Cent of Superintendent Interaction with Personal Characteristics	90
XXIX.	Correlations of Per Cent of Secretary-Treasurer Interaction with Personal Characteristics	92
XXX.	Correlations of Per Cent of Chairman Interaction with Personal Characteristics	94
XXXI.	Correlations of Per Cent of Member Inter- action with Personal Characteristics	96
XXXII.	Summary of Significant Differences of Per Cent of Initiated Interaction of Focal Position Incumbents on Administrative Unit Variables	100

TABLE	PAGE
XXXIII. Summary of Significant Differences of Per Cent of Received Interaction of Focal Position Incumbents on Administrative Unit Variables	101
XXXIV. Summary of Performed Instrumental Roles of Focal Positions by Task Area	103
XXXV. Summary of Sent Instrumental Roles of Focal Positions by Task Area	106
XXXVI. Summary of Expressive Roles of Focal Positions by Task Area	108
XXXVII. Task Area Role Congruence by Administrative Unit	116
XXXVIII. Correlations Between Task Area Role Congruence and Personal Characteristics of Participants	117
XXXIX. Comparison of Indices of Task Area Role Congruence of Focal Positions by Administrative Unit Characteristics	118
XL. Superintendents' Interaction Role Congruence by Unit and Task Area	120
XLI. Secretary-Treasurers' Interaction Role Congruence by Unit and Task Area	122
XLII. Chairmen's Interaction Role Congruence by Unit and Task Area	124
XLIII. Correlations Between Interaction Role Congruence and Superintendents' Personal Characteristics	126

TABLE	PAGE
XLIV. Correlations Between Interaction Role Congruence and Secretary-Treasurers' Personal Character- istics	127
XLV. Correlations Between Interaction Role Congruence and Chairmen's Personal Characteristics	129
XLVI. Summary of the Significant Differences of the Indices of Interaction Role Congruence of Focal Position Incumbents on Administrative Unit Variables	130
XLVII. Comparison of Personal Characteristics of Focal Position Incumbents by Administrative Type	167
XLVIII. Comparison of Personal Characteristics of Focal Position Incumbents by Enrollment Size	168
XLIX. Comparison of Personal Characteristics of Focal Position Incumbents by Meeting Size	169
L. Comparison of Personal Characteristics of Superintendents by Appointment	170
LI. Comparison of Superintendents' Per Cent of Interaction by Administrative Type	172
LII. Comparison of Secretary-Treasurers' Per Cent of Interaction by Administrative Type	173
LIII. Comparison of Chairmen's Per Cent of Interaction by Administrative Type	174

TABLE

PAGE

LIV.	Comparison of Superintendents' Per Cent of Interaction by Enrollment Size	175
LV.	Comparison of Secretary-Treasurers' Per Cent of Interaction by Enrollment Size	176
LVI.	Comparison of Chairmen's Per Cent of Inter- action by Enrollment Size	177
LVII.	Comparison of Superintendents' Per Cent of Interaction by Meeting Size	178
LVIII.	Comparison of Secretary-Treasurers' Per Cent of Interaction by Meeting Size	179
LIX.	Comparison of Chairmen's Per Cent of Interaction by Meeting Size	180
LX.	Comparison of Superintendents' Per Cent of Interaction by Appointment	181
LXI.	Performed Roles of Focal Position Incumbents in Pupil Personnel Interaction	183
LXII.	Performed Roles of Focal Position Incumbents in Personnel Interaction	184
LXIII.	Performed Roles of Focal Position Incumbents in Finance Interaction	185
LXIV.	Performed Roles of Focal Position Incumbents in Extra-System Relations Interaction	186

TABLE

PAGE

LXV.	Performed Roles of Focal Position Incumbents in Educational Program Interaction	187
LXVI.	Performed Roles of Focal Position Incumbents in Plant and Facilities Interaction	188
LXVII.	Performed Roles of Focal Position Incumbents in Non-Educational Interaction	189
LXVIII.	Performed Roles of Focal Position Incumbents in Total Interaction	190
LXIX.	Sent Roles of Focal Position Incumbents in Pupil Personnel Interaction	192
LXX.	Sent Roles of Focal Position Incumbents in Personnel Interaction	193
LXXI.	Sent Roles of Focal Position Incumbents in Finance Interaction	194
LXXII.	Sent Roles of Focal Position Incumbents in Extra-System Relations Interaction	195
LXXIII.	Sent Roles of Focal Position Incumbents in Educational Program Interaction	196
LXXIV.	Sent Roles of Focal Position Incumbents in Plant and Facilities Interaction	197
LXXV.	Sent Roles of Focal Position Incumbents in Non-Educational Interaction	198

TABLE

PAGE

LXXVI. Sent Roles of Focal Position Incumbents in
Total Interaction 199

LXXVII. Comparison of Indices of Interaction Role
Congruence of Focal Position Incumbents
by Administrative Type 201

LXXVIII. Comparison of Indices of Interaction Role
Congruence of Focal Position Incumbents
by Enrollment Size 202

LXXIX. Comparison of Indices of Interaction Role
Congruence of Focal Position Incumbents
by Meeting Size 203

LXXX. Comparison of Indices of Interaction Role
Congruence of Superintendents by
Appointment 204

LIST OF FIGURES

FIGURE	PAGE
I. Four Complementary Pairs of Small Group	
Roles	18
II. Relationships Between Member Behavior,	
Group Roles, and Role Congruence	23
III. Comparison of Interaction Profiles By	
Two Coders of Concurrently Recorded	
Meetings	56

CHAPTER I

INTRODUCTION TO THE PROBLEM

The purpose of this chapter is to introduce and state the problem that was investigated, to indicate the delimitations of the study, to define a number of terms used in this report and to outline the content of the dissertation.

I. INTRODUCTION

It is unlikely that any area in the world places more faith in local control of education than does North America. Both Canada and the United States have education systems which give some control over the character of education in the community to locally elected or appointed lay school boards. Although the constitutions of these nations placed the prime responsibility for education with the state or province, most states and provinces have chosen to delegate some of this responsibility to local school boards.

II. SCHOOL BOARDS

The school board must perform a dual role. First, it acts as an executive agency of the provincial or state legislature. In this sense it is a quasi-municipal corporation, and as such has the most limited powers known to law.

It can exercise only those powers granted by statute or derived by necessary implication from the duties assigned to it.¹

However,

. . . permissive sections of the acts and sometimes vagueness in wording or meaning necessitate the exercise of broad discretion.²

Second, it acts as a legislative agency for the local community. Thus, within the sphere of authority delegated by the state or provincial legislature, policies formulated by local school boards "have the force of law and constitute part of the legal framework within which the schools operate."³

Because the school board is the level of educational government most closely connected with the technical activities of teaching and learning, because it is the level of government most closely connected to the people of the community, and because it is the level at which provincial or state policies are implemented, the problems and pressures which exist in public education tend to focus on the local school board.

III. SCHOOL BOARD MEETINGS

The locus of decisions and policies directed toward the solution of the problems of public education is the school board meeting. Although some decisions may be made informally or in closed meetings, decisions which affect the community's schools must be ratified and placed on the record at an open school board meeting.

The purpose of this study was to analyze meeting interaction between lay board members and administrative staff by which local educational policies and decisions are formulated and ratified.

IV. THE PROBLEM

Statement of the Problem

The purposes of the study were:

1. To describe the structures of interaction at a sample of school board meetings.
2. To relate the structures of interaction to selected characteristics of the meeting participants and administrative units.

Sub-problems^{*}

The sub-problems subsumed under the purposes stated above can best be presented as questions of the following form.

1. What are the general and specific interaction roles of superintendents, secretary-treasurers, and board chairmen? That is, what roles do the individuals in these positions play in total meeting interaction, and what roles do they play in specific task area interaction?

* Terms used in the statements of the problems and the sub-problems will be defined in succeeding chapters.

2. What are the performed and sent roles associated with these positions?
3. What are the degrees of congruence of these roles?
4. Are these roles related to the incumbent's age, position tenure, unit tenure, position experience, and the amount and recency of his formal education?
5. Are these roles related to the type of administrative unit (County, District, or Division), the number of meeting participants, the total pupil enrollment of the unit, and the appointment of the superintendent (local or provincial)?
6. Is the degree of congruence of these roles related to the characteristics of the administrative unit or to the personal characteristics of the incumbent?

Significance of the Problem

Answers to the questions stated above have significance for two main areas of educational administration, implications for practice, and bases for further research.

Implications for practice. McCordic suggests that the smooth functioning of school systems, such as those in Canada and the United States, requires cooperative and coordinated effort of educational and business administrators and lay personnel.⁴ Although a great deal is known about the role of the superintendent, little research has focussed on the secretary-treasurer or the board chairman. Furthermore, very little is known about the processes of

decision-making at board meetings and the roles of participants in these processes.

Educational research has given us no faithful description--much less an explanation--of the way in which school board members reach decisions. Such descriptions must necessarily include reference to the person-to-person relationships underlying deliberations and actions of board members, since board decisions are products of an enterprise which is essentially social.⁵

If one is to participate effectively in board meetings he must be aware of both his own and others' roles in the structure of interaction. For,

Clearly, effective administrative behavior is based on a realistic interpretation of the situation in which the administrator finds himself and not on misconceptions or stereotypes of the situation.⁶

Bases for further research. As will be evident in Chapter III, and as is the case in most educational research, this study was of the type Guba would call an investigation.⁷ That is, the research design did not provide stringent control of all internal and external variables. However, one of the important characteristics of investigations is that they result in information which is useful as the basis for subsequent research.

. . . if we treat [investigation] data as illustrative of the kinds of things that might be observed, or if we think of an investigation as a pilot study which yields some insights into the kinds of problems that might be encountered and which could be studied in detail in a more elaborate design in a different situation, then investigations may be of great value. Or, if we treat the data as heuristic, that is, furnishing a convenient jumping-off place for more detailed and rigorous research, investigations can be very helpful.⁸

Thus, the interaction roles uncovered by this study provide a framework for more rigorous research on the process of school board decision-making. Further, the study demonstrates the relevance of such role theory concepts as performed role, sent role and role congruence to the study of group interaction.

V. DELIMITATIONS

The sample for the study was delimited to the board meetings of eleven central Alberta administrative units. The interaction data gathered were delimited to approximately eight hours for each unit.

Two units had assistant superintendents, and two other units has assistant secretary-treasurers in regular attendance. The interaction data for these people and for people making special presentations at meetings were included in the total interaction and task area analyses, but were deleted from the analyses of individual interaction roles and role congruence.

The additional data collected were delimited to a small number of personal and unit variables. No data on the psychological characteristics of meeting participants nor on the social, political or economic characteristics of the communities were obtained.

VI. LIMITATIONS

The findings of this study must be evaluated in terms of a

number of fairly severe limitations.

First, the sample of both administrative units and interaction was not randomly selected. Furthermore, the sample was quite small, particularly when divided into two or more subsamples. These limitations, therefore, did not permit the extension of the results of this study to any other population of educational systems or personnel.

Second, the conclusions were limited by the validity of the interaction data. In addition to the collapsing of Bales' twelve categories into six, the interaction profiles were weighted to obtain a high degree of interaction coder agreement. This weighting was based on the assumption that the "actual" interaction was the mean of the perceptions of the two coders.

Third, the training period for the interaction coders was short compared to that suggested by Bales. This limited the degree to which the interaction data from this study could be compared to interaction data from other research.

Fourth, the coders were required to attribute meaning to the observed interaction in terms of both interaction category and task area. Thus the data were limited by the accuracy of the perceptions of the coders.

Finally, the assumption that the recorded interaction was representative of the total formal interaction of the meeting participants and not affected by the presence of either the coders

or the tape recorder may not be valid.

VII. DEFINITIONS OF TERMS

This dissertation uses a number of terms which have particular meanings.

School Board. This term will be used to refer to those elected representatives of the citizens of an administrative unit who form the District or Division school board or the County Council school committee.

Meeting Participants. This term will be used to refer to the superintendent, the secretary-treasurer, the chairman, and the other elected members of the school board.

Administration. This term will be used to refer to the superintendent and secretary-treasurer of the unit.

Board Members. This term will be used to refer to the meeting participants not including the administration and the chairman.

VIII. ORGANIZATION OF THE REMAINDER OF THE THESIS

Chapter II will outline the theory and research upon which the study was based. It includes such topics as Interaction, Interaction Roles, Role Congruence and School Board Interaction Studies.

Chapter III describes the research design including sections on research procedures, definition of variables, validity and reli-

ability of the data, and description of the sample.

Chapters IV and V present the findings of the study. The former describing the interaction roles of meeting participants, and the latter examining the congruence of these roles.

The concluding chapter, Chapter VI, presents a summary of the research project and draws from its findings some conclusions and implications.

REFERENCES FOR CHAPTER I

¹Frederick Enns, The Legal Status of the Canadian School Board (Toronto: The Macmillan Company, 1963), p. 37.

²Ibid., p. 5.

³P. F. Bargen, "The Legal Basis for Administrative Decisions," Canadian Education, XV (September, 1960), p. 43.

⁴W. J. McCordic, "Is the Management Cycle Concept Enough?" paper read at the Canadian Education Association Short Course; Banff, Alberta, May, 1967.

⁵W. W. Charters, Jr., "Beyond the Survey in School Board Research," Educational Administration and Supervision, XLI (December, 1955), pp. 450-451.

⁶Erwin Miklos, "Role Theory in Administration," The Canadian Administrator, III (November, 1963), p. 7.

⁷Egon G. Guba, "Experiments, Studies, Surveys, and Investigations," in Jack A. Culbertson and Stephen P. Hencley, (eds.), Educational Research: New Perspectives (Danville, Illinois: The Interstate Printers and Publishers, 1963), pp. 237-248.

⁸Ibid., p. 243.

CHAPTER II

CONCEPTUAL AND THEORETICAL FRAMEWORK

The primary aim of the present study was to describe the structure of interaction at school board meetings. The focus was on the interaction roles associated with the positions of superintendent, secretary-treasurer and board chairman.

This chapter will present a discussion of the conceptual framework upon which the study was based. Included in this discussion will be the identification and definition of the roles to be examined and the theoretical basis for the hypotheses to be tested.

I. INTERACTION

Interaction in a group is the continual exchange of cues, symbols and meanings among its members. This exchange implies not only the reaction of an individual to the behavior of other individuals, but also the reactions of the others to the behavior of the one.

Structure

Interaction among group members tends to become structured.

Zaleznik and Moment suggest that:

Since group structure results from the interaction of members, it becomes the representable and recurrent pattern of relationships through which group activities are channeled.¹

Research by Bales and his associates has indicated that through experience an individual's behavior in a group becomes quite consist-

ent.² This suggests that an individual learns his role through experience and interaction with others. As the group members learn their roles, the structure of the group behavior develops.

What are the reasons for the emergence of group structure? Cartwright and Zander suggest three. They are (1) requirements of efficient group performance, (2) different abilities and motivations of individuals, and (3) characteristics of the environment.³ The first of these provides the basis for the remainder of the discussion.

Dimensions

For a group to perform efficiently, it must solve two basic problems, goal accomplishment and group maintenance. That is, its members must undertake activities aimed at accomplishing the objectives for which it was formed, and aimed at maintaining itself as a viable system. These two types of activities will be called, respectively, instrumental and expressive activities.

Research into the behavior of individuals in groups and organizations conducted over the past two decades has indicated that the two most basic dimensions of social behavior are those related to the needs of the group as a group, and related to the needs of the individual members of the group.⁴ A comment by Brown is typical of the conclusions drawn from these studies. In a study of the perceptions of the behavior of 170 Alberta school principals by over 1500 teachers, Brown was able to account for 76 per cent of the data variance in two factors he called system

orientation and person orientation. He describes these as, respectively,

. . . behavior that responds to the needs of the school as the apersonalized system with its own goals, themes, and institutional existence, and . . . behavior that responds to the idiosyncratic personal and professional needs of fellow human beings on staff.⁵

These two dimensions of group member behavior can be seen to be very closely associated with the two problems of goal accomplishment and group maintenance.

II. INTERACTION ROLES

An interaction structure may be viewed as a set of interaction roles together with the relationships between them.

Roles

A role is commonly defined as the sum total of the expectations for the behavior of the incumbent of a position. If a group member learns his role through interaction with other members, then the expectations for his role must be communicated to him through the behavior of the other members. One may infer from the observation of group interaction some of the expectations the group members hold for each other's behavior. Therefore, interaction roles may be defined in terms of observed interaction.

Role Complementarity

One of the most basic relationships between and among roles

in a group, and thus a characteristic of the role structure, is the complementarity of roles. Parsons and Shils state:

This fundamental phenomenon may be called the complementarity of expectations, not in the sense that the expectations of the two actors with regard to each other's action are identical, but in the sense that the action of each is oriented to the expectations of the other.⁶

Group roles may be identified as complementary pairs. A given role cannot exist unless the complementary role is accepted and played by another member or members of the group. The pairs of roles emerge because, to a certain extent, each fulfills the needs of the other, thereby defining and reinforcing the other. Thus, through interaction, complementary pairs of roles emerge and are reinforced by each other.

Small Group Roles

Research conducted by Benne and Sheats,⁷ and Slater⁸ suggests that, analogous to the two basic dimensions of group behavior, there are two main categories of group roles, task-oriented or instrumental roles, and group maintenance or expressive roles.

Instrumental roles. To accomplish the task for which it owes its existence, a group must have access to information about the problems it faces, and about the alternative solutions to these problems. To reach a solution to the problem, the group must evaluate the possible alternatives.

To provide for these aspects of the group's decision-making

process, two complementary pairs of instrumental roles may be defined. The first of these is the advisor-advice seeker pair. The role of advisor is fulfilled by the member or members who provide evaluative input (advice, opinion, suggestions, etc.) for group discussion. The complementary role of advice seeker is fulfilled by the member or members who seek this evaluative input.

The second complementary pair of instrumental roles to be defined is that of informer-information seeker. These roles are fulfilled respectively by the member or members who provide and seek non-evaluative input for group discussion.

Bowman obtained questionnaire data from a sample of superintendents, board members and professors of educational administration on their perceptions of the role of the superintendent in determining, informing and advising on educational decisions. He defined these roles as follows.

Determining--action by the superintendent to resolve a problem situation without referring the problem to the board of education.

Informing--bringing a problem situation to the board of education and offering data about the situation, but without commitment to a course of action.

Advising--letting the board know what, in the opinion of the superintendent, should be done to resolve a problem situation.⁹

His findings relevant to the present study indicated that board members of smaller districts wanted more informing and less recommending (advising) by the superintendent, and that short-tenure members (less than 7 years) wanted more superintendent advice than

long-tenure members(7 or more years).¹⁰

Expressive roles. To maintain the group as a viable and functioning system, some of the group members' activities must be directed toward meeting the needs of the members as individuals and to maintaining the underlying social structure of the group. The needs of the individuals would include such things as the need to be recognized and the need to be able to identify with the group, and maintenance of the social structure would include such things as reinforcement and support of group norms, values and status hierarchy.

To accomplish some of these aims, two complementary pairs of expressive roles may be identified. The first of these is the exemplar-protagonist pair. The role of exemplar is fulfilled by the member or members who most closely and most frequently express the aggregate opinion or attitude of the group. The complementary role of protagonist is fulfilled by the member or members who reinforce the role of exemplar by reacting favorably to the exemplar's behavior.

The second pair of complementary expressive roles to be defined is that of deviant-antagonist. The role of deviant is fulfilled by the member or members who most frequently express attitude or opinion opposite to that of the group. The role of the antagonist is fulfilled by the member or members who reinforce and complement the deviant role by reacting negatively to the deviant's behavior.

It should be noted that all these roles are "ideal" types.

In practice elements of an individual's behavior might well be assigned to each of these eight roles. Therefore, the assignment of a given role to a particular position is necessarily based on the relative amount of the position incumbent's behavior perceived as related to the given role.

Figure I presents a summary, in chart form, of the four pairs of small group roles identified and defined above.

Task area roles. To this point in the discussion it has been possible to consider a school board as a particular kind of problem-solving group. However, it is suggested that there are two very fundamental differences between experimental groups and school boards. The first of these is that the school board is a "continuing" group. It is continually replacing members and must accept the credit or blame in the future for the decisions it makes now.

The second, and the one with which this section will deal, is that the task of educational policy setting appears much more complex than the tasks which experimental groups have been asked to perform. Thus, it would not seem reasonable to expect the same board meeting participants to fulfill the same role in all aspects of the complex task.

Although they have not focussed on interaction roles, several studies indicate that the expectations for the behavior of the superintendent are not consistent in the various aspects of the educational task. The works of Finlay in Alberta,¹¹ Stafford in

Instrumental Roles

Advisor (gives advice)	Advice Seeker (seeks advice)
Informer (gives information)	Information Seeker (seeks information)

Expressive Roles

Protagonist (positive reactor)	Exemplar (positively reacted to)
Antagonist (negative reactor)	Deviant (negatively reacted to)

FIGURE I

FOUR COMPLEMENTARY PAIRS OF
SMALL GROUP ROLES

British Columbia,¹² and Skippen in Oregon¹³ all report that the superintendent is expected by board members to act mainly on his own in the areas of curriculum and instruction, to act under the direction of the board in matters of personnel and pupil services, to act as advisor only in the areas of school plant planning and management, administrative structure and public relations, and to be least active in financial matters.

These findings were further confirmed in a study of values and value-perceptions in superintendent-school board relationships reported by Abbott. He states:

When asked to indicate confidence in their superintendent, board members tended to discriminate among task areas and among levels of generality of administrative action. Specifically, they expressed more confidence in their superintendents in the areas of curriculum development and staff relations than they did in the areas of school-community relations and school plant planning.¹⁴

The volume of studies which focusses on the superintendent is not matched by research on the roles of other district personnel. Although the secretary-treasurer or business administrator is recognized by many as a significant factor in the operations of the school system, few studies have used this position as the focus of attention.

A number of studies do comment, however, on the role of the secretary-treasurer as a supplement to their main findings. A comment by McInnes illustrates this. From his survey of boards in Saskatchewan, McInnes found that the secretary reported directly

to the board and that the board delegated action directly through the secretary. He suggests reasons for this rather influential position of the secretary in the following statement.

The tenure of the secretary exceeded that of the administrator [superintendent] as well as that of any individual trustee During this time they had become specialists in their work and had inspired the confidence of many succeeding board members. Their opinion is highly regarded and their contribution significant The responsibility of the secretary is much more narrow in scope and is less complex than that of the administrator and is therefore much more clearly defined.¹⁵

Although board members and board chairmen have been used as alter groups or counter positions in the analyses of various roles, few studies have focussed directly on the member's or chairman's role in the school system.

Hagen's study of the role of board members over a 25 year period in an Oregon town appears relevant to the current problems. Through interviews and analyses of board documents, Hagen developed indices of board confidence in the superintendent, and of board intervention in the administration of the school system. His data indicated that over the period of his study, a reciprocal effect was evident. That is, the intervention of board members appeared to vary inversely with their confidence in the competence of the superintendent.¹⁶

III. ROLE CONGRUENCE

The identification of a given individual as the one fulfilling a given role requires that meaning be attributed to the elements of his behavior. For instance, if a given individual's behavior is perceived as mainly giving opinions and suggestions related to the group's tasks then he could be said to be fulfilling the instrumental role of advisor.

However, every act or element of behavior has two meanings in terms of group roles. First, it is an expression of the actor's expectations for his own role. Second, it is an expression of the expectations the actor holds for the role of the member or members toward whom it is directed.

Therefore, from the observed behavior of the members of a group one may obtain two sets of expectations for the role of a member. The first set constitutes the expectations an individual has for his own role, and the second set constitutes the expectations others have for his role. The former will be called the performed role, the latter the sent role.¹⁷

Performed Role

The performed role of a group member is defined as the set of expectations which he holds for his own role as represented by his own behavior.

Sent Role

The sent role of a group member is defined as the set of expectations which other members hold for his role as represented by their behavior toward him.

Interaction Role Congruence

There is, of course, a relationship between performed and sent roles. For, as Gross et. al. say,

Three basic ideas which appear in most conceptualizations considered, if not in the definitions of role themselves, are that individuals: (1) in social locations (2) behave (3) with reference to expectations.¹⁸

Therefore, as a structure of interaction roles emerges one would expect that the performed and sent roles assigned to a given member would tend to converge. That is, that a high degree of role congruence would develop.

Parsons and Shils suggest that a "system of interaction may be analyzed in terms of the extent of conformity of ego's action with alter's expectations and vice versa."¹⁹ In the terms used here, this conformity is role congruence. Role congruence for a given position incumbent is the degree to which his behavior is complemented by the behavior of others toward him, or the correspondence of his performed and sent roles.

Figure II presents a paradigm of the relationships between group member behavior, roles and role congruence. It can be seen that role congruence may be measured as the degree of correspondence

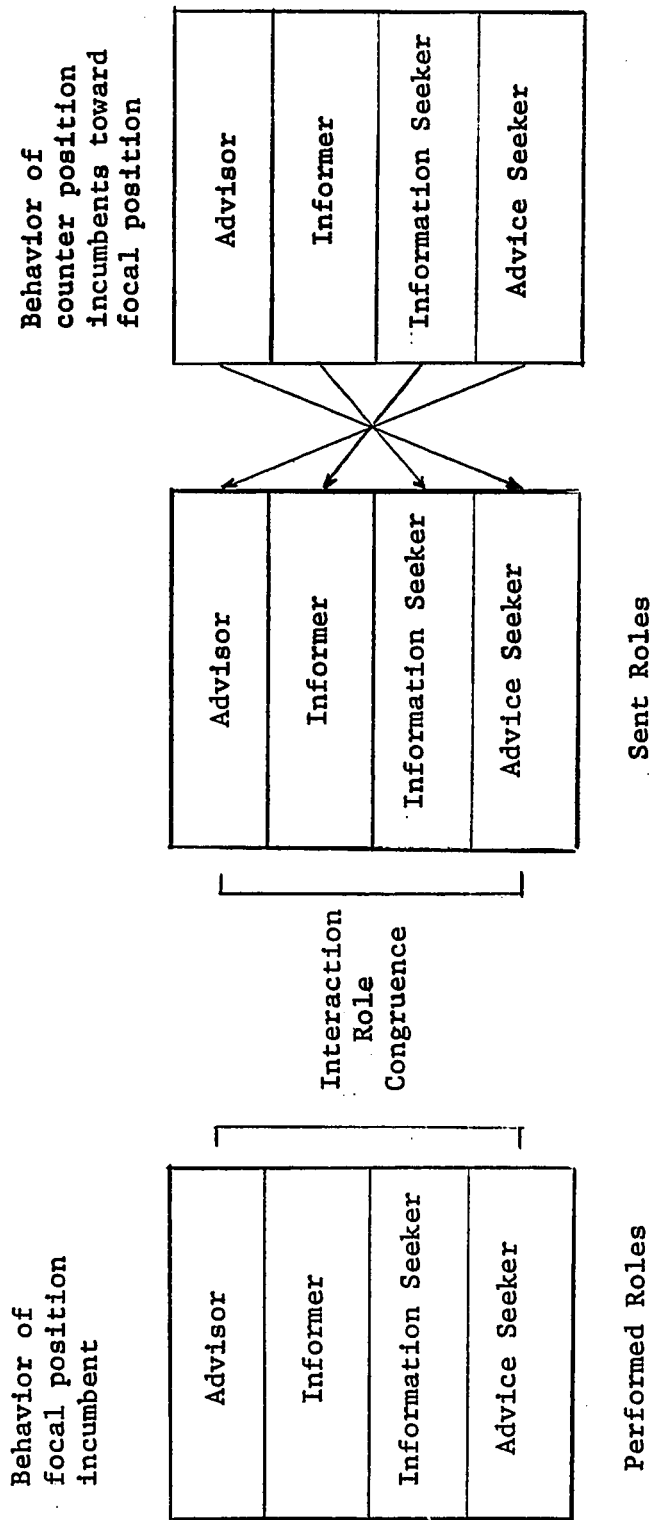


FIGURE II
 RELATIONSHIPS BETWEEN MEMBER BEHAVIOR,
 GROUP ROLES, AND ROLE CONGRUENCE

between the distribution of the focal position incumbent's acts through the four instrumental roles and the distribution of the counter position incumbents' acts through the four complementary roles.

Task Area Role Congruence

Just as interaction role congruence is the correspondence between a group member's interaction behavior and that of other group members toward him, task area role congruence may be viewed as the correspondence between the distribution of a member's behavior in the various task areas and the distribution of the behavior of other group members directed toward him in the various task areas.

Hypotheses

A secondary focus of the present study was the relationship between interaction role congruence and tenure and experience in a given position.

The previously cited research by Bales and others is summarized in a statement by Stogdill. He says,

. . . group structures of expectation, once differentiated and reinforced by the performances and interactions of the members over a period of time, tend to exhibit a high degree of stability.²⁰

This stability of structure is dependent upon complementarity of roles which, in turn, suggests a high degree of role congruence. These relationships were stated in the form of three hypotheses.

Hypothesis 1. The greater the number of years an individual has held a given position in a given system the greater the degree of congruence of his role.

Hypothesis 2. The greater the number of years an individual has been in a given system in any position the greater the degree of congruence of his role.

Hypothesis 3. The greater the number of years of experience an individual has had in a given position in any system the greater the degree of congruence of his role.

IV. SCHOOL BOARD INTERACTION STUDIES

Although they do not focus directly on interaction roles, it might be well to review briefly three studies which examine interaction at school board meetings using a technique similar to the one employed for the present study.

The Thomas Study

The major segment of Thomas' study involved the recording of interaction at 22 five-man school boards through one meeting each. Bales' Interaction Process Analysis (I.P.A.) was the coding technique used. The sample was chosen so as to consist of eleven boards with long-tenure board members and administrators and eleven boards with short-tenure board members and administrators. Analysis of the interaction patterns revealed no significant differences between long-tenure and short-tenure boards. However, there were some differences in the interaction patterns of long and short-tenure superintendents.

New administrators tended to request more information and offer more suggestions and opinions than did administrators with long tenure. This fact may be interpreted to indicate that each administrator seeks to exercise influence through the resources he has available: the long-tenure administrator influences through the power inherent in his channels of information: the new administrator must rely more exclusively upon the power of ideas, opinions, or suggestions.²¹

Further analyses of these data indicated that the superintendent functioned as the "task leader." In addition:

Since a large proportion of the administrator's task-centered activity consisted of giving suggestions and opinions, the task leadership of these administrators may further be characterized as directive rather than non-directive. That is to say, the administrators not only clarified the problems and discussed the implications of various alternatives but also proposed most of the solutions. Board members usually listened and reacted to such proposals, but seldom made suggestions on their own.²²

The Brubacher Study

Brubacher also used Bales' I.P.A. for the recording of school board interaction. His study compared patterns of interaction in making programmed and non-programmed decisions. Programmed decisions were defined as those for which the group has developed specific procedures to solve the problem, and non-programmed decisions were defined as those for which no procedures had been devised. The meeting observer was required to subjectively judge the type of decision the board was making.

The data for this study were recorded by the author himself from four consecutive meetings of seven metropolitan Detroit area boards. In addition to the recording of interaction, a questionnaire designed to yield the perceptions of the school board members of

their individual roles, as well as their perceptions of the roles and status of their co-members in the decision-making process.

Brubacher found that, although the seven boards in his sample had similar total interaction profiles, the aggregate programmed decision profile differed from the aggregate non-programmed decision profile. His study indicated that non-programmed decisions require more interaction than programmed. Further, his results show that the programmed decision profile is higher in positive reactions, and lower in attempted answers than the non-programmed decision profile.

This study also indicated the complementarity of superintendent and board member interaction roles by the relatively high incidence of superintendent interaction in the attempted answers categories, and relatively low interaction in the questions categories, coupled with the converse pattern for board members. Brubacher summarizes his findings on interaction roles in the following way.

In general, the results from the use of the observational technique would indicate that school board members play different roles from superintendents, and school board officers [chairmen and secretaries] play different roles from school board members. Superintendents primarily provide information, opinions, and suggestions, whereas board members do more questioning. School board officers, however, provide more information and opinion, as well as ask more questions than the other four members of a school board.²³

The data from the questionnaire provided these additional findings on meeting participants' roles. First, the superintendents perceived their own roles as primarily providing information and making

specific suggestions. Second, the presidents perceived their roles as primarily mediating disputes, providing information and raising questions. Third, the secretaries perceived their roles as mainly giving support to proposals.²⁴ Finally, the members perceived the superintendent's role to be primarily in the problem areas of curriculum, administrative organization and school personnel.²⁵

The Matthews Study

Matthews recorded, again using I.P.A., the interaction of two school boards in the same central Alberta suburban community over a period of ten months covering a total of 53 meetings.

His findings on board interaction for programmed and non-programmed decisions confirmed Brubacher's results. Of particular interest here, however, are his findings on the superintendents' interaction roles. He reports that,

. . . the superintendents received more positive reactions and agreement than they initiated. They initiated more suggestions, opinions and information than they received. More queries for information, opinion and suggestion, and less negative reaction and disagreement were directed to them than they initiated The nature of the superintendents' behavior patterns together with the fact that board members typically looked to the superintendent for guidance in the classification, analysis and solution of task-problems seems to support the conclusion that the superintendent is the task-leader of the board group.²⁶

V. SUMMARY

This chapter presents the framework of theory and background of research upon which the present study was based.

The theory developed consisted of the concepts of performed and sent interaction roles and the relationship between them. Congruence of interaction roles was defined as the correspondence between performed and sent roles. Three hypotheses were stated relating role congruence to the incumbent's tenure and experience in the position and tenure in the administrative unit.

The research surveyed indicated the dimensions and stability of the structure of interaction in small groups, and the roles of the superintendent, the secretary-treasurer and the board members and chairman. The chapter concludes with a brief description of three studies which examined the interaction at school board meetings using Bales' Interaction Process Analysis as the interaction coding framework.

REFERENCES FOR CHAPTER II

¹ Abraham Zalesnik and David Moment, The Dynamics of Interpersonal Behavior (New York: John Wiley and Sons, Inc., 1964), p. 67.

² Edgar F. Borgatta and Robert F. Bales, "Task and Accumulation of Experience as Factors in the Interaction of Small Groups," Sociometry, XVI (1953), pp. 239-252.

³ Dorwin Cartwright and Alvin Zander, (eds.), Group Dynamics (second edition; Evanston, Illinois: Row, Peterson and Company, 1960), pp. 643-645.

⁴ For example see L. Carter, "Leadership and Small Group Behavior," in M. Sherif and M. O. Wilson, (eds.), Group Relations at the Crossroads (New York: Harper and Brothers, 1953), p. 16.

⁵ Alan F. Brown, "Reactions to Leadership," Educational Administration Quarterly, III (1967), p. 69.

⁶ Talcott Parsons and Edward A. Shils (eds.), Toward a General Theory of Action (Cambridge, Massachusetts: Harvard University Press, 1951), p. 15.

⁷ Kenneth D. Benne and Paul Sheats, "Functional Roles of Group Members," The Journal of Social Issues, IV (Spring, 1948), pp. 41-49.

⁸ Philip E. Slater, "Role Differentiation in Small Groups," American Sociological Review, XX (1955), p. 308.

⁹ Thomas R. Bowman, "Participation of Superintendents in School Board Decision-Making," Administrator's Notebook, XI, No. 5 (January, 1963), p. 1.

¹⁰ Ibid., p. 3.

¹¹ J. H. Finlay and A. W. Reeves, "Expectations of School Boards for the Role of the Provincially Appointed Superintendent of Schools in Alberta," The Alberta Journal of Educational Research, VII (June, 1961), pp. 74-80.

¹² H. D. Stafford, "Expectations of School Trustees for the Role of District Superintendent of Schools in British Columbia," (unpublished Master's thesis, The University of Alberta, Edmonton, 1964).

- ¹³ Robert Errett Skippen, Jr., "A Comparison of the Superintendent's Influence on School Board Policy as Perceived by Superintendents of Schools and the School Board Chairmen," (unpublished Doctoral dissertation, The University of Oregon, 1964).
- ¹⁴ Max G. Abbott, "Values and Value-Perceptions in Superintendent-School Board Relationships," Administrator's Notebook, IX, No. 4 (December, 1960), p. 3.
- ¹⁵ William Raymond McInnes, "A Descriptive Survey of the Organization, Functions and Operation of Collegiate Institute Boards in the Smaller Cities of Saskatchewan," (unpublished Master's thesis, The University of Alberta, Edmonton, 1962), pp. 148-149.
- ¹⁶ Arnold J. Hagen, "An Exploratory Study of the Patterning and Structuring of the Roles Played by School Board Members Through a Particular Time Sequence," (unpublished Doctoral dissertation, The University of Oregon, 1955).
- ¹⁷ These concepts are discussed more fully in Neal Gross, Ward S. Mason and Alexander W. McEachern, Explorations in Role Analysis (New York: John Wiley and Sons, Inc., 1958); Ragnar Rommetveit, Social Norms and Roles (Minneapolis: The University of Minnesota Press, 1954); and Robert L. Kahn, et al., Organizational Stress: Studies in Role Conflict and Ambiguity (New York: John Wiley and Sons, Inc., 1964).
- ¹⁸ Gross, Mason and McEachern, op. cit., p. 17.
- ¹⁹ Parsons and Shils, loc. cit.
- ²⁰ Ralph M. Stogdill, Individual Behavior and Group Achievement (New York: Oxford University Press, 1959), p. 80.
- ²¹ Michael P. Thomas, Jr., and Russell T. Gregg, "The Interaction of Administrators and School Boards," Administrator's Notebook, X, No. 6 (February, 1962), p. 3.
- ²² Ibid.
- ²³ John Wemple Brubacher, "An Analysis of the Decision-Making Process of School Boards," (unpublished Doctoral dissertation, The University of Michigan, 1963), pp. 147-148.
- ²⁴ Ibid., pp. 108-115.
- ²⁵ Ibid., p. 136

²⁶ Neville O. Matthews, "A Study of the Decision-Making Process of Two School Boards in an Alberta Community," (unpublished Doctoral dissertation, The University of Alberta, Edmonton, 1967), p. 302.

CHAPTER III

RESEARCH DESIGN

The purpose of this chapter is to define the variables, describe the procedures involved in the collection and analysis of the data, and provide a brief description of the sample.

I. THE VARIABLES

Interaction

The interaction data were gathered by direct observation. Interaction was coded according to the method and categories of Bales' Interaction Process Analysis (I.P.A.).¹

Bales maintains that the set of categories in the I.P.A. are "ultimately linked on the one hand to theory and on the other to empirical observation."² Further, he suggests that they are "A general-purpose, standard set of categories for observation and analysis, rather than a series of special lists of categories, each particularly fitted for a particular kind of group or a particular hypothesis."³

There were a number of reasons for the selection of Bales' method for the recording of interaction for this study. First, as implied above, the method is general and appeared to be applicable to a number of diverse task-oriented or discussion groups. Second, this method had been used for the analysis of interaction of a great

number of widely varying groups. Third, the I.P.A. categories have been the basis of several other school board studies. For instance, the previously cited research of Thomas, Brubacher and Matthews used I.P.A. to obtain their data.⁴ Finally, the categories and technique provide data relevant to the performed and sent roles under investigation.

Categories. The I.P.A. categories are illustrated in Table I. The 12 categories are arranged in a series of complementary pairs proceeding from the center pair, 6 and 7, outward. These pairs deal respectively with problems of orientation, evaluation, control, decision, tension-management, and integration.

The categories are also grouped in threes related to basic areas of interaction. Categories 1-3, and 10-12, represent social-emotional positive and negative reactions respectively. Whereas, categories 4-6, and 7-9, represent attempted answers and questions in the task area. No detailed description of each category will be attempted here.⁵

Coding. The coding or recording of the interaction required that each unit of behavior be recorded in the appropriate category. In addition, the recorder noted who the actor was, and to whom the act was directed.

The unit of interaction was any segment of behavior which could be discerned and interpreted by the recorder. This definition thus included such behavior as smiling, nodding, and day-dreaming.

TABLE I
 CATEGORIES FOR INTERACTION
 PROCESS ANALYSIS^a

Social- Emotional Area: Positive	A	1	<u>Shows solidarity</u> , raises other's status, gives help, reward:						
		2	<u>Shows tension release</u> , jokes, laughs, shows satisfaction:						
		3	<u>Agrees</u> , shows passive acceptance, understands, concurs, complies:						
Task Area: Neutral	B	4	<u>Gives suggestion</u> , direction, implying autonomy for other:						
		5	<u>Gives opinion</u> , evaluation, analysis, expresses feeling, wish:						
		6	<u>Gives orientation</u> , information, repeats, clarifies, confirms:	a	b	c	d	e	f
	C	7	<u>Asks for orientation</u> , information, repetition, confirmation:						
		8	<u>Asks for opinion</u> , evaluation, analysis, expression of feeling:						
		9	<u>Asks for suggestion</u> , direction, possible ways of action:						
Social- Emotional Area: Negative	D	10	<u>Disagrees</u> , shows passive rejection, formality, withholds help:						
		11	<u>Shows tension</u> , asks for help, withdraws out of field:						
		12	<u>Shows antagonism</u> , deflates other's status, defends or asserts self:						

- | | |
|-----------------------------|---------------------------------|
| a Problems of communication | d Problems of decision |
| b Problems of evaluation | e Problems of tension reduction |
| c Problems of control | f Problems of integration |

- | | |
|----------------------|----------------------|
| A Positive reactions | C Questions |
| B Attempted answers | D Negative reactions |

^aRobert F. Bales, Interaction Process Analysis (Cambridge, Massachusetts: Addison-Wesley Press, Inc., 1951), p. 9.

However, in practice, the recorder was almost always recording only units of verbal behavior. These units were as short as single words, phrases, or clauses, or as long as ten or fifteen minute reports. In the latter case, the recorder tallied the number of sentences or clauses in the appropriate category, and "who-to-whom" notation.

The recording of the initiator and receiver of each unit of interaction was accomplished by assigning each individual a number, and recording in the appropriate category a number pair for each unit of interaction. This number pair indicated interaction from the first individual or group represented in the pair to the second individual or group.

It was obvious that the perceptions of the recorder were of prime importance. In order to place the units of interaction in the proper categories, he assumed the perspective of the "generalized other." That is, he attempted to perceive, not necessarily the intended meaning of a comment, but the meaning that would be attributed to the comment by those to whom it was directed.

Similarly, because it was intended that the process of interaction be recorded, Bales suggested that the recorder "view each act as a response to the last act of the last other, or as an anticipation of the next act of the next other."⁶ And further, because interaction in the social-emotional areas was often more subtle and thus more difficult to perceive, he suggested that the recorder "favor the category nearer the top or the bottom of the list."⁷

In order that the recording procedure may be more clearly understood, there follows a brief segment from the transcript of a school board meeting. In the parentheses following each unit of interaction is noted the category in which it was recorded and the "who-to-whom" number pair. The chairman is numbered 1, the secretary-treasurer 2, the superintendent 3, the other board members 4, 5, 6, 7, and the meeting as a whole and non-regular participants as 0.

Chairman: Will the meeting please come to order. (6,1-0)
Have the minutes been distributed, John? (7,1-2)

Secretary-treasurer: (nods). (6,2-1)

Chairman: Are there any errors or omissions in the minutes? (8,1-0)

Board member 5: I move the adoption of the minutes. (6,5-1)

Board member 4: Seconded. (3,4-1)

Chairman: All in favor? (7,1-0)

Members: (assorted grunts, nods, and raised hands). (3,0-1)

Chairman: Carried. (6,1-2) Superintendent's report. (7,1-3)

Superintendent: Mr. Chairman, copies of the report have been distributed. (6,3-1) I'd like to call special attention to a number of things. (He notes several things while the other participants thumb through the pages of the report).
(6, 3-0 ~~///~~ ~~///~~ //) Any questions? (8,3-0)

Board member 7: Why is [Kings Avenue] school enrollment so high?
(8,7-3)

Board member 6: It's that new subdivision. (5,6-7)

Superintendent: Yes, (3,3-6) the population in that area has really gone up. (6,3-0) We'll probably have to get portable classrooms there next September. (5,3-0)

Board member 4: Won't the new wing be ready? (7,4-3)

Secretary-treasurer: No. (6,2-4) The contractor told me yesterday that the bad weather was holding them up. (6,2-4)

Board member 5: Let's hope summer comes eventually. (2,5-0)

Board member 4: I think we should make him put more men on the job. (5,4-3)

Chairman: I agree. (3,1-4) I think we should tell him to meet the contract agreement dead-line. (5,1-4)

Secretary-treasurer: Okay. (3,2-1) I'll call him tomorrow to see what can be done. (3,2-0).

Board member 5: No. (10,5-2) That won't do any good. (10,5-2)
If we want that job done on time we'll have to hit him where it hurts--in the pocketbook. (4,5-0)

Board member 6: Does he carry it in his hip pocket? (2,6-0)

Members: (laugh) (2,0-0)

Superintendent: There's no need. (10, 3-5) The contract clearly states (6,3-0)

(and so on.)

Samples of the interaction recording sheet, and interaction summary sheet are included in Appendix A.

Task Areas

The coders were required to note, in addition to I.P.A. coding, to which of the following seven task areas the interaction was mainly directed.

Pupil personnel services (PUP). This task area included discussion of such topics as guidance services, extra-curricular activities of pupils, and pupil discipline policies.

Staff personnel (PER). This task area included discussion of such topics as evaluation, allocation and promotion of both educational and non-educational staff.

Finance and business management (FIN). This task area included discussion of both obtaining and allocating financial resources.

Extra-system relations (EXT). This task dealt mainly with public relations and relations with provincial and municipal governments.

Educational program (EDP). This task area included discussion of curriculum and instruction as well as administrative organization.

Plant and facilities (PLA). This task area dealt with acquisition and allocation of buildings, sites, facilities and equipment.

Non-educational detail (NED). This task area was a residual category and included such topics as approval of minutes, motions of adjournment, and other detail which was not clearly related to the other six areas.

Although these categories were designed to be exhaustive and mutually exclusive, in practice some of the discussion could have been legitimately placed in two or more areas. For instance, a board discussion of teacher salary negotiations could have been viewed as finance, personnel, or extra-system relations. The observer was

required to judge the basic orientation of the interaction and categorize it accordingly. Thus, if the "timbre" of the salary negotiation discussion was focussed on increased costs of education, then it was classed as finance. On the other hand, if the orientation of the comments was toward attracting or losing staff, then it was classed as personnel.

Personal Characteristics

Variables associated with each of the meeting participants were examined. They were the following.

1. Sex.
2. Age.
3. Position tenure--number of years in the present position in the present administrative unit.
4. Unit tenure--number of years associated with the present administrative unit in any position.
5. Position experience--number of years experience in present position in any administrative unit.
6. Residence in community--number of years of residence within the administrative unit.
7. Amount of education.
8. Recency of education.

Unit Characteristics

Variables associated with the characteristics of the admin-

Administrative units in the sample were the following.

1. Administrative type--County, District or Division.
2. Enrollment size--small (fewer than 3,000) or large (3,000 or more).*
3. Meeting size--small (fewer than 10 participants) or large (10 or more).*
4. Superintendent's appointment--local or provincial.

II. DATA COLLECTION

The Sample

The first step in selection of the sample of administrative units for the study was to mail a letter requesting permission to observe, record and administer a questionnaire to four Divisions, eleven County and eight school District boards in central Alberta. Of approximately fifteen units which indicated a willingness to participate, eleven were selected to comprise the sample. Selection was made on the bases of prompt expression of willingness to participate and proximity to the University.

Interaction Data

Coders. Two graduate students from the Department of

* These categories were chosen both because they divided the sample into sub-samples of similar size and because they occurred at what appeared to be "natural" breaks in the distribution.

Educational Administration were selected as research assistants, that is, coders, for the project.

The training of these coders was a short, concentrated three-phase course. The first phase, of approximately three hours, involved a discussion of the twelve categories of the I.P.A., coding of a sample written protocol, and a concluding discussion of the protocol and comparisons of the coding of the two recorders and the author, noting and attempting to clarify difficulties or differences. Phase two involved the coding of an actual board meeting, with frequent concurrent noting of time and task area of discussion. The third phase involved comparison and review of the coding of the meeting in phase two. An attempt was made in this phase to further refine and clarify any difficulties or differences encountered in the coding in either interaction categories or task areas.

The training program required approximately ten hours over a three day period. It was realized that this program was considerably shorter and less rigorous than that suggested by Bales.⁸ However, the limitations on the resources of time and money necessitated such a truncated course. Further, the analyses which were applied to the data examined aggregates of acts. No investigation of the sequence of acts was attempted. The reliability and consistency analyses presented in subsequent sections indicate that, in terms of the analyses of the data, the training program was quite satisfactory.

Procedure. The interaction data were obtained from all or part of 26 meetings, representing two or three meetings of each of the eleven boards in the sample. The interaction at these meetings was recorded by only one coder with the exception of meetings one, fifteen and twenty-six. These three meetings were coded concurrently but independently by both coders and recorded on audio tape. This procedure provided data for inter-coder reliability and coder consistency analyses.

Personal Data

Information on the personal characteristics of the members of the sample boards was gathered by means of a questionnaire (Appendix A, page 163).

This instrument was completed by each participant prior to the coding of the first meeting of each board.

Administrative Unit Data

The information on the administrative units of the sample was obtained from the Annual Report of the Department of Education, Province of Alberta, 1967.⁹

III. DATA ANALYSES

Interaction

The basic unit of analysis for this study was the interaction profile.

Interaction profile. The interaction profile of an individual or board was defined as the distribution of acts within the interaction categories. From the coded interaction (approximately eight hours for each board) interaction profiles were determined for each participant and each board for each task area. The summing of the task area profiles provided a general interaction profile for each participant and each board.

Interaction categories. When all the interaction data had been collected, collated and summarized it was deemed necessary that the twelve categories, delineated by Bales, be collapsed into six. There were two reasons for this adjustment of the data. First, the number of acts coded in each of Bales' categories 1, 2, 3, 10, 11, and 12 was so small as to be almost negligible. Second, preliminary interaction category reliability analyses and discussion with coders indicated a high degree of difficulty in differentiating between acts which were opinion and those which were suggestion. Therefore, the coded interaction was collapsed from Bales' twelve categories to six for the present study.

Bales' categories 1, 2, and 3 (shows solidarity, shows tension release, and agrees) were collapsed into category 1 and assigned Bales' term positive reaction. His categories 4 and 5 (gives suggestion and gives opinion) were collapsed into category 2 and renamed gives advice. Bales' category 6 (gives orientation) was

numbered category 3 and renamed gives information, his category 7 (asks for orientation) was numbered 4 and renamed asks for information. Original categories 8 and 9 (asks for opinion and asks for suggestion) were collapsed into category 5 and renamed asks for advice. And finally, Bales' categories 10, 11, and 12 (disagrees, shows tension and shows antagonism) were collapsed into category 6 and assigned Bales' term negative reaction. This new set of categories related directly to the four instrumental and four expressive interaction roles delineated in the previous chapter. The relationships between the categories used in this study and those of Bales are indicated in Table II.

Interaction Roles

The interaction roles of meeting participants were determined by the comparison of interaction profiles. The mean (\bar{X}) and standard deviation (σ) of the distribution of acts among the meeting participants in each interaction category were calculated. An individual whose interaction in a given category was greater than $\bar{X} + \sigma$ was assigned an H (high) for that category. Similarly, an individual whose interaction was less than $\bar{X} - \sigma$ in a given category was assigned L (low) for that category. Thus, an individual with an H in category 3 performs the interaction role of informer, and a participant with an L in category 5 performs the role of low advice seeker.

TABLE II

COMPARISON OF INTERACTION CATEGORIES
FOR THE PRESENT STUDY WITH
THOSE OF BALESA

Bales' Categories		Present Study Categories	
Number	Description	Number	Description
1	Shows solidarity	1	Positive reaction
2	Shows tension release		
3	Agrees		
4	Gives suggestion	2	Gives advice
5	Gives opinion		
6	Gives orientation	3	Gives information
7	Asks for orientation	4	Asks for information
8	Asks for opinion	5	Asks for advice
9	Asks for suggestion		
10	Disagrees	6	Negative reaction
11	Shows tension		
12	Shows antagonism		

^aRobert F. Bales, Interaction Process Analysis (Cambridge, Massachusetts: Addison-Wesley Press, Inc., 1951).

Table III presents a sample calculation of the performed roles of meeting participants of unit one in the personnel task area.

Instrumental roles. Four types of instrumental roles were defined.

The role of advisor was defined in terms of initiated interaction in category 2 and received interaction in category 5. The role of informer in terms of initiated interaction in category 3 and received interaction in category 4. Advice seeker and information seeker roles were defined in terms of initiated interaction in categories 5 and 4 respectively and received interaction in categories 2 and 3 respectively.

Expressive roles. Four types of expressive roles were defined.

The roles of protagonist and antagonist were defined in terms of initiated interaction in categories 1 and 6 respectively. The roles of exemplar and deviator were defined in terms of received interaction in categories 1 and 6 respectively.

General and specific roles. The specific interaction roles were determined from the profiles for each of the task areas. The general interaction roles were determined from the total of the seven task area profiles.

TABLE III
 SAMPLE DETERMINATION OF ROLES
 FROM INITIATED INTERACTION
 OF ADMINISTRATIVE UNIT
 ONE IN PERSONNEL
 TASK AREA

Interaction Category	Supt.	Sec.-T.	Chair.	Members (N=4)	\bar{X}	σ
1	2	0	14(H)	14	4.3	4.6
2	2(L)	17	9	78	15.1	11.2
3	116(H)	90	73	124	57.6	40.9
4	1	7	48(H)	39	13.6	15.6
5	0	6(H)	0	3	1.3	2.4
6	0	4	2	20	3.7	6.5

Performed and sent roles. The method of interaction coding used in this study which notes both the initiator of an act and the participant toward whom it is directed permits the determination of both performed and sent roles. Performed roles were determined directly from the initiated interaction data. Sent roles, however, could not be determined directly from the received interaction matrices. For example, high interaction in category 5 directed toward a participant did not define that participant's role as an advice seeker. Rather, it is a manifestation of the expectations for that individual's role as an advisor. The symmetry of the interaction categories, particularly the instrumental ones (2 to 5), permits the determination of sent roles from the inverted profile of the received interaction. (See Figure II, page 23).

Congruence of Roles

It will be recalled that role congruence represents the correspondence of performed and sent roles.

Interaction. The index of congruence of interaction roles (IRC index) was defined as the correlation between the initiated and the inverted received percentage profiles in the four instrumental categories (2, 3, 4, and 5). Table IV displays sample calculations of three indices of congruence for unit one.

It can be seen from this table that the percentage profile of the acts initiated by the superintendent is very similar to the

TABLE IV

SAMPLE DETERMINATION OF CONGRUENCE OF
INTERACTION ROLES OF ADMINISTRATIVE
UNIT ONE IN PERSONNEL TASK AREA

Initiated Interaction Category	<u>Superintendent</u>				Received Interaction Category
	Initiated Acts	Pct.	Received Pct.	Acts	
2	2	1.9	0.0	0	5
3	116	28.8	35.4	23	4
4	1	1.1	1.6	5	3
5	0	0.0	6.3	6	2
Index of congruence		r = .98			
<u>Secretary-Treasurer</u>					
2	17	16.0	33.3	3	5
3	90	22.3	10.8	7	4
4	7	7.4	5.2	16	3
5	6	66.7	5.3	5	2
Index of congruence		r = -.35			
<u>Chairman</u>					
2	9	8.5	66.7	6	5
3	73	18.1	27.7	18	4
4	48	50.5	62.7	193	3
5	0	0.0	80.0	76	2
Index of congruence		r = -.23			

inverted percentage profile of acts directed toward him (received interaction). This high degree of linear correspondence is indicated by the index of IRC of .98. This could be interpreted to indicate that, for this sample of interaction, the categorization of 97 per cent of the superintendent's behavior could be correctly predicted from the behavior of the other meeting participants directed toward him.

The IRC indices of the secretary-treasurer and chairman are much lower indicating that their behavior did not complement the behavior others directed toward them.

Task area. The index of congruence of task area roles (TARC index) was defined as the correlation between the initiated and received percentages of interaction in the seven task areas.

Reliability

It was assumed that the data obtained from the personal information questionnaire and the Annual Report were both valid and reliable. This assumption could not be made about the interaction data. Therefore, measures of inter-coder reliability and coder consistency were calculated from the interaction of the three concurrently but independently coded meetings.

Task area. On the assumption that the coded interaction was both ratio and interval data, Pearson product-moment correlation

coefficients (r's) were used as measures of reliability. The correlations between the task area profiles for meetings one, fifteen and twenty-six are displayed in Table V. The coefficients range from .69 to .91 for direct observation and from .89 to .98 for coding from the audio tapes of the meetings two weeks after the conclusion of the data gathering period.

Comparison of task area profiles coded from direct observation and from the audio tape provided a measure of temporal consistency. Table VI indicates that coder A's consistency ranged from .56 to .99, and B's ranged from .64 to .97.

TABLE V

TASK AREA INTER-CODER RELIABILITIES
(No. of task areas = 7)

Method	Meeting 1	Meeting 15	Meeting 26
Direct observation	.69	.89	.91
Audio Tape	.96	.98	.89

TABLE VI

TASK AREA CODER CONSISTENCY BETWEEN
DIRECT OBSERVATION AND AUDIO TAPE
(No. of task areas = 7)

Coder	Meeting 1	Meeting 15	Meeting 26
A	.87	.56	.99
B	.92	.64	.97

Meeting participant. Table VII presents the correlations between the initiated and received interaction attributed to the meeting participants by coders A and B. In each case the r's were greater than or equal to .90 for both direct observation and audio tape. The consistency of the coders perception of the initiator and receiver of interaction is indicated by Table VIII. The consistency of A's interaction coding range from .89 to .99, whereas B's consistency ranged from .85 to .99.

Interaction categories. Tables IX and X indicate respectively the reliability and consistency of the coders assignment of acts to various interaction categories. Both coders exhibited a high degree of consistency, r's being greater than or equal to .92. The agreement between the two coders was not as high, particularly from the audio tape. However, the use of the interaction profile as the basic

TABLE VII

MEETING PARTICIPANT INTER-CODER
RELIABILITIES

Interaction	Method	Meeting 1 (N = 7)	Meeting 15 (N = 10)	Meeting 26 (N = 13)
Initiated	Direct obs.	.99	.90	.96
	Audio tape	.95	.99	.97
Received	Direct obs.	.98	.96	.94
	Audio tape	.99	.99	.93

TABLE VIII

MEETING PARTICIPANT CODER CONSISTENCY BETWEEN
DIRECT OBSERVATION AND AUDIO TAPE

Interaction	Coder	Meeting 1 (N = 7)	Meeting 15 (N = 10)	Meeting 26 (N = 13)
Initiated	A	.89	.91	.99
	B	.86	.94	.99
Received	A	.99	.99	.93
	B	.98	.97	.85

unit of analysis dictated that these profiles be essentially equivalent for inter-administrative unit comparisons.

TABLE IX

INTERACTION CATEGORY INTER-CODER RELIABILITIES
(No. of interaction categories = 6)

Method	Meeting 1	Meeting 15	Meeting 26
Direct obs.	.98	.94	.88
Audio tape	.83	.69	.86

Examination of the frequency polygons (Figure III) representing the interaction profiles of the three meetings recorded by both coders suggested that there was a consistent difference between the

TABLE X

INTERACTION CATEGORY CODER CONSISTENCY BETWEEN
DIRECT OBSERVATION AND AUDIO TAPE
(No. of interaction categories = 6)

Coder	Meeting 1	Meeting 15	Meeting 26
A	.99	.98	.99
B	.94	.92	.99

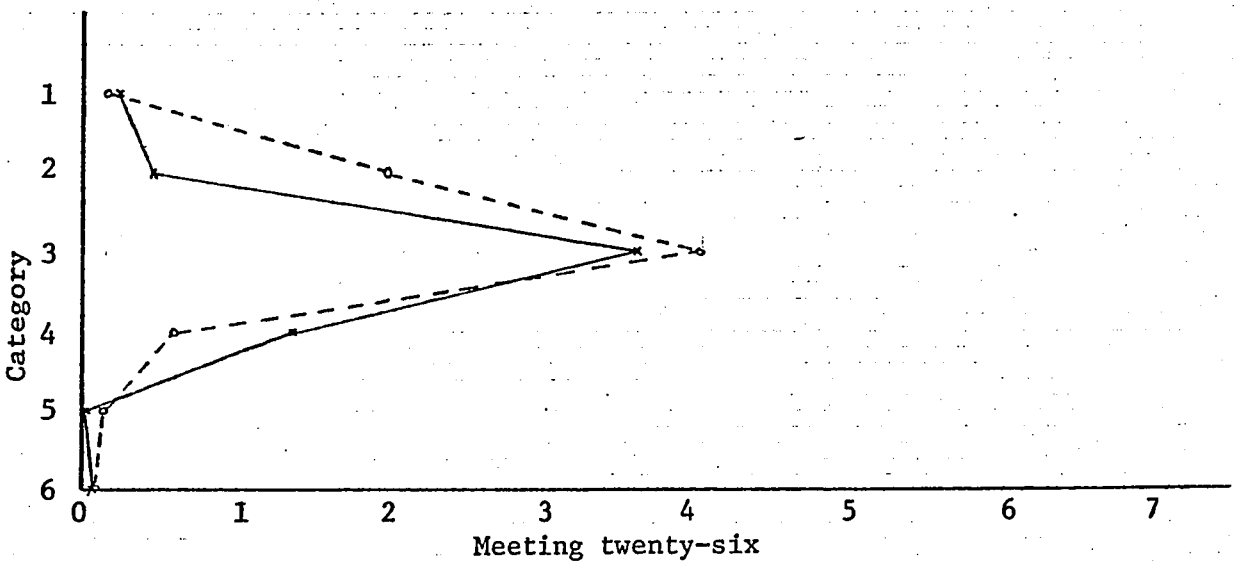
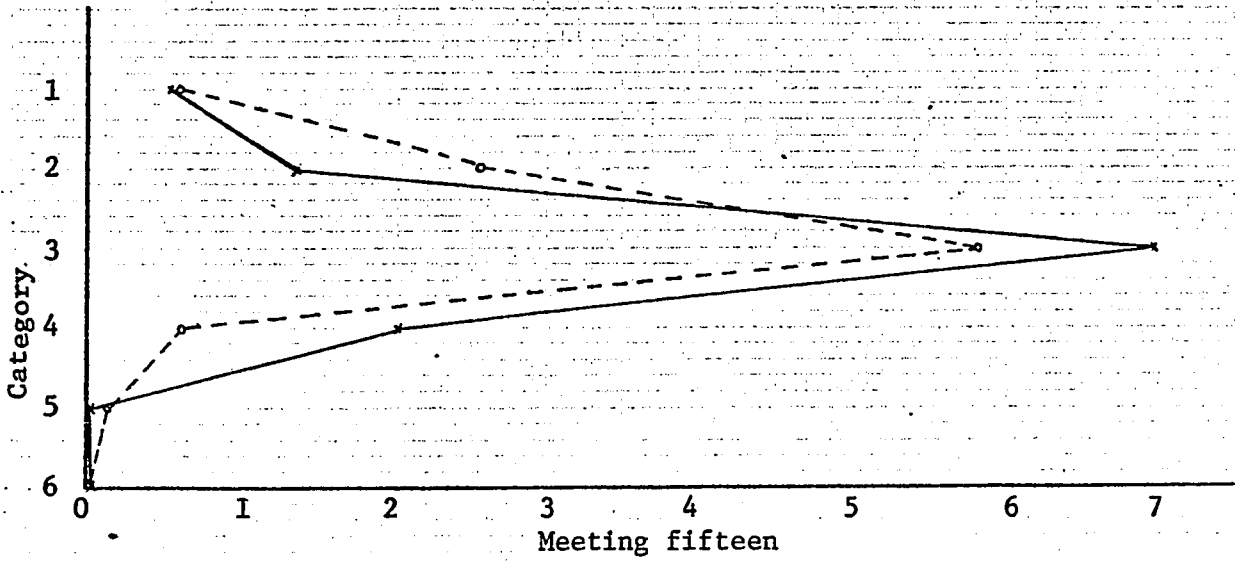
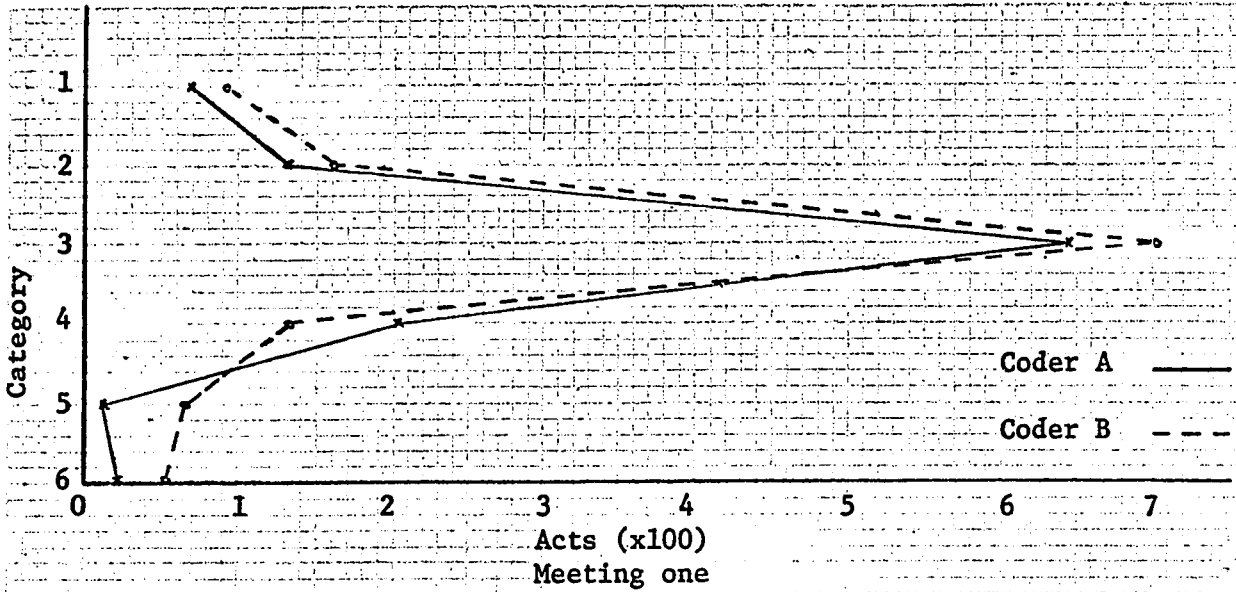


FIGURE III
COMPARISON OF INTERACTION PROFILES BY TWO
CODERS OF CONCURRENTLY RECORDED MEETINGS

perceptions of the two. That is, for all three meetings coder A recorded fewer acts in category 2, and more acts in category 4. It was decided, therefore, that by calculating two sets of weights, one set to be applied to data recorded by each coder, the coding bias could be overcome.

The calculation of the profile weights was based on the assumption that the actual interaction was the mean of the two coder's perceptions. Using the aggregate profile of the three meetings coded concurrently, weights were calculated which, when applied to the data gave the mean aggregate profile. This calculation is presented in Table XI.

To see if the application of these weights did make the recorded interaction of the two coders equivalent, one of the concurrently coded meetings was chosen at random (meeting 15) and the chi square test for independence of two nominal variables was applied to the raw and weighted data. These tests are presented in Table XII. Chi square for the raw data was 131.19. This indicated a difference between the profiles recorded by the two coders at less than the one per cent level of probability. Chi square for the weighted data was 13.41. This indicated that there was no significant difference between the two weighted profiles at the one per cent level of probability. These profiles were, therefore, accepted as the more reliable data and the weights were applied to all of the raw data. The weighted data were rounded to

TABLE XI
 CALCULATION OF WEIGHTING SYSTEM
 FOR INTERACTION PROFILES

Category	Three meeting aggregate		Total (1)+(2) (3)	Mean (3) ÷ 2 (4)	Weights B (4) ÷ (1) (5)	Weights B (4) ÷ (2) (6)
	A (1)	B (2)				
1	146	144	290	145.0	0.99	1.01
2	279	604	883	441.5	1.58	0.73
3	1691	1660	3351	1675.5	0.99	1.01
4	539	260	799	399.5	0.74	1.54
5	17	81	98	49.0	2.88	0.60
6	23	62	85	42.5	1.85	0.69

TABLE XII

CHI SQUARE TEST FOR INDEPENDENCE OF RAW AND
WEIGHTED INTERACTION PROFILES OF MEETING
FIFTEEN RECORDED BY TWO CODERS

Category	Raw Profiles			Weighted Profiles		
	A	B	Total	A	B	Total
1	54	49	103	53.6	49.3	102.9
2	122	252	374	193.1	184.2	377.3
3	695	582	1277	688.6	587.4	1276.0
4	201	65	266	149.0	99.9	248.9
5	0	11	11	0.0	6.7	6.7
6	0	1	1	0.0	0.7	0.7
Total	1072	960	2032	1084.3	928.2	2012.5
Chi Square = 131.19						
Chi Square = 13.41						

the nearest act and were used in all subsequent analyses.

Validity

The question of validity of data in the social sciences is a difficult one to answer, because in the final analysis it becomes a question of what is "real." On this topic, Heyns and Lippitt say, "In one sense, the question of validity means: Does the observer score measure what it purports to measure? In another sense, the question of validity asks: Does the observer score predict anything?"¹⁰ The former question is usually answered by comparison of the data or findings in question with some external, relatively objective, and accepted criterion. However, "the lack of definite criteria for judging the adequacy of group relationships [makes] it necessary to base the study of validity largely on the logical, internal consistency and reasonable expectancy of a series of analyses."¹¹

Therefore, the validity of the interaction data for this study was approached as a question of comparability of interaction profiles both within and without the sample.

External. The external validity of the interaction profiles was examined in relation to studies of other school boards and to studies of other types of small groups.

Table XIII displays the total interaction profile for this study in comparison with the studies of Thomas,¹² Brubacher,¹³ and

TABLE XIII
 COMPARISON OF INTERACTION PROFILES
 OF FOUR SCHOOL BOARD STUDIES

Interaction Category	Percentage of Acts					
	Thomas rank	Brubacher rank	Matthews rank	Present study rank	Present study rank	Present study rank
1	19.0	9.3	3.88	5	4.61	4
2	38.0	43.6	27.81	2	20.84	2
3	31.0	32.9	51.34	1	60.53	1
4	12.0	4.6	9.36	3	11.07	3
5		5.2	6.27	4	1.92	5
6	0.0	4.2	1.42	6	1.03	6
Total	100.0	99.8	100.08		100.00	
Coefficient of concordance (W) = .87 (significant $p \leq .01$)						

Matthews.¹⁴ The coefficient of concordance (W) calculated on the rank profiles was .87. This indicates a significant relationship among the interaction data of these four studies. A similar comparison procedure was used to compare interaction of case discussion groups,¹⁶ therapy groups,¹⁷ and labor-management sessions¹⁸ with data from the present study. As indicated in Table XIV, there was also a significant association among the ranked interaction profiles of these groups at the one per cent level of probability.

Internal. The internal validity was examined for by comparing the interaction profiles of the eleven administrative units in the sample. Table XV displays the ranks of the interaction categories for each board. The coefficient of concordance for these ranks was .99. This indicates a high degree of internal consistency despite the fact that the data for six boards were recorded by coder A and five were recorded by coder B.

These analyses suggest that the data have a high degree of internal and external validity.

IV. DESCRIPTION OF THE SAMPLE

To provide a perspective from which the analyses may be viewed, a brief description of the sample will be presented.

Administrative Units

The eleven administrative units, comprising the sample, were six Counties, four Districts, and one Division. This is illustrated

TABLE XIV
 COMPARISON OF INTERACTION PROFILES OF
 THIS STUDY AND A SELECTION OF NON-
 SCHOOL BOARD STUDIES

Interaction Category	Percentage of Acts					
	Bales & Hare rank	Talland rank	Landsberger rank	Present study rank	Landsberger rank	Present study rank
1	27.4	6.8	14.1	4.61	3	4
2	41.4	23.7	27.5	20.84	2	2
3	15.5	59.2	32.7	60.53	1	1
4	2.3	5.5	7.3	11.07	5	3
5	2.9	3.0	2.5	1.92	6	5
6	10.4	1.8	13.9	1.03	4	6
Total	99.9	100.0	100.0	100.00		
Coefficient of concordance (W) = .77 (significant p ≤ .01)						

TABLE XV
 COMPARISON OF THE INTERACTION PROFILES
 OF THE ELEVEN BOARDS COMPRISING
 THE SAMPLE

Interaction Category	Category rank by administrative unit										
	1	2	3	4	5	6	7	8	9	10	11
1	4	4	4	4	5	4	4	4	4	4	4
2	3	2	3	2	2	2	2	2	3	2	3
3	1	1	1	1	1	1	1	1	1	1	1
4	2	3	2	3	3	3	3	3	2	3	2
5	5	5	6	5	4	5	5	5	5	5	5
6	6	6	5	6	6	6	6	6	6	6	6

Coefficient of concordance (W) = .99 (significant $p \leq .001$)

by Table XVI. This table also indicates the enrollment size, meeting size and superintendent's appointment for each administrative unit.

It should be noted here that the sample Counties and Divisions had provincially appointed superintendents, whereas the Districts had locally appointed ones. Also, Counties tended to have large meetings, while Districts and Divisions had small ones.

Meeting Participants

Tables XVII and XVIII present descriptive data on the personal characteristics of meeting participants.

Superintendents. Table XVII indicates that all superintendents were male, were between 30 and 60 years of age and had at least one university degree. It also indicates that 6 superintendents had taken some formal education within the last 5 years. Table XVIII indicates that the superintendents had held that rank for approximately 7.6 years, 6.5 in their present district. On the average, the superintendents worked in the administrative unit for one year and lived in the community for approximately two years prior to becoming superintendent.

Secretary-treasurers. Ten of the secretary-treasurers were male, all were less than 60 years of age, none had earned a university degree, and six had not taken any formal education in the last ten years. Table XVIII indicates that although they had lived in the community for more than 14 years, they had held the position

TABLE XVI
 CLASSIFICATION OF ADMINISTRATIVE UNITS
 BY ADMINISTRATIVE TYPE, ENROLLMENT
 SIZE, MEETING SIZE, AND
 SUPERINTENDENT'S
 APPOINTMENT

Unit Variable	Administrative Unit											Total
	1	2	3	4	5	6	7	8	9	10	11	
Admin. type												
County		x	x	x	x			x	x			6
District	x						x			x	x	4
Division						x						1
Enroll. size												
Small	x		x	x		x			x	x		6
Large		x			x		x	x			x	5
Meet. size												
Small	x					x	x			x		4
Large		x	x	x	x			x	x		x	7
Supt. app't												
Local	x						x			x	x	4
Prov.		x	x	x	x	x		x	x			7

TABLE XVII
DESCRIPTION OF MEETING PARTICIPANTS BY NOMINAL VARIABLES

Variable	Category	Superintendents	Sec.-Treasurers	Chairmen	Members	
Sex	Male	11	10	11	67	
	Female	0	1	0	7	
Age	Less than 30	0	2	0	3	
	31 - 35	1	2	0	1	
	36 - 40	4	1	1	8	
	41 - 45	2	2	1	14	
	46 - 50	0	1	2	12	
	51 - 55	2	1	3	6	
	56 - 60	2	0	2	11	
	61 - 65	0	0	2	8	
	66 - 70	0	0	0	5	
	More than 70	0	0	0	7	
Amount of education	Less than gr. 10	0	0	0	29	
	Gr. 10 to 1. t. gr. 12	0	4	3	23	
	High school grad.	0	4	1	7	
	Less than 3 yrs. univ.	0	3	3	5	
	1 univ. degree	2	0	3	4	
	2 univ. degrees	5	0	0	3	
	3 univ. degrees	4	0	0	1	
	4 or more degrees	0	0	0	2	
	Recency of education	Less than 2 yrs.	3	2	0	7
		3 - 5 yrs.	3	1	0	2
	6 - 10 yrs.	1	2	0	3	
	11 - 20 yrs.	3	1	2	7	
	More than 20 yrs.	1	5	9	55	

TABLE XVIII

DESCRIPTION OF MEETING PARTICIPANTS
BY CONTINUOUS VARIABLES

Variable	Supts. (N=11)		Sec.-T.'s (N=11)		Chairmen (N=11)		Members (N=74)	
	Mean	S. Dev.	Mean	S. Dev.	Mean	S. Dev.	Mean	S. Dev.
Position tenure	6.55	5.31	6.09	5.82	3.18	2.04	4.97	3.95
Unit tenure	7.55	7.64	7.82	6.49	8.00	8.24	5.24	4.27
Position experience	7.64	4.92	6.73	5.72	6.18	9.31	7.19	7.46
Yrs. of residence in community	8.27	11.93	14.45	14.31	31.09	18.50	33.38	17.92

of secretary-treasurer for only about six years, and had served the unit in other capacities for approximately two years prior to appointment to this position.

Chairmen. All the chairmen were male, were between the ages of 36 and 65 and had not taken any formal education for at least ten years. The amount of education of the chairmen ranged from less than high school graduation to one university degree. On the average, chairmen had lived in the community over 30 years, had served their present board for 8 years, and had been chairmen for more than 3 years.

Members. Table XVII indicates that the 67 male and 7 female board members covered the full range in age, amount and recency of education. However, 55 of the 74 had not had any formal education within the last 20 years. Table XVIII shows that on the average members have lived in the present communities over 30 years and had approximately five of their seven years experience as members with their present board.

Interaction

The sample amount of interaction coded for each administrative unit in terms of time and number of acts is displayed in Table XIX. The mean amount of time observed by the coders was 460.1 minutes (7.7 hours) for the eleven boards. The time ranged from 328 minutes (5.5 hours) to 604 minutes (10.1 hours). The mean number of acts coded was 2721.1 or 5.91 acts per minute.

TABLE XIX

NUMBER OF MEETINGS, TIME AND NUMBER
OF ACTS IN THE INTERACTION SAMPLE
OF EACH ADMINISTRATIVE UNIT

Administrative Unit	Time (minutes)			Total	Interaction (acts)	Acts per minute
	Meeting 1	2	3			
1	165	105	180	450	2983	6.63
2	310	141		451	3276	7.26
3	231	238		469	3036	6.47
4	198	226		424	2825	6.62
5	321	244		565	3869	6.85
6	345	143		488	3060	6.27
7	180	227		407	2490	6.12
8	312	182		494	2600	5.26
9	274	205	125	604	2768	4.58
10	100	164	64	348	1437	4.38
11	227	99	55	381	1588	4.17
Total	2663	1974	424	5061	29932	
Mean				460.1	2721.1	5.91

The number of acts coded for each board in each task area is presented in Table XX. The greatest number of acts was coded in the areas of personnel and plant and facilities. The fewest acts were recorded in extra-system relations and finance. It should be noted that none of the interaction of unit one was perceived to fall in the area of pupil personnel services, and none of the interaction of unit five was coded in the area of finance.

Relationships Among Personal Variables

It would seem important that the description of the sample include an examination of the relationships among the personal characteristics of the participants.

Superintendents. Table XXI shows that among the superintendents there is a cluster of significant correlations between the variables related to tenure. That is, age, experience, and recency of education are all positively related.

Secretary-treasurers. As indicated in Table XXII, there are significant correlations among the variables related to the secretary-treasurers' experience and length of residence in the community. As with superintendents, the secretary-treasurer's amount of education is not related to any other personal characteristics. Unlike the superintendents, however, the recency of the secretary-treasurer's education was not related to tenure or experience in the present position and unit.

TABLE XX
 DISTRIBUTION OF INTERACTION
 THROUGH TASK AREAS, BY
 ADMINISTRATIVE UNIT

Admin. Unit	Task Area							Total
	PUP	PER	FIN	EXT	EDP	PLA	NED	
1	0	654	358	354	426	1053	138	2983
2	416	1307	149	143	653	472	136	3276
3	424	415	155	122	773	1036	111	3036
4	156	370	362	218	389	217	1113	2825
5	339	1531	0	161	233	796	809	3869
6	731	601	268	21	198	988	253	3060
7	276	966	140	47	101	830	130	2490
8	399	1015	56	338	286	253	253	2600
9	276	540	652	81	431	689	99	2768
10	608	242	54	114	130	109	180	1437
11	23	206	333	69	170	686	101	1588
Total	3648	7847	2527	1668	3790	7129	3323	29932

TABLE XXI
 INTERCORRELATIONS^a OF PERSONAL
 CHARACTERISTICS OF SUPERINTENDENTS
 (N = 11)

Variable	1	2	3	4	5	6
1. Age	1.00					
2. Position tenure	.82 ^b	1.00				
3. Unit tenure	.72 ^b	.89 ^b	1.00			
4. Position exp.	.71 ^b	.90 ^b	.80 ^b	1.00		
5. Res. in comm.	.39	.50	.82 ^b	.43	1.00	
6. Amt. of educ.	-.05	.02	-.05	.02	.02	1.00
7. Rec. of educ.	.60	.82 ^b	.73 ^b	.68 ^b	.40	.07

^aPearson product-moment correlations.

^bSignificantly different from zero ($p \leq .05$).

TABLE XXII
 INTERCORRELATIONS^a OF PERSONAL CHARACTERISTICS
 OF SECRETARY-TREASURERS
 (N = 11)

Variable	1	2	3	4	5	6
1. Age	1.00					
2. Position tenure	.44	1.00				
3. Unit tenure	.31	.92 ^b	1.00			
4. Position exp.	.31	.94 ^b	.84 ^b	1.00		
5. Res. in comm.	.20	.66 ^b	.83 ^b	.57	1.00	
6. Amt. of educ.	.19	.30	.14	.32	.00	1.00
7. Rec. of educ.	.34	-.01	.20	-.04	.17	-.33

^aPearson product-moment correlations.

^bSignificantly different from zero ($p \leq .05$).

Chairmen. Table XXIII indicates that age and length of residence in the community are positively related at a significant level in the sample of chairmen. There is a significant negative correlation between recency and amount of education indicating that more recently educated chairmen have more formal education.

Members. The variables related to age, experience as a board member in this and other units, and length of residence in the community are positively and significantly ($p \leq .05$) correlated in the sample of 74 board members. Similarly, the members' recency of education, as shown in Table XXIV, was positively correlated with age, experience as a board member, and length of residence in the community at a significant level. The significant negative correlations between years of residence in the community and amount of education, and between recency and amount of education indicate, as with the chairmen, that more recently educated members have taken more formal education.

Relationships Between Personal and Unit Variables

Table XXV presents a summary of the results of t-tests comparing administrative units on each unit variable by the personal characteristics of the focal position incumbents.

None of the differences on the unit variables was significant ($p \leq .05$) for the superintendent's characteristics with the exception that locally appointed superintendents tended to have more formal education than provincially appointed ones.

TABLE XXIII
 INTERCORRELATIONS^a OF PERSONAL
 CHARACTERISTICS OF CHAIRMEN
 (N = 11)

Variable	1	2	3	4	5	6
1. Age	1.00					
2. Position tenure	.45	1.00				
3. Unit tenure	.48	.29	1.00			
4. Position exp.	.33	.32	.09	1.00		
5. Res. in comm.	.70 ^b	.36	.39	.47	1.00	
6. Amt. of educ.	-.35	-.29	-.25	-.41	-.51	1.00
7. Rec. of educ.	.60	.39	.23	.24	.41	-.69 ^b

^aPearson product-moment correlations.

^bSignificantly different from zero ($p \leq .05$).

TABLE XXIV
 INTERCORRELATIONS^a OF PERSONAL
 CHARACTERISTICS OF MEMBERS
 (N = 74)

Variable	1	2	3	4	5	6
1. Age	1.00					
2. Position tenure	.60 ^b	1.00				
3. Unit tenure	.58 ^b	.91 ^b	1.00			
4. Position exp.	.59 ^b	.79 ^b	.75 ^b	1.00		
5. Res. in comm.	.55 ^b	.34 ^b	.24 ^b	.27 ^b	1.00	
6. Amt. of educ.	-.11	-.07	-.03	-.11	-.34 ^b	1.00
7. Rec. of educ.	.39 ^b	.21	.22	.26 ^b	.28 ^b	-.38 ^b

^aPearson product-moment correlations.

^bSignificantly different from zero ($p \leq .05$).

TABLE XXV
 SUMMARY^a OF THE SIGNIFICANT DIFFERENCES OF PERSONAL
 CHARACTERISTICS OF FOCAL POSITION
 INCUMBENTS ON ADMINISTRATIVE
 UNIT VARIABLES

Unit Variable	Participant	Personal Variable	Mean	S.D.	t	p ^b
Administrative type						
Counties	Chair.	Age	5.83	1.07	2.97	.02
Districts			3.50	1.12		
Counties	Chair.	Res. in com.	44.33	15.15	4.65	.00
Districts			14.25	3.77		
Counties	Chair	Amt. educ.	2.33	1.11	2.35	.05
Districts			4.50	1.50		
Enrollment size						
Small	Chair.	Pos. tenure	4.33	1.89	2.37	.04
Large			1.80	1.17		
Meeting size						
Small	Chair.	Res. in com.	14.00	3.39	4.18	.00
Large			40.86	16.41		
Superintendent's appointment						
Local	Supt.	Amt. educ.	6.75	.43	2.25	.05
Provincial			5.86	.64		

^aComplete data are reported in Appendix B.

^bTwo-tailed.

None of the differences on the unit variables was significant for the personal characteristics of the secretary-treasurer.

Significant differences between units on the chairmen's characteristics indicated that: (1) County chairmen tend to be older than District chairmen, (2) chairmen of small enrollment units have held the position longer than those of large enrollment units, (3) chairmen of Counties and large meetings have resided in the community considerably longer than those of small meeting Districts, and (4) chairmen of Districts have significantly more education than have chairmen of Counties.

V. SUMMARY

This chapter has presented a description of the research design for this study. The description included brief discussions of the administrative unit, personal and interaction variables, the sources and methods of data collection, and the types of analyses applied to the data. The chapter also describes and presents the results of reliability and validity analyses, and concludes with a description of the sample.

REFERENCES FOR CHAPTER III

- ¹Robert F. Bales, Interaction Process Analysis (Cambridge, Massachusetts: Addison-Wesley Press, Inc., 1951).
- ²Ibid., p. ii.
- ³Ibid., p. iii.
- ⁴Supra, pp. 25-28.
- ⁵For an extensive description of each category, see Ibid., pp. 177-195.
- ⁶Ibid., p. 91.
- ⁷Ibid., p. 92.
- ⁸Ibid., pp. 85-99.
- ⁹Sixty-second Annual Report of the Department of Education, Province of Alberta, 1967 (Edmonton: Queen's Printer, 1968).
- ¹⁰Roger W. Heyns and Ronald Lippitt, "Systematic Observational Techniques," in Gardner Lindzey (ed.), Handbook of Social Psychology, Vol. I (Reading, Massachusetts: Addison-Wesley Publishing Company, 1954), p. 397.
- ¹¹Bernard Steinzor, "The Development and Evaluation of a Measure of Social Interaction," Human Relations, II (1949), p. 345.
- ¹²Michael P. Thomas, "Interaction Process Analysis of Administrator-School Board Relationships" (unpublished Doctoral dissertation, The University of Wisconsin, 1960).
- ¹³John W. Brubacher, "An Analysis of the Decision-Making Process of School Boards" (unpublished Doctoral dissertation, The University of Michigan, 1963).
- ¹⁴Neville O. Matthews, "A Study of the Decision-Making Process of Two School Boards in an Alberta Community" (unpublished Doctoral dissertation, The University of Alberta, 1967).

¹⁵George A. Ferguson, Statistical Analysis in Psychology and Education (New York: McGraw-Hill Book Company, Inc., 1959), pp. 186-189.

¹⁶Robert F. Bales and A. Paul Hare, "Diagnostic Use of the Interaction Profile," The Journal of Social Psychology, LXVII (1965), p. 240.

¹⁷George A. Talland, "Task and Interaction Process: Some Characteristics of Therapeutic Group Discussion," Journal of Abnormal Psychology, L (1955), pp. 105-109.

¹⁸H. A. Landsberger, "Interaction Process Analysis of Professional Behavior: A Study of Labor Mediators in Twelve Labor-Management Disputes," American Sociological Review, XX (1955), pp. 566-575.

CHAPTER IV

INTERACTION ROLES

The purpose of this chapter is to present the results of the analyses of the interaction data as a basis for the description of the roles played by superintendents, secretary-treasurers and chairmen in board meeting interaction, and to describe significant relationships between these roles and personal and unit characteristics. The five per cent level of probability will be accepted as indicative of a significant relationship.

I. PROPORTION OF INTERACTION

Table XXVI indicates the mean per cent of initiated and received interaction by meeting participants in each task area and for the total interaction recorded.

Superintendents

Of the three focal positions, the superintendents initiated the greatest proportion of the total acts recorded. The mean total initiated interaction for superintendents was 23.2 per cent. In the areas of personnel (PER) and pupil services (PUP) they initiated 33.3 and 26.2 per cent of the interaction respectively, well above their proportion of the total. Percentages of 12.3 and 14.1 in the areas of finance (FIN) and non-educational detail (NED) were well below the per cent of total interaction initiated.

TABLE XXVI

MEAN PER CENT OF BOARD INTERACTION
BY PARTICIPANT AND TASK AREA

Interaction	Participant	N	Task Area									
			PUP	PER	FIN	EXT	EDP	PLA	NED	Total		
Initiated	Supt.	11	26.2	33.3	12.3	17.6	21.2	20.9	14.1	23.2		
	Sec.-T.	11	9.4	9.2	21.4	22.8	13.8	8.4	14.9	12.2		
	Chairman	11	20.1	19.7	22.4	18.8	24.6	22.9	27.2	20.3		
	Member	74	3.3	3.8	9.5	3.9	3.9	3.6	3.9	3.8		
Received	Supt.	11	10.9	9.6	7.3	3.9	6.9	7.3	6.8	7.9		
	Sec.-T.	11	2.9	3.0	6.8	5.2	3.7	3.7	5.9	4.2		
	Chairman	11	20.4	26.0	21.0	17.0	21.0	25.3	24.9	24.2		
	Member	74	2.3	2.4	2.8	2.8	2.5	2.4	2.0	2.4		

The superintendents were involved in 7.9 per cent of the total received interaction, that is, in interaction directed toward them. Again, the means for pupil services and personnel were well above the mean for the total, and unlike in initiated, involvement in extra-system relations (EXT) appeared well below the mean for the total.

In sum, then, the superintendent's performed role is characterized by high involvement in pupil services and personnel and low involvement in finance and non-educational detail. On the other hand, his sent role is characterized by high involvement in pupil services and personnel but low involvement in extra-system relations.

Secretary-Treasurers

The secretary-treasurers in the sample had the smallest mean per cent of both initiated and received interaction of the three focal positions. On the average, they initiated 12.2 per cent of the total interaction. They were well above this proportion in the areas of finance and extra-system relations (21.4 and 22.8 per cent respectively), and well below in the areas of pupil services, personnel, and plant and facilities (PLA).

Of the total received interaction, the secretary-treasurers had a mean of 4.2 per cent. The 6.8 and 5.9 per cents in finance and non-educational detail respectively were well above the mean for the total, and the 2.9 and 3.0 per cents for pupil services and personnel were well below.

The secretary-treasurer's performed role is characterized by high involvement in finance and extra-system relations and low involvement in pupil services, personnel, and plant and facilities. Whereas his sent role is characterized by high involvement in finance and non-educational detail, and low involvement in pupil services and personnel.

Chairmen

The chairmen's pattern of interaction exhibited a fairly constant distribution among task areas in both initiated and received acts. On the average, the chairmen initiated 20.3 per cent of the total interaction and initiated slightly higher percentages of 24.6 and 27.2 in the areas of educational program and non-educational detail. They received 24.2 per cent of the total interaction, but only 17.0 per cent of the extra-system relations acts.

The chairmen's performed role is fairly constant among task areas with a slight emphasis on educational program and non-educational detail. Their sent role is also fairly constant among task areas with a slightly lower involvement in extra-system relations.

It should be noted that the mean per cent of the chairmen's involvement in received interaction was greater than three times that of any other participant. This result may well be due to the rather formal rules of order undergirding school board meetings.

That is, much of the interaction which was intended for the meeting as a whole or for particular participants may have been verbally directed toward the chairmen.

Members

The mean per cent of initiated interaction of board members was 3.8. This was fairly constant among the task areas with the exception of finance where the proportion of acts initiated was more than twice the mean for the total. In received interaction, members were involved at a fairly constant level among the task areas with a mean of 2.4 per cent for the total interaction.

The member's performed role is dominated by involvement in finance. His sent role is characterized by relatively low and constant involvement in all task areas.

Summary

The performed roles of the superintendents, secretary-treasurers and chairmen in the sample exhibited a degree of task area complementarity. The major areas of the superintendent's role being pupil services and personnel, of the secretary-treasurers finance and extra-system relations, and of the chairmen educational program and non-educational detail. None was highly involved in the initiation of interaction in the area of plant and facilities, although the secretary-treasurer was relatively low in this area.

The sent roles for the three focal positions also indicated

some complementarity. The superintendents' received interaction was relatively greater in the areas of pupil services and personnel than in other areas, whereas the secretary-treasurers' received interaction was relatively greater in finance and non-educational detail. Despite the fact that finance is the main area of the secretary-treasurer's received interaction, it is noteworthy that his mean per cent of received interaction in this area is less than that of the superintendent, 6.8 to 7.3 per cent respectively. None of the focal positions had a sent role relatively high in the areas of plant, educational program, or extra-system relations, although both superintendent and chairman were low in the last area.

It is interesting to note the high degree of similarity between the percentages of initiated interaction of the focal positions in this study with those from Brubacher's research. Table XXVI indicates that superintendents initiated 23.3 per cent of the interaction, chairmen 20.3 per cent, and secretary-treasurers 12.2 per cent. The corresponding positions in Brubacher's study initiated 26.0, 19.5, and 11.7 per cent respectively.¹

Table XXVII presents the results of an analysis similar to that discussed above. The performed and sent roles indicated by the percentages of aggregate board interaction displayed in this table exhibit basically the same characteristics as were evident in Table XXVI. Thus, this analysis tends to confirm the task area roles described in the preceding sections.

TABLE XXVII

PER CENT OF AGGREGATE BOARD INTERACTION
BY PARTICIPANT AND TASK AREA^a

Interaction	Participant	Task Area									
		PUP	PER	FIN	EXT	EDP	PLA	NED	Total		
Initiated	Supt.	37.9	38.8	18.6	23.8	21.0	27.2	18.5	29.0		
	Sec.-T.	12.2	13.9	20.2	34.2	18.8	11.9	19.2	16.2		
	Chairman	24.4	20.2	24.0	15.4	26.9	26.5	28.2	23.9		
	Members	25.6	27.1	37.2	26.6	33.3	34.5	34.0	31.0		
	Total	100.0	100.0	100.0	100.0	100.0	100.1	99.9	100.1		
Received	Supt.	24.5	16.9	11.9	10.2	13.3	11.8	14.6	15.0		
	Sec.-T.	5.2	7.0	10.8	13.4	9.3	6.7	11.3	8.1		
	Chairman	34.8	47.0	45.8	46.6	39.8	51.5	45.4	45.5		
	Members	35.5	29.1	31.5	29.8	37.6	30.0	28.7	31.4		
	Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		

^aThe percentages here are higher than those in Table XXVI because these analyses exclude interaction initiated by and directed toward non-regular participants and the meeting as a whole. The percentages in Table XXVI do not exclude this interaction.

II. PROPORTION OF INTERACTION AND PERSONAL CHARACTERISTICS

One of the sub-problems of this study was the investigation of relationships between the interaction roles of meeting participants and their personal characteristics. To uncover these relationships the personal characteristics of the participants were correlated with their percentages of involvement in task area and total meeting interaction.

Superintendents

Table XXVIII presents correlations between superintendents' personal characteristics and proportion of initiated and received interaction. Significant positive relationships were found between percentages of pupil services, extra-system relations, plant and facilities, and total initiated interaction and the superintendent's age and experience characteristics. This suggests that the more experienced a superintendent is in his position and administrative unit the more he contributes to meeting discussion in these areas.

This table also indicates positive and significant relationships between age and experience characteristics of the superintendents and their proportion of received interaction in the areas of pupil services, extra-system relations and plant and facilities. This implies that the older, more experienced superintendents are expected to contribute more to meeting discussion in these areas.

TABLE XXVIII
 CORRELATIONS^a OF PER CENT OF SUPERINTENDENT
 INTERACTION WITH PERSONAL CHARACTERISTICS
 (N = 11)

Task area	Age	Position tenure	Unit tenure	Position exp.	Res. in com.	Amt. of educ.	Rec. of educ.
Initiated							
PUP	0.66 ^b	0.73 ^b	0.70 ^b	0.65 ^b	0.33	-0.48	0.71 ^b
PER	.42	.08	.11	.09	-.00	-.33	.22
FIN	.24	.46	.44	.42	.31	-.41	.41
EXT	.56	.78 ^b	.82 ^b	.69 ^b	.53	.02	.75 ^b
EDP	.22	.27	.52	.29	.56	-.01	.52
PLA	.25	.45	.48	.69 ^b	.40	.24	.53
NED	.12	.21	.43	.23	.55	.15	.47
Total	.64 ^b	.63 ^b	.67 ^b	.63 ^b	.46	-.04	.71 ^b
Received							
PUP	0.63 ^b	0.51	0.38	0.53	-0.02	-0.54	0.40
PER	.08	-.19	-.26	-.15	-.38	-.37	-.21
FIN	-.20	-.09	-.17	-.18	-.33	-.76 ^b	-.12
EXT	.69 ^b	.64 ^b	.31	.56	-.23	.00	.54
EDP	.48	.29	.01	.27	-.40	-.12	.30
PLA	.63 ^b	.52	.35	.70 ^b	-.05	-.01	.45
NED	-.15	-.09	-.15	-.06	-.33	-.13	.22
Total	.48	.26	.07	.32	-.34	-.37	.22

^aPearson product-moment correlations.

^bSignificantly different from zero ($p \leq .05$).

Several additional findings, indicated by this table, are noteworthy. First, the amount of the superintendent's education is not significantly related to the initiation of interaction in any task area, and is negatively related, at a significant level, to the per cent of interaction received in the area of finance. This indicates that within this sample the more education the superintendent has the less he is expected to contribute to finance discussion.

Second, although the total initiated interaction was significantly related to age and experience variables, there was no significant relationships between the total received interaction and these personal characteristics. It appears that the superintendent's general performed role is related to his tenure in the unit but his general sent role is not.

Finally, it should be noted that none of the proportions of initiated or received interaction in any of the total or task areas was related to the length of the superintendent's residence in the community.

Secretary-Treasurers

Table XXIX displays the correlations representing the relationships between initiated and received interaction in the various task areas and the secretary-treasurer's personal characteristics.

The one significant correlation in initiated interaction indicates that the more recent the secretary-treasurer's education the

TABLE XXIX
 CORRELATIONS^a OF PER CENT OF SECRETARY-
 TREASURER INTERACTION WITH
 PERSONAL CHARACTERISTICS
 (N = 11)

Task area	Age	Position tenure	Unit tenure	Position exp.	Res. in com.	Amt. of educ.	Rec. of educ.
Initiated							
PUP	-0.25	0.06	0.02	0.28	-0.20	-0.35	0.04
PER	-.11	-.13	-.06	-.16	-.30	-.30	-.01
FIN	.14	.25	.26	.09	.25	-.51	.00 ^b
EXT	-.34	-.38	-.53	-.37	-.59	.20	-.62 ^b
EDP	-.12	-.16	-.33	-.14	-.47	-.16	-.47
PLA	-.35	.14	.15	.11	.03	-.08	-.54
NED	.18	.12	.01	.03	-.15	-.04	-.32
Total	-.09	-.09	-.12	-.13	-.36	-.15	-.27
Received							
PUP	-0.29	-0.01	-0.11	0.24	-0.32	-0.05	-0.20
PER	.06	-.15	-.10	-.22	-.24	-.45 ^b	.03
FIN	-.17	-.33	-.12	-.50	.18 ^b	-.63 ^b	.06
EXT	-.34	-.34	-.52 ^b	-.30	-.82 ^b	.08	-.39
EDP	-.05	-.55	-.67 ^b	-.54	-.71 ^b	-.27	-.26 ^b
PLA	-.37	-.07	-.11	-.04	-.09	.02	-.63 ^b
NED	.01	.19	.29	.11	.07	-.55	.25
Total	.00	-.24	-.26	-.30	-.38	-.26	-.30

^aPearson product-moment correlations.

^bSignificantly different from zero ($p \leq .05$).

more he offers to the meeting's extra-system relations interaction. Significant negative correlations were found between amount of education, length of residence in the community and tenure in the present administrative unit and received interaction in the areas of finance, extra-system relations, and educational program respectively. These findings suggest that the more education and experience the secretary-treasurer has the less the interaction directed toward him. The significant correlation between recency of education and received plant and facilities interaction indicates that within this sample the more recent the secretary-treasurer's education the more interaction is directed toward him in this area.

Chairmen

The significant correlations displayed in Table XXX indicate that the older the chairman the less he contributes to plant and non-educational interaction, the longer he has been chairman the less he initiates in the area of pupil services, and the longer he has served the administrative unit and lived in the community the less he contributes to the total and non-educational discussions respectively.

In received interaction, significant correlations indicate that the longer the chairman's tenure as chairman the less the interaction directed toward him in the area of pupil services, but

TABLE XXX
 CORRELATIONS^a OF PER CENT OF
 CHAIRMAN INTERACTION WITH
 PERSONAL CHARACTERISTICS
 (N = 11)

Task area	Age	Position tenure	Unit tenure	Position exp.	Res. in com.	Amt. of educ.	Rec. of educ.
Initiated							
PUP	-0.27	-0.70 ^b	-0.47	-0.06	-0.20	0.11	-0.18
PER	-.12	.11	-.45	.27	-.15	.06	.02
FIN	-.53	-.03	-.46	.08	-.09	-.30	-.01
EXT	-.22	-.03	-.34	-.16	-.31	-.25	-.14
EDP	-.13	.12	-.33	-.12	-.26	-.42	.19
PLA	-.67 ^b	-.17	-.42	-.17	-.44 ^b	-.02	-.53
NED	-.61 ^b	-.34	-.45	-.14	-.71 ^b	.45	-.52
Total	-.45	-.12	-.62 ^b	-.04	-.50	-.17	-.01
Received							
PUP	-0.02	-0.61 ^b	-0.22	-0.03	-0.02	0.37	-0.31
PER	.02	.23	.00	.08	-.21	.33	-.16
FIN	-.18	.11	-.30	-.05	-.15	.33	-.32
EXT	.22	.70 ^b	-.13	-.10	-.12	.00	.30
EDP	.08	.33	.24	-.04	-.19	.40	-.37
PLA	.01	.21	-.06	.22	-.20	.42	-.39
NED	-.38	.01	-.44	-.12	-.54	.43	-.43
Total	-.03	.17	-.08	.06	-.30	.50	-.32

^aPearson product-moment correlations.

^bSignificantly different from zero ($p \leq .05$).

the more the interaction directed toward him in extra-system relations.

Members

Table XXXI presents correlations between personal characteristics of board members and their per cent of interaction in the various task areas. Significant negative correlations indicate that older members tend to contribute less to personnel discussion and to be sought less for contributions to educational program discussion than younger members. Other results indicate that highly educated members contribute highly to the total and plant and facilities interaction, and more recently educated members contribute more to personnel and total discussion and are sought more in personnel discussion than less recently educated members.

Summary

Although the significance level of each of the coefficients in the preceding four sections was determined in relation to the probability of its occurrence as a discrete relationship, when one examines the relationships among a large number of variables within the same sample of people the problem of a type of second-order probability must be considered. What this means is that some of the significant correlations indicated and discussed above may in fact be spurious. To attempt to determine which of these relationships was spurious and which was not would have required a much more

TABLE XXXI
 CORRELATIONS^a OF PER CENT OF
 MEMBER INTERACTION WITH
 PERSONAL CHARACTERISTICS
 (N = 74)

Task area	Age	Position tenure	Unit tenure	Position exp.	Res. in com.	Amt. of educ.	Rec. of educ.
Initiated							
PUP	-0.03	0.01	-0.01	-0.08	-0.15	0.02	-0.09 _b
PER	-.24 _b	-.14	-.18	-.18	-.21	.32	-.41 _b
FIN	.00	.02	.01	-.04	.12	.00	.04
EXT	-.02	.00	-.01	-.03	.07	.04	-.14
EDP	-.10	-.15	-.19	-.15	-.09	-.02 _b	-.18
PLA	.02	.02	.01	-.02	-.06	.29 _b	-.18
NED	-.19	-.07	-.10	-.17	-.09	.08	-.10
Total	-.16	-.08	-.11	-.16	-.19	.30 _b	-.30 _b
Received							
PUP	-0.10	-0.07	-0.06	-0.08	-0.02	-0.18	0.07 _b
PER	-.15	-.07	-.10	-.09	-.14	.15	-.33 _b
FIN	-.04	.05	.02	.00	-.04	-.08	.05
EXT	-.11	-.07	-.10	-.06	.06	.02	.05
EDP	-.28 _b	-.13	-.17	-.19	.00	.15	-.21
PLA	.04 _b	-.04	-.06	-.07	.06	.09	-.09
NED	-.26 _b	-.11	-.14	-.21	-.08	.01	-.15
Total	-.19	-.13	-.16	-.18	-.08	.06	-.20

^aPearson product-moment correlations.

^bSignificantly different from zero ($p < .05$).

detailed and complex analysis than these data permitted or required.

Despite this limitation, however, one may draw a number of generalizations from these analyses. First, using the number of significant coefficients as a criterion, the superintendents', the chairmens' and the members' performed roles were more highly related to their personal characteristics than their sent roles. The converse was true for the secretary-treasurer. One may interpret this to mean that the superintendent, the chairmen, and the members were actively involved in determining and maintaining their own roles, whereas the secretary-treasurer was rather passive and perhaps resistant to the role being sent to him.

Second, of the four categories of meeting participants, only the members had performed roles related to the amount of formal education they had undertaken. With the exception of the negative relationship between the superintendents' and secretary-treasurers' sent finance role and their amount of education, there appeared to be no connection between the focal position incumbents' task area roles and their amount of education.

Finally, there appears to be a very different relationship between the superintendent's role as related to his age and experience, to that of the other meeting participants. The significant correlations between the superintendent's involvement in meeting interaction and his age were all in the positive direction, whereas,

with but one exception, the relationships for other participants were in the negative direction. These results suggest that the more experience the superintendent has in a given position and administrative unit the more of the meeting discussion he is willing and able to undertake, whereas the more experience other participants have the less they contribute and are expected to contribute to the meeting interaction. One might well interpret this to mean that experience is seen as a more important criterion for definition of interaction roles than education. Further, that tenure and experience as a superintendent and in a given administrative unit develops within the superintendent a kind of self-confidence and within the other meeting participants a confidence in the competence of the superintendent.

These findings tend to confirm the existence of Hagen's "reciprocal effect." That is, the more confidence the board members have in their superintendent the less they intervene in board or district affairs.²

III. PROPORTION OF INTERACTION AND UNIT CHARACTERISTICS

Another sub-problem of the current study required examination of the data to see if the interaction roles of meeting participants were related to the characteristics of the administrative units in the sample.

Table XXXII presents a summary of the t-tests which compared the per cent of initiated interaction of the focal positions by administrative unit variables for each task area and total interaction.

None of these analyses indicated significant differences for the superintendents' initiated interaction. The secretary-treasurers of large enrollment districts initiated significantly more interaction in the pupil services task area than did those of small enrollment districts. No other secretary-treasurer analyses indicated significant differences. These t-tests indicated that chairmen of small meetings and Districts initiated more total and non-educational interaction than those of large meetings and Counties respectively.

The results of similar analyses applied to the received interaction are displayed in Table XXXIII. These tests indicate that provincially appointed superintendents and superintendents of Counties have significantly more interaction directed toward them in the areas of pupil services, personnel, finance, and total interaction than locally appointed superintendents and superintendents of Districts. In addition, superintendents of small enrollment units have more personnel interaction directed toward them than those of large enrollment Districts.

Secretary-treasurers of Counties had significantly more pupil services and educational program interaction directed toward them than District secretary-treasurers. Similarly, secretary-

TABLE XXXII

SUMMARY^a OF SIGNIFICANT DIFFERENCES OF
 PER CENT OF INITIATED INTERACTION
 OF FOCAL POSITION INCUMBENTS ON
 ADMINISTRATIVE UNIT VARIABLES

Unit Variable	Parti- cipant	Task area	Mean	S.D.	t	p ^b
Administrative type						
Counties Districts	Chair.	NED	18 36	6 6	4.38	.00
Counties Districts	Chair.	Total	17 22	4 1	2.50	.04
Enrollment size						
Small Large	Sec.-T.	PUP	4 16	3 9	2.71	.04
Meeting size						
Small Large	Chair.	NED	36 22	5 11	2.81	.02
Small Large	Chair.	Total	26 17	6 4	2.50	.03

^aComplete data are reported in Appendix C.

^bTwo-tailed.

TABLE XXXIII
 SUMMARY^a OF SIGNIFICANT DIFFERENCES OF
 PER CENT OF RECEIVED INTERACTION
 OF FOCAL POSITION INCUMBENTS ON
 ADMINISTRATIVE UNIT VARIABLES

Unit Variable	Parti- cipant	Task area	Mean	S.D.	t	p ^b
Administrative type						
Counties Districts	Supt.	PUP	14 4	5 5	2.84	.02
Counties Districts	Supt.	FIN	12 2	8 1	2.90	.03
Counties Districts	Supt.	Total	9 5	2 2	3.26	.01
Counties Districts	Sec.-T.	PUP	5 1	3 1	3.01	.02
Counties Districts	Sec.-T.	EDP	5 2	3 1	2.97	.02
Enrollment size						
Small Large	Supt.	PER	13 5	5 2	3.57	.01
Meeting size						
Small Large	Sec.-T.	PUP	1 4	1 3	2.45	.04
Small Large	Sec.-T.	EDP	2 5	1 3	2.30	.05
Superintendent's appointment						
Local Provincial	Supt.	PUP	4 15	5 5	3.18	.01
Local Provincial	Supt.	PER	5 12	3 5	2.95	.02
Local Provincial	Supt.	FIN	2 10	1 8	2.84	.03
Local Provincial	Supt.	Total	5 10	2 2	3.56	.01

^aComplete data are reported in Appendix C.

^bTwo-tailed.

treasurers of large meetings were the targets of more pupil services and educational program interaction than those in small meetings.

None of these tests revealed significant differences on the administrative unit variables in the chairmen's received interaction in the total or any of the task areas.

IV. INSTRUMENTAL ROLES

The preceding sections of this chapter have presented discussion of the performed and sent roles of meeting participants in terms of the number and proportion of acts they initiated and received in the various task areas. The succeeding sections will present an analysis of these roles in terms of the kinds of interaction initiated and received.

It will be recalled that, in instrumental interaction, the roles of advisor, informer, information seeker and advice seeker were defined in terms of interaction categories 2, 3, 4, and 5 respectively.

Performed

Table XXXIV presents a summary of the performed instrumental roles of the focal position incumbents of the eleven administrative units in the sample.

Advisor. The general role of advisor is performed jointly by the superintendent and chairman. There is also a tendency for

TABLE XXXIV
 SUMMARY^a OF PERFORMED INSTRUMENTAL ROLES
 OF FOCAL POSITIONS BY TASK AREA

Role (category)	Parti- cipant	Task Area							Total
		PUP	PER	FIN	EXT	EDP	PLA	NED	
Advisor (2)	Supt.	6 ^b	4	1	3	3	7	1	6
	Sec.-T.	0	0	1	1	0	1	4	-2
	Chair.	5	5	3	3	5	4	7	6
Informer (3)	Supt.	7	10	3	4	9	7	5	10
	Sec.-T.	3	1	8	7	4	2	6	5
	Chair.	2	1	4	2	4	5	6	2
Information seeker (4)	Supt.	0	2	0	1	0	0	3	2
	Sec.-T.	0	1	2	0	1	2	1	2
	Chair.	7	9	6	7	7	9	9	10
Advice seeker (5)	Supt.	0	1	1	1	1	1	1	1
	Sec.-T.	2	1	1	1	0	1	1	0
	Chair.	5	6	6	3	8	7	7	11

^aSee Appendix D for complete results.

^bThese figures represent the net number of times the interaction of the indicated participant was greater than one standard deviation above the mean in the task area and interaction category for the eleven administrative units.

these two to share the role of advisor in the areas of pupil services, personnel, and extra-system relations. In the areas of finance, educational program and non-educational detail the chairman performs the role of prime advisor. This role is performed by the superintendent in the area of plant and facilities.

Informer. The role of informer is performed by the superintendent in total board interaction and in the areas of pupil services, personnel, educational program and plant and facilities. The secretary-treasurer performs this role in the areas of finance and extra-system relations. The role of informer in non-educational detail was fairly equally performed by the incumbents of all three focal positions.

Information seeker. The role of information seeker is performed predominantly by the chairman in total interaction and all task areas. There were only slight indications of this role being performed by the superintendent in the areas of personnel and non-educational detail, and by the secretary-treasurer in the areas of finance and plant and facilities.

Advice seeker. The chairman dominated the performing of the advice seeker role in total interaction and all task areas. Only the secretary-treasurer, in the pupil services area, gave any indication of performing this role with the chairman.

Sent

A summary of the instrumental roles sent to the incumbents of the focal positions is displayed in Table XXXV.

Advisor. The chairman and superintendent are jointly expected to fulfill the role of advisor in the areas of personnel, educational program, non-educational detail and in total interaction. The chairman is sought most often for advice on pupil services and finance, whereas the superintendent is sought most often for advice on plant and facilities. Advice on extra-system relations is sought equally from the incumbents of all three positions.

Informer. Although the superintendent and chairman are jointly sent the role of informer in total interaction, it was the secretary-treasurer and chairman who shared this role in finance and non-educational detail discussion. The superintendent was expected to fulfill the role of informer in the areas of pupil services and personnel, the secretary-treasurer in extra-system relations, and the chairman in educational program and plant and facilities.

Information seeker. The chairman was expected to fulfill the role of information seeker in every task area as well as in total interaction. Only in the pupil services area was the superintendent, and in the extra-system relations and non-educational detail areas were the superintendent and secretary-treasurer expected to fulfill, even slightly, the role of information seeker.

TABLE XXXV

SUMMARY^a OF SENT INSTRUMENTAL ROLES
OF FOCAL POSITIONS BY TASK AREA

Role (category)	Parti- cipant	Task Area							Total
		PUP	PER	FIN.	EXT.	EDP	PLA	NED	
Advisor (5)	Supt.	2 ^b	5	1	2	3	3	3	6
	Sec.-T.	-1	1	0	2	0	2	2	2
	Chair.	4	7	5	2	3	1	3	7
Informer (4)	Supt.	9	8	3	3	5	5	2	8
	Sec.-T.	2	2	5	7	4	2	7	1
	Chair.	3	5	6	4	6	7	7	7
Information seeker (3)	Supt.	2	0	1	2	0	0	2	0
	Sec.-T.	-1	1	1	2	1	1	2	0
	Chair.	9	10	7	8	9	10	10	11
Advice seeker (2)	Supt.	3	3	3	3	4	3	0	2
	Sec.-T.	0	1	0	1	-1	1	0	0
	Chair.	7	10	5	5	10	10	8	11

^aSee Appendix E for complete results.

^bThese figures represent the net number of times the interaction of the indicated participant was greater than one standard deviation above the mean in the task area and interaction category for the eleven administrative units.

Advice seeker. The role of advice seeker was sent to the chairman in each task area and in the total interaction. However, unlike the role of information seeker, there is a clear indication that the superintendent is expected to seek the advice of other meeting participants in all task areas except non-educational detail. That is, participants direct a fair amount of advice toward the superintendent on all educational topics.

V. EXPRESSIVE ROLES

Four expressive roles for meeting participants were delineated. The roles of protagonist and antagonist were defined in terms of high positive and negative initiated interaction respectively. Exemplar and deviator were defined in terms of high positive and negative received interaction respectively. Table XXXVI displays the summary of the focal positions and their involvement in playing these expressive roles.

Performed

The two performed expressive roles examined were those of protagonist and antagonist.

Protagonist. Table XXXVI clearly indicates that the chairman was the prime performer of the protagonist's role in all task areas and in total interaction. However, this role was shared with the superintendent in the areas of pupil services and plant and

TABLE XXXVI
 SUMMARY^a OF EXPRESSIVE ROLES OF
 FOCAL POSITIONS BY TASK AREA

Role (category)	Parti- cipant	Task Area							Total
		PUP	PER	FIN	EXT	EDP	PLA	NED	
Protagonist (1, init- iated)	Supt.	4 ^b	4	1	3	0	6	1	4
	Sec.-T.	0	0	-1	2	0	2	0	-1
	Chair.	5	7	6	5	9	7	7	11
Antagonist (6, init- iated)	Supt.	1	2	1	1	2	3	0	2
	Sec.-T.	1	1	0	0	1	1	2	1
	Chair.	2	3	1	1	0	2	1	3
Exemplar (1, re- ceived)	Supt.	7	3	2	3	0	3	2	3
	Sec.-T.	0	1	2	5	2	1	2	1
	Chair.	6	8	5	4	9	10	7	11
Deviator (6, re- ceived)	Supt.	1	1	0	1	0	1	1	2
	Sec.-T.	0	0	2	1	0	2	2	1
	Chair.	2	5	0	1	3	1	1	5

^aSee Appendices D and E for complete results.

^bThese figures represent the net number of times the interaction of the indicated participant was greater than one standard deviation above the mean in the task area and interaction category for the eleven administrative units.

facilities.

Antagonist. The role of antagonist, the member who initiates most negative interaction, is also shared by the superintendent and chairman. With the exception of non-educational detail and educational program where the secretary-treasurer and superintendent respectively are prime antagonists, the chairman and superintendent were very similar in the amount of negative interaction they initiated.

Sent

The roles of exemplar and deviator were assigned respectively to the targets toward whom positive and negative interaction was directed.

Exemplar. As with protagonist, the chairman was the prime recipient of positive acts in total interaction and most task areas. Only in the areas of pupil services and extra-system relations, where the superintendent and secretary-treasurer respectively were prime, does the chairman not have a majority of the positive acts directed toward him. One should recall, however, that agreement to a formal motion on the floor was coded as a positive reaction sent to the chairman.

Deviator. The role of deviator was sent to the chairman in pupil services, personnel, educational program and total interaction. In the areas of finance, plant and non-educational detail, the role of deviator was sent to the secretary-treasurer.

In concluding this section, it should be noted that the examination of performed and sent expressive roles was based upon a rather small proportion of the total interaction (5.64 per cent). Therefore, although these roles may be very important to the functioning of the board, generalizations based upon these data would be very tenuous.

VI. SUMMARY

The purpose of this chapter was to describe, from the analyses of the interaction data, the roles performed by and sent to the incumbents of the focal positions and to investigate the relationships between these roles and the incumbent's personal characteristics and the characteristics of the administrative units. This section will summarize and synthesize these findings into comprehensive descriptions of the performed and sent roles of the incumbents of the focal positions.

The primary task areas in which the superintendent performs are those of pupil services and personnel. In these areas he serves as advisor and informer to meeting interaction. He performs these same roles in the secondary areas of educational program, plant and extra-system relations. There were indications that the older more experienced superintendents contributed more to meeting discussions than younger less experienced ones.

The primary task areas of the superintendent's sent role were

also pupil services and personnel. The interaction directed toward him in these areas indicated that the meeting participants expected the superintendent to fulfill the role of advisor and informer in these as well as the secondary areas of plant and educational program. In addition, the superintendent was expected to assume the role of advice seeker in pupil services and the secondary area of finance.

Interaction directed toward the superintendent indicated that meeting participants expected him to fulfill secondary roles of informer in finance and advisor in non-educational detail. It is interesting to note that there were indications that the same role of informer in the finance task area was inversely related to the superintendent's amount of education. That is, the more formal education he had undertaken the less the superintendent was sought for information about the administrative unit's financial and business affairs.

Finally, there were indications that provincially appointed superintendents, and superintendents of Counties and small enrollment units were expected to participate more highly in discussion, especially in the areas of pupil services, personnel, finance and total interaction, than locally appointed superintendents and superintendents of Districts and large enrollment units.

The secretary-treasurer's primary areas of initiated interaction were extra-system relations and finance, the secondary areas

were non-educational detail and educational program. In all four of these areas he performs the role of informer and in non-educational detail the role of advisor. These analyses also indicated that, in the area of extra-system relations, the more recent his formal education the more information he contributed to meeting discussion.

The primary task areas of the roles sent to secretary-treasurers were finance and non-educational detail. The secondary areas were extra-system relations, educational program and plant. In each of these areas, with the exception of plant, the secretary-treasurer was expected to fulfill the role of informer. In addition, he was expected to serve as advisor in the areas of non-educational detail, extra-system relations and plant. There was a tendency for the more experienced, and the more highly educated secretary-treasurer to be sought less for advice and information than less highly educated and experienced ones.

The primary areas of the chairman's performed roles were non-educational detail and educational program, and the secondary areas were plant, finance and pupil services. In each of these areas the chairman performed the roles of advisor, information seeker and advice seeker. As with secretary-treasurers, there was a tendency for older, more experienced chairmen to contribute less to meeting interaction than younger less experienced ones. Also, chairmen of small meetings and Districts initiated more interaction than

those of large meetings and Counties.

The chairman was sent interaction primarily in the areas of personnel, plant and non-educational detail and secondarily in educational program and finance. In finance he was sent the roles of informer, information seeker and advice seeker. In the other areas he was sent, in addition to these roles, the role of informer.

The complex of roles both performed by and sent to the chairman may well be a reflection of his formal status as the focus of meeting interaction rather than a function of his personal characteristics, expertise or knowledge. The fact that the chairman is the dominant participant in both performed and sent expressive roles tends to confirm this conclusion.

This chapter has presented a description of the performed and sent interaction roles of school board meeting participants. The extent to which the performed and sent roles correspond, that is, the congruence of the roles, is the subject of the next chapter.

REFERENCES FOR CHAPTER IV

¹John Wemple Brubacher, "An Analysis of the Decision-Making Process of School Boards" (unpublished Doctoral dissertation, The University of Michigan, 1963), p. 140.

²Arnold J. Hagen, "An Exploratory Study of the Patterning and Structuring of Roles Played by School Board Members Through a Particular Time Sequence" (unpublished Doctoral dissertation, The University of Oregon, 1955).

CHAPTER V
CONGRUENCE OF ROLES

The preceding chapter has described the performed and sent roles of the incumbents of the focal positions in terms of both task areas and type of interaction. The purpose of this chapter is to examine the congruence of these roles, that is, the degree of correspondence between the performed and sent roles, in relation to the personal characteristics of the incumbents and the characteristics of the administrative units. Again the five per cent level of probability will be accepted as indicative of significant relationships.

I. TASK AREA ROLE CONGRUENCE

It will be recalled that the index of task area role congruence (TARC) was defined as the Pearson product-moment correlation between the proportions of initiated and received interaction in the seven task areas. Table XXXVII presents these indices for the focal positions of the eleven administrative units in the sample. The mean indices for the superintendents, secretary-treasurers, and chairmen were respectively .87, .86, and .88. These indicate a high degree of congruence between the initiated and received task area profiles for all three focal positions. That is, the distribution of the participation of the superintendents, secretary-treasurers and chairmen through the task areas of meeting discussion very closely corresponds to the discussion profile

directed toward them in these task areas. Furthermore, all three focal positions had similar TARC indices.

TABLE XXXVII

TASK AREA ROLE CONGRUENCE
BY ADMINISTRATIVE UNIT

Participant	Administrative Unit											Mean
	1	2	3	4	5	6	7	8	9	10	11	
Supt.	.85 ^a	.83	.95	.78	.98	.88	.88	.59	.94	.86	.99	.87
Sec.-T.	.84	.99	.88	.97	.67	.94	.86	.41	.96	.96	.98	.86
Chairman	.92	.95	.91	.70	.97	.89	.89	.96	.96	.62	.93	.88

^aPearson product-moment correlations between percentages of initiated and received interaction in seven task areas.

Congruence and Personal Characteristics

Table XXXVIII displays the correlations between the personal characteristics of the incumbents and their TARC indices. With the exception of the chairman's age, none of these analyses indicated a significant relationship between the TARC index and personal characteristics.

The positive correlation of .60 between the chairman's age and his TARC index indicates that the distribution of initiated acts through the task areas more closely corresponded to the distribution of received acts for older chairmen than younger. One may interpret this to mean either that older chairmen perceive their sent role more

accurately and are thus more able to fulfill it or that older more established chairmen are less willing to exceed the bounds of expectations for their role.

Congruence and Unit Characteristics

The results of t-tests comparing the TARC indices of the three focal positions on the administrative unit variables are presented in Table XXIX. None of these analyses indicated a significant difference with a two-tailed probability less than or equal to .05.

TABLE XXXVIII
CORRELATIONS^a BETWEEN TASK AREA
ROLE CONGRUENCE AND PERSONAL
CHARACTERISTICS OF
PARTICIPANTS
(N = 11)

Participant	Age	Pos. tenure	Unit tenure	Pos. exp.	Res. in com.	Amt. educ.	Rec. educ.
Supt.	-.24	-.04	-.03	.02	.09	.40	-.20
Sec.-T.	.18	.35	.39	.23	.35	.24	.02
Chairman	.60 ^b	.07	.21	.11	.18	.13	.46

^aPearson product-moment correlations.

^bSignificantly different from zero ($p \leq .05$).

TABLE XXXIX
COMPARISON OF INDICES OF TASK AREA ROLE CONGRUENCE
OF FOCAL POSITIONS BY ADMINISTRATIVE
UNIT CHARACTERISTICS

Variable	Participant	Mean	S.D.	t	p ^a
Administrative type^b					
Counties	Supt.	.85	.13	.81 ^c	.44 ^c
Districts		.90	.06		
Counties	Sec.-T.	.81	.21	1.06 ^c	.33 ^c
Districts		.91	.06		
Counties	Chairman	.91	.10	.87	.41
Districts		.84	.13		
Enrollment size					
Small	Supt.	.88	.06	.33 ^c	.76 ^c
Large		.85	.15		
Small	Sec.-T.	.93	.05	1.43 ^c	.23 ^c
Large		.78	.22		
Small	Chairman	.83	.13	2.01 ^c	.09 ^c
Large		.94	.03		
Meeting size					
Small	Supt.	.87	.01	.03 ^c	.97 ^c
Large		.87	.13		
Small	Sec.-T.	.90	.05	.78 ^c	.46 ^c
Large		.84	.20		
Small	Chairman	.83	.12	1.15	.28
Large		.91	.09		
Superintendent's appointment					
Local	Supt.	.90	.06	.82 ^c	.43 ^c
Provincial		.85	.12		

^aTwo-tailed.

^bThe one Division (administrative unit 6) was omitted from these analyses.

^cCorrected by the Welch approximation for lack of homogeneity of variance.

II. INTERACTION ROLE CONGRUENCE

The index of interaction role congruence (IRC) was defined as the Pearson product-moment correlation between the initiated and inverted received percentage interaction profiles in the instrumental categories (2, 3, 4, and 5).

Task Area

IRC indices for the three focal positions were calculated for each administrative unit and for the total interaction and each task area.

Superintendents. Table XL displays the IRC indices for the superintendents of each administrative unit for total interaction and each task area. The mean IRC index for the superintendents in total interaction was .55. The only task area with a mean IRC index greater than this was pupil services with .65, although the mean IRC index in personnel was .53. By far the lowest mean IRC index for the superintendents was in the finance task area with -.14. It will be recalled that pupil services and personnel were the two major task areas of the superintendents' interaction, and that finance was the lowest area of his initiated interaction (Table XXVI, page 83).

One may interpret these findings in two ways. First, these results suggest that the role of the superintendent in pupil services and personnel interaction has become rather well defined and

TABLE XL
 SUPERINTENDENTS' INTERACTION ROLE CONGRUENCE^a
 BY UNIT AND TASK AREA

Admin. Unit	Task Area							Total
	PUP	PER	FIN	EXT	EDP	PLA	NED	
1	-- ^b	.98	.20	.96	.83	-.58	--	.87
2	.66	-.69	-.28	.94	-.04	.39	--	-.48
3	.25	.66	-.22	-.48	-.09	.45	-.27	.51
4	.98	.62	.30	-.35	.08	.97	.52	.79
5	.87	.85	--	.89	.25	.69	-.74	.69
6	-.00	.83	.46	--	.97	-.47	.58	.32
7	.83	.66	-.88	--	--	.81	-.42	.91
8	.70	.91	-.33	.66	.55	-.03	.95	.62
9	.65	.42	-.10	-.05	.38	.38	.89	.34
10	.88	.86	--	.51	.25	.80	.09	.93
11	--	-.23	-.43	--	.90	.45	1.00	.50
Mean ^c	.65	.53	-.14	.39	.41	.39	.29	.55
S.D.	.30	.50	.39	.55	.37	.49	.61	.38

^aPearson product-moment correlations between initiated and inverted received percentage interaction profiles in instrumental categories (2, 3, 4 and 5).

^bIndicates that one or both interaction profiles are zeros.

^cN reduced where indicated.

congruently perceived by the superintendent and the other meeting participants through a large amount of interaction. On the other hand, his role in finance interaction is neither well defined nor congruently perceived because relatively little participation was recorded in this task area.

Second, one may interpret these findings to indicate that both the superintendent and the other meeting participants are satisfied with the superintendent's role in pupil services and personnel but not with his role in finance. Furthermore, the fact that finance is the area of the superintendent's least initiated interaction but third highest in received interaction suggests that the other meeting participants are endeavoring to expand the superintendent's role in finance further than it is at present performed.

Secretary-treasurers. The IRC indices of the eleven secretary-treasurers in the task areas and total interaction are indicated by Table XLI.

The mean IRC index for total interaction of secretary-treasurers was .65. The task areas of extra-system relations and educational program had the highest mean IRC indices, .59 and .69 respectively, and personnel had the lowest, .34. These results indicate a fairly high degree of congruence of the secretary-treasurers' and other meeting participants' perceptions of the interaction role of the secretary-treasurer in extra-system relations and educational program discussion.

TABLE XLI

SECRETARY-TREASURERS' INTERACTION ROLE
CONGRUENCE^a BY UNIT AND TASK AREA

Admin. Unit	Task Area							Total
	PUP	PER	FIN	EXT	EDP	PLA	NED	
1	-- ^b	-.35	.47	-.17	.60	-.22	.56	.16
2	.66	.56	-.90	.94	.99	.55	-.72	.97
3	.98	.73	-.50	.86	.90	.93	1.00	.95
4	.20	.96	.99	.58	1.00	--	.64	.46
5	.89	-.02	--	.79	1.00	-.34	.64	.99
6	.99	.51	.91	--	.66	.76	.97	.84
7	-.64	-.33	.83	-.14	--	.61	.73	.38
8	.38	-.71	.90	.13	-.79	.92	.65	.68
9	.99	.40	.99	.98	.92	-.36	.63	-.05
10	.47	1.00	.99	.96	.96	.68	-.58	.81
11	--	1.00	-.01	1.00	--	.96	.92	.97
Mean ^c	.55	.34	.47	.59	.69	.45	.49	.65
S.D.	.50	.58	.66	.45	.54	.51	.56	.35

^aPearson product-moment correlations between initiated and inverted received percentage interaction profiles in instrumental categories (2, 3, 4 and 5).

^bIndicates that one or both interaction profiles are zeros.

^cN reduced where indicated.

Chairmen. The mean IRC index for chairmen in total interaction was .41, as shown in Table XLII. The task areas with the greatest congruence of the chairman's performed and sent interaction roles were personnel and extra-system relations. The area with the lowest mean IRC index was non-educational detail.

One general characteristic of the findings presented in Tables XL, XLI, and XLII is noteworthy. The mean IRC indices for the total interaction of the chairmen, superintendents, and secretary-treasurers were respectively .41, .55, and .65. In rank order, these are the inverse of the rank order of the percentages of total received interaction (Table XXVI, page 83). This suggests that the meeting participant more closely meets the expectations for his role when less interaction is directed toward him. Also there was evident a tendency for the participant's IRC index to be highest in the task areas of his greatest involvement. Together these suggest that congruence of interaction roles is a function of both the amount of interaction and the number of task areas of involvement. For instance, the secretary-treasurers' relatively high total IRC index appears to be related to fairly low interaction concentrated in few task areas. Whereas, the chairman's lower IRC index appears to be related to fairly high total interaction diffused among many task areas. These findings tend to confirm the statement by McInnes that "the responsibility of the secretary is much more narrow in scope and is less complex than that of the administrator and is therefore much more

TABLE XLII
CHAIRMEN'S INTERACTION ROLE CONGRUENCE^a
BY UNIT AND TASK AREA

Admin. Unit	Task Area							Total
	PUP	PER	FIN	EXT	EDP	PLA	NED	
1	-- ^b	-.23	.26	.34	.80	.04	.86	.30
2	.77	-.19	.12	-.34	-.03	-.16	.61	.12
3	-.06	-.10	-.31	-.15	-.03	-.49	-.55	-.34
4	-.06	.90	-.09	.21	.25	.64	.44	.52
5	.77	.97	--	.81	.40	.51	-.04	.73
6	-.62	1.00	.97	.92	-.11	.13	.25	.77
7	-.18	.31	-.50	--	--	.30	.22	.00
8	.54	.61	--	-.01	-.11	-.19	-.29	.17
9	-.00	.47	.85	.76	.65	.87	-.73	.67
10	.20	.80	-.16	.84	.80	.74	.17	.80
11	.95	.23	.60	-.13	-.39	.25	.16	.75
Mean ^c	.23	.43	.19	.33	.22	.24	.10	.41
S.D.	.48	.44	.49	.45	.40	.41	.43	.36

^aPearson product-moment correlations between initiated and inverted received percentage interaction profiles in instrumental categories (2, 3, 4 and 5).

^bIndicates that one or both interaction profiles are zeros.

^cN reduced where indicated.

clearly defined."¹

Congruence and Personal Characteristics

The IRC indices of the incumbents of the three focal positions were correlated with their personal characteristics.

Superintendents. Table XLIII presents the correlations between the personal characteristics of the sample of superintendents and IRC indices for each task area and for total interaction. The only significant correlations found were between both the superintendent's unit tenure and residence in the community and his IRC index in the finance task area. These negative coefficients both indicate that the longer the superintendent had been employed by the administrative unit and had lived in the community the less his participation in finance discussion was congruent with the discussion directed toward him.

Secretary-treasurers. Significant correlations between the secretary-treasurer's IRC index and his position tenure, unit tenure, and position experience in the pupil services task area are indicated by Table XLIV. There was also a significant correlation between the IRC index and the secretary-treasurer's age in total interaction. These negative correlations indicate that secretary-treasurers with more experience in the position and administrative unit have a lower degree of role congruence in pupil services interaction than those with less experience, and that older secretary-treasurers have a lower degree of role congruence in total inter-

TABLE XLIII
CORRELATIONS^a BETWEEN INTERACTION ROLE CONGRUENCE
AND SUPERINTENDENTS' PERSONAL CHARACTERISTICS

Task area	Age	Position tenure	Unit tenure	Position exp.	Res. in com.	Amt. of educ.	Rec. of educ.
PUP	-.32	-.02	.09	.20	.15	.06	.24
PER	.31	.14	.17	.25	.07	.37	.27
FIN	-.20	-.51	-.67 ^b	-.43	-.76 ^b	-.11	-.49
EXT	-.26	-.30	-.30	-.33	-.33	.40	-.39
EDP	.41	.10	.04	-.05	.32	.50	-.11
PLA	-.25	.01	.14	.21	.26	-.18	.23
NED	.44	.23	-.09	.03	-.34	-.22	.20
Total	.12	.13	.24	.24	.33	.53	.36

^aPearson product-moment correlations with N reduced from 11 where necessary.

^bSignificantly different from zero ($p \leq .05$).

TABLE XLIV
 CORRELATIONS^a BETWEEN INTERACTION ROLE
 CONGRUENCE AND SECRETARY-TREASURERS'
 PERSONAL CHARACTERISTICS

Task Area	Age	Position tenure	Unit tenure	Position exp.	Res. in com.	Amt. of educ.	Rec. of educ.
PUP	-.44	-.86 ^b	-.78 ^b	-.85 ^b	-.45	-.39	.18
PER	-.06	.10	.17	.06	.06	.24	.24
FIN	.47	-.11	-.24	-.11	.02	.00	.29
EXT	-.28	-.20	-.08	-.17	-.24	-.18	.39
EDP	-.05	.42	.25	.48	.09	.31	-.25
PLA	-.18	.29	.43	.22	.41	-.06	.16
NED	.39	-.07	-.09	-.05	.19	.22	.01
Total	-.73 ^b	-.02	.16	.06	.14	-.07	.05

^aPearson product-moment correlations with N reduced from 11 where necessary.

^bSignificantly different from zero ($p \leq .05$).

action than younger ones.

Chairmen. The significant negative correlations indicated in Table XLV suggest that the longer the chairmen had lived in their present communities and held the position of chairman the lower the congruence of their interaction role in non-educational detail and total interaction respectively, and the older the chairman was the lower his IRC index. The significant positive correlation between IRC index and amount of education indicated that in pupil services discussion, more highly educated chairmen more closely met the expectations for their role than did less well educated ones.

Congruence and Unit Characteristics

Table XLVI presents a summary of the results of t-tests which examined IRC indices of the three focal positions for significant differences on the administrative unit variables.

None of these tests revealed significant differences of the IRC indices of secretary-treasurers on the administrative unit variables. In the area of pupil personnel services, however, the chairmen of large enrollment units tended to have larger IRC indices than chairmen of smaller units. This means that chairmen of large enrollment units behave in board meetings more in congruence with the acts directed toward them than did chairmen of smaller units in discussion of pupil services.

There were several significant differences between the IRC

TABLE XLV

CORRELATIONS^a BETWEEN INTERACTION ROLE CONGRUENCE
AND CHAIRMEN'S PERSONAL CHARACTERISTICS

Task Area	Age	Position tenure	Unit tenure	Position exp.	Res. in com.	Amt. of educ.	Rec. of educ.
PUP	.01	-.43	.14	-.23	-.11	.70 ^b	-.36
PER	.06	-.33	.04	-.41	-.10	-.21	-.09
FIN	.47	.20	-.42	-.31	.09	.17	-.03
EXT	-.03	.01	-.35	-.31	-.36	-.06	-.03
EDP	-.13	.46	-.29	-.10	-.18	.05	.02
PLA	-.19	-.14	-.47	-.56	-.15	.25	-.30
NED	-.56 ^b	.08	-.34	-.42	-.61 ^b	.19	-.07
Total	-.13	-.18	-.45	-.64 ^b	-.34	.40	-.47

^aPearson product-moment correlations with N reduced from 11 where necessary.

^bSignificantly different from zero ($p \leq .05$).

TABLE XLVI

SUMMARY^a OF THE SIGNIFICANT DIFFERENCES OF THE
 INDICES OF INTERACTION ROLE CONGRUENCE
 OF FOCAL POSITION INCUMBENTS ON
 ADMINISTRATIVE UNIT VARIABLES

Unit Variable	Participant	Task area	Mean	S.D.	t	p ^b
Administrative type						
Counties	Supt.	EDP	.19	.23	2.34	.05
Districts			.66	.29		
Enrollment size						
Small	Supt.	FIN	.13	.25	3.25	.01
Large			-.48	.24		
Small	Supt.	EXT	.12	.54	3.13	.04
Large			.83	.12		
Small	Chairman	PUP	-.11	.27	2.81	.02
Large			.57	.40		
Superintendent's appointment						
Local	Supt.	Total	.80	.18	2.34	.04
Provincial			.40	.39		

^aComplete data are reported in Appendix F.

^bTwo-tailed.

indices of superintendents on the administrative unit variables. These differences indicated the tendencies for: District superintendents to have higher IRC indices in educational program discussion than County superintendents; superintendents of small enrollment units to have higher IRC indices in finance but lower IRC indices in extra-system relations than those of small enrollment units; and for locally appointed superintendents to have higher IRC indices than provincially appointed ones in total interaction.

The first and last findings, together with the indication that District superintendents are locally appointed and County superintendents are provincially appointed tend to confirm the implication by Bowman that the power to hire and fire a superintendent will bring about agreement between the superintendent and the board on the performance of the superintendent's role.²

III. HYPOTHESIS TESTING

The results of the analyses presented in the previous sections of this chapter provide information relevant to the theoretical hypotheses which comprised the secondary focus of this study.

Hypothesis 1

The greater the number of years an individual has held a given position in a given system the greater the degree of congruence of his role.

Superintendents. Tables XXXVIII and XLIII indicate no significant relationships between the superintendent's tenure in his present position and his TARC index and IRC indices in total interaction or any task area.

Secretary-treasurers. Tables XXXVIII and XLIV indicate that the secretary-treasurer's position tenure is significantly related to only his IRC index in the pupil services task area, and in the negative direction.

Chairmen. Tables XXXVIII and XLV indicate no significant relationships between the chairman's TARC and IRC indices and his position tenure.

There was not sufficient evidence for the acceptance of hypothesis 1.

Hypothesis 2

The greater the number of years an individual has been in a given system in any position the greater the degree of congruence of his role.

Superintendents. Tables XXXVIII and XLIII indicate that the superintendent's unit tenure is significantly related to only his IRC index in the finance task area, and in the negative direction.

Secretary-treasurers. Tables XXXVIII and XLIV indicate that the secretary-treasurer's unit tenure is significantly related to only his IRC index in the pupil services area, and in the negative direction.

Chairmen. Tables XXXVIII and XLV indicate no significant relationships between the chairman's unit tenure and his TARC and IRC indices.

There was not sufficient evidence for the acceptance of hypothesis 2.

Hypothesis 3

The greater the number of years of experience an individual has had in a given position in any system the greater the degree of congruence of his role.

Superintendents. Tables XXXVIII and XLIII indicate no significant relationships between the superintendent's position experience and his TARC and IRC indices.

Secretary-treasurers. Tables XXXVIII and XLIV indicate that the secretary-treasurer's position experience is significantly related to only his IRC index in the pupil services area, and in the negative direction.

Chairmen. Tables XXXVIII and XLV indicate that the chairman's position experience is significantly related to only his IRC index in total interaction, and in the negative direction.

There was not sufficient evidence for the acceptance of hypothesis 3.

Discussion

The data analyses described in this chapter did not confirm the theoretical hypotheses. What is more, the significant relation-

ships which were found between interaction role congruence and tenure and experience variables were all in the negative direction. Although the relationships were not all statistically significant, there was a clear tendency for the role congruence to decrease with the incumbent's tenure and experience in the position and administrative unit.

IV. SUMMARY

The focus of this chapter has been on the relationships between the indices of task area role congruence and interaction role congruence and the personal characteristics of the focal position incumbents.

In summary, two generalizations are suggested by the findings. First, it appears that a meeting participant's interaction role congruence will be higher if his interaction is limited in amount and number of task areas than if his interaction is relatively greater in amount and number of task areas.

Second, the relationships between interaction role congruence and tenure and experience of the focal position incumbents were clearly contrary to those hypothesized. That is, the role congruence of meeting participants tended to decrease through the years of their tenure and experience.

REFERENCES FOR CHAPTER V

¹William Raymond McInnes, "A Descriptive Survey of the Organization, Functions and Operation of Collegiate Institute Boards in the Smaller Cities of Saskatchewan," (unpublished Master's thesis, The University of Alberta, Edmonton, 1962), p. 149.

²Thomas R. Bowman, "Participation of Superintendents in School Board Decision-Making," Administrator's Notebook, XI, No. 5 (January, 1963), p. 3.

CHAPTER VI

SUMMARY, CONCLUSIONS AND IMPLICATIONS

This final chapter will summarize the research project design and findings, and draw some conclusions and implications from the results of the data analyses.

I. SUMMARY

The locus of the decision-making process of the local school boards which characterize North American public education is the school board meeting. A research project was formulated with the intent of describing and analyzing the structure of interaction at a sample of these meetings in terms of the interaction roles of the meeting participants.

The Research Project

Theoretical framework. The theoretical framework for the study was a synthesis of role and small group theory. The concepts of status, function and role in group interaction were examined and the concepts of performed role, sent role and role congruence were defined. Performed role was defined as the set of behaviors of the incumbent of a position. Sent role was defined as the set of expectations for a given position manifest by the behavior of the incumbents of other positions. Congruence of role was defined as the degree of correspondence between the performed and sent roles. This discussion

provided the framework for hypothesizing that the congruence of interaction roles of school board meeting participants would vary directly with their position tenure, administrative unit tenure and position experience.

Research background. The literature of theory and research on small groups and school board meeting participants provided both support for the theory and a lexicon of terms and concepts for the description and analysis of the school board meeting interaction structure.

Small group research indicated that behavior in a small group tends to become stabilized and clustered along two main dimensions. These dimensions are related to the personal needs of the members and to the needs of the group as a whole. Accordingly, it was demonstrated that the most fundamental role differentiation in group interaction was the divorcing of task and social-emotional functions.

Research on the roles of superintendents and secretary-treasurers conducted mainly by questionnaire indicated that they were expected to fulfill different roles in the various task areas. The superintendent was expected to act on his own in the area of educational program, to work under the board's direction in matters of personnel and pupil services, and to advise in other task areas. The secretary-treasurer, however, was expected to be advisor in the area of finance and little involved in the other areas.

Three studies on interaction at school board meetings indicated differences in interaction structures for programmed and non-programmed decisions, in interaction profiles of long-tenure and short-tenure superintendents, and that the superintendent is the task-leader of the board group.

Research design. Information on the administrative unit, the personal characteristics of meeting participants, and the coding of approximately eight hours of interaction for each of eleven administrative units in central Alberta formed the data for the interaction structure analyses.

Data on the administrative units were obtained from provincial Department of Education documents, on meeting participants from personal data questionnaires and on interaction from direct observation by trained coders. The technique and interaction categories of Bales' Interaction Process Analysis (I.P.A.) were chosen as the method for obtaining interaction data. This method was selected because of its wide use with many types of small groups, because of its use in other school board interaction research, and because it provided data compatible with the concepts of performed role, sent role and role congruence.

Three of twenty-six meetings of the eleven units were tape recorded and coded concurrently but independently by the two interaction coders. The data from these three meetings permitted the calculation of measures of inter-coder reliability and coder con-

sistency. Measures of both validity and reliability were high. However, it was deemed necessary to apply sets of weights to the interaction recorded by the two coders in order to nullify what appeared to be coder disagreement. Similarly, it was necessary to collapse the twelve categories of the I.P.A. into six to increase reliability and provide sufficient data in each category for meaningful analysis.

The roles of advisor, informer, information seeker and advice seeker were defined in terms of the four instrumental interaction categories. The roles of protagonist, antagonist, exemplar and deviator were defined in terms of initiated and received interaction in the two expressive categories.

Indices of task area and interaction role congruence were defined respectively as the Pearson product-moment correlation between the initiated and received percentages of interaction in the seven task areas, and as the correlation between the initiated and inverted received percentage profiles in the four instrumental interaction categories.

The Findings

Roles. Only 5.64 per cent of the total interaction was coded in the expressive interaction categories. The tendency was for this interaction to be initiated by and directed toward the participants who were highest interactors in the instrumental categories

of the various task areas. Thus, the chairman and superintendent shared the performance of the roles of protagonist and antagonist. The role of exemplar was sent to the chairman in most task areas, to the superintendent in pupil services, and to the secretary-treasurer in extra-system relations. The role of deviator was sent to the chairman in personnel, educational program and total interaction, and to the secretary-treasurer in finance, plant and non-educational detail.

The instrumental roles performed by the superintendent are those of advisor and informer in the primary areas of pupil services and personnel and in the secondary areas of educational program, plant and extra-system relations. These same roles were sent to the superintendent in the same task areas. In addition, however, the superintendent was sent the role of advice seeker in pupil services and finance.

There were indications that older, more experienced superintendents contributed more to meeting interaction than younger, less experienced ones, and that provincially appointed superintendents of Counties and small enrollment units were expected to participate more than locally appointed superintendents of Districts and large enrollment units.

The secretary-treasurer performed the role of informer in the primary areas of extra-system relations and finance and in the secondary areas of non-educational detail and educational program.

In general, he was sent the role of informer in these areas as well. There were some indications that less experienced and less well educated secretary-treasurers contributed and were expected to contribute more to meeting interaction than more experienced and more highly educated ones.

The chairman was sent and performed the roles of advisor, information seeker and advice seeker in most task areas. Older, more experienced chairmen contributed less to meeting discussion than younger less experienced ones, and chairmen of small meetings and Districts initiated a greater proportion of acts than did chairmen of large meetings and Counties.

Role congruence. The indices of task area role congruence (TARC) for the incumbents of all three focal positions were fairly high, .86, .87 and .88. These indicate that the interaction initiated by and sent to the focal positions across the task areas are highly congruent. A positive correlation between the chairman's age and TARC index was the only significant relationship between TARC index and personal characteristics of the focal position incumbents or characteristics of the administrative units.

The mean interaction role congruence (IRC) indices for the superintendents, secretary-treasurers and chairmen were respectively .55, .65 and .41. The analyses indicated the tendency for a participant's IRC index to be highest in the task areas of his greatest participation. All significant correlations between IRC

indices and personal characteristics of participants were in the negative direction suggesting that the longer the tenure and the greater the experience of the participant the lower his interaction role congruence. There was not sufficient evidence for acceptance of the theoretical hypothesis.

Analyses of the IRC indices of the incumbents of the focal positions and the administrative unit variables indicated that chairmen of large enrollment units had larger IRC indices than those of small enrollment units in pupil services discussion. These analyses also indicated that (1) superintendents of Districts had higher IRC indices than superintendents of Counties in educational program, (2) superintendents of small enrollment units had higher IRC indices in finance and lower IRC indices in extra-system relations than superintendents of large enrollment units, and (3) locally appointed superintendents had higher IRC indices than provincially appointed ones.

II. CONCLUSIONS

Limitations

Before conclusions are drawn from the findings of this study, it might be well to reiterate briefly the limitations discussed in Chapter I.

First, the sample of administrative units and observed interaction was small and was not selected on a random basis. Second,

although the measures of coder consistency and inter-coder reliability were fairly high, it was necessary to weigh the interaction data to overcome a certain degree of coder disagreement. Third, because of the fairly short coder training program, the interaction data may not be directly comparable to interaction coding from other studies. Fourth, the interaction data are subject to the perceptual biases (if any) of the coders. Fifth, and finally, the assumption that the presence of the interaction coder or tape recorder did not affect the interaction in any way may not be valid.

Task area. The involvement of the meeting participants in the various task areas tends to confirm the research on educational personnel roles cited in Chapter II. However, several findings which appear unique to this study are noteworthy.

The superintendent's participation in educational program interaction is less than his participation in total interaction. If his influence on board policy is as great in this area as Finlay, Stafford, Skippen and Abbott suggest,¹ then the import of his participation lies in the type not the amount of participation. The opposite comment may be made on his participation in plant and facilities. If the superintendent's influence is rather low in this area then his relatively high participation has little influence. On the other hand, the fact that the superintendent's participation in plant interaction was over twice that of the secretary-treasurer may indicate that board members perceive the provision of

plant and facilities as more closely related to problems of pupils, staff and educational program than to problems of finance and business management.

The relatively high participation of the secretary-treasurer in extra-system relations may be a function of his fourteen years of residence in the community compared to the superintendent's eight (Table XVIII, page 68). This does not explain, however, the chairman's lower involvement despite his thirty-one years of residence. It is suggested that perhaps the chairman's relatively high and consistent involvement in all task areas is a function of his formal status as chairman, and this load prevents him from "specializing" in particular task areas.

The indication that board members participate more than twice as much in the area of finance as in any other area confirms the observation of many practicing educators that board members are very concerned about revenues, expenditures and business management.

Examinations for relationships between participation in meeting interaction and personal characteristics of participants suggested the following conclusions. The more experience a superintendent has as superintendent the more he contributes and is expected to contribute to meeting interaction. One may conclude from this that over time and through interaction meeting participants develop confidence in and respect for the competence of the superintendent, and they allow and expect him to take part in a greater proportion of

meeting discussion.

The relationships between participation of the incumbents of the focal positions and the administrative unit variables indicated that the chairmen of small meetings initiated a higher proportion of total and non-educational interaction than those of large meetings. This suggests that regardless of the size of the meeting, the proportion of participation of the administration, the superintendent and secretary-treasurer, remains unchanged, whereas the chairman's does not.

These analyses also indicated that in the areas of pupil services, personnel, finance and total interaction provincially appointed superintendents of Counties are expected to participate much more than locally appointed superintendents of Districts. The finding that secretary-treasurers of large meeting, rural Counties were sought more for information on pupil services and educational program than secretary-treasurers of small meeting, urban Districts suggests that, particularly in rural units, the secretary-treasurer's potential for influencing board decisions and policy is not narrowly confined to finance and business management.

Interaction. The data for this study enables one to make the following conclusions regarding the interaction roles of the focal position incumbents.

The superintendent serves, and is expected to serve, as the main source of information necessary for board decisions in all task

areas except finance, extra-system relations and non-educational detail. In finance and extra-system relations the secretary-treasurer is the main source of information. Despite the fact that these two administrative officers do not have the opportunity to vote on board motions, the role of information source places them in a potentially very powerful and influential position.

The chairman shares the role of advisor with the superintendent. Together they provide the catalytic action of opinion and suggestion which gives direction to the process of board decision-making.

The main role both performed by and sent to the chairman, however, is that of information and advice seeker. Both his de jure and de facto role is that of a "clearing house" for meeting interaction. As mentioned in the preceding section, this role does not permit the chairman to focus his participation in a given task area or to bring to bear the potential influence of information. However, his role as relayer² is a very potent one in the discussion processes of the board. He has the potential to magnify or diminish the effect of comments by his recognizing or ignoring of the contributions of participants.

Finally, the limited data on expressive roles did not confirm Slater's conclusion that task and social-emotional roles were fulfilled by different individuals.³ Rather, the indication by the present study was that instrumental and expressive roles tend to be performed

by the same people in the various task areas.

Role Congruence

From the high degree of task area role congruence one may conclude that there is general agreement among meeting participants on the amount of their participation in the task areas. Particularly for the administrative participants, the task area roles would appear to be clearly defined.

The mean interaction role congruence (IRC) index of .65 for secretary-treasurers suggests that not only is his task area role well defined, but also his interaction role is perceived congruently by himself and other meeting participants. The same comment on the interaction roles of the superintendent and chairman could not be made with the same degree of assurance, however, because the IRC indices of these participants were considerably lower.

Correlations between IRC index and measures of position and unit tenure, position experience and years of residence in the community indicated that, contrary to the theoretical hypotheses, interaction role congruence did not increase through interaction. Rather, there were fairly consistent indications that the IRC index decreased with increased experience in playing the given role. This suggests that either the incumbents of the focal positions are attempting to change their interaction roles at a rate greater than the expectations of other participants change, or that the expectations for the roles of these focal positions are changing more rapidly

than the actual performance of the roles. Both of these possibilities tend to contradict Keeler's observation that:

Whatever concept the board member has of the role of the superintendent in theory, this role in practice is narrow and circumscribed. The role compounds negatively with passing time and practice.⁴

Finally, the indication that the IRC index for locally appointed superintendents is significantly larger than that of provincially appointed ones in total interaction tends to confirm Bowman's implication that the power to hire and fire a superintendent does constrain his role.⁵

III. IMPLICATIONS

The results of this research have implications for both the practice of, and research into the administration of educational systems.

For Practice

The description of the roles played in school board meetings indicated by this research provides both the aspiring and practicing school board member or official with some knowledge about how he behaves and how others behave toward him. It would seem reasonable to expect that this knowledge would enable him to function more effectively and efficiently in the social processes of board meetings.

As was indicated in Chapter II, the role of the superintendent has been well described. Little can be added to this description by

the present research with the exception that locally appointed superintendents appear to conform more to the expectations for their interaction role than provincially appointed ones. If it is felt that receptivity to the expectations of board meeting participants is functional in terms of local control of education, then the practice of local appointment of the superintendent is indicated. If, on the other hand, it is felt that the chief education officer of the school unit should have as few local constraints on his interaction role as possible, then the practice of provincially or state appointed superintendents is indicated. It should be realized, however, that this would not remove the constraints on his role. It would merely transfer them from the local to the state or provincial level.

The indication by these data that the secretary-treasurer is a significant source of information for discussion and decisions in the areas of finance and extra-system relations, together with the fact that it is fairly common practice for him to determine the meeting agenda, places the secretary-treasurer in a potentially, if not actually, very strong position to influence the determination of board policy. This implies, therefore, that it would be prudent to expand, and initiate where necessary, programs for the training of school business officials in educational administration to supplement their competencies in finance and business administration.

The importance of the role of the chairman in meeting inter-

action suggests that his selection should be made with care. The indication that the chairman was selected because, "it was his turn," is all too frequently heard. Furthermore, if the local involvement in educational policy, which North America holds dear, is to be retained, local involvement in policy making must be made more effective. One strategy for improving the participation of both board chairmen and members is to continue the in-service workshops designed to keep trustees abreast of the rapid developments in education. To complement this, however, it would appear prudent to consider having meeting participants involved in training programs which focus on the processes of small group interaction in order that they may better understand the processes by which they must function in determining local education policy.

In general then, the results of this study indicate that if a degree of local involvement and control of public education is to be maintained and to be effective, it must result from the cooperative, coordinated interaction of trained, locally responsible educational and business administrators and lay educators.

For Research

It was suggested that this study provided a framework for further research on the processes of school board decision-making. This framework is composed of implications for research design and theory construction.

Research design. The limitations inherent in the design of the study reported here make the conclusions which have been stated quite tenuous. Nevertheless, the results are sufficiently consistent to warrant further research.

A number of refinements are suggested for the design of studies aimed at confirming these findings. First, it would appear necessary to consider the selection of a larger random sample of both administrative units and meeting interaction. Second, as suggested in an earlier chapter, a more rigorous and concentrated program of coder training must be undertaken if the interaction data is to be subjected to complex analyses. Third, it would be advisable to consider gathering more data on the psychological characteristics of meeting participants. For instance, knowledge about the relationships between interaction roles and personality types would be very valuable. Finally, to ensure that the interaction data is reliable and valid it would appear necessary that at least two coders be required to record concurrently but independently all interaction analyzed.

Theory construction. It is suggested that the present study has demonstrated the relevance of the concepts of performed role, sent role and role congruence to the study of interaction in small groups. If empirical evidence is gathered through replication of this study which confirms these findings, then the theory which is developed in Chapter II will have to be modified to accommodate such

evidence.⁶

It is not the purpose of this section nor this report to present a detailed discussion of the theory which might develop from replicative research. However, two examples will be presented as indications of the directions the theory modification might take.

The first of these examples is Hollander's concept of idiosyncrasy credit.⁷ Basically this concept refers to the willingness of group members to accept a degree of what might be called "non-expected" or deviant behavior from a member who has established himself as a leader. In the context of the present study, this concept would tend to explain why the role congruence of more experienced superintendents was lower than that of less experienced ones. That is, once the superintendent had established himself as a leader of the school board group it was not necessary for him to meet as closely the expectations of the group as it was when he was relatively new in the group.

The second possible direction of theory development might be to incorporate the concept of latent interaction roles. That is, over a period of time the interaction roles of meeting participants may become so well "understood" that expectations do not need to be communicated to members. Performed roles would remain overt because the group must continue to function, but sent roles would become covert or latent when the members learned their roles. This type of theory could also accommodate the decrease in role con-

gruence over time.

In sum, what this study has done is to provide some insights into the problems of understanding small group interaction which beg further examination.

Although small group theory is fairly well established, it is founded mainly on research done with experimentally constructed groups. The research reported here was done with "natural" groups and tended not to confirm previous theory. It is suggested that future development and refinement of small group theory must be based to a large extent upon research which focusses on natural and not experimental groups. Furthermore, the explanation and understanding of the formal processes by which local education decisions are reached may only be obtained with greater knowledge of the structure of interaction at school board meetings.

REFERENCES FOR CHAPTER VI

¹Supra, pp. 17-19.

²Harold Guetzkow, "Differentiation of Roles in Task-Oriented Groups," in Dorwin Cartwright and Alvin Zander, (eds.), Group Dynamics (second edition; Evanston, Illinois: Row, Peterson and Company, 1960), p. 696.

³Philip E. Slater, "Role Differentiation in Small Groups," American Sociological Review, XX (1955), p. 308.

⁴Donald Sargent Keeler, "A Case Analysis of Points of Conflict in School Board-Superintendent Relationships" (unpublished Doctoral dissertation, Cornell University, 1962), Dissertation Abstracts, Vol. XXIII, p. 1984.

⁵Supra, p. 131.

⁶This approach to the interaction between empirical evidence and theory is discussed by Abraham Kaplan, The Conduct of Inquiry (San Francisco: Chandler Publishing Company, 1964).

⁷E. P. Hollander, Leaders, Groups, and Influence (New York: Oxford University Press, 1964).

BIBLIOGRAPHY

BIBLIOGRAPHY

A. BOOKS

- Bales, Robert F. Interaction Process Analysis. Cambridge, Massachusetts: Addison-Wesley Press, Inc. 1951.
- Bredemeier, H. C., and R. M. Stephenson. The Analysis of Social Systems. New York: Holt, Rinehart and Winston, Inc., 1962.
- Cartwright, Dorwin, and Alvin Zander (eds.). Group Dynamics. Second edition. Evanston, Illinois: Row, Peterson and Company, 1960.
- Culbertson, Jack A., and Stephen P. Hencley (eds.). Educational Research: New Perspectives. Danville, Illinois: The Interstate Printers and Publishers, 1963.
- Deutsch, Morton, and Robert M. Krauss. Theories in Social Psychology. New York: Basic Books, Inc. 1965.
- Enns, Frederick. The Legal Status of the Canadian School Board. Toronto: The Macmillan Company, 1963.
- Ferguson, George A. Statistical Analysis in Psychology and Education. New York: McGraw-Hill Book Company, Inc., 1959.
- Gross, Neal. Who Runs Our Schools? New York: John Wiley and Sons, Inc., 1958.
- Gross, Neal, and Robert E. Herriott. Staff Leadership in Public Schools: A Sociological Inquiry. New York: John Wiley and Sons, Inc., 1965.
- Gross, Neal, Ward S. Mason, and Alexander W. McEachern. Explorations in Role Analysis. New York: John Wiley and Sons, Inc., 1958.
- Hare, A. Paul, Edgar F. Borgatta, and Robert F. Bales (eds.). Small Groups: Studies in Interaction. Revised edition. New York: Alfred A. Knopf, 1966.
- Hollander, E. P. Leaders, Groups and Influence. New York: Oxford University Press, 1964.
- Homans, George C. The Human Group. New York: Harcourt Brace Company Inc., 1950.

- Kahn, Robert L., et al. Organizational Stress: Studies in Role Conflict and Ambiguity. New York: John Wiley and Sons, Inc., 1964.
- Kaplan, Abraham. The Conduct of Inquiry. San Francisco: Chandler Publishing Company, 1964.
- Knowles, Malcolm and Hulda. Introduction to Group Dynamics. New York: Association Press, 1959.
- Lasswell, Harold D., and Daniel Lerner (eds.). The Policy Sciences--Recent Developments in Scope and Methods. Palo Alto: Stanford University Press, 1951.
- Lindzey, Gardner (ed.). Handbook of Social Psychology. 2 vols. Reading, Massachusetts: Addison-Wesley Publishing Company, Inc., 1954.
- Linton, Ralph. The Study of Man. New York: D. Appleton-Century Company, 1936.
- Merton, R. K. Social Theory and Social Structure. Glencoe, Illinois: The Free Press, 1957.
- Newcombe, Theodore, Ralph H. Turner, and Philip E. Converse. Social Psychology. New York: Holt, Rinehart and Winston, Inc., 1965.
- Olmsted, Michael S. The Small Group. New York: Random House, 1959.
- Parsons, Talcott, and Edward A. Shils (eds.). Toward a General Theory of Action. Cambridge, Massachusetts: Harvard University Press, 1951.
- Petrullo, Luigi, and Bernard M. Bass (eds.). Leadership and Interpersonal Behavior. New York: Holt, Rinehart and Winston, Inc., 1961.
- Rommetveit, Ragnar. Social Norms and Roles. Minneapolis: University of Minnesota Press, 1954.
- Sherif, Muzafer (ed.). Intergroup Relations and Leadership. New York: John Wiley and Sons, Inc., 1962.
- Sherif, M., and M. O. Wilson (eds.). Group Relations at the Crossroads. New York: Harper and Brothers, 1953.
- Stogdill, Ralph M. Individual Behavior and Group Achievement. New York: Oxford University Press, 1959.

Tonnies, Ferdinand. Gemeinschaft und Gessellschaft. Trans. Charles Loomis. New York: Harper Torchbook, 1963.

Zaleznik, Abraham and David Moment. The Dynamics of Interpersonal Behavior. New York: John Wiley and Sons, Inc., 1964.

B. PUBLICATIONS OF THE GOVERNMENT, LEARNED SOCIETIES,
AND OTHER ORGANIZATIONS

Province of Alberta, Department of Education. Sixty-second Annual Report. Edmonton: The Queen's Printer, 1968.

Stogdill, R. M. Manual for the Leader Behavior Description Questionnaire--Form XII. Columbus: Bureau of Business Research, Ohio State University, 1957.

von Bertalanffy, Ludwig and Anatol Rapoport (eds.). General Systems. Yearbook of the Society for the Advancement of General Systems Theory, Volume I, 1956.

C. PERIODICALS

Abbott, Max G. "Values and Value-Perceptions in Superintendent-School Board Relationships," Administrator's Notebook, IX, No. 4 (December, 1960).

Bales, Robert F. "Phases in Group Problem-Solving," The Journal of Abnormal and Social Psychology, XLVIII (1951), pp. 485-495.

Bales, Robert F., and A. Paul Hare, "Diagnostic Use of the Interaction Profile," The Journal of Social Psychology, LXVII (1965), pp. 239-258.

Bargen, P. F. "The Legal Basis for Administrative Decisions," Canadian Education, XV (September, 1960), pp. 40-60.

Bavelas, Alex. "Communication Patterns in Task-Oriented Groups," The Journal of the Acoustical Society of America, XXII (November, 1950), pp. 725-730.

Benne, Kenneth D., and Paul Sheats. "Functional Roles of Group Members," The Journal of Social Issues, IV (Spring, 1948), pp. 41-49.

- Blake, Robert R., Jane Srygley Mouton, and Benjamin Fructer. "A Factor Analysis of Training Group Behavior," The Journal of Social Psychology, LVIII (1962), pp. 121-130.
- Borgatta, Edgar F., and Robert F. Bales. "Task and Accumulation of Experience as Factors in the Interaction of Small Groups," Sociometry, XVI (1953), pp. 239-252.
- Borgatta, Edgar F., and Robert F. Bales. "The Consistency of Subject Behavior and the Reliability of Scoring in Interaction Process Analysis," American Sociological Review, XVIII (1953), pp. 566-569.
- Borgatta, Edgar F., Leonard S. Cottrell, Jr., and Henry J. Meyer. "On the Dimensions of Group Behavior," Sociometry, XIX (1956), pp. 223-240.
- Bowman, Thomas R. "Participation of Superintendents in School Board Decision-Making," Administrator's Notebook, XI No. 5 (January, 1963).
- Brown, Alan F. "Reactions to Leadership," Educational Administration Quarterly, III (1967), pp. 62-73.
- Charters, W. W., Jr. "Beyond the Survey in School Board Research," Educational Administration and Supervision, XLI (December, 1955), pp. 449-452.
- Finlay, J. H., and A. W. Reeves. "Expectations of School Boards for the Role of Provincially Appointed Superintendent of Schools in Alberta," The Alberta Journal of Educational Research, VII (June, 1961), pp. 74-80.
- Getzels, Jacob W., and E. G. Guba. "Social Behavior and Administrative Process," The School Review, LXV (1957), pp. 423-441.
- Heinicke, Christoph, and Robert F. Bales. "Developmental Trends in the Structure of Small Groups," Sociometry, XVI (1953), pp. 7-38.
- Landsberger, H. A. "Interaction Process Analysis of Professional Behavior: A Study of Labor Mediators in Twelve Labor-Management Disputes," American Sociological Review, XX (1955), pp. 566-575.
- Leavitt, H. J. "Some Effects of Certain Communication Patterns on Group Performance," The Journal of Abnormal and Social Psychology, XLVI (1951), pp. 38-50.

- Miklos, Erwin. "Role Theory in Administration," The Canadian Administrator, III (November, 1963), pp. 5-8.
- Slater, Philip E. "Role Differentiation in Small Groups," American Sociological Review, XX (1955), pp. 300-310.
- Steinzor, Bernard. "The Development and Evaluation of a Measure of Social Interaction," Human Relations, II (1949), pp. 319-347.
- Talland, George A. "Task and Interaction Process: Some Characteristics of Therapeutic Group Discussion," The Journal of Abnormal Psychology, L (1955), pp. 105-109.
- Thomas, Michael P., Jr., and Russell T. Gregg. "The Interaction of Administrators and School Boards," Administrator's Notebook, X, No. 6 (February, 1962).

D. UNPUBLISHED MATERIALS

- Brubacher, John Wemple. "An Analysis of the Decision-Making Process of School Boards." Unpublished Doctoral dissertation, The University of Michigan, 1963.
- Giles, Thomas Edward. "A Study of the Role of Secretary-Treasurer in School Divisions and Counties in Alberta." Unpublished Doctoral dissertation, The University of Oregon, 1965.
- Hagen, Arnold J. "An Exploratory Study of the Patterning and Structuring of the Roles Played by School Board Members Through a Particular Time Sequence." Unpublished Doctoral dissertation, The University of Oregon, 1955.
- Hrynyk, Nicholas P. "A Descriptive Survey of School Division Secretary-Treasurers." Unpublished Master's thesis, The University of Alberta, 1962.
- Keeler, Donald Sargent. "A Case Analysis of Points of Conflict in School Board-Superintendent Relationships." Unpublished Doctoral dissertation, Cornell University, 1962.
- Matson, Orran L. "Conflict in the Executive Function of the Administration of the Large School Units in Alberta." Unpublished Master's thesis, The University of Alberta, 1964.

- Matthews, Neville O. "A Study of the Decision-Making Process of Two School Boards in an Alberta Community." Unpublished Doctoral dissertation, The University of Alberta, 1967.
- McCordic, W. J. "Is the Management Cycle Concept Enough?" Paper read at the Canadian Education Association Short Course, Banff, Alberta, May, 1967.
- McInnes, William Raymond. "A Descriptive Survey of the Organization, Functions and Operation of Collegiate Institute Boards in the Smaller Cities of Saskatchewan." Unpublished Master's thesis, The University of Alberta, 1962.
- Skippen, Robert Errett. "A Comparison of the Superintendent's Influence on School Board Policy as Perceived by Superintendents of Schools and the School Board Chairmen." Unpublished Doctoral dissertation, The University of Oregon, 1964.
- Stafford, H. D. "Expectations of School Trustees for the Role of District Superintendent of Schools in British Columbia." Unpublished Master's thesis, The University of Alberta, 1964.
- Thomas, Michael P. "Interaction Process Analysis of Administrator-School Board Relationships." Unpublished Doctoral dissertation, The University of Wisconsin, 1960.

APPENDIX A
DATA COLLECTION INSTRUMENTS

PERSONAL DATA QUESTIONNAIRE

(Please count this school year as a full year)

1. POSITION

Superintendent _____ Chairman _____
 Secretary-Treasurer _____ Member _____
 Other (please specify) _____

2. SEX

Male _____ Female _____

3. AGE

30 or less _____	46 - 50 _____	61 - 65 _____
31 - 35 _____	51 - 55 _____	66 - 70 _____
36 - 40 _____	56 - 60 _____	over 70 _____
41 - 45 _____		

4. TENURE

	This district	Other districts
Number of years as:		
Superintendent	_____	_____
Secretary-Treasurer	_____	_____
Chairman	_____	_____
Member	_____	_____
Other	_____	_____

5. Number of years employed by this district other than above. _____

6. Number of years residence in this community. _____

7. EDUCATION (AMOUNT)

Grade 9 or less _____	One university degree _____
Grade 10 to less than complete grade 12 _____	Two university degrees _____
High school graduation _____	Three university degrees _____
Less than 3 years university or college _____	Four or more university degrees _____

8. EDUCATION (RECENCY)

When did you last take an academic course?

Within the last 2 years _____
 Between 3 and 5 years ago _____
 Between 6 and 10 years ago _____
 Between 11 and 20 years ago _____
 More than 20 years ago _____

District: _____

Date: _____

Sheet No. _____

CATEGORY	Content Area							
	Time							
1	<u>Shows solidarity</u> , raises other's status, gives help, reward:							
2	<u>Shows tension release</u> , jokes, laughs, shows satisfaction:							
3	<u>Agrees</u> , shows passive acceptance, understands, concurs, complies:							
4	<u>Gives suggestion</u> , direction, implying autonomy for other:							
5	<u>Gives opinion</u> , evaluation, analysis, expresses feeling, wish:							
6	<u>Gives orientation</u> , information, repeats, clarifies, confirms:							
7	<u>Asks for orientation</u> , information, repetition, confirmation:							
8	<u>Asks for opinion</u> , evaluation, analysis, expression of feeling:							
9	<u>Asks for suggestion</u> , direction, possible ways of action:							
10	<u>Disagrees</u> , shows passive rejection, formality, withholds help:							
11	<u>Shows tension</u> , asks for help, withdraws out of field:							
12	<u>Shows antagonism</u> , deflates other's status, defends or asserts self:							

APPENDIX B

**COMPARISON OF PERSONAL CHARACTERISTICS OF FOCAL
POSITION INCUMBENTS ON ADMINISTRATIVE
UNIT VARIABLES**

TABLE XLVII
 COMPARISON OF PERSONAL CHARACTERISTICS
 OF FOCAL POSITION INCUMBENTS
 BY ADMINISTRATIVE TYPE ^a

Variable	Counties (6)		Districts (4)		t	p ^b
	Mean	S.D.	Mean	S.D.		
Superintendent's						
Age	3.33	1.97	3.00	1.22	.27	.79
Position ten.	7.17	6.26	6.50	3.91	.17	.87
Unit tenure	7.17	6.26	9.25	9.68	.37	.72
Pos. exp.	9.17	5.24	6.50	3.91	.78	.46
Res. in com.	4.33	2.81	15.50	17.24	1.28 ^c	.29 ^c
Amt. educ.	5.83	.69	6.75	.43	2.12	.07
Rec. educ.	2.67	1.49	3.00	1.00	.35	.73
Secretary-treasurer's						
Age	3.17	2.85	3.25	2.17	.04	.97
Pos. tenure	4.50	3.91	9.50	7.12	1.28	.24
Unit tenure	5.67	5.06	10.75	7.85	1.11	.30
Pos. exp.	5.67	4.03	9.50	7.12	.97	.36
Res. in com.	6.17	6.01	20.75	14.69	1.88 ^c	.13 ^c
Amt. educ.	2.67	.75	3.50	.50	1.75	.12
Rec. educ.	3.83	1.46	2.75	1.48	1.02	.34
Chairman's						
Age	5.83	1.07	3.50	1.12	2.97	.02
Pos. tenure	3.33	1.37	3.00	2.92	.22	.83
Unit tenure	10.17	10.46	6.00	2.24	.94 ^c	.38 ^c
Pos. exp.	8.83	11.74	3.00	2.92	1.16 ^c	.29 ^c
Res. in com.	44.33	15.15	14.25	3.77	4.65 ^c	.00 ^c
Amt. educ.	2.33	1.11	4.50	1.50	2.35	.05
Rec. educ.	5.00	.00	4.50	.50	2.19	.06

^aThe one Division (administrative unit 6) was omitted from these analyses.

^bTwo-tailed.

^cCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE XLVIII
 COMPARISON OF PERSONAL CHARACTERISTICS
 OF FOCAL POSITION INCUMBENTS
 BY ENROLLMENT SIZE

Variable	Small (6)		Large (5)		t	p ^a
	Mean	S.D.	Mean	S.D.		
Superintendent's						
Age	3.33	1.60	3.40	1.85	.06	.96
Pos. tenure	6.17	5.70	7.00	4.77	.24	.82
Unit tenure	6.17	5.70	9.20	9.20	.61	.56
Pos. exp.	7.00	5.23	8.40	4.41	.43 _b	.68 _b
Res. in com.	4.17	2.27	13.20	16.20	1.24 _b	.28 _b
Amt. educ.	6.17	.69	6.20	.75	.07	.95
Rec. educ.	2.83	1.34	2.40	1.36	.48	.64
Secretary-treasurer's						
Age	3.33	2.75	2.80	2.14	.32 _b	.76 _b
Pos. tenure	3.67	2.92	9.00	6.99	1.59 _b	.17 _b
Unit tenure	4.83	3.39	11.40	7.45	1.82 _b	.13 _b
Pos. exp.	3.67	2.92	10.40	6.09	2.27 _b	.06 _b
Res. in com.	11.00	12.83	18.60	14.88	.82	.43
Amt. educ.	3.00	.82	2.80	.75	.38	.71
Rec. educ.	3.33	1.80	3.80	1.17	.45	.66
Chairman's						
Age	5.00	1.53	4.80	1.47	.20	.85
Pos. tenure	4.33	1.89	1.80	1.17	2.37 _b	.04 _b
Unit tenure	6.17	2.61	10.20	11.50	.77 _b	.49 _b
Pos. exp.	9.50	11.56	2.20	1.17	1.54 _b	.18 _b
Res. in com.	35.17	20.91	26.20	13.60	.75	.47
Amt. educ.	2.33	1.37	3.80	1.72	1.42	.19
Rec. educ.	4.83	.37	4.80	.40	.13	.90

^aTwo-tailed.

^bCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE XLIX
 COMPARISON OF PERSONAL CHARACTERISTICS
 OF FOCAL POSITION INCUMBENTS
 BY MEETING SIZE

Variable	Small (4)		Large (7)		t	p ^a
	Mean	S.D.	Mean	S.D.		
Superintendent's						
Age	3.50	1.50	3.29	1.83	.18	.86
Pos. tenure	5.75	4.21	7.00	5.81	.34	.74
Unit tenure	9.00	9.82	6.71	5.90	.44	.67
Pos. exp.	5.75	4.21	8.71	4.98	.91	.39
Res. in com.	13.75	18.05	5.14	3.27	.95 ^b	.41 ^b
Amt. educ.	6.50	.50	6.00	.76	1.07	.31
Rec. educ.	2.75	1.30	2.57	1.40	.19	.85
Secretary-treasurer's						
Age	2.75	2.17	3.29	2.66	.31	.76
Pos. tenure	7.00	7.55	5.57	4.47	.36	.73
Unit tenure	8.75	6.98	7.29	6.13	.33	.75
Pos. exp.	7.00	7.55	6.57	4.34	.11	.92
Res. in com.	23.00	16.51	9.57	10.03	1.52	.16
Amt. educ.	3.00	.71	2.86	.83	.26	.80
Rec. educ.	2.75	1.48	4.00	1.41	1.25	.24
Chairman's						
Age	3.75	1.30	5.57	1.18	2.15	.06
Pos. tenure	3.50	2.69	3.00	1.51	.36 ^b	.73 ^b
Unit tenure	5.50	2.60	9.43	9.85	1.00 ^b	.35 ^b
Pos. exp.	3.50	2.69	7.71	11.21	.95 ^b	.37 ^b
Res. in com.	14.00	3.39	40.86	16.41	4.18 ^b	.00 ^b
Amt. educ.	3.00	1.22	3.00	1.93	.00	.99
Rec. educ.	4.75	.43	4.86	.35	.41	.70

^aTwo-tailed.

^bCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE L
COMPARISON OF PERSONAL CHARACTERISTICS
OF SUPERINTENDENTS
BY APPOINTMENT

Variable	Local (4)		Provincial (7)		t	p ^a
	Mean	S.D.	Mean	S.D.		
Superintendent's						
Age	3.00	1.22	3.57	1.92	.49	.64
Pos. tenure	6.50	3.91	6.57	5.97	.02	.98
Unit tenure	9.25	9.68	6.57	5.97	.51	.62
Pos. exp.	6.50	3.91	8.29	5.31	.53	.61
Res. in com.	15.50	17.24	4.14	2.64	1.31 ^b	.28 ^b
Amt. educ.	6.75	.43	5.86	.64	2.25	.05
Rec. educ.	3.00	1.00	2.43	1.50	.62	.55

^aTwo-tailed.

^bCorrected by the Welch approximation for lack of homogeneity of variance.

APPENDIX C

COMPARISON OF PER CENT OF INTERACTION OF FOCAL
POSITION INCUMBENTS ON ADMINISTRATIVE
UNIT VARIABLES

TABLE LI
 COMPARISON OF SUPERINTENDENTS'
 PER CENT OF INTERACTION BY
 ADMINISTRATIVE TYPE^a

Task Area	Counties (6)		Districts (4)		t	p ^b
	Mean	S.D.	Mean	S.D.		
Initiated						
PUP	32	14	18	17	1.23	.25
PER	36	13	25	12	1.19	.27
FIN	15	10	11	6	.57	.59
EXT	18	14	21	15	.25	.81
EDP	20	9	27	13	.90	.40
PLA	23	9	21	9	.23	.82
NED	12	6	19	13	1.06	.32
Total	25	7	22	9	.38	.72
Received						
PUP	14	5	4	5	2.84	.02
PER	11	5	5	3	2.06	.07
FIN	12	8	2	1	2.90 ^c	.03 ^c
EXT	5	5	2	2	1.73 ^c	.13 ^c
EDP	9	6	4	3	1.27	.24
PLA	9	4	4	3	1.86	.10
NED	7	4	6	7	.38	.72
Total	9	2	5	2	3.26	.01

^aThe one Division (administrative unit 6) was omitted from these analyses.

^bTwo-tailed.

^cCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE LII
 COMPARISON OF SECRETARY-TREASURERS'
 PER CENT OF INTERACTION BY
 ADMINISTRATIVE TYPE^a

Task Area	Counties (6)		Districts (4)		t	p ^b
	Mean	S.D.	Mean	S.D.		
Initiated						
PUP	15	8	3	5	2.14	.07
PER	13	8	6	7	1.26	.24
FIN	21	16	21	15	.01	.99
EXT	30	22	17	12	.96	.36
EDP	17	6	11	7	1.37	.21
PLA	8	5	10	4	.59	.57
NED	17	8	15	12	.18	.86
Total	15	5	10	6	1.39	.20
Received						
PUP	5	3	1	1	3.01 ^c	.02 ^c
PER	4	4	2	2	1.14	.29
FIN	6	4	6	3	.03	.98
EXT	6	1	5	3	1.17 ^c	.33 ^c
EDP	5	3	2	1	2.97 ^c	.02 ^c
PLA	3	2	5	2	1.07	.32
NED	8	5	3	3	1.48	.18
Total	5	1	3	2	1.35	.21

^aThe one Division (administrative unit 6) was omitted from these analysis.

^bTwo-tailed.

^cCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE LIII
 COMPARISON OF CHAIRMEN'S PER
 CENT OF INTERACTION BY
 ADMINISTRATIVE TYPE^a

Task Area	Counties (6)		Districts (4)		t	p ^b
	Mean	S.D.	Mean	S.D.		
Initiated						
PUP	18	8	19	15	.17	.87
PER	17	5	21	6	.99	.35
FIN	20	16	23	6	.37 ^c	.73 ^c
EXT	11	3	17	14	.88 ^c	.44 ^c
EDP	20	8	22	5	.27	.79
PLA	16	8	30	17	1.51	.17
NED	18	6	36	6	4.38	.00
Total	17	4	22	1	2.50 ^c	.04 ^c
Received						
PUP	20	7	21	20	.04 ^c	.97 ^c
PER	21	5	32	16	1.29 ^c	.29 ^c
FIN	13	11	28	23	1.18	.27
EXT	16	8	17	20	.04 ^c	.97 ^c
EDP	17	6	26	16	1.08 ^c	.34 ^c
PLA	19	9	34	20	1.40	.20
NED	18	7	31	11	1.96	.09
Total	18	4	31	17	1.48 ^c	.24 ^c

^aThe one Division (administrative unit 6) was omitted from these analysis.

^bTwo-tailed.

^cCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE LIV
 COMPARISON OF SUPERINTENDENTS'
 PER CENT OF INTERACTION BY
 ENROLLMENT SIZE

Task Area	Small (6)		Large (5)		t	p ^a
	Mean	S.D.	Mean	S.D.		
Initiated						
PUP	27	17	25	15	.23	.82
PER	38	12	28	14	1.10	.30
FIN	15	10	9	6	1.07	.31
EXT	15	14	21	16	.61	.56
EDP	18	10	25	13	.99	.35
PLA	18	9	23	11	.70	.50
NED	10	10	19	7	1.65	.13
Total	21	5	26	10	.87 ^b	.42 ^b
Received						
PUP	13	7	9	5	1.00	.34
PER	13	5	5	2	3.57 ^b	.01 ^b
FIN	7	4	8	10	.11 ^b	.92 ^b
EXT	5	3	3	5	.63	.54
EDP	8	2	6	7	.53 ^b	.62 ^b
PLA	8	4	7	5	.20	.85
NED	8	6	5	4	.95	.37
Total	9	3	6	3	1.63	.14

^aTwo-tailed.

^bCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE LV
 COMPARISON OF SECRETARY-TREASURERS'
 PER CENT OF INTERACTION BY
 ENROLLMENT SIZE

Task Area	Small (6)		Large (5)		t	p ^a
	Mean	S.D.	Mean	S.D.		
Initiated						
PUP	4	3	16	9	2.71 ^b	.04 ^b
PER	8	6	11	11	.59	.57
FIN	17	3	26	20	1.01 ^b	.37 ^b
EXT	29	23	15	9	1.35 ^b	.22 ^b
EDP	13	7	15	9	.46	.66
PLA	7	5	11	4	1.38	.20
NED	13	9	18	10	.79	.45
Total	11	5	14	7	.61	.56
Received						
PUP	2	2	4	4	.86	.41
PER	3	3	3	4	.15	.89
FIN	8	4	5	4	.92	.38
EXT	6	3	5	2	.58	.58
EDP	5	3	3	2	1.01	.34
PLA	3	3	4	1	.97 ^b	.36 ^b
NED	4	2	8	5	1.92 ^b	.11 ^b
Total	4	2	4	2	.38	.71

^aTwo-tailed.

^bCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE LVI
 COMPARISON OF CHAIRMEN'S PER
 CENT OF INTERACTION BY
 ENROLLMENT SIZE

Task Area	Small (6)		Large (5)		t	p ^a
	Mean	S.D.	Mean	S.D.		
Initiated						
PUP	17	11	24	11	.91	.38
PER	21	5	18	6	.66	.53
FIN	26	7	18	17	1.04 ^b	.35 ^b
EXT	27	22	9	3	2.00 ^b	.10 ^b
EDP	30	16	18	4	1.81 ^b	.12 ^b
PLA	29	15	15	6	2.06 ^b	.08 ^b
NED	27	11	28	11	.20	.85
Total	22	6	18	5	1.10	.30
Received						
PUP	15	9	27	14	1.42	.19
PER	26	11	26	13	.07	.95
FIN	23	13	18	23	.44	.67
EXT	22	14	11	9	1.30	.22
EDP	22	9	20	14	.16	.88
PLA	28	11	22	20	.50	.63
NED	26	11	24	12	.32	.76
Total	24	11	24	15	.05	.96

^aTwo-tailed.

^bCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE LVII
 COMPARISON OF SUPERINTENDENTS'
 PER CENT OF INTERACTION
 BY MEETING SIZE

Task Area	Small (4)		Large (7)		t	p ^a
	Mean	S.D.	Mean	S.D.		
Initiated						
PUP	23	15	28	16	.42	.68
PER	36	12	32	15	.40	.70
FIN	9	7	14	9	.78	.46
EXT	21	15	16	15	.51	.63
EDP	26	14	18	9	1.04	.32
PLA	17	11	23	8	.84	.42
NED	17	14	13	6	.59 ^b	.59 ^b
Total	23	8	23	8	.05	.96
Received						
PUP	9	6	12	7	.81	.44
PER	10	7	9	5	.09	.93
FIN	3	1	10	8	2.29 ^b	.06 ^b
EXT	3	2	5	5	.84 ^b	.43 ^b
EDP	6	3	8	6	.61	.56
PLA	6	3	8	4	.86	.41
NED	7	7	7	5	.12	.91
Total	7	3	8	3	.46	.66

^aTwo-tailed.

^bCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE LVIII
 COMPARISON OF SECRETARY-TREASURERS'
 PER CENT OF INTERACTION BY
 MEETING SIZE

Task Area	Small (4)		Large (7)		t	p ^a
	Mean	S.D.	Mean	S.D.		
Initiated						
PUP	4	5	12	9	1.53	.16
PER	5	7	11	9	1.07	.31
FIN	26	11	19	16	.80 ^b	.45 ^b
EXT	18	11	26	22	.64	.54
EDP	12	6	15	8	.58	.58
PLA	9	4	8	5	.48	.64
NED	15	12	15	9	.06	.96
Total	10	6	14	6	.95	.37
Received						
PUP	1	1	4	3	2.45 ^b	.04 ^b
PER	2	2	4	4	1.07 ^b	.31 ^b
FIN	9	4	5	4	1.49	.17
EXT	4	3	6	2	.80	.44
EDP	2	1	5	3	2.30 ^b	.05 ^b
PLA	5	2	3	2	1.29	.23
NED	4	3	7	5	1.43 ^b	.19 ^b
Total	4	2	4	2	.68	.51

^aTwo-tailed.

^bCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE LIX
 COMPARISON OF CHAIRMEN'S PER
 CENT OF INTERACTION BY
 MEETING SIZE

Task Area	Small (4)		Large (7)		t	p ^a
	Mean	S.D.	Mean	S.D.		
Initiated						
PUP	18	14	21	10	.33	.74
PER	21	6	19	6	.64	.54
FIN	28	6	19	15	1.41 ^b	.19 ^b
EXT	33	26	11	3	1.72 ^b	.18 ^b
EDP	33	17	20	8	1.47 ^b	.22 ^b
PLA	34	16	17	7	2.11 ^b	.10 ^b
NED	36	5	22	11	2.81 ^b	.02 ^b
Total	26	6	17	4	2.50	.03
Received						
PUP	13	10	25	13	1.48	.17
PER	28	12	25	11	.29	.78
FIN	22	15	20	20	.13	.90
EXT	22	18	14	9	.85 ^b	.44 ^b
EDP	22	13	21	11	.16	.87
PLA	27	13	25	17	.17	.87
NED	30	11	22	11	1.12	.29
Total	26	12	23	13	.26	.80

^aTwo-tailed.

^bCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE LX
 COMPARISON OF SUPERINTENDENTS'
 PER CENT OF INTERACTION BY
 APPOINTMENT

Task Area	Local (4)		Provincial (7)		t	p ^a
	Mean	S.D.	Mean	S.D.		
Initiated						
PUP	18	17	31	14	1.24	.25
PER	25	12	38	13	1.48	.17
FIN	11	6	13	10	.35	.73
EXT	21	15	16	15	.51	.63
EDP	27	13	18	9	1.16	.28
PLA	21	9	20	11	.15	.88
NED	19	13	11	7	1.24 ^b	.28 ^b
Total	22	9	24	7	.25	.81
Received						
PUP	4	5	15	5	3.18	.01
PER	5	3	12	5	2.95 ^b	.02 ^b
FIN	2	1	10	8	2.84 ^b	.03 ^b
EXT	2	2	5	4	1.92 ^b	.09 ^b
EDP	4	3	9	5	1.36	.21
PLA	4	3	9	4	2.00	.08
NED	6	7	7	4	.38	.71
Total	5	2	10	2	3.56	.01

^aTwo-tailed.

^bCorrected by the Welch approximation for lack of homogeneity of variance.

APPENDIX D

PERFORMED ROLES OF FOCAL
POSITION INCUMBENTS

TABLE LXI

PERFORMED ROLES OF FOCAL POSITION INCUMBENTS
IN PUPIL PERSONNEL INTERACTION

Parti- cipant	Inter- action category	Administrative Unit										Net No. of H's
		1 ^a	2	3	4	5	6	7	8	9	10	
Supt.	1	H	-	-	-	H	-	-	H	H	-	4
	2	-	H	-	-	H	H	H	H	H	-	6
	3	H	H	H	-	-	H	H	H	H	-	7
	4	H	-	-	-	-	L	-	-	-	-	0
	5	-	-	-	-	-	-	-	-	-	-	0
	6	-	-	-	-	-	-	-	-	H	-	1
Sec.-T.	1	-	-	-	-	-	-	-	-	-	-	0
	2	-	-	-	H	L	-	-	-	-	-	0
	3	H	-	-	H	-	-	H	-	-	-	3
	4	-	-	-	-	-	L	H	-	-	-	0
	5	H	-	-	H	-	-	-	-	-	-	2
	6	H	-	-	-	-	-	-	-	-	-	1
Chairman	1	-	H	-	H	H	H	H	-	-	-	5
	2	H	H	H	H	-	H	-	-	-	-	5
	3	-	-	-	-	H	-	-	-	-	H	2
	4	-	H	H	H	H	-	H	H	-	H	7
	5	H	-	-	H	-	H	H	-	H	-	5
	6	-	-	-	H	-	H	-	-	-	-	2

^aNo pupil personnel services interaction was recorded for administrative unit 1.

TABLE LXII
PERFORMED ROLES OF FOCAL POSITION INCUMBENTS
IN PERSONNEL INTERACTION

Parti- cipant	Inter- action category	Administrative Unit											Net No. of H's
		1	2	3	4	5	6	7	8	9	10	11	
Supt.	1	-	-	H	-	-	-	-	H	H	-	H	4
	2	L	-	-	H	H	-	H	H	-	H	-	4
	3	H	H	H	H	H	H	H	H	H	H	-	10
	4	-	H	-	-	-	-	-	H	-	-	-	2
	5	-	H	-	-	-	-	-	-	-	-	-	1
	6	-	-	-	-	-	-	-	H	H	-	-	2
Sec.-T.	1	-	-	-	-	-	-	-	-	-	-	-	0
	2	-	-	-	-	-	-	-	-	-	-	-	0
	3	-	H	-	-	-	-	-	-	-	-	-	1
	4	-	H	-	-	-	-	-	-	-	-	-	1
	5	H	-	-	-	-	-	-	-	-	-	-	1
	6	-	H	-	-	-	-	-	-	-	-	-	1
Chairman	1	H	H	H	-	H	H	H	-	-	-	H	7
	2	-	H	H	-	H	H	H	-	-	-	-	5
	3	-	-	-	-	-	-	-	-	-	-	H	1
	4	H	H	H	H	H	H	H	-	H	-	H	9
	5	-	H	-	-	H	H	H	H	-	H	-	6
	6	-	H	-	-	H	-	H	-	-	-	-	3

TABLE LXIII
 PERFORMED ROLES OF FOCAL POSITION INCUMBENTS
 IN FINANCE INTERACTION

Parti- cipant	Inter- action category	Administrative Unit										Net No. of H's	
		1	2	3	4	5 ^a	6	7	8	9	10		11
Supt.	1	-	-	H	-	-	-	-	-	-	-	-	1
	2	-	-	-	H	-	-	-	-	-	-	-	1
	3	-	-	H	H	-	-	-	H	-	-	-	3
	4	-	-	-	-	-	-	-	-	-	-	-	0
	5	-	-	H	-	-	-	-	-	-	-	-	1
	6	-	-	H	-	-	-	-	-	-	-	-	1
Sec.-T.	1	-	-	-	-	-	-	-	-	-	L	-	-1
	2	-	H	-	-	-	-	-	-	-	-	-	1
	3	H	H	H	H	H	H	H	H	-	-	-	8
	4	-	-	-	-	-	H	H	-	-	-	-	2
	5	-	-	-	-	-	H	-	-	-	-	-	1
	6	-	-	-	-	-	-	-	-	-	-	-	0
Chairman	1	H	H	H	H	-	H	-	H	H	L	-	6
	2	-	H	-	-	H	H	-	-	-	-	-	3
	3	-	H	H	H	-	-	-	-	H	-	-	4
	4	H	-	H	H	H	-	-	H	-	H	-	6
	5	-	H	-	-	H	H	H	-	H	H	-	6
	6	-	H	-	-	-	-	-	-	-	-	-	1

^aNo finance interaction was recorded for administrative unit 5.

TABLE LXVIII
PERFORMED ROLES OF FOCAL POSITION INCUMBENTS
IN TOTAL INTERACTION

Parti- cipant	Inter- action category	Administrative Unit										Net No. of H's	
		1	2	3	4	5	6	7	8	9	10		11
Supt.	1	-	H	-	-	-	-	H	H	-	-	H	4
	2	L	-	H	H	H	-	H	H	H	H	-	6
	3	-	H	H	H	H	H	H	H	H	H	H	10
	4	-	H	-	-	-	-	-	H	-	-	-	2
	5	-	-	H	-	-	-	-	-	-	-	-	1
	6	-	-	H	-	-	-	-	-	H	-	-	2
Sec.-T.	1	-	-	-	-	-	-	-	-	-	-	L	-1
	2	-	-	-	-	-	L	-	-	-	-	L	-2
	3	H	H	H	H	-	-	-	H	-	-	-	5
	4	-	H	-	-	-	-	H	-	-	-	-	2
	5	-	-	-	-	-	-	-	-	-	-	-	0
	6	-	H	-	-	-	-	-	-	-	-	-	1
Chairman	1	H	H	H	H	H	H	H	H	H	H	H	11
	2	-	H	H	H	H	H	H	-	-	-	-	6
	3	-	-	-	H	-	H	-	-	-	-	-	2
	4	H	H	H	H	H	H	H	-	H	H	H	10
	5	H	H	H	H	H	H	H	H	H	H	H	11
	6	-	H	-	-	H	-	H	-	-	-	-	3

APPENDIX E

SENT ROLES OF FOCAL POSITION INCUMBENTS

TABLE LXIX
SENT ROLES OF FOCAL POSITION INCUMBENTS
IN PUPIL PERSONNEL INTERACTION

Parti- cipant	Inter- action category	Administrative Unit										Net No. of H's	
		1 ^a	2	3	4	5	6	7	8	9	10		11
Supt.	1		H	H	-	H	H	H	-	H	H	-	7
	2		-	H	-	-	-	H	H	-	-	-	3
	3		H	-	-	-	-	-	H	-	-	-	2
	4		H	H	H	H	H	H	H	H	H	-	9
	5		-	-	-	H	-	-	H	-	-	-	2
	6		-	-	-	-	-	-	H	-	-	-	1
Sec.-T.	1		-	-	-	-	-	-	-	-	-	-	0
	2		-	-	-	-	-	-	-	-	-	-	0
	3		-	-	-	-	L	-	-	-	-	-	-1
	4		H	-	-	H	-	-	-	-	-	-	2
	5		-	-	-	-	-	-	-	-	-	L	-1
	6		-	-	-	-	-	-	-	-	-	-	0
Chairman	1		H	H	H	H	-	-	-	H	-	H	6
	2		H	H	H	H	H	H	-	H	-	-	7
	3		H	H	H	H	H	H	H	H	-	H	9
	4		-	H	-	H	H	-	-	-	-	-	3
	5		H	H	-	-	H	H	-	-	-	-	4
	6		H	-	-	-	-	H	-	-	-	-	2

^aNo pupil personnel services interaction was recorded for administrative unit 1.

TABLE LXX

SENT ROLES OF FOCAL POSITION INCUMBENTS
IN PERSONNEL INTERACTION

Parti- cipant	Inter- action category	Administrative Unit											Net No. of H's
		1	2	3	4	5	6	7	8	9	10	11	
Supt.	1	H	-	-	-	H	-	-	-	-	H	-	3
	2	-	-	H	H	-	-	-	-	H	-	-	3
	3	-	-	-	-	-	-	-	-	-	-	-	0
	4	H	-	H	H	H	H	-	H	H	H	-	8
	5	-	H	-	H	H	H	-	H	-	-	-	5
	6	-	-	-	-	H	-	-	-	-	-	-	1
Sec.-T.	1	-	H	-	-	-	-	-	-	-	-	-	1
	2	-	H	-	-	-	-	-	-	-	-	-	1
	3	-	H	-	-	-	-	-	-	-	-	-	1
	4	-	H	-	-	-	-	-	-	H	-	-	2
	5	-	-	-	-	-	-	-	-	H	-	-	1
	6	-	-	-	-	-	-	-	-	-	-	-	0
Chairman	1	-	H	H	H	-	H	H	H	H	-	H	8
	2	H	H	-	H	H	H	H	H	H	H	H	10
	3	H	H	H	H	H	H	H	H	H	-	H	10
	4	H	H	H	-	-	-	H	-	-	-	H	5
	5	H	H	-	-	H	H	H	H	H	-	-	7
	6	H	H	-	-	H	-	H	H	-	-	-	5

TABLE LXXI
SENT ROLES OF FOCAL POSITION INCUMBENTS
IN FINANCE INTERACTION

Parti- cipant	Inter- action category	Administrative Unit										Net No. of H's	
		1	2	3	4	5 ^a	6	7	8	9	10		11
Supt.	1	-	-	H	H	-	-	-	-	-	-	-	2
	2	-	H	-	-	-	-	H	H	-	-	-	3
	3	-	H	-	-	-	-	-	-	-	-	-	1
	4	-	-	H	H	-	-	-	H	-	-	-	3
	5	-	H	-	-	-	-	-	-	-	-	-	1
	6	-	-	-	-	-	-	-	-	-	-	-	0
Sec.-T.	1	-	H	H	-	-	H	-	-	L	-	-	2
	2	-	-	H	-	-	L	-	-	-	-	-	0
	3	-	H	-	-	-	-	-	-	-	-	-	1
	4	-	-	-	-	H	H	H	H	H	-	-	5
	5	-	-	-	-	-	-	-	-	-	-	-	0
	6	-	H	-	-	-	-	-	-	H	-	-	2
Chairman	1	-	-	H	H	H	-	-	H	-	H	-	5
	2	H	H	-	H	H	-	-	-	-	H	-	5
	3	H	H	-	H	H	H	-	H	-	H	-	7
	4	H	H	H	H	-	H	-	-	-	H	-	6
	5	H	H	H	-	H	H	-	-	-	-	-	5
	6	-	-	-	-	-	-	-	-	-	-	-	0

^aNo finance interaction was recorded for administrative unit 5.

TABLE LXXIII

SENT ROLES OF FOCAL POSITION INCUMBENTS
IN EDUCATIONAL PROGRAM INTERACTION

Parti- cipant	Inter- action category	Administrative Unit											Net No. of H's
		1	2	3	4	5	6	7	8	9	10	11	
Supt.	1	H	-	-	-	-	-	-	-	-	L	-	0
	2	-	-	-	H	-	-	-	H	H	H	-	4
	3	-	-	-	-	-	-	-	-	-	-	-	0
	4	-	-	-	H	H	H	-	H	H	-	-	5
	5	-	H	-	-	-	-	-	H	-	H	-	3
	6	-	-	-	-	-	-	-	-	-	-	-	0
Sec.-T.	1	-	-	H	-	H	-	-	-	-	-	-	2
	2	-	-	-	-	-	-	-	-	L	-	-	-1
	3	-	-	-	-	-	-	-	-	H	-	-	1
	4	-	H	H	-	H	-	-	-	-	H	-	4
	5	-	-	-	-	-	-	-	-	-	-	-	0
	6	-	-	-	-	-	-	-	-	-	-	-	0
Chairman	1	H	H	H	H	H	H	H	-	H	-	H	9
	2	H	H	H	H	H	H	-	H	H	H	H	10
	3	H	H	H	H	-	H	-	H	H	H	H	9
	4	H	H	-	H	H	H	-	-	-	-	H	6
	5	-	-	H	-	H	-	-	-	-	H	-	3
	6	H	H	-	-	H	-	-	-	-	-	-	3

TABLE LXXVI

SENT ROLES OF FOCAL POSITION INCUMBENTS
IN TOTAL INTERACTION

Parti- cipant	Inter- action category	Administrative Unit											Net No. of H's
		1	2	3	4	5	6	7	8	9	10	11	
Supt.	1	-	-	H	-	H	-	-	-	-	H	-	3
	2	-	-	-	-	-	-	-	H	H	-	-	2
	3	-	-	-	-	-	-	-	-	-	-	-	0
	4	-	-	H	H	H	H	H	H	H	H	-	8
	5	-	H	-	H	H	H	-	H	-	H	-	6
	6	-	-	-	H	-	-	-	H	-	-	-	2
Sec.-T.	1	-	H	-	-	-	-	-	-	-	-	-	1
	2	-	-	-	-	-	-	-	-	-	-	-	0
	3	-	-	-	-	-	-	-	-	-	-	-	0
	4	-	H	-	-	-	-	-	-	-	-	-	1
	5	-	-	-	H	-	-	-	-	H	-	-	2
	6	-	-	-	-	H	-	-	-	-	-	-	1
Chairman	1	H	H	H	H	H	H	H	H	H	H	H	11
	2	H	H	H	H	H	H	H	H	H	H	H	11
	3	H	H	H	H	H	H	H	H	H	H	H	11
	4	H	H	H	H	H	-	H	-	-	-	H	7
	5	H	H	H	-	H	H	H	-	H	-	-	7
	6	H	H	H	-	H	-	H	-	-	-	-	5

APPENDIX F

**COMPARISON OF INDICES OF INTERACTION ROLE
CONGRUENCE OF FOCAL POSITION INCUMBENTS
ON ADMINISTRATIVE UNIT VARIABLES**

TABLE LXXVII

COMPARISON OF INDICES OF INTERACTION ROLE
 CONGRUENCE OF FOCAL POSITION INCUMBENTS
 BY ADMINISTRATIVE TYPE^a

Parti- cipant	Task Area	Counties (6)		Districts (4)		t	p ^b
		Mean	S.D.	Mean	S.D.		
Supt.	PUP	.68	.23	.85	.03	1.81 ^c	.13 ^c
	PER	.46	.54	.57	.47	.29	.78
	FIN	-.13	.23	-.37	.44	.89	.41
	EXT	.27	.58	.73	.23	.96	.38
	EDP	.19	.23	.66	.29	2.34	.05
	PLA	.47	.31	.37	.57	.34	.74
	NED	.27	.67	.22	.59	.09	.93
	Total	.41	.42	.80	.18	2.02 ^c	.08 ^c
Sec-T.	PUP	.68	.30	-.08	.55	2.13	.08
	PER	.32	.55	.33	.67	.02	.98
	FIN	.30	.82	.57	.38	.54	.60
	EXT	.71	.29	.41	.57	.98	.35
	EDP	.67	.65	.78	.18	.20	.85
	PLA	.34	.58	.51	.44	.42	.69
	NED	.47	.55	.41	.58	.16	.88
	Total	.67	.37	.58	.32	.34	.74
Chairman	PUP	.33	.38	.32	.47	.01	.99
	PER	.44	.45	.28	.37	.55	.60
	FIN	.14	.44	.05	.42	.27	.80
	EXT	.21	.44	.35	.40	.40	.70
	EDP	.19	.27	.40	.56	.68	.52
	PLA	.20	.50	.33	.25	.45	.67
	NED	-.09	.49	.35	.29	1.46	.18
	Total	.31	.37	.46	.33	.59	.57

^aThe one Division (administrative unit 6) was omitted from these analyses.

^bTwo-tailed.

^cCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE LXXVIII

COMPARISON OF INDICES OF INTERACTION ROLE
 CONGRUENCE OF FOCAL POSITION INCUMBENTS
 BY ENROLLMENT SIZE

Parti- cipant	Task Area	Small (6)		Large (5)		t	p ^a
		Mean	S.D.	Mean	S.D.		
Supt.	PUP	.55	.37	.76	.09	1.35 ^b	.23 ^b
	PER	.73	.18	.30	.64	1.44 ^b	.21 ^b
	FIN	.13	.25	-.48	.24	3.25 ^b	.01 ^b
	EXT	.12	.54	.83	.12	3.13 ^b	.04 ^b
	EDP	.40	.38	.41	.35	.04	.97
	PLA	.26	.59	.46	.29	.75	.48
	NED	.36	.41	.20	.79	.36	.73
	Total	.63	.25	.45	.48	.72	.49
Sec.-T.	PUP	.73	.33	.32	.58	1.15	.29
	PER	.54	.45	.10	.61	1.24	.25
	FIN	.64	.54	.20	.73	.97	.36
	EXT	.64	.43	.54	.46	.31	.76
	EDP	.84	.15	.40	.84	1.15 ^b	.37 ^b
	PLA	.36	.54	.54	.47	.51	.62
	NED	.54	.53	.44	.59	.25	.81
	Total	.53	.37	.80	.24	1.27	.24
Chairman	PUP	-.11	.27	.57	.40	2.81	.02
	PER	.47	.48	.39	.39	.30	.77
	FIN	.25	.50	.07	.45	.47	.65
	EXT	.49	.39	.08	.44	1.38	.21
	EDP	.39	.38	-.03	.28	1.73	.12
	PLA	.32	.47	.14	.27	.68	.52
	NED	.07	.55	.13	.30	.19	.85
	Total	.45	.39	.35	.32	.41	.69

^aTwo-tailed.

^bCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE LXXIX
 COMPARISON OF INDICES OF INTERACTION ROLE
 CONGRUENCE OF FOCAL POSITION INCUMBENTS
 BY MEETING SIZE

Parti- cipant	Task Area	Small (4)		Large (7)		t	p ^a
		Mean	S.D.	Mean	S.D.		
Supt.	PUP	.57	.40	.68	.23	.48 _b	.65 _b
	PER	.83	.11	.36	.55	2.16 _b	.07 _b
	FIN	-.07	.58	-.18	.24	.34 _b	.77 _b
	EXT	.73	.23	.27	.58	1.89 _b	.11 _b
	EDP	.68	.31	.29	.33	1.58 _b	.15 _b
	PLA	.14	.67	.47	.28	.95 _b	.40 _b
	NED	.08	.41	.39	.67	.65	.54
	Total	.76	.25	.42	.39	1.38	.20
Sec.-T.	PUP	.27	.68	.68	.30	1.14 _b	.37 _b
	PER	.21	.57	.42	.56	.53	.61 _b
	FIN	.80	.20	.24	.76	1.82 _b	.12 _b
	EXT	.22	.53	.75	.29	1.86 _b	.10 _b
	EDP	.74	.16	.67	.65	.27 _b	.80 _b
	PLA	.46	.39	.44	.58	.04	.97
	NED	.42	.60	.54	.53	.30	.77
	Total	.55	.29	.71	.36	.70	.50
Chairman	PUP	-.20	.34	.42	.41	2.05	.07
	PER	.47	.48	.41	.42	.19	.86
	FIN	.14	.55	.23	.43	.25	.81
	EXT	.70	.26	.16	.42	1.83	.10
	EDP	.50	.43	.11	.32	1.41	.20
	PLA	.30	.27	.20	.46	.35	.73
	NED	.37	.28	-.06	.46	1.54	.16
	Total	.47	.33	.37	.38	.37	.72

^aTwo-tailed.

^bCorrected by the Welch approximation for lack of homogeneity of variance.

TABLE LXXX
 COMPARISON OF INDICES OF INTERACTION ROLE
 CONGRUENCE OF SUPERINTENDENTS
 BY APPOINTMENT

Parti- cipant	Task Area	Local (4)		Prov. (7)		t	p ^a
		Mean	S.D.	Mean	S.D.		
Supt.	PUP	.85	.03	.59	.32	2.21 ^b	.07 ^b
	PER	.57	.47	.51	.52	.15	.88
	FIN	-.37	.44	.03	.30	1.20 ^b	.27 ^b
	EXT	.73	.23	.27	.58	1.89 ^b	.11 ^b
	EDP	.66	.29	.30	.35	1.41	.20
	PLA	.37	.57	.34	.44	.09	.93
	NED	.22	.59	.32	.62	.20 ^b	.85 ^b
	Total	.80	.18	.40	.39	2.34 ^b	.04 ^b

^aTwo-tailed.

^bCorrected by the Welch approximation for lack of homogeneity of variance.