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THE UNIVERSITY OF ALBERTA

AN ANALYSIS OF THE VERBAL MOVES IN
SCHOOL BOARD MEETING INTERACTION

by



EDWARD ALLAN HOLDAWAY

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
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September, 1968

UNIVERSITY OF ALBERTA
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The undersigned certify that they have read,
and recommend to the Faculty of Graduate Studies for
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ABSTRACT

An adapted form of Bellack's classroom verbal interaction analysis technique, which views discourse as a language game with verbal moves and cycles, was used to analyze the verbal behavior of participants at meetings of thirteen school boards in Alberta.

Precis transcripts were made of seventy-four hours of tape recordings: from these, 21,220 verbal moves were identified in 7,449 cycles. Each move was coded six ways based on the speaker, task area, and its tactical, action, purpose, and problem-policy aspects. Frequency and percentage frequency distributions were tabulated and examined to obtain generalizations about the patterns of verbal behavior.

Chairmen and trustees contributed 62 per cent of all verbal moves: the remainder was divided approximately equally among superintendents, secretary-treasurers, and other participants. Reactions constituted 39 per cent of all moves, 27 per cent were soliciting, 19 per cent responding, and 15 per cent structuring. The most common types of moves were elaborating reactions (24 per cent), fact-seeking questions (14 per cent), and factual responses (12 per cent).

A major difference among participants was greater involvement of chairmen and trustees in soliciting moves, and of superintendents,

secretary-treasurers and others in responding moves. Chairmen and trustees made most of the structuring, soliciting, and reacting moves, while most responding moves were made by superintendents, others, and trustees. Superintendents and secretary-treasurers made more factual statements than did chairmen and trustees. Percentage distributions of aspects of the verbal moves showed considerable consistency among boards, but wide variations occurred in the distributions among all categories of participants, possibly indicating different role perceptions.

Increased structuring and meeting preparation were associated with fewer moves per minute, more cycles per minute, and fewer moves per cycle. Most moves occurred in the plant, educational staff, community relations, transportation, and salary negotiations task areas. Superintendents were most involved with educational staff, but all other categories of participants with plant. Boards were relatively unconcerned with policy formation.

Ranked distributions of types of cycles were significantly similar both between different meetings of each board, and among the meetings of all boards. The most common cycle consisted of a solicitation and a response.

The technique was assessed to be meaningful, reliable, and useful in analysis of various verbal interaction settings.

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The willing cooperation of thirteen school boards and their administrative staffs enabled the data to be collected. During the tape recording and analysis, help was provided by Messrs. D. Hemphill, D. Horovatin, and D. Mitchell. Technical assistance was given by Mr. G. Hills, Technical Services, and Mr. L. Twigge, Department of Extension, University of Alberta.

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CHAPTER I

STATEMENT OF THE PROBLEM AND ITS SIGNIFICANCE

The need for greater understanding of existing decision-making processes in organizations and the need for research into ways by which these processes can be improved have been frequently mentioned by experts in the study of administration. That these needs also exist in education is made clear by Keppel:

Anyone who takes the trouble to visit American schools soon realizes that the school board and the superintendent stand at the center both of making policy and of putting it into practice. The forces that play on them in reaching decisions, and the relation between the board and the superintendent, therefore deserve intensive study. It is not safe to rely on cursory or superficial observation, for the strengthening of American schools--at least under present arrangements--is impossible without action by school boards and superintendents. (11:p.vii)

This study attempted to increase understanding of the processes involved in formal decision-making at school board meetings by examining types of verbal behavior of the different categories of participants. To achieve this, the verbal moves-cycles approach, which was developed at Teachers College, Columbia University, by Bellack *et al.* for analysis of classroom interaction (3:pp.1-40), was modified into a form considered suitable for analysis of verbal interaction in more general situations.

Bellack viewed classroom discussion as a "language game" in which reasonably clear role expectations and conventions existed. Within this discussion he identified structuring, soliciting,

responding, and reacting "verbal moves" as well as "teaching cycles." A verbal move, the basic unit of discourse, was a statement which dealt with one aspect of the lesson, and could therefore be a word, phrase, sentence, or group of sentences. A teaching cycle contained several verbal moves related to the same aspect of the discussion; a new cycle was initiated when a structuring or soliciting move introduced another aspect.

In this chapter, the general problem and specific research questions are stated, and the study is outlined briefly. The opinions of various experts are included to support statements which indicate the significance of the research.

General Statement of the Problem

The problem was stated in the following general way: What information can be obtained about the verbal interaction which occurs in a sample of school board meetings in Alberta by using an adapted form of the verbal moves-cycles technique developed by Bellack *et al.* for analysis of classroom interaction?

Specific Research Questions

Because the study was both descriptive and exploratory no hypotheses were tested. Rather, it was the intent to obtain information relevant to the following specific questions.

1. Tactical, Action, Purpose, and Problem-Policy Aspects of Verbal Moves

1.1 What are the frequency and percentage frequency distributions

of the tactical, action, purpose, and problem-policy aspects of verbal moves made by the categories of meeting participants for each school board and for all school boards taken collectively?

1.2 To what extent are these distributions similar?

1.3 To what extent is the collective percentage frequency distribution of types of tactical moves in the school board meetings similar to the collective percentage frequency distribution of these moves in the classrooms?

2. Cycles

2.1 What are the percentage frequency distributions of types of verbal cycles among the school board meetings?

2.2 To what extent are these distributions similar for:

(i) different meetings of each school board; and

(ii) meetings of different school boards?

2.3 To what extent is the collective percentage frequency distribution of types of verbal cycles in the school board meetings similar to the collective percentage frequency distribution of these cycles in the classrooms?

2.4 What is the mean number of verbal moves per cycle for:

(i) the total meetings of each school board, and

(ii) the meetings of all school boards taken collectively?

2.5 What is the relationship between the average number of verbal moves per cycle and the extent of use of the Davies-Brickell System practices by each school board?

3. Task Areas

- 3.1 What are the frequency and percentage frequency distributions of verbal moves classified by task area among the various categories of participants in school board meetings taken collectively?
- 3.2 To what extent are the percentage frequency distributions of verbal moves classified by task area similar among the superintendents of different school boards?
- 3.3 Which categories of participants have the highest percentage frequencies of verbal moves in different task areas for school board meetings taken collectively?
- 3.4 To what extent are the categories of participants having the highest percentage frequencies of verbal moves in different task areas similar among the meetings of the different school boards?

4. Move and Cycle Rates

- 4.1 What are the rates at which verbal moves and cycles occur for:
 - (i) the total meetings of each school board; and
 - (ii) the meetings of all school boards taken collectively?
- 4.2 What are the relationships between these verbal move and cycle rates and the extent of use of the Davies-Brickell System practices by each school board?
- 4.3 To what extent are the collective verbal move and cycle rates in the school board meetings similar to those in the classrooms?

5. Applicability of Technique

5.1 What is the subjectively assessed usefulness of this verbal interaction analysis technique for the analysis of school board meetings and decision-making meetings generally?

Brief Outline of the Study

Tape recordings were made of the proceedings of thirteen school boards in Alberta for a mean time of nearly six hours. Transcripts, usually in precis form, were made from these recordings. The transcripts were then analyzed to provide information pertinent to the research questions listed above.

Significance of the Problem

The study was considered to be significant for three reasons: (1) it could provide a new research methodology; (2) being conducted in the field, it could yield more information about the functioning of school boards and the role of the superintendent than has been previously available; and (3) it could furnish information about patterns of discussion as well as about the way in which some decisions are made in organizations.

It appeared that the adapted Bellack technique could provide a new research methodology for analysis of various group decision-making or discussion situations--it was expected that application to the specific school board situation would allow such a general assessment to be made.

The importance of the development of theories relevant to decision-making is stated by Feldman and Kanter:

The most important problem standing in the way of the understanding of organizational decision making is the incorporation of the available empirical information into theories adequate for the task. (9:p.642)

Dill presented this assessment in 1962:

Further work is needed to enable us to characterize the dimensions of decision problems Most useful in the short run . . . will be studies . . . which begin from the empirical base to spell out theories that apply to particular classes of decisions and inquiries . . . into basic aspects of human problem-solving and decision-making behavior. (6:p.48)

Kaplan has referred to this problem of concept formation in the "paradox of conceptualization," that is, "the proper concepts are needed to formulate a good theory, but we need a good theory to arrive at the proper concepts." (12:p.53) In this study, it was proposed that the concept of verbal moves may help to further understanding of formal decision-making processes.

Nevertheless, a position is taken which Kaplan refers to as "methodological determinism." That is, the principles in this area of formal decision-making are worth searching for without necessarily accepting that they do exist nor that they always apply under all conditions. (12:p.124)

Dill pointed out in 1964 that most of our knowledge of decision-making has been obtained from examination of problems in laboratory groups, business firms and government administrative agencies. He felt that the focus of attention should be shifted to include problems and processes in schools, colleges and universities. (7:p.205) School boards, while operating within the provincial legal framework and Department of Education regulations, do continually make decisions

affecting the quality of education. The expectations that the provincial proportion of the education cost will increase, possibly accompanied by a simultaneous increase in provincial control, and that further consolidation of school districts will occur, indicate that some means should be devised to assess, in a more detailed way than has been performed previously, the manner in which school boards solve problems.

In 1961, before the Bellack study was commenced, Bantock stated that it is necessary to clarify the basic concepts involved as a preliminary to research into what constitutes good teaching. His comments seem to be applicable equally to both the teaching and meeting situations.

Once teaching is seen as an interactive process in a context, it is relevant to demand insight into the particular nature of the interactions involved in different sorts of context. . . . The only way to scientific understanding of such a complex situation lies in the creation of a series of models based in some measure on subjective assessments of objective situations. (1:p.276)

Following his 1954 case study of one school board, Goldhammer reached the following two related conclusions which have both general and specific relevance to problem-solving groups:

This case study of the policy-formation process would seem to indicate that deliberative groups develop highly consistent patterns for resolving practical problems of policy. Furthermore, these patterns have significant consequences for the working effectiveness of the group and their capacity to arrive at effective decisions of policy.

An awareness of the nature of these patterns and the consequences they produce creates the possibilities that patterns of deliberations may be restructured to provide a more effective milieu for making educational policies in a local community. (10:p.85)

Despite the fact that this study of Alberta school boards ignored discussions held outside the formal school board meetings, it was considered that analysis of the transcripts would help to provide understanding of the formulation of formal school system decisions. Although the participants at a school board meeting can be conceived of as a small group, many decisions reached can be classified as organizational in nature and effect.

In this regard, Barnard postulated in 1938 that ". . . the description of the processes of decision are relatively more important to the understanding of organization behavior than in the case of individuals." (2:pp.186-187) This statement has been echoed by Charters for the school board situation. (5:p.334) Etzioni has also stressed this aspect: "An important though relatively new and less developed addition to the formal line of organizational analysis is the study of organizational decision-making." (8:p.29)

The results of this study can be considered as constituting a descriptive theory of verbal interaction in the sample of school board meetings. Etzioni, after assessing the state of decision-making theory in 1964 as largely non-organizational and prescriptive, advocated more descriptive studies of organizational decision-making:

However, in recent years there has been a growing interest in a descriptive theory of decision-making which reports and analyzes how people actually make decisions, what prevents them from making rational ones, and under what conditions they will make comparatively rational decisions. The descriptive approach still requires considerable development and needs to be extended from the individual to the organizational level. (8:p.30)

In this connection, Blau and Scott have described the values of field studies in these words:

Although the field study does not approach the controlled experiment in rigor of design and hence in validity of conclusions, the use it permits of a combination of systematic research procedures concentrated on a single object of study can yield data of considerable scientific value. Moreover its focus on social relations among individuals and groups in natural settings provides data of great importance for the study of organizations--data of a type not obtained by any other design. (4:p.21)

Summary of Chapter I

The general problem involved identification of patterns of verbal interaction at school board meetings using the verbal moves technique developed for analysis of classroom interaction. Several specific research questions were formulated dealing mainly with the percentage frequency distributions of aspects of verbal moves and cycles.

Statements by experts in the study of administration support the need for greater understanding of the processes of organizational decision-making by development of descriptive theory.

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CHAPTER II

REVIEW OF PERTINENT LITERATURE

This review of literature covers the following three main areas: (1) the legal status of school boards and their operation; (2) decision-making processes; and (3) existing methods of group interaction analysis.

I. LITERATURE CONCERNING SCHOOL BOARDS

Legal Status of School Boards

The School Act (Alberta) states that "the board of a non-divisional district or of a division shall administer the district or division." (16:p.57) The same power is given to the School Committee of a County Council. In this study, the term "school board" or "board" applies to either a school district or division board, or a county school committee, and "school trustee" or "trustee" to a member of either a school board or a school committee.

Enns describes the administration of education in Canada in this way:

Provincial school acts set the broad framework within which departments of education and school boards function. They establish the structure of the educational system and much of its operation by specific mandates and prohibitions. However, no law can prescribe completely. . . . Consequently, a considerable degree of permissiveness exists in the provincial statutes relating to departments of education and to local school boards. (11:p.4)

Sparby points out that a school board has a dual role:

(1) cooperate with the provincial educational authority to maintain province-wide minimum educational levels, and (2) act as a form of local government to provide locally desired service. (28:p.33) He identifies the three specific school board functions as legislative, executive, and judicial. But Enns feels that school boards ". . . are confined to the exercise of the express powers vested in them. Only in a narrow sense are they self-governing." (11:p.37)

The School Act states that "The chairman of the board shall exercise a general supervision over the affairs of the district or division. . . ." (16:p.69) This Act also describes a district superintendent as "the chief executive officer of the board" having "jurisdiction over all aspects of the business of the board." (16:p.74) Byrne, however, feels that the superintendent is viewed by Canadian school boards rather as a "chief education officer." (6:p.42) The duties of a provincial superintendent are to advise and assist the board, and exercise a general supervision over school personnel and property. (16:p.73)

Because *The School Act* does not prescribe rigid roles for school board meeting participants, considerable variation in these roles was expected. In fact *The School Act* states that, "The board may adopt rules of procedure, not inconsistent with this Act, governing the conduct of its meetings." (16:p.297)

Comments concerning School Board Operation

Seven "stumbling blocks" to school board effectiveness in the United States are listed by Tuttle, including a lack of current written board policies and overemphasis on business aspects and neglect of educational matters. (31:pp.29-35) Andrews agrees with this, stating that "pressing matters of business detail frequently bog down the board so completely that there is no time left to consider educational problems." (1:p.47)

In an attempt to improve school board operation, the Davies-Brickell System was devised. In this system, a distinction is made between policy-making, as the board function, and policy-implementation and rule-making as the functions of administrative officers. (5:p.21) The definitions basic to this system are that, "Policy is a guide to discretionary action," and that, "A rule is a specification of a required action." (9:pp.15,17)

Davies and Brickell state that laymen and professional educators both advocate policy-making as the answer to the problem of how local board control can be maintained without overly restricting the actions of professional educators. (9:p.v) Kratzmann agrees with their approach, but points out that many school boards in Western Canada do not operate in this ideal way. (23:pp.42-43)

Research into School Board Operation

The literature related to sixteen research projects dealing with school board operation in Alberta, British Columbia, Saskatchewan, and the United States was examined. These projects consisted of six

observation studies, six questionnaire studies, two analyses of minute books, one interview study, and one analysis of policy books.

One of the questionnaire studies was performed by Finlay in Alberta in 1961 when he determined that the expectations of 286 divisional and county trustees for the superintendent varied both within and among boards. (14:pp.1,13) The ratings of the most important functions were: (1) instructional leadership, (2) selection and management of staff personnel, (3) pupil personnel, (4) provision and maintenance of school facilities, (5) school finance, (6) administrative organization and structure, and (7) public relations. (14:p.95)

In another questionnaire study, Hastings in 1966 found from the responses of fifty-eight provincially appointed superintendents that "school boards in Alberta do not generally operate as policy-making bodies that delegate the execution of policies to their administrative staffs." (19:pp.iv-v)

Maertz studied 6,270 official decisions as recorded in the minute books of eight school divisions and eight counties for 1949 and 1964. Among his major findings were:

1. Boards undertook too much administrative detail and were not convinced of the usefulness of policy formation--only 3.2 per cent of the decisions were policy-forming.
2. Twenty-six per cent of the decisions related to the school board, 21 per cent to buildings, 19 per cent to staff, 14 per cent to business management and accounting, 9 per cent to transportation, 8 per cent to pupil personnel, and 2.5 per cent to the instructional program.

3. Larger school systems tended to make a higher proportion of policy decisions.

4. Superintendents tended to take little part in the meetings and did not actively initiate policy formation. (24:pp.118-136)

An observation study of one five-member board was undertaken by Cunningham in the United States in 1961. Besides recording that only about 9 per cent of the decisions were "policy-decisions," he noted that the chairman appeared to control the decision-making pattern of a policy-making body. (8:pp.13-16)

In a 1954 case study of one school board in the United States Goldhammer noted that the superintendent was usually the interaction focus, responding to interrogation with information, recommendations, or opinions. (15:pp.84-85) The bilateral chairman-superintendent exchange tended to structure the group deliberations.

Sletten used questionnaires in 1957 to obtain the opinions of 636 school board members and 171 superintendents in Montana concerning the distinction between policy-formation and policy-implementation. Although he noted resistance among board members to delegate authority, Sletten observed that in the larger districts they expressed views which were more consistent with the division between policy-making and administration. (27:pp.1-4)

II. LITERATURE CONCERNING DECISION-MAKING

The abundant decision-making literature contains expert opinion on and reports of research into individual, group, and organization decision-making processes.

Definition of Decision-Making

A lack of consensus on the meaning of the terms "decision-making," "problem-solving," and "creativity" activities exists among people considered as knowledgeable in matters of organization theory. Nevertheless, it is generally acknowledged that "decision-making" should not be restricted to the actual selection of an alternative, but rather to the range of associated activities. Griffiths lists the following steps: (1) recognize, define and limit the problem; (2) analyze and evaluate the problem; (3) establish criteria of judgment; (4) collect data; (5) select preferred alternatives; and (6) program, control and evaluate the solution. (17:p.94)

Rationality, Satisficing, and Coalitions

The classical theory of rational man involves behavior as described above by Griffiths. But phenomenologists, such as Simon, speak of rationality only in a particular frame of reference:

The pattern of human choice is more nearly a stimulus-response pattern than a pattern among alternatives. Human rationality operates, then, within the limits of a psychological environment. (26:p.108)

Simon uses the term "decision" whether or not the selection is self-conscious, deliberate or rational (26:p.4), but Barnard requires such selection to result from deliberation, calculation, and thought before he will apply the label of "decision." (3:p.185)

By accepting the above position, Simon proposes that individuals, and presumably also groups, "satisfice" rather than "optimize," although the intent of a decision sequence over time is often to

optimize. This satisficing concept is accepted by writers such as Dill (10:p.209), Etzioni (12:pp.30-31), and Feldman and Kanter (13:p.618). In fact, Feldman and Kanter reach this conclusion:

The most realistic descriptive theory of the organization is one of a coalition of groups with conflicting goals. Such a view is suggested both by the inadequacies of simpler models and by observations of organizational decision-making. The problem raised by the model is the nature of the process by which the members of the coalition resolve their differences. (13:p.639)

Hemphill also disagrees with the rational approach to group decision-making by proposing that mutual problems are solved by a change in the members' perception of a state of affairs, by a change in external conditions, or by leadership acts. (20:pp.101-105)

Individual and Group Decision-Making

That the process of individual decision-making is interwoven with organizational and group decision-making is supported by Feldman and Kanter, because ". . . the organizational decision process is compounded of many individual processes," and because ". . . an important part of the process of organizational decision making is the consideration of the effects of the decision upon the individuals involved. . . ." (13:p.643)

One of the recurrent topics of discussion related to the locus of decision-making in organizations, which includes school jurisdictions, is that of whether the group or an individual can produce the better decision. Costello and Zalkind consider that group performance is generally better because of less possibility of error, division of labor reduces the time involved, and more accurate

judgments are made because of a wider knowledge base. (7:p.429)
However, they concede that the group decision is seldom better than the best individual decision made by an expert.

This is of prime importance in the separation of decision-making functions between a school board and its superintendent. But delegation of decision-making authority, although a form of participation in organizational decision-making, is different from group participation. Strauss feels that the feasibility of delegation depends upon the decision-making ability of subordinates, the organizational need for conformity and the availability of adequate controls, sanctions and indoctrination procedures. (30:p.70)

Laboratory Experiments

Costello and Zalkind, after a student experiment involving the technique of "brainstorming" in which no criticism of "free-wheeling" ideas is allowed while searching for a solution to a problem, concluded that this technique inhibits creative thinking. (7:pp.433-440)
Although school board meetings do not follow the brainstorming technique in its pure form, they are generally used as idea-producing and idea-evaluation sessions. Consequently, the Davies-Brickell System of supplying detailed information and recommendations before school board meetings may lead to more effective decisions than would less structured meetings. Among the aspects considered essential for effective group operation by Costello and Zalkind are systematic problem-solving practices, and an optimally large number of people. (7:p.444)

The use of five-man laboratory discussions allowed Hare and Bales to show that a combination of seating position and distance could be used to predict the interaction pattern of task-oriented decision-making groups. (18:p.432) Hoffman also used laboratory groups of three or four persons to conclude that the solution does not necessarily reflect a group effort, that the decision-point occurs relatively early in the meeting, and that satisfaction with the solution depends more upon the problem-solving process than the quality of the solution. (22:p.270) A survey of research led Morris to conclude that task characteristics have considerable effect upon group interaction, even though small group research implicitly assumes that this association does not exist. (25:p.545)

III. METHODS OF ANALYSIS OF GROUP INTERACTION

The following outlines of selected techniques provide an overview of the variety of methods which have been used for the analysis of group interaction.

Bales

The twelve-category Interaction Process Analysis method devised by Bales during the 1940's is the most widely used technique. It is based on verbal and non-verbal cues noted during group discussion by trained observers who place each item of interaction in one of the following categories: (1) shows solidarity, (2) shows tension release, (3) agrees, (4) gives suggestion, (5) gives opinion, (6) gives orientation, (7) asks for orientation, (8) asks for opinion, (9) asks

for suggestion, (10) disagrees, (11) shows tension, and (12) shows antagonism. (2:p.486)

Steinzor

The development of reliable categories of social behavior was attempted by Steinzor in 1948 when he noted that the existing categories appeared to be useful only in specific situations.(29:p.106) This instrument, assessed as reliable by Steinzor when used by a well-trained person, employs nineteen intent categories such as (1) activate and originate, (2) structure and delimit, (3) diagnose by labelling, and (4) evaluate. (29:pp.108-109)

Borgatta

The variety of interaction scoring systems has been noted by Borgatta as ranging from those requiring little interpretation by the scorer to those which require a great deal. (4:pp.24-27) He observed that the five factors of assertiveness, sociability, intelligence, emotionality and task interest appear consistently in factor analytic studies of peer assessments of meeting participants. Consequently, he developed a Behavior Scores System, in which each action (except group laughter or tension) is scored in the range from one to six in one of the categories of assertive acts (neutral, dominant or antagonistic), withdrawal acts, supportive acts, or assertive supportive responses. (4:pp.29-36) These scores are then intercorrelated and also correlated with the peer assessments.

Hoffman

Lewin's concept of valence, or the degree of acceptability of a solution, was applied by Hoffman in 1961 to group problem-solving. (22:p.264) Each act is classified into one of the following seven behavior categories: (1) statement of the solution, (2) justification, (3) agreement, (4) vote, (5) reconnaissance, (6) questions, and (7) criticism. (22:p.265) After each solution has been adopted by a group, the individual satisfaction with that solution is assessed.

In 1965, Hoffman stated that most interaction systems ignore the relevance of the statements with respect to solving particular problems, and saw a need for research which distinguished ". . . among different types of remarks, e.g. description of the solution, justification for it, [and] criticisms of it, both favorable and unfavorable." (21:pp.124-125)

IV. SUMMARY OF CHAPTER II

School boards in Alberta are legally empowered to administer education in their jurisdictions, but their power is extremely limited. Most experts feel that the boards involve themselves too much in administration, and recommend restricting their activities to policy-making.

General agreement exists that (1) decision-making should be viewed as a many-step process from problem identification to decision implementation and evaluation, and (2) that the process is one of

satisficing rather than of rational optimizing. The understanding of organizational or system decision-making requires examination of both group and individual decision-making processes. A consensus exists on the need for greater meeting structure and preparation in order to reach more effective decisions.

Several methods of interaction analysis exist. These have shown that interaction is affected by factors such as seating position and task area. Hoffman has stressed the need to include the intent of interaction statements in these analytical methods.

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CHAPTER III

DEVELOPMENT OF THE CODING SYSTEM

This chapter is concerned with a description of Bellack's technique for analysis of classroom linguistic behavior, and with the adaptation of that technique into the method used in this study.

I. CLASSROOM INTERACTION ANALYSIS SCHEME DEVISED BY BELLACK

Background of Research

A research team at Columbia University consisting of Bellack, Davitz, Hyman, Kliebard, Smith, and others, being dissatisfied with the prescriptive direction and results of research into the teaching process, sought between 1963 and 1966 to develop a descriptive theory of this endeavor. (1:pp.v,vi,1)

This new approach ". . . was influenced by recently developed concepts in the study of language and meaning by contemporary philosophers and psychologists including Wittgenstein, Feigl, and Brown." (1:pp.1-2) Consequently, classroom verbal interaction was viewed as a "language game": this provided a useful analytical framework ". . . within which we could identify verbal expressions that communicate various kinds of meaning." (1:pp.1-4) In the classroom language game, certain rules and conventions apply, and the role expectations are reasonably clear for both the teacher and student.

The data consisted of the linguistic behavior of fifteen high school teachers and 345 students during four lessons for each class on the topic of international trade. (1:p.1) In order ". . . to describe the patterned processes of verbal interaction that characterize classrooms in action," the classroom proceedings of these sixty lessons were taperecorded and verbatim transcriptions (protocols) produced from these recordings. (1:p.1)

Coding and Analysis of the Protocols

Pedagogical moves. The following four pedagogical moves were used as the major categories for analysis.

1. Structuring. A structuring move sets the context for subsequent behavior by launching or halting or excluding interaction.
2. Soliciting. A soliciting move elicits a verbal or physical response, or encourages a person to attend to a task.
3. Responding. A responding move occurs only in a reciprocal relationship to a soliciting move: that is, it fulfills the expectation of the soliciting move.
4. Reacting. A reacting move is prompted by a structuring, soliciting, responding, or other reacting move, but it is not directly elicited. It modifies, by clarifying, synthesizing, or expanding, and/or rates, either positively or negatively, previous remarks in another move. (1:p.4)

During analysis, solicitations and responses were seen to be quite distinctive moves, but difficulty was sometimes experienced in distinguishing between structuring and reacting moves because each

could contain elements of the other. This problem was resolved by using the manifest content, and by establishing comprehensive definitions and noting numerous examples. (1:p.36)

Each pedagogical move was coded in the following ways:

- (1) Speaker (Teacher, Pupil, or Audio-Visual Device)
- (2) Type of Pedagogical Move
- (3) Substantive Meanings
- (4) Substantive-Logical Meanings
- (5) Number of Lines in (3) and (4)
- (6) Instructional Meanings
- (7) Instructional-Logical Meanings
- (8) Number of Lines in (6) and (7)

An example of a coded pedagogical move is:

T	/	STR	/	IMX	/	XPL	/	4	/	PRC	/	FAC	/	2
(1)		(2)		(3)		(4)		(5)		(6)		(7)		(8)

This is interpreted as follows: a *teacher* makes a *structuring* move in which he *explains* something about *imports* and *exports* for *four* lines of transcript and also states *facts* about *class procedures* for *two* lines of transcript. (1:p.16)

Development of the code was a long process: "Even at the stage of the research, however, further revisions of the code were necessitated by problems encountered in particular protocols." (1:p.13)

Cycles. Analysis revealed the existence of *teaching cycles* which were begun by an *initiating* move (either structuring or soliciting); the responding and reacting moves were termed *reflexive*. The concepts of moves and cycles made possible the interpretation of the pedagogical significance of classroom communications. (1:p.5)

Each cycle showed one of twenty-one possible patterns, such as STR SOL RES REA RES.. REA.., where ".." represents one or more additional moves of the same type. (1:pp.194-195)

Findings

Some of the findings considered significant by Bellack *et al.* were the following.

1. Teachers dominate classroom verbal interaction: the teacher-pupil ratio of lines spoken was 3:1, and for moves 3:2. (1:p.84)

2. ". . . one can reasonably speak of a teacher's pedagogical style as an internally consistent and temporally stable dimension of behavior." (1:p.85) This statement was based on the stability of the distribution of verbal move types in different lessons.

3. Most of the teachers' verbal activity involved soliciting (46.6 per cent) and reacting (39.2 per cent). The distributions for different teachers were closely similar. Students were concerned mostly with responding (65.4 per cent). Role differentiation was obvious with teachers contributing percentages of 86, 86, and 81 of all structuring, soliciting, and reacting moves respectively, and pupils 88 per cent of all responding moves. (1:pp.46-48)

4. Most of the discourse involved fact-stating and explaining (59.5 per cent), with only minor amounts of both defining and interpreting activity (5.6 per cent) and evaluative statements (7.5 per cent). (1:pp.74-75)

5. Approximately 60 per cent of a teacher's moves elicit subject matter information, and 40 per cent involve direction of pupils' activities. (1:p.240)

6. "The data point to the fact that pedagogical discourse, rather than occurring haphazardly, seems to follow regular patterns." (1:p.216)

The value or significance of Bellack's research appears to be that it has provided a manner in which complex verbal interaction can be more clearly viewed and analyzed. Bellack feels that such a methodology can lead to more fruitful research than can laboratory research in which the participants have only a limited history of interaction. (1:p.252)

II. ADAPTATION OF BELLACK'S METHOD INTO A FORM SUITABLE FOR THIS STUDY

Philosophical Justification

One reason why it was contended that the classroom analysis technique described above may have useful applications in more general situations is that it adds sequential and cyclical dimensions not stressed in schemes such as those of Bales and Borgatta. That is to say, each statement can be viewed in the context of those preceding it. Further it is possible to consider both soliciting and structuring moves in meetings as stimuli, to which participants respond by responding or reacting moves.

The use of a descriptive-theoretical model in both classroom and organizational situations is not unique, as Getzels and Thelen have also used a modified Getzels-Guba social system model, to which frequent mention has been made in the school administration setting, for explanation of classroom behavior. (3:p.65)

As the verbal interaction analysis technique depends heavily upon word interpretation, it is important to examine the philosophical

viewpoint of language. Wittgenstein, whose views formed an important part of the philosophical basis of the Bellack study, has written of meaning in these terms:

For a *large* class of cases--though not for all--in which we employ the word "meaning" it can be defined thus: the meaning of a word is its use in the language.

And the *meaning* of a name is sometimes explained by pointing to its bearer. (6:pp.20-21)

He has also used the term "language game" to emphasize ". . . the fact that the *speaking* of language is part of an activity, or of a form of life." Bellack's use of the term "language game" to describe classroom verbal activity conforms with Wittgenstein's postulation.

The language game and its rules, social interaction and research are interrelated by Moore and Anderson:

The "conclusion" seems to us inescapable that *self-consciously acting in accordance with a rule* (or formulating such rule) is one of the fundamental aspects of social interaction, and any experimental studies which neglect this point simply have nothing to do with that topic. Indeed . . . social games of strategy are *models* of social interaction; obedience to game rules must be self-conscious. (5:pp.73-74)

Coding System

In a recent review of studies and opinions concerned with behavior observation studies, Boyd and DeVault raised several issues relevant to this research project. They appear to agree with Thelen that the postulation of categories of behavior is actually development of subtheories about dynamic human processes. (2:p.535) This is assumed to imply that the use of such categories as structuring, soliciting, responding, and reacting, indicates that the speakers behaved purposively, albeit possibly subconsciously, in these ways. Boyd and

DeVault also state that ". . . if observation systems deal with social behaviors, then purposeness or intent of act cannot be ignored."

(2:p.536)

Hare states that any category system requires decisions in the following five areas. (4:p.398)

1. Frame of reference. This should be scored primarily by assessing either (a) the intent of the actor, or (b) the effect upon others. In this study, the intent was assessed.

2. Unit act. Hare suggests that this should be either a sentence, paragraph, interaction, or any piece of behavior causing a response. In the analysis, the unit was any phrase, sentence, or combination of sentences, which constituted one tactical verbal move. (Hereinafter this unit is usually referred to as a "move.")

3. Sample. The sample can be either continuous or taken at intervals. A continuous sample throughout two or more meetings was used.

4. Single or multiple code. Each unit was multiply coded.

5. Recording devices. The meetings were taperecorded.

By consideration of the above comments and other literature, by examination of the minutes of one school board over a six-month period, and by observation of several school board meetings, a tentative interaction analysis system was developed. This was modified into the following form during the study to allow for coding of each verbal move in six aspects--speaker, tactical move type, substantive aspect, implied action, purpose, and problem-policy relationship. The first three aspects correspond to those used by Bellack; the last three

replace his "substantive-logical meaning," "instructional meaning," and "instructional-logical meaning." It was not practical to include the "number of lines" of statements made--Bellack used this measure, as well as the number of verbal moves, to indicate the amount of involvement of teachers and students.

ADAPTED INTERACTION ANALYSIS SYSTEM

1. SPEAKER

S - Superintendent	C - Chairman	O - Others
ST - Secretary-Treasurer	T - Trustee	

2. TACTICAL MOVE TYPES (In context of verbal cycle)

(a) Initiative Moves

- | | |
|---|---|
| <p>1. <u>Structuring</u>--sets the context for subsequent statements, focuses on a topic, or launches a discussion.</p> | <p>STRF - provides or states a <i>fact</i>
 STRO - presents an <i>opinion</i>
 STROM- moves a <i>motion</i>
 STRP - states a <i>procedural</i> matter</p> |
| <p>2. <u>Soliciting</u>--directly elicits a verbal, physical, or mental response. Includes all genuine questions.</p> | <p>SOLF - seeks a <i>fact</i>
 SOLO - seeks an <i>opinion</i>
 SOLM - puts a <i>motion</i>
 SOLN - <i>not included</i> above: orders, acknowledges, or requests</p> |

(b) Reflexive Moves

- | | |
|---|--|
| <p>1. <u>Responding</u>--reciprocal response to a solicitation.</p> | <p>RESF - presents a <i>fact</i>
 RESO - presents an <i>opinion</i></p> |
| <p>2. <u>Reacting</u>--expands, supports, opposes, or comments upon the previous move, but not directly elicited.</p> | <p>REAS - <i>supports</i> the previous move
 REAE - <i>elaborates</i> the previous move
 REAO - <i>opposes</i> the previous move
 REAM - <i>modifies</i> the previous move (partial agreement)
 REAN <i>not included</i> above</p> |

3. SUBSTANTIVE ASPECT OF MOVE--*task area* to which most of the statement is related.

COM School-Community Relations
 CUR Curriculum
 EDS Educational Staff
 FIN School Finance
 IGR Intergovernmental Relations
 NES Non-Educational Staff
 PLA School Plant and Other Buildings
 PUP Pupil Personnel
 SAL Salary Negotiations
 SBI School Board Internal Matters
 TRA Transportation
 OED Other Educational Matters
 NED Not Educational Matters

4. IMPLIED ACTION

INI *Initiating* an action or aspect of a discussion (beginning)
 MOD *Modifying* or steering an action or discussion (intermediate)
 TER *Terminating* an action or discussion, e.g. put motion (ending)

5. PURPOSE

GOAD *Discussion* related to goal attainment or definition
 GOAP *Procedural matters* related to goal attainment or definition
 SYM *System maintenance* - enhances group solidarity

6. PROBLEM-POLICY RELATIONSHIP

FORM Move intended to contribute to *policy formation*
 PROB Move intended to contribute to *solution of a specific problem*, without regard to policy formation
 IMP Move intended to advocate *implementation* of existing policy or practice
 NCP Move *not connected* with policy formation or implementation, or problem solution

EXAMPLE:

T2 / STRO / EDS / INI / GOAD / FORM

Trustee 2 (T2) presents his opinion (STRO) on the present staffing position (EDS) in initiating (INI) a discussion (GOAD) about the need for a more vigorous recruitment policy (FORM).

III. SUMMARY OF CHAPTER III

During the 1960's a Columbia University research team developed a descriptive theory of classroom verbal interaction by examination of pedagogical moves and the cycles in which these moves occur. By assuming similarities in the existence of role expectations and conventions between the classroom and meeting situations, Bellack's method of analysis was adapted into a form deemed useful for analysis of verbal interaction at school board meetings.

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CHAPTER IV

RESEARCH PROCEDURES

This chapter contains descriptions of the way in which the cooperating school boards were selected, the taperecording procedures, questionnaires, and analytical techniques. Some information concerning the characteristics of the school jurisdictions and their meetings is included, as well as the length of time of the tape recordings. A brief outline is presented of the assumptions, delimitations, and limitations of the study.

Selection of the Sample of School Boards

A letter inviting participation in the study was sent to twenty school districts, divisions and counties within one hundred miles of Edmonton, (Appendix A). Of the fifteen jurisdictions which agreed to participate, eleven were selected. Demands of time and cost required this restriction. Another two jurisdictions which agreed to forward typed transcripts of meetings were added, making a total sample of two school divisions, four city school districts (three Protestant and one Roman Catholic), and seven counties. It was realized, however, that the manner of selection meant that the sample may not have been representative of Alberta school boards in general.

An arbitrary goal of six hours of tape recording of each school board was set--actually an average of five hours and forty

minutes was obtained between February and June, 1967, by recording one, two, or three meetings of each board. In the cases of the two boards which required three meetings, two of the meetings were combined and considered as one to facilitate presentation of the findings. Technical problems reduced the average length of time of tape recording from the original goal.

Table I shows (1) the total length of time of taperecordings for each board, (2) the time spent in formal presentations such as reading minutes or a report, and (3) the difference between (1) and (2), that is, the time spent in discussion. Each board averaged thirty-four minutes of formal presentations, and five hours and six minutes of discussion.

Tape Recording of School Board Meetings

The meetings were taperecorded by using one or two conference microphones placed centrally among the meeting participants and a tape recorder remotely located in the same room. In addition to operating the tape recorder, the observer also recorded a coded designation of the speakers in order on a prepared sheet (Appendix B), as well as periodical recording of tape footage and content to facilitate later detailed coding. Usually the recording commenced at the beginning of a meeting to ensure a degree of uniformity and to avoid disruption of the proceedings.

Data concerning School Jurisdictions and Meeting Participants

A questionnaire (Appendix C) was submitted to each person who regularly participated in each board meeting. The information

TABLE I

TOTAL LENGTHS OF TIME OF ENTIRE TAPE RECORDINGS, OF FORMAL PRESENTATIONS, AND OF DISCUSSION PERIODS FOR ALL MEETINGS

Board	Total Time of Recording		Total Time of Formal Presentations		Total Discussion Time	
	Each meeting hr. min.	Total hr. min.	Each meeting hr. min.	Total hr. min.	Each meeting hr. min.	Total hr. min.
1	3 23	6 49	18	48	3 05	6 01
	3 26		30		2 56	
2	3 26	3 26	19	19	3 07	3 07
3	3 56	7 07	27	52	3 29	6 15
	3 11		25		2 46	
4	3 12	5 05	23	39	2 49	4 26
	1 53		16		1 37	
5	4 00	4 00	47	47	3 13	3 13
6	4 51	7 21	30	37	4 21	6 44
	2 30		07		2 23	
7	0 47	5 12	00	21	0 47	4 51
	4 25		21		4 04	
8	4 13	6 11	36	49	3 47	5 22
	1 58		13		1 45	
9	2 17	5 31	02	15	2 15	5 16
	3 14		13		3 01	
10	4 01	6 29	32	51	3 29	5 38
	2 28		19		2 09	
11	1 15	3 47	00	00	1 15	3 47
	2 32		00		2 32	
12	4 59	6 18	29	35	4 30	5 43
	1 19		06		1 13	
13	4 21	6 30	21	33	4 00	5 57
	2 09		12		1 57	
Total		73 46		7 26		66 20
Mean		5 40		0 34		5 06

relevant to this study for purposes of description or analysis included occupation, sex, age (by category), tenure as a trustee, chairman or employee, level of education, and recency of education.

Another questionnaire (Appendix D) was used to obtain descriptive information about the school jurisdictions and practices related to their school board meetings. For example, questions were asked relating to enrollment, use of closed sessions, use of standing committees, preparation of the agenda, and the extent to which practices recommended by the Davies-Brickell System were followed.

A summary of some of the obtained information is presented in Table II. Some of the major generalizations concerning the sample are as follows.

1. Districts usually hold two meetings per month at night, while counties usually hold one meeting per month during the day.
2. Districts and divisions make frequent use of closed sessions; counties seldom use closed sessions.
3. The meetings of districts and divisions are generally more structured than are those of counties.
4. No overall difference seems to exist in the use of standing committees in different types of jurisdictions.
5. Districts and divisions average about five trustees on the school board; counties usually have ten trustees.
6. The agenda for district meetings is usually prepared jointly by the superintendent and secretary-treasurer; for counties and divisions usually this is done by the secretary-treasurer alone.

TABLE II

INFORMATION DESCRIBING SOME ASPECTS OF THE SCHOOL JURISDICTIONS AND THEIR MEETINGS

Board	Board type	Number of meetings per month	Meeting time	Estimated number of hours of closed sessions per year	Estimated extent of use of Davies-Brickell system (1-5 scale)	Number of standing committees	Number of trustees		Officers preparing agenda		
							1	2		Total	
4	district	3	night	60	5	0	7	6	7	S	ST
9	"	2	"	12	3	4	5	5	5		ST
11	"	2	"	18	2	6	5	5	5	S	ST
12	"	2	"	84	3	0	5	4	5	S	ST
5	division	1	day	96	4	4	6	-	6		ST
13	"	2	"	12	4	3	4	4	4		ST
1	county	1	day	0	1	4	9	7	10		ST
2	"	1	"	0	1	2	10	-	10		ST
3	"	1	"	3	3	0	10	10	10		ST
6	"	1	"	0	3	2	6	7	7	S	ST
7	"	1	"	0	1	10	10	10	10		ST
8	"	2	"	0	2	2	10	10	10		ST
10	"	1	"	2	3	3	9	10	10		As. ST

Assumptions

The following assumptions were made.

1. The recording and the presence of observers did not substantially affect the behavior of the participants.

Some chairmen and superintendents stated that the recording did have an initial effect upon the participants, but that their behavior soon became what they perceived to be normal.

2. The formal initiator of an interaction cycle was the person who initiated at the meeting, even though the cycle topic may have been raised at an earlier meeting or in an informal situation.

3. The proceedings were accurately and consistently categorized.

Delimitations

The following delimitations were imposed.

1. Only the verbal interaction which occurred during the formal sessions of school board meetings was analyzed. That is, non-verbal meeting interaction and all interaction which occurred outside the meeting situation were both disregarded, but their importance was recognized.

2. The sample was restricted to thirteen school jurisdictions, and the tape recording to an average of five hours and forty minutes for each board over a two or three month period.

3. Only the clear and intelligible sections of the tape recordings were analyzed. Possibly 5 per cent of the recorded sessions was not intelligible because of technical inadequacies, soft speech, or simultaneous statements from different speakers.

Limitations

Some limitations have been indicated in the assumptions and delimitations: for example, the sample was restricted in size and time, and much informal decision-making behavior was not accessible. In addition, the non-verbal behavior was ignored and serious misinterpretation was therefore possible. Bloomfield deals with this problem:

Linguistic meanings are more specific than the meanings of non-linguistic acts. A great deal of human co-operation is effected without language. . . . We must mention especially, in this last connection, the non-linguistic (non-distinctive) features of speech sound. . . . the manner of speech, in fact, is, next to speech itself, our most effective form of signalling. Linguistic forms, however, result, for the most part, in far more accurate, specific and delicate co-ordination than could be reached by non-linguistic means (1:p.242)

These comments are supported by Steinzor. (4:p.107)

However, it is reiterated that the intent of the study was to investigate the usefulness of a new analytical method translated into a different setting, rather than to attempt to analyze all the behaviors which can be observed at school board meetings.

Classification of the Study

The study was classified as mainly descriptive yet partly exploratory using the following criteria of Selltiz *et al.*

1. Exploratory studies--". . . the major emphasis is on discovery of ideas and insights."
2. Descriptive studies--". . . portray accurately the characteristics of a particular individual, situation, or group. . . ." and/or ". . . determine the frequency with which something occurs or with which it is associated with something else."
(3:pp.50-51)

It is legitimate also to describe a purpose of the study as the development of descriptive theory, whose function is seen by

Clements as being ". . . to render some aspect of the perceived world intelligible." (2:pp.124-128) On the other hand, prescriptive theory is a guide to action, and is usually a later development.

Analytical Techniques

Either exact copies or precis of the legible taperecorded statements were made. Each statement was then examined to determine the number of moves it contained. Each move was then coded in the five ways described above, and various summaries of the types of moves made by each category of participant were tabulated. Certain modifications which were made in the coding system during analysis required recoding of moves which had been examined previously.

As a test of reliability of coding between persons relatively unfamiliar with the coding system, two graduate students coded ten pages of transcript. Their judgments were compared with each other and with that of the researcher. Percentages of agreement and areas of disagreement were noted.

In order to obtain information about the specific research questions listed in Chapter I, the following procedures were employed using summaries of the aspects of the moves.

1. The percentage frequency distributions of the aspects of the moves were examined by the method of inspection in an attempt to discover broad areas of similarity or difference among boards.

2. The percentage frequency distributions of the total numbers of aspects of moves made by all categories of participants at all meetings

were examined by the method of inspection to obtain an overall picture of discussion at board meetings.

3. The percentage frequency distributions of types of cycles were examined by the method of inspection and Spearman correlations to determine the degree of similarity among boards, and to determine the most common types of cycles.

4. The percentage frequency distributions of moves made by various categories of meeting participants were examined by the method of inspection and t tests to determine the degree of similarity among boards, and to determine which categories of participants were most involved in the different task areas.

5. The correlations between the estimated extent of use of practices recommended by the Davies-Brickell System and (1) the move rate, (2) the cycle rate, and (3) the number of moves per cycle, were examined using Pearson product-moment coefficients.

Summary of Chapter IV

Tape recordings of an average length of five hours and forty minutes were made from the meetings of a sample of thirteen Alberta school boards selected on the bases of cooperation and proximity. Transcripts of these tape recordings were coded on five aspects of the contained verbal moves. Summaries were made of the frequencies and percentage frequencies of types of moves made by the various categories of meeting participants.

The distributions so obtained, and the distributions of cycle patterns, were examined mainly by the method of inspection to assess

the degree of similarity among boards, and to obtain a descriptive theory of school board meeting discussion.

Certain information was also collected by questionnaire and used for the purpose of description and/or correlation analysis.

The major restrictions of the study relate to the size of the sample, both in terms of the number of boards and length of recording, and to the exclusion of non-verbal behavior and extra-meeting discussions.

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CHAPTER V

EXAMPLES OF RECORDED VERBAL MOVES

In Chapter III, explanations and definitions were provided of the categories used to code each verbal move. The major coding aspects were tactical move type, task area, implied action, purpose, and problem-policy relationship. In this chapter, examples of individual moves are provided from the transcripts of statements illustrating subdivisions of these aspects. The examples in each category are not sequential.

Examples of the Categories of Tactical Move Types

1. Structuring Moves

(a) STRF - structuring by presenting a fact

S "A related question is this request from a husband and wife for bursaries. They have not previously taught in this county."

ST "I have been reviewing the bursary costs. It is \$6,000 at present for students at university."

C "I would like to draw attention to Item One of the Agreement. It states that"

(b) STRO - structuring by presenting an opinion

C "I was going to suggest we pay the tuition and \$5 a day subsistence and let him foot the rest. If he wants to stay there it's up to him."

T "The janitor could do it."

T "I suggest we call in the three head janitors and revise the whole deal."

(c) STROM - structuring by moving a motion

T "I'll make it a motion that we send him and pay all his expenses."

(d) STRP - structuring by using a procedural statement

C "O.K. Number Four."

C "I'm ready for a motion."

ST "Number 31. Newsletter."

2. Soliciting Moves(a) SOLF - soliciting a fact

T "What position would this put your bursary students in?"

S "Have you heard anything _____?"

C "This would be a renewal of your present contract?"

(b) SOLO - soliciting an opinion

T "Is Mr. _____ a strong industrial teacher?"

S "What action are you prepared to take on this as a School Committee?"

C "Is this the best way to do it?"

(c) SOLM - putting a motion

C "All in favor? Carried."

(d) SOLN - soliciting move other than the above

C "Trustee _____ has a question." (Declarative)

C "Any questions?" (Requesting)

C "Would you read the motion _____?" (Imperative)

3. Responding Moves(a) RESF - factual response to a solicitation

T "It is part of the janitor's duties."

O "Yes, indeed--the same way."

S "He has three years and is going for his fourth."

(b) RESO - opinion response to a solicitation

S "Could be. We could use an evening."

ST "We should have a letter to acknowledge its receipt."

T "I think so."

4. Reacting Moves

(a) REAS - support of the previous move

S "I think that would be the only right thing to do."

T "This is right. Small footage is going to be the one that's going to cost per foot."

C "I think that is past due."

(b) REAE - elaboration of the previous move

T "Her husband must have some responsibility."

S "In special areas we have \$1,000 for the fourth year."

ST "They come in under (d) here--all full-time hourly paid employees--and they would be able to get a \$4,000 group life insurance"

(c) REAO - opposition to the previous move

T "Why the big schools? The small ones have more complaints."

C "No--we have a choice. Sabbatical leave is not paid without the board's O.K."

T "I think 50 per cent is too much."

(d) REAM - modifying the previous move

T "This is worse--it's legal bribery."

C "But you can only change an agreement by negotiations."

S "Yes, we have very few cases. The point is I am wondering if this is not their reason."

(e) REAN - none of the above

O "Thanks very much."

C "You're on the bit this morning!"

T "Well, we should give all the farmers and miners a fringe benefit too!"

Examples of Topics Subsumed under Task Areas

Several examples of topics discussed in the meetings are listed under the following task area headings.

1. COM School-Community Relations

Negotiations with service clubs, universities, exhibition associations, and home and school associations; permanent closing of a school; naming of schools after prominent citizens; community use of facilities; petitions; newspaper advertising; liaison with public libraries.

2. CUR Curriculum (involves content aspect of school program)

New mathematics; kindergartens; teaching films; orientation of new students; excursions; driver education; examination results; educational television.

3. EDS Educational Staff

Appointment, promotion and resignation; bursaries and leaves; reports on teachers; attendance at conventions and institutes; substitutes; internship.

4. FIN School Finance

Budget; payment of accounts; debenture borrowing.

5. IGV Intergovernmental Relations

Inter-district meetings and relations; Centennial celebrations; Federal sales tax; approval of building plans by the Department of Education; relations with health units, Local Authorities Board,

Glenrose Hospital, Department of Highways, Department of Indian Affairs.

6. NES Non-Educational Staff
Employment; work; salary and fringe benefits; employment of non-teacher professionals.
7. PLA School Plant and Other Buildings
New building plans; land acquisition; tenders; teacherages; landscaping; non-educational equipment such as telephones.
8. PUP Pupil Personnel
Attendance policy; attendance reports; misbehavior; insurance; entrance age; participation in sporting activities; exchange students; attendance at workshops and science fairs; health examinations.
9. SAL Salary Negotiations
Discussion of submissions and negotiations.
10. SBI School Board Internal Matters
Filling of vacancies on board; elections; meeting dates; insurance of trustees; committees; distribution of minutes; procedural matters.
11. TRA Transportation
Transportation of students and routes; purchase and maintenance of buses; radios in buses.
12. OED Other Educational Matters
Custodians for examination papers; Federal retraining schemes; district school holiday; correction to minutes on educational matters.
13. NED Not Educational Matters
Agenda matters; adjournment of meetings; reading and approval of minutes; Alberta School Trustees' Association business.

Examples of Moves Demonstrating Types of Implied Action

1. INI Initiating a Discussion Topic

C "How come the architect's report came out as it did?"

C "Item number 4. Clearing of sidewalks."

ST "The next item concerns salary negotiations."

2. MOD Modifying a Discussion

C "They had the same problem we have today--probably more so."

O "What we are really asking for is a new gym and four classrooms."

T "The thing is that if anything is wrong they always blame the board."

3. TER Terminating a Discussion

C "Those in favor of the motion? Carried."

T "There is no further discussion on this."

C "Well, I guess that takes care of it."

Examples of Moves Demonstrating Types of Purpose

1. GOAD Discussion on Goal Attainment

T "At six per cent or eight per cent."

O "May have to replace four next year."

C "Well, I can speak to _____ on this, but I think it's been straightened out."

2. GOAP Procedural Matters Related to Goal Attainment

T "I'll so move."

C "All those in favor? Carried."

ST "What was the motion? That the substitute be paid?"

3. SYM System Maintenance

- C "Ah! You're on the bit this morning!"
- C "Oh, boy!"
- T "One teacher suggested that the board members take a shot at it!"

Examples of Moves Demonstrating Types of Problem or Policy Relationship

1. PROB Problem Solving

- C "Maybe _____ you could find out in a general way how much it would be to add individuals and we could take it from there."
- S "No. This is actually the second staff member we have used for it."
- T "Is it the best way to do it?"

2. FORM Policy Formulation

- S "We should review the basic bursary policy."
- C "If we approve, we should set up guidelines to handle future cases of a similar nature."
- C "The board is concerned with the policy which may be set."

3. IMP Implementation of Existing Policy

- C "You recommend we pay the substitute. That is fine, it's done automatically."
- S "Should we not leave the policy as it is at present?"
- ST "We don't need to have a motion. It's already covered."

4. NCP Not Connected with Problem or Policy

- C "Ah! You're on the bit this morning!"
- T "Well, we should give all the farmers and miners a fringe benefit too!"
- S Superintendent gives attendance report.

Interrelationships among the Various Categories

Because each move was multiply coded, certain relationships were possible between the classification categories. Each STR (structuring) move was automatically coded as an INI (initiating) move. RES (responding) and REA (reacting) moves were automatically coded as MOD (modifying) or TER (terminating). Apart from these relationships, all other combinations of the major coding categories were possible.

CHAPTER VI

DISTRIBUTION OF VERBAL MOVES CLASSIFIED ACCORDING TO TACTICAL ASPECT

This chapter, which reports the distributions of the verbal moves according to the structuring, soliciting, responding, and reacting aspects, begins the presentation of results. Chapter VII contains details of the action, purpose, and problem-policy aspects of the verbal moves. Information about the distribution of task area moves among the categories of participants comprises Chapter VIII. Chapter IX deals with features of the verbal cycles.

The first section of this chapter is concerned with the distribution by categories of participants of all moves recorded in all the board meetings. Next, the distributions of the tactical subdivisions among categories of participants for all boards taken collectively are discussed. These distributions among boards are then examined for each category, with emphasis upon the superintendents. Finally, some aspects of the rates at which verbal moves occurred are presented.

It was not practical to include detailed statistical analyses of all the collected and derived data--often gross generalizations had to be made by the method of inspection. The specific research questions in Chapter I guided data presentation and construction of tables.

The raw data for the study, that is, the frequencies of occurrence of various moves types, are presented in Tables XXVIII, XXIX, and XXX in Appendices E, F, and G. From this information, detailed descriptions of the verbal behavior of categories of participants at the meetings of each board can be obtained. However, the development of such descriptions did not constitute an aim of this study and consequently they are not included.

Percentages in the range 0.5 to 100 have generally been rounded in the tables to the nearest whole number. Percentages less than 0.5 were recorded correct to the first decimal place. Because of these procedures, totals of percentages in the tables often do not add to exactly 100.

I. DISTRIBUTIONS OF ALL MOVES MADE BY EACH CATEGORY OF PARTICIPANTS FOR ALL BOARDS

The overall percentage contributions of each category of participants to all moves for all school boards collectively were as follows: superintendents, 14.3 per cent; secretary-treasurers, 11.7 per cent; chairmen, 28.5 per cent; trustees, 33.6 per cent; and "others," 11.9 per cent, (Table III). A mean of 7.25 trustees attended each meeting, and a mean of 3.81 "others" spoke during each meeting. In general terms, the chairmen and trustees supplied about 62 per cent of all moves, with the remainder being divided approximately equally among the other three categories.

The presence of "others," that is, people other than regular participants, could have distorted the relative percentage contributions

TABLE III

PERCENTAGE FREQUENCY DISTRIBUTIONS OF MOVES MADE BY EACH
CATEGORY OF PARTICIPANTS FOR EACH BOARD

Board Board type	Percentage contribution of each category of participants to all moves				Percentage contribution of each of four categories of participants to all verbal moves adjusted after removal of moves made by "others"				
	Supt.	Sec.- Treas.	Chairman	Trustees	Others	Supt.	Sec.- Treas.	Chairman	Trustees
4 district	10.0	5.9	40.5	33.3	10.4	11.1	6.6	45.2	37.1
9 "	13.9	10.6	33.2	19.5	22.8	18.0	13.8	43.0	25.2
11 "	20.5	5.2	23.2	38.8	12.4	23.4	5.9	26.4	44.3
12 "	13.6	11.6	41.7	23.9	9.2	15.0	12.8	45.9	26.3
5 division	15.9	11.9	27.6	28.1	16.6	19.1	14.2	33.1	33.7
13 "	15.8	7.3	39.8	25.8	11.3	17.8	8.3	44.9	29.1
1 county	16.3	13.2	24.3	33.4	12.9	18.7	15.1	27.9	38.3
2 "	18.0	13.4	32.1	32.6	3.9	18.7	14.0	33.4	33.9
3 "	13.5	6.0	17.6	49.9	13.1	15.5	6.9	20.2	57.4
6 "	12.7	15.2	22.8	35.3	14.0	14.7	17.7	26.5	41.1
7 "	14.0	10.1	30.4	33.9	11.6	15.9	11.5	34.4	38.3
8 "	10.8	17.2	27.2	38.0	6.8	11.6	18.5	29.2	40.7
10 "	15.2	18.4	16.1	40.8	9.5	16.8	20.4	17.8	45.1
Overall	14.3	11.7	28.5	33.6	11.9	16.3	13.3	32.3	38.1

of each category of participants in each board. Therefore, the percentage contributions were also calculated or adjusted for the four regular categories after removing moves made by "others."

The percentage contributions of superintendents to all verbal moves ranged from 10.0 to 20.5; the adjusted range was 11.1 to 23.4 per cent. Secretary-treasurers showed an initial variation from 5.2 to 18.4 per cent, and adjusted variation from 5.9 to 20.4 per cent. "Others" showed greater variation with a range of 3.9 to 22.8 per cent.

Although the chairmen and trustees were the two most dominant categories in terms of percentages of all moves, their relative contributions showed marked differences indicating different meeting styles and possibly different climates. The unadjusted and adjusted ranges for chairmen were respectively 16.1 to 41.7 per cent, and 17.8 to 45.9 per cent. For trustees these ranges were 19.5 to 49.9 per cent, and 25.2 to 57.4 per cent. Only in Board 10 did the chairman not rank in the highest two percentage frequency contributions made by different categories of participants.

Despite the fact that wide variations did exist in the percentage contribution ranges of each category, indicating that verbal interaction in different boards followed different patterns, the ranges of chairmen and trustees were of a higher order than were those of the other three categories.

II. DISTRIBUTIONS OF SUBDIVISIONS OF THE TACTICAL ASPECTS OF ALL MOVES FOR ALL BOARDS

In this section the percentage frequencies of moves made by each category of participants in the tactical aspect subdivisions are discussed, both as a percentage of all moves made by each category, and as a percentage of all moves made in the particular subdivisions. The data are presented in Table IV.

Structuring Moves

Structuring moves involving statements of facts (STRF), statements of opinions (STRO), moving of motions (STROM), and procedural statements (STRP) for all participants constituted 5, 6, 2, and 2 per cent respectively of all moves. Leaving aside the procedural STROM and STRP percentages, the major variations from this overall distribution were in, (1) the higher ratio of STRF to STRO moves (11:4) made by the secretary-treasurers, and (2) the higher ratio of STRO to STRF moves made by the trustees (7:2). Also, superintendents and secretary-treasurers had slightly higher percentages of their own moves in the structuring subdivision than did the chairmen and trustees.

Superintendents and secretary-treasurers made most of the STRF moves with 28 and 27 per cent respectively, whereas the chairmen and trustees made most of the STRO moves with 26 and 37 per cent.

Soliciting Moves

Most of the soliciting moves sought a factual answer (SOLF, 14 per cent of all moves), with lesser percentages of the total

TABLE IV
 FREQUENCY AND PERCENTAGE FREQUENCY DISTRIBUTIONS OF TACTICAL ASPECTS OF ALL MOVES FOR ALL BOARDS

Frequency	Category of participant	TACTICAL ASPECTS OF MOVES															Total					
		Structuring					Soliciting					Responding						Reacting				
		F	O	OM	P	Total	F	O	M	N	Total	F	O	Total	S	E		O	M	N	Total	
Total frequencies for all meetings of all boards	Supt. Sec.-Treas. Chairman Trustees Others TOTAL	288	232	0	13	533	224	117	0	25	366	622	333	955	209	757	59	105	58	1,188	3,042	
Frequencies of each move aspect as percentages of all moves made by each category (horizontal)	Supt. Sec.-Treas. Chairman Trustees Others TOTAL	9	8	0	0.4	18	7	4	1	1	12	20	11	31	7	25	2	3	2	39	100	
Frequencies of each move aspect as percentages of all moves in each aspect (vertical)	Supt. Sec.-Treas. Chairman Trustees Others TOTAL	11	4	1	1	17	10	6	1	1	18	21	6	26	6	27	2	3	2	40	100	
		3	5	0.2	5	14	15	9	8	13	45	5	4	9	6	17	2	2	4	32	100	
		2	7	6	0.1	14	20	7	1	1	28	6	7	13	7	27	3	4	5	46	100	
		6	5	0.2	0.2	11	6	5	1	1	12	26	12	37	7	24	3	3	3	40	100	
		5	6	2	2	15	14	7	2	4	27	12	7	19	7	24	2	3	4	39	100	
		1,033	1,273	419	371	3,096	2,999	1,419	470	907	5,795	2,464	1,509	3,973	1,395	4,999	481	688	793	8,356	21,220	
		28	18	4	4	17	7	8	3	3	6	25	22	24	15	15	12	15	7	14	14.3	
		27	8	7	7	13	8	11	3	3	7	21	9	16	11	13	9	10	7	12	11.7	
		20	26	2	85	28	31	37	100	86	47	11	17	14	27	21	25	21	31	23	28.5	
		11	37	98	3	33	48	35	5	5	34	17	32	22	36	38	40	42	45	39	33.6	
		14	10	2	2	9	5	9	2	2	5	26	19	24	12	12	14	11	10	12	11.9	
		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100.0	

classified as opinion-seeking (SOLO, 7 per cent), putting motions (SOLM, 2 per cent), and others (SOLN, 4 per cent). Most categories of participants adhered to this general 2:1 ratio for SOLF:SOLO moves, but the trustees asked more SOLF questions (20:7 ratio) and "others" more SOLO questions (6:5 ratio).

The highest percentage of all moves made by chairmen occurred in the SOL division with 45 per cent; for trustees this was the second most important subdivision with 28 per cent of all their moves. SOL moves constituted only 12 per cent of the total moves made by superintendents.

Examination of the bottom part of Table IV showed that the majority of SOLF moves were made by the trustees (48 per cent) and the chairmen (31 per cent)--this also applied to the SOLO moves with 35 and 37 per cent respectively. The remainder was spread approximately equally among the other three categories of participants.

Responding Moves

Responding moves which provided a fact (RESF) constituted 12 per cent of all moves, and those providing an opinion (RESO) 7 per cent. This 12:7 ratio was approximately adhered to by superintendents, chairmen, and "others," but the secretary-treasurers had more emphasis on factual responses and trustees more on opinions.

RES moves were the second most common subdivision for superintendents, secretary-treasurers, and "others." It was the least common subdivision for chairmen and trustees.

Superintendents, "others," and secretary-treasurers provided 25, 26, and 21 per cent respectively of all RESF moves: trustees supplied the highest percentage of all RESO moves with 32 per cent.

Reacting Moves

Reacting moves constituted the highest percentage of all tactical subdivisions with 39 per cent of all moves, composed of 7 per cent REAS (support), 24 per cent REAE (elaboration), 2 per cent REAO (opposition), 3 per cent REAM (modifying), and 4 per cent REAN (other). This distribution was very closely followed by all categories, except that the chairmen had only 17 per cent of their moves classed as REAE.

For all categories of participants except chairmen, REA moves were the most common. Chairmen were most involved in SOL moves.

The percentage contributions of each category of participants to all types of REA moves paralleled approximately the overall REA distribution of 14 per cent by superintendents, 12 per cent by secretary-treasurers, 23 per cent by chairmen, 39 per cent by trustees, and 12 per cent by "others."

Overall Distribution of the Tactical Subdivisions

Taken overall, the frequency ranking of the tactical subdivisions was (1) REA, 39 per cent, (2) SOL, 27 per cent, (3) RES, 19 per cent, and (4) STR, 15 per cent. For the classroom Bellack obtained the order, (1) SOL 34 per cent, (2) REA, 31 per cent, (3) RES, 29 per cent, and (4) STR, 6 per cent. (1:p.46)

In summary, the main functions of the superintendents, secretary-treasurers, and "others" were to respond to and elaborate upon prior moves--their totals for these two activities were 56, 54, and 62 per cent respectively. For chairmen and trustees, questioning and elaborating were the main activities with respective totals of 62 and 55 per cent. Superintendents and secretary-treasurers were generally more involved in stating facts in their structuring and responding moves than were the elected participants.

III. DISTRIBUTIONS OF SUBDIVISIONS OF THE TACTICAL ASPECT
OF MOVES MADE BY ALL PARTICIPANTS
COLLECTIVELY AMONG ALL BOARDS

Comparisons are made in this section of the distributions among boards of the percentages of moves occurring in each tactical subdivision as shown in Table V.

Structuring Moves

Most boards conformed closely to the following overall frequencies of structuring moves expressed as percentages of all moves--STRF (5 per cent), STRO (6 per cent), STROM (2 per cent), and STRP (2 per cent). However, Board 8 had only 3 per cent of all moves in both the STRF and STRO categories, and Board 4, the only board which used the entire Davies-Brickell System, had 5 per cent STROM moves and 5 per cent STRP moves.

TABLE V
 PERCENTAGE FREQUENCY DISTRIBUTIONS OF MOVES CLASSIFIED BY TACTICAL SUBDIVISIONS MADE BY ALL
 CATEGORIES OF PARTICIPANTS TAKEN COLLECTIVELY FOR EACH BOARD

Board	Board type	Percentages of all moves made by all participants taken collectively												Total frequency					
		STRUCTURING			SOLICITING			RESPONDING		REACTING			Subdivision totals						
		F	O	M	F	O	M	F	O	S	E	O	STR		SOL	RES	REA		
4	district	4	5	5	14	3	6	11	3	4	15	1	2	5	20	38	14	27	1,274
9	"	6	5	1	8	11	2	7	12	6	27	3	3	4	14	24	19	43	1,675
11	"	4	7	2	12	7	2	10	7	9	19	3	3	7	15	26	18	41	1,084
12	"	5	5	2	16	6	3	14	7	6	20	2	2	3	15	32	20	33	2,064
5	division	6	6	2	11	6	2	9	6	9	24	2	3	6	15	26	15	44	987
13	"	6	6	2	19	7	2	15	9	5	17	1	2	3	16	32	24	28	1,800
1	county	4	4	2	17	7	2	15	6	6	23	2	5	3	11	29	21	39	1,950
2	"	7	6	4	12	6	4	11	5	7	21	2	3	5	20	26	16	38	969
3	"	4	6	1	16	8	2	13	9	6	23	3	3	3	11	29	22	38	1,901
6	"	6	8	1	15	4	1	11	6	7	27	2	5	3	15	23	17	45	1,810
7	"	4	9	2	15	7	2	14	6	6	20	2	4	4	16	29	20	35	1,363
8	"	3	3	1	12	8	2	10	8	7	34	4	3	3	8	23	18	51	2,005
10	"	6	9	2	12	6	2	10	6	8	29	2	4	3	17	21	15	46	2,338
Overall		5	6	2	14	7	2	12	7	7	24	2	3	4	15	27	19	39	21,220

Soliciting Moves

The overall distribution of soliciting moves as percentages of all moves, namely, SOLF (14 per cent), SOLO (7 per cent), SOLM (2 per cent), and SOLN (4 per cent), was approximately adhered to by most individual boards. Board 4 again was distinctive with the lowest percentage of SOLO moves (3), and by far the highest percentages of SOLM (6) and SOLN (15) moves.

Responding Moves

Most boards had the ratio of their percentages of RESF and RESO moves approximately equal to the 12:7 mean percentage distribution ratio observed for all boards collectively. For Board 4, this percentage ratio was 11:3, indicating considerably greater emphasis upon factual responses. Board 9 reversed the mean ratio by having greater emphasis upon RESO moves (12 per cent) than RESF moves (7 per cent).

Reacting Moves

As with the preceding subdivisions, most boards paralleled the overall percentage distribution for REA moves of REAS (7), REAE (24), REAO (2), REAM (3), and REAN (4). Board 4 had the lowest or equal lowest percentages in each of the first four of these REA subdivisions with 4, 15, 1 and 2 per cent--this may have reflected more tightly controlled meeting procedures.

IV. DISTRIBUTIONS OF SUBDIVISIONS OF THE TACTICAL ASPECT
OF MOVES MADE BY EACH CATEGORY OF PARTICIPANTS
AMONG ALL BOARDS

Another way used to examine the move distribution was listing of the percentages of the STR, SOL, RES, and REA subdivisions of the moves made by each category of participants in each board, (Table VI).

Superintendents

Quite appreciable variations occurred in the percentage distributions of the various tactical moves made by the superintendents. The STR percentage varied from 8 to 33, the SOL percentage from 7 to 21, the RES percentage from 16 to 45, and the REA percentage from 23 to 52. For most superintendents, the REA and RES moves constituted the highest percentages, but in four boards the superintendents' STR percentage at least equalled that for the RES moves.

Secretary-Treasurers

Even greater overall variation existed in the proportion of moves made by the secretary-treasurers in the STR, SOL, RES, and REA subdivisions with percentage ranges of 4 to 25, 3 to 28, 15 to 54, and 19 to 49. Role differentiation among the secretary-treasurers was indicated by these distributions which reflected contrasting involvements in initiating and reflexive moves.

TABLE VI
 PERCENTAGE FREQUENCY DISTRIBUTIONS OF MOVES CLASSIFIED BY TACTICAL DIVISIONS MADE BY EACH
 CATEGORY OF PARTICIPANTS FOR EACH BOARD

Board	Board type	Percentages of all moves made by each category of participants taken individually																			
		Superintendent			Secretary-Treasurer			Chairman			Trustees			Others							
		STR	SOL	RES REA	STR	SOL	RES REA	STR	SOL	RES REA	STR	SOL	RES REA	STR	SOL	RES REA					
4	district	33	9	23	35	4	3	44	49	16	61	3	19	28	36	7	29	10	3	52	35
9	"	14	7	27	52	6	28	17	49	18	31	15	35	10	25	23	43	13	23	17	47
11	"	18	21	16	45	5	5	54	36	22	55	4	19	13	19	14	54	9	10	46	36
12	"	10	9	44	37	10	23	30	36	16	45	8	31	19	33	15	33	11	13	43	34
5	division	20	11	20	49	17	11	23	49	11	49	7	33	17	29	9	45	13	7	30	49
13	"	24	8	45	23	22	17	40	21	14	52	9	25	18	30	16	36	6	8	54	32
1	county	10	15	34	42	22	24	24	30	11	42	9	37	10	36	11	43	5	7	54	35
2	"	26	12	31	31	20	18	23	38	18	45	7	31	18	22	11	49	18	3	45	34
3	"	15	7	40	38	18	14	49	19	7	63	8	22	11	31	12	46	12	7	48	33
6	"	14	14	27	45	23	19	15	43	15	33	13	38	14	24	16	46	12	15	21	52
7	"	19	11	37	33	15	15	35	35	14	50	6	31	19	29	13	39	15	7	45	33
8	"	8	18	27	46	8	21	22	49	9	25	13	52	7	26	13	54	9	12	33	46
10	"	25	14	25	35	25	10	22	43	13	40	10	38	13	21	8	57	16	19	26	38
Overall		18	12	31	39	17	18	26	40	14	45	9	32	14	28	13	46	11	12	37	40

Chairmen

Ten chairmen made more SOL moves than any other move type: the other three chairmen most commonly made REA moves. Only in Board 11 did a chairman make more STR moves than SOL or REA moves--this indicated that most chairmen were actively involved in the discussions. Within each board the distributions usually approximated the mean, although some deviations were considerable; for example, the Board 3 chairman had a SOL percentage of 63 as compared with the mean of 45.

Trustees

The trustees of Board 4 (Davies-Brickell System) had the highest proportion of their moves classified as STR moves (28 per cent) and SOL moves (36 per cent), together with the lowest proportion of their moves classified as RES moves (7 per cent) and REA moves (29 per cent), indicating that these trustees were generally more active initiators of new topic aspects than were the trustees of other boards.

For every other board, a greater proportion of REA moves than SOL moves were made by trustees--these were more common than the STR and RES moves which were approximately equally frequent.

"Others"

In twelve boards, the proportions of RES and REA moves made by "others" were far greater than those of the STR and SOL moves. For nearly all boards, the distribution approximated the mean--in Board 2, "others" made more SOL moves (23 per cent) than RES moves (17 per cent).

Comparison of the Distributions among Categories of Participants

The bottom row of Table VI shows that the main role of the superintendents, secretary-treasurers, trustees, and "others" was in supplying reflexive moves (RES and REA), with percentage frequencies of 70, 66, 59, and 77 of all their moves respectively. Chairmen were more involved in the initiating tactical moves (STR and SOL) with 59 per cent of their total moves being of these types.

V. DISTRIBUTION OF THE CONTRIBUTIONS OF EACH CATEGORY
OF PARTICIPANTS TO EACH SUBDIVISION OF THE
TACTICAL ASPECT OF THE MOVES

Table VII is similar to Table VI, but presents the percentage contribution of each category of participants to all the moves made in a tactical subdivision, rather than showing the proportion of all the moves made by each category in the subdivision.

Superintendents

Of all STR moves made in the meetings, the superintendents contributed a mean of 17 per cent in a range of 9 to 25 per cent. Their highest contribution was in RES moves with a mean of 24 per cent of all RES moves and range of 16 to 34 per cent. Their contribution to REA moves was also considerable and approximately consistent with a mean of 14 per cent of all REA moves and a range of 10 to 22 per cent. The greatest variation occurred in the SOL proportion, with a range of 2 to 16 per cent of all SOL moves being supplied by superintendents.

TABLE VII
 PERCENTAGE FREQUENCY CONTRIBUTIONS OF EACH CATEGORY OF PARTICIPANTS TO TACTICAL SUBDIVISIONS OF MOVES
 MADE IN MEETINGS OF EACH BOARD

Board	Board type	Percentage contributions of each category of participants to all moves in each tactical subdivision																							
		Superintendent				Secretary-Treasurer				Chairman				Trustees				Others							
		STR	SOL	RES	REA	STR	SOL	RES	REA	STR	SOL	RES	REA	STR	SOL	RES	REA	STR	SOL	RES	REA				
4	district	16	2	16	13	1	0.4	19	11	32	65	10	28	46	31	17	35	5	1	39	13				
9	"	14	4	20	17	4	12	9	12	45	43	27	27	14	20	23	19	22	21	21	25				
11	"	25	16	19	22	2	1	15	5	34	49	5	11	33	29	29	51	7	5	31	11				
12	"	9	4	30	15	8	9	17	13	45	59	16	39	32	25	17	24	7	4	19	9				
5	division	21	7	20	18	13	5	18	13	20	53	13	21	31	31	16	29	15	4	33	19				
13	"	23	4	30	13	10	4	12	6	34	65	15	36	28	24	18	33	4	3	25	13				
1	county	14	8	26	18	26	11	15	10	25	36	10	23	30	42	17	37	6	3	32	12				
2	"	24	8	34	15	13	9	19	14	29	55	14	26	30	27	22	42	4	0.4	11	4				
3	"	18	3	24	14	9	3	13	3	11	38	7	10	48	53	27	61	14	3	28	12				
6	"	12	8	20	13	23	13	13	14	23	33	17	20	31	37	33	37	11	9	17	16				
7	"	16	5	26	13	9	5	18	10	25	52	9	27	39	34	21	38	11	3	26	11				
8	"	11	8	17	10	18	15	22	17	31	30	21	28	33	43	28	40	7	4	13	6				
10	"	22	10	25	12	26	9	26	17	12	31	10	13	31	41	22	50	9	9	17	8				
Overall		17	6	24	14	13	7	16	12	28	47	14	23	33	34	22	39	9	5	24	12				

Comparisons were made between the means of these subdivisions for the four locally appointed superintendents and the nine provincially appointed superintendents. The t values were 0.582 (STR), 0.125 (SOL), 1.04 (RES), and 1.41 (REA). As these were below the figure of 2.18 needed for 0.05 significance on a two-tailed test, no significant association existed between this aspect of the superintendents' verbal involvement and the type of appointment.

Secretary-Treasurers

Some of the widest variations experienced in the study occurred in the percentage contributions of the secretary-treasurers to the STR and SOL moves, which ranged respectively from 1 to 26 per cent, and 0.4 to 15 per cent. The secretary-treasurers of divisions and counties contributed considerably more to the STR moves, with a mean of 16 per cent, than did those of the districts whose mean was only 4 per cent.

Their contributions to all the RES and REA moves were much more consistent even though some major discrepancies occurred; for example, the secretary-treasurers of Boards 11, 13 and 3 contributed only 5, 6, and 3 per cent of all REA moves as compared with the 12 per cent mean.

Chairmen

Appreciable variations existed in the contributions of the chairmen to all moves in each of the STR, SOL, RES and REA subdivisions, revealing wide differences in their operating styles, and possibly also in the influence they exerted upon a meeting and its decisions.

These percentage ranges were respectively 11 to 45, 30 to 65, 5 to 27, and 10 to 39.

The highest percentage contribution of eleven chairmen occurred in the SOL subdivision; for the other two chairmen their SOL contribution was the second highest. Their STR percentage contribution was usually at least equal to that of the REA moves.

Trustees

As occurred with the chairmen, wide percentage contribution variations were encountered with the trustees, with the percentage ranges being 14 to 48 (STR), 20 to 53 (SOL), 16 to 33 (RES) and 19 to 61 (REA). However, a more even distribution was noted among the tactical subdivisions for trustees than for the other participant categories, with mean percentage contributions of 33, 34, 22, and 39 respectively.

"Others"

Generalizations made about the roles of "others" in the meetings are difficult to interpret because this category includes many types of participants; for example, assistant-superintendents, assistant secretary-treasurers, architects, principals, teachers, bus drivers, parents, county councillors, and students were all involved. Nevertheless, in twelve boards, "others" had their highest percentage contribution to all moves in each tactical subdivision in RES moves with a range of 11 to 39 per cent. This high contribution indicated that "others" provide much information upon which meeting decisions

may be based--in fact, in seven boards their RES contribution was 25 per cent or higher.

High percentage contributions of "others" in the STR, SOL and REA subdivisions were not common, but when they did occur, as in Board 9 with 22, 21, and 25 per cent respectively, they represented lengthy discussions, often with an architect.

VI. DISTRIBUTIONS OF SUBDIVISIONS OF THE TACTICAL ASPECT OF MOVES MADE BY EACH SUPERINTENDENT

The mean percentage distribution of all moves made by all superintendents, as shown in Table VIII, revealed that their most common tactical move types were reacting (39 per cent) and responding (31 per cent). More specifically, the highest percentages of all their moves were recorded in the REAE (25 per cent), RESF (20), RESO (11), STRF (9), STRO (8), SOLF (7), and REAS (7) types.

Distributions for each board usually adhered to these means with moderate uniformity. For example, the REAE range was 18 to 41 per cent of all moves, although for twelve boards it was 18 to 29 per cent. For RESF and RESO the respective percentage ranges were 11 to 33, and 5 to 18, and for STRF and SOLF, 3 to 18, and 2 to 14 of all moves.

Some of these variations in the percentage distributions may have been caused by differences in the numbers of moves in the individual task areas, but role expectations both of and for the superintendents, probably also was a factor. For example, the superintendents of district Boards 11 and 12 had 11 per cent and 33 per cent

TABLE VIII
 PERCENTAGE FREQUENCY DISTRIBUTIONS OF TACTICAL SUBDIVISIONS OF ALL MOVES
 MADE BY EACH SUPERINTENDENT

Board	Board type	Percentages of all moves made by each superintendent																				Total frequency					
		STRUCTURING					SOLICITING					RESP.					REACTING						Subdivision totals				
		F	O	OM	P		F	O	M	N		F	O				S	E	O	M	N		STR	SOL	RES	REA	
4	district	18	14	1	1	6	0	3	3	17	6	5	24	0	3	3	36	9	23	35	127						
9	"	11	3	1	1	2	3	2	2	15	12	5	41	2	2	2	14	7	27	49	233						
11	"	7	11	0.5		14	7	0	0	11	5	6	27	2	5	5	18	21	16	45	222						
12	"	6	4	0		4	3	1	1	33	11	6	25	1	1	3	10	9	44	37	281						
5	division	13	8	0		7	3	1	1	11	9	11	29	1	5	3	20	11	20	49	157						
13	"	16	7	0.4		5	2	1	1	27	17	3	18	1	0	1	24	8	45	23	284						
1	county	3	7	0.3		9	5	0.3		23	11	8	23	3	7	1	10	15	34	42	317						
2	"	17	10	0		7	4	1	1	21	10	5	22	1	1	2	26	12	31	31	174						
3	"	8	7	0		4	4	0.4		22	18	10	20	3	4	0	15	7	40	38	256						
6	"	8	6	0		12	2	0		22	5	10	28	1	5	1	14	14	27	45	229						
7	"	10	8	1		5	6	0		28	9	6	20	1	6	1	19	11	37	33	191						
8	"	6	3	0		9	7	2	2	13	14	8	28	3	3	4	8	18	27	46	216						
10	"	10	14	1		10	4	1	1	16	9	7	21	3	3	1	25	14	25	35	355						
Overall		9	8	0.4		7	4	1	1	20	11	7	25	2	3	2	18	12	31	39	3,042						

respectively of all their moves in the RESF classification. Presumably these responses resulted from questions directed to the superintendents, and this three-fold difference seems to indicate a difference in expectations.

This phenomenon was also observed in several other percentages. The superintendent of Board 9 spent only 2 per cent of all his moves in SOLF statements, whereas for the superintendent of Board 11 this proportion was 14 per cent--this variation can be explained by differences in self-perception of the role. Another example is provided in the 3 per cent allocation of moves by the Board 9 superintendent to STRO moves as compared with 14 per cent for the Board 4 superintendent. Although both were locally employed, one expressed his opinions in a structuring way much more frequently than did the other.

VII. DISTRIBUTIONS OF CONTRIBUTIONS OF EACH SUPERINTENDENT TO TACTICAL SUBDIVISIONS OF THE MOVES

Table IX lists the percentage contributions of each superintendent to all subdivisions of the tactical aspect of the verbal moves. These figures indicate the involvement of the superintendent with other participants in these tactical divisions. As such, this method of approach represents another way of examining and describing the role of meeting participants than is represented by that in Table VIII.

As an example, the superintendent of Board 11 had only 7 per cent of all his moves placed in the STRF subdivision (which had a mean of 9 per cent for all superintendents), as compared with his

TABLE IX
 PERCENTAGE FREQUENCY CONTRIBUTIONS OF EACH SUPERINTENDENT TO THE TACTICAL SUBDIVISIONS OF ALL MOVES MADE BY ALL CATEGORIES OF PARTICIPANTS

Board	Board type	Percentage contribution of each superintendent to all moves classified in each subdivision																				Percentage contribution of supt. to all moves					
		STRUCTURING					SOLICITING					RESP.					REACTING						Subdivision totals				
		F	O	OM	P		F	O	M	N		F	O				S	E	O	M	N		STR	SOL	RES	REA	
4	district	40	26	1	5	0	2	15	22	12	17	0	13	6	16	2	16	13	10.0								
9	"	26	8	6	4	4	9	30	14	12	21	8	9	8	14	4	20	17	13.9								
11	"	37	31	4	24	20	0	21	15	14	29	18	30	13	25	16	19	22	20.5								
12	"	17	10	0	4	8	2	33	23	14	18	9	9	13	9	4	30	15	13.6								
5	division	36	19	0	10	7	3	19	23	21	19	7	26	9	21	7	20	18	15.9								
13	"	43	18	3	4	4	4	29	30	10	16	16	0	7	23	4	30	13	15.8								
1	county	13	28	3	9	11	2	25	28	20	17	23	24	5	14	8	26	18	16.3								
2	"	41	31	0	10	11	6	35	33	12	19	11	4	8	24	8	34	15	18.0								
3	"	26	16	0	3	6	2	23	26	24	12	14	19	0	18	3	24	14	13.5								
6	"	18	10	0	10	5	0	24	11	18	13	7	13	4	12	8	20	13	12.7								
7	"	36	12	8	5	11	0	29	20	13	14	8	23	2	16	5	26	13	14.0								
8	"	18	9	0	8	9	16	15	19	13	9	9	11	11	11	8	17	10	10.8								
10	"	25	25	15	12	11	6	25	25	12	11	23	11	6	22	10	25	12	15.2								
Percentage of total		28	18	0	4	7	8	0	3	25	22	15	12	15	7	17	6	24	14	14.3							

contribution of 37 per cent of all STRF moves made in meetings of his board (mean of 28 per cent for all superintendents).

Again, as with percentages in Table VIII, wide variations were noted in the ranges of percentage contributions of nearly all the tactical subdivisions. This indicated different types of superintendent involvement in the meetings, but no obvious differences were apparent among the distributions for provincially appointed and locally appointed superintendents.

In the structuring subdivision, twelve superintendents contributed more to the factual moves than to those involving opinions. Ten superintendents contributed at least 25 per cent of all STRF moves, but only five superintendents contributed this percentage of all STRO moves. Six superintendents made no STRP moves, but the superintendent of Board 10 made 15 per cent of all these moves--however, the frequencies were so low with 15 per cent representing only five moves, that STRP comparisons are of little import.

Although the variation in contributions to all SOLF moves for each board was appreciable being 3 to 24 per cent, after the exclusion of Board 11 in which many of the superintendent's SOLF moves were questions directed towards a principal and an architect, the range was reduced to 3 to 12 per cent. This particular superintendent also contributed the highest superintendent's proportion of all SOLO moves with 20 per cent--removal of this figure left a SOLO range of 0 to 11 per cent.

The percentage contributions to all RESF and RESO moves were 15 to 35, and 11 to 33 respectively, with the superintendents being

equally divided as to which subdivision they contributed the higher percentage.

In the reacting moves, the ranges of the respective percentage contributions of superintendents were 10 to 24 (REAS), 9 to 29 (REAE), 0 to 23 (REAO), 9 to 30 (REAM), and 0 to 13 (REAN). So all superintendents were involved in at least 10 per cent of all supporting reactions, and, with one exception, in at least 7 per cent of all opposing reactions in the meetings of each board. The superintendent of Board 4 made no REAO moves--he was also the only superintendent who made no SOLO moves.

The highest percentage contribution made by any superintendent to all moves was 20.5 for Board 11. This superintendent also contributed the highest percentages of SOLF, SOLO, REAE, and REAM moves of any superintendent. The lowest percentage contribution to all moves, 10.0 per cent, was made by the Board 4 superintendent.

VIII. DISTRIBUTION OF THE RATES OF MOVES

The mean number of moves per minute of total recording time for all boards was 4.79 in the range 3.95 to 6.01, and for per minute of discussion time 5.33 moves per minute in the range 4.48 to 6.92, (Table X). These figures represent the rates at which different moves were made by either the same or a different participant. In Chapter IX the cycle rate and number of moves per cycle are discussed. Use of the discussion time as a base, rather than the total recording time, gave a more typical representation of the mean move rate (5.33 moves

TABLE X

DISTRIBUTION OF THE RATES OF MOVES FOR EACH BOARD

Board	Total number of verbal moves	Length of meeting (minutes)		Number of moves per minute		Proportion of Davies-Brickell System used (range 1 to 5)
		Total	Discussion time	Total	Discussion time	
1	1,950	409	361	4.77	5.40	1
2	969	206	187	4.70	4.70	1
3	1,901	427	375	4.45	5.07	3
4	1,274	305	266	3.95	4.79	5
5	987	240	193	4.11	5.11	4
6	1,810	441	404	4.10	4.48	3
7	1,363	312	291	4.37	4.68	1
8	2,005	371	322	5.40	6.23	2
9	1,675	331	316	5.06	5.30	3
10	2,338	389	338	6.01	6.92	3
11	1,084	227	227	4.78	4.78	2
12	2,064	378	343	5.46	6.02	3
13	1,800	390	357	4.62	5.04	4
Total	21,220	4,426	3,980	4.79	5.33	-

per minute), and allowed comparison with Bellack's mean classroom rate of 5.89 moves per minute. (1:pp.46, 196-198)

The Pearson correlation coefficient between the total move rate and the estimated proportion of use of the Davies-Brickell System practices was -0.894 ; using the discussion move rate, this coefficient was -0.906 . Because both of these coefficients are above that of 0.684 needed for 0.01 significance for a two-tailed test, increased structuring and meeting preparation tended to show a significant association with a lower move rate for these thirteen boards.

IX. SUMMARY OF CHAPTER VI

Some gross general findings were formulated by inspection of percentage distributions based on (1) all moves made by each category of participants, and (2) all moves made within a tactical subdivision.

Chairmen and trustees contributed approximately equally to 62 per cent of all moves recorded, with the remainder approximately equally divided among the superintendents, secretary-treasurers, and "others."

Structuring moves accounted for 15 per cent of all moves, soliciting moves for 27 per cent, responding moves for 19 per cent, and reacting moves for 39 per cent. The three most common tactical subdivisions were REAE moves (24 per cent), SOLF moves (14 per cent), and RESF moves (12 per cent).

Most of the moves made by superintendents, secretary-treasurers, and "others" were (1) reacting, and (2) responding. For chairmen

the order was (1) soliciting and (2) reacting, and for trustees it was (1) reacting and (2) soliciting. By removing the common high involvement in reacting moves, the essential difference lay in the emphasis of chairmen and trustees upon soliciting moves, as compared with the emphasis of superintendents, secretary-treasurers, and "others" upon responding moves. The existence of several categories of participants in this study meant that role differentiation was probably rendered more difficult than it was in Bellack's classroom research.

The majority of all structuring, soliciting, and reacting moves were made by the chairmen and trustees together. Superintendents, "others," and trustees produced most of the responding moves. Each category of participants made percentages of moves in some tactical subdivisions which were considerably higher than their mean contribution to all moves. These were as follows: superintendent, in the STRF, RESF, and RESO subdivisions; secretary-treasurer, STRF and RESF; chairman, STRP and SOLN; trustees, SOLF; and "others," RESF and RESO. These distributions showed the greater involvement of superintendents and secretary-treasurers in fact-stating than opinion-stating in their structuring and responding moves: the reverse was evident for chairmen and trustees.

The percentage contributions of the tactical subdivisions of reacting moves among the categories of participants closely followed the overall mean distribution. This uniformity did not occur for structuring, soliciting, or responding moves.

Considerable consistency occurred in the percentage distributions of some tactical aspects of the moves among boards. However, for superintendents, the ranges in both types of percentage distributions were considerable, indicating different perceptions of the role of the superintendent, both by that officer and other participants.

The only board which used the Davies-Brickell System entirely was distinctive for certain reasons. For example, it had the highest percentages of structuring and soliciting moves, and the lowest percentages of responses and reactions, of all the school boards. Also, its superintendent had the lowest percentage involvement of any superintendent.

For all boards collectively, the mean discussion rate was 5.33 moves per minute. The discussion rate was significantly negatively correlated with the extent of use of practices advocated by the Davies-Brickell System.

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CHAPTER VII

DISTRIBUTIONS OF VERBAL MOVES CLASSIFIED ACCORDING TO ACTION, PURPOSE, AND PROBLEM-POLICY ASPECTS

The previous chapter dealt with the tactical aspect of the verbal moves recorded in school board meetings--this aspect provided a major focus of the study. In this chapter the subsidiary aspects of the moves, that is, their action, purpose, and problem-policy connotations, are examined.

First, the overall distributions of these aspects and their subdivisions are presented. Then the distribution by school jurisdictions is discussed, with emphasis upon the superintendent's role. This is followed by a comparison among board meetings of the involvement of the various categories of participants in these aspects.

I. DISTRIBUTIONS OF ACTION, PURPOSE, AND PROBLEM-POLICY ASPECTS OF MOVES FOR ALL BOARDS

The frequency and percentage frequency distributions of the action, purpose, and problem-policy aspects of the verbal moves for all school boards taken collectively are shown in Table XI. These distributions were compiled from those listed for each board in Table XXIX in Appendix F.

Table XI has three parts. The upper section contains the frequency distributions of the three aspects for each category of participants, the middle section the percentage frequencies of the types

of moves made by each category, and the bottom section the percentage contributions of each category to the moves in each aspect subdivision.

Action Aspect

The percentage distributions of the initiating (INI), intermediate (MOD), and terminating (TER) moves of the superintendents and secretary-treasurers taken collectively were approximately equivalent with percentages of 9:91:1 and 11:88:1 respectively. Chairmen had a similar distribution except that 9 per cent of their moves were terminating--such moves were largely procedural. Trustees and "others" had smaller percentages of initiating moves (3 per cent) than did the other categories of participants.

Examination of the bottom section of Table XI showed that the highest percentage of the moves which initiated a topic (INI) were made by chairmen (45 per cent), with most of the remainder being approximately equally distributed among the superintendents, secretary-treasurers and trustees. "Others" contributed 6 per cent of all initiating moves. The chairman also provided most (85 per cent) of all terminating moves. Trustees supplied more intermediate moves (36 per cent of the total) than did any other category, followed by chairmen with 25 per cent of the total--an approximately equal distribution of the remainder occurred among the other three categories of participants.

The overall distribution of the action aspect of the verbal moves for all participants was 7 per cent initiating, 90 per cent intermediate, and 3 per cent terminating.

Purpose Aspect

For all participants, the purpose aspect distribution, as shown in Table XI, was 89 per cent for goal discussion moves (GOAD), 9 per cent for procedural moves related to goal attainment (GOAP), and 2 per cent for system maintenance moves (SYM). The most noteworthy departures from this mean occurred with (1) superintendents and "others," who were less concerned with procedural matters, and (2) the chairmen, for whom procedural statements constituted 19 per cent of their total number of moves.

Most of the discussion moves were made by the trustees (34 per cent) and chairmen (25 per cent). The other 41 per cent was divided approximately equally among the other three categories of participants. The chairmen and trustees also contributed most of the procedural moves with 60 per cent and 28 per cent, and the system maintenance moves with 24 per cent and 57 per cent respectively.

Problem-Policy Aspect

Overall percentages of 94, 4, 0.3, and 1 were obtained for the problem-solving (PROB), policy formulation (FORM), advocating policy implementation (IMP), and unrelated (NCP) subdivisions respectively of the problem-policy aspects of moves for the meetings of all boards, (Table XI). This distribution tends to confirm the findings of Hastings and Maertz, as reported in Chapter II, that school boards do not operate as policy-making bodies.

Most of the categories of participants conformed to this overall distribution, but the "others" category, as could be

anticipated, had a lower percentage of all their moves (2 per cent) in the FORM subdivision. Superintendents had a higher percentage (6 per cent) of FORM moves than the mean of 4 per cent.

The chairmen and trustees together contributed most of the moves in each problem-policy subdivision with percentage ratios of 28:34 (PROB), 27:37 (FORM), 25:31 (IMP), and 55:26 (NCP) respectively. In the predominant PROB subdivision, the percentage contributions of the superintendents, secretary-treasurers, and "others" were approximately equal, being 14, 12, and 12 respectively. But the superintendent was more involved in the FORM moves, with 20 per cent of the total, than were these other two categories.

Only fifty-five moves of the total of 21,220 were classified as IMP, so analysis of the percentage contributions of each category of participants in this regard would not be meaningful for purposes of comparison. However, greater recourse to existing policy could have been expected if adequate policy formation had occurred previously.

Interpretation of the distribution among categories of participants of moves in the NCP subdivision was not an important part of the study, because it included many types of moves, such as humor, strictly procedural statements, and information reports which required no action.

II. DISTRIBUTIONS OF SUBDIVISIONS OF THE ACTION ASPECT OF MOVES AMONG ALL BOARDS

This section describes the percentage distributions of the INI, MOD, and TER action moves among the meetings of all boards for (1) all participants collectively, and (2) for superintendents individually as listed in Table XII.

All Participants

Of all the moves made at district board meetings, 10.0 per cent were classified as initiating a topic (INI), whereas for divisions and counties combined this mean was 6.3 per cent. These figures indicated that the average number of intermediate verbal moves per topic tended to be higher in the rural jurisdictions. Board 4, which was the only board to use the entire Davies-Brickell System, had the highest percentages of both INI moves (14 per cent) and TER moves (7 per cent).

However, a considerable degree of consistency did exist in the aspect subdivisions among the boards, with the percentage range for INI moves being 5 to 14, for MOD moves 80 to 93, and for TER moves 2 to 7.

Superintendents

A wide variation existed in the percentages of moves made in the INI and MOD subdivisions by the thirteen superintendents. Possibly because of the use of the Davies-Brickell System procedures, the superintendent of Board 4 had by far the highest percentage of moves

TABLE XII

PERCENTAGE FREQUENCY DISTRIBUTIONS OF THE ACTION ASPECT OF MOVES
IN MEETINGS OF EACH OF THIRTEEN BOARDS

Board	Board type	All participants				Superintendents				Total frequency		
		Percentages of all moves made by all participants in meetings of each board in each action subdivision		Percentages of all moves made in each action subdivision by each superintendent		Percentage contribution of each superintendent to all moves made in each action subdivision		Total frequency				
		INI	MOD	TER	Total frequency	INI	MOD		TER			
4	district	14	80	7	1,274	28	72	0	21	9	0	127
9	"	7	90	3	1,675	9	91	0.4	18	14	2	233
11	"	9	88	3	1,084	7	92	1	17	21	6	222
12	"	10	86	4	2,064	2	96	1	3	15	3	281
5	division	6	92	3	987	7	92	1	19	16	4	157
13	"	8	90	3	1,800	15	85	0.4	32	15	2	284
1	county	6	91	3	1,950	6	94	0.3	16	17	2	317
2	"	9	85	6	969	15	83	2	30	18	5	174
3	"	6	92	3	1,901	5	94	1	13	14	4	256
6	"	6	92	2	1,810	4	95	1	9	13	6	229
7	"	5	91	4	1,363	7	93	0	19	14	0	191
8	"	5	93	2	2,005	8	91	0.5	19	11	3	216
10	"	6	91	3	2,338	8	90	2	21	15	13	355
Overall		7	90	3	21,220	9	91	1	17	14	4	3,042

classified INI (28 per cent) as compared with the range of 2 to 15 per cent for the other superintendents. No obvious difference existed in the distributions for the two types of superintendent.

Each superintendent's contribution to all of the INI moves in meetings of each board also showed a wide variation with a range of 3 to 32 per cent. The TER range was also considerable, being 0 to 13 per cent. The MOD percentages varied from 9 per cent, for the superintendent of Board 4, to 21 per cent.

Observation of the meetings produced the impression that the percentages of the INI moves made by superintendents depended largely upon the procedures desired by the chairmen and, to a lesser extent, by the secretary-treasurers and trustees, rather than whether the superintendents were locally or provincially appointed. By arbitrarily exempting the superintendent of Board 12, the mean INI percentages of both types of superintendent were approximately equal, being 19 and 20.

Terminating a discussion was not generally an important activity of superintendents, although 13 per cent of all terminating moves of Board 10 were made by its superintendent.

III. DISTRIBUTIONS OF SUBDIVISIONS OF THE PURPOSE ASPECT OF MOVES AMONG ALL BOARDS

The order of presentation which was used for the action aspect of the verbal moves is followed for the purpose aspect divisions, the data for which appear in Table XIII.

TABLE XIII

PERCENTAGE FREQUENCY DISTRIBUTIONS OF SUBDIVISIONS OF THE PURPOSE ASPECT OF MOVES IN MEETINGS OF EACH BOARD

Board	Board type	All participants				Superintendents				Total frequency		
		Percentages of all moves made by all participants in meetings of each board in each purpose subdivision		Total frequency		Percentages of all moves made in each purpose subdivision by each superintendent		Percentage contribution of each superintendent to all moves made in each purpose subdivision				
		GOAD	GOAP	SYM	Total frequency	GOAD	GOAP	SYM	GOAD		GOAP	SYM
4	district	91	7	1	1,274	96	2	3	12	1	11	127
9	"	92	7	2	1,675	97	1	2	15	2	13	233
11	"	84	12	4	1,084	95	4	1	23	7	6	222
12	"	83	15	2	2,064	98	1	1	16	1	5	281
5	division	91	7	2	987	97	2	1	17	4	11	157
13	"	89	10	1	1,800	95	5	0	17	8	0	284
1	county	91	7	1	1,950	99	0.3	1	18	1	8	317
2	"	84	14	2	969	92	7	1	20	9	11	174
3	"	90	7	3	1,901	99	1	0	15	2	0	256
6	"	95	4	1	1,810	100	0	0.4	13	0	6	229
7	"	90	9	1	1,363	99	1	0	15	1	0	191
8	"	92	7	1	2,005	92	8	0	11	12	0	216
10	"	90	8	1	2,338	95	4	1	16	7	6	355
Overall		89	9	2	21,220	97	3	1	16	4	6	3,042

All Participants

Some differences in the operation of different board meetings were revealed by the percentage distributions of the discussion (GOAD), procedural (GOAP), and system maintenance (SYM) subdivisions of the purpose aspect of the verbal moves. For example, only 4 per cent of all moves in Board 6 meetings were procedural as compared with 15, 14, and 12 per cent for Boards 12, 2, and 11. These figures appear to indicate wide variance in the control exerted by the meeting participants upon discussion.

System maintenance moves, which consisted mainly of statements intended to be humorous, also varied appreciably in distribution, constituting 4 per cent of all moves in the meetings of Board 11, but only 1 per cent of all moves in the meetings of seven other boards.

The distribution for all boards taken collectively was 89 per cent GOAD, 9 per cent GOAP, and 2 per cent SYM.

Superintendents

Although all superintendents were mostly involved in GOAD moves (92 per cent or higher) rather than in GOAP or SYM moves, the variation in the percentages of their moves given to the latter purpose aspect subdivisions indicated that superintendents had different styles of operation in the meetings. For example, the Board 6 superintendent made no procedural moves, whereas 7 per cent of all moves of the Board 2 superintendent were procedural. Also, four superintendents, all provincially appointed, made no moves which could be construed as system maintenance in purpose, but 3 and 2 per cent of

all moves made by the locally appointed superintendents of Boards 4 and 9 were so classified.

Similar variations were noted in the contributions of the superintendents to all the GOAP and SYM moves in the meetings of each board, with respective ranges of 0 to 12 per cent and 0 to 13 per cent. Their contributions to all the GOAD moves displayed more consistency with eleven superintendents in the 11 to 18 per cent range.

IV. DISTRIBUTIONS OF SUBDIVISIONS OF THE PROBLEM-POLICY ASPECT OF MOVES AMONG ALL BOARDS

The percentage distributions of the PROB, FORM, IMP, and NCP subdivisions of the problem-policy aspect discussed in this section are based on the data in Table XIV. Again, the findings for all participants taken collectively are presented first, followed by those for the superintendents taken individually.

All Participants

Although the mean percentage of moves dealing with policy formation for all boards was only 4 per cent of all moves, a wide variation was noted ranging from 0.1 per cent for Board 3 to an isolated 32 per cent for Board 11. The next highest was 8 per cent for Board 12. It was recognized that this extreme discrepancy could have resulted in the problem-policy aspect, as indeed it could have in the other aspects, because of the nature of a particular agenda topic.

TABLE XIV

PERCENTAGE FREQUENCY DISTRIBUTIONS OF SUBDIVISIONS OF THE PROBLEM-POLICY ASPECT OF MOVES IN MEETINGS OF EACH BOARD

Board	Board type	All participants						Superintendents						Total frequency	
		Percentages of all moves made by all participants in meetings of each board in each problem-policy subdivision						Percentages of all moves made in each problem-policy subdivision by each superintendent							
		PROB	FORM	IMP	NCP	Total frequency	PROB	FORM	IMP	NCP	Percentage contribution of each superintendent to all moves made in each problem-policy subdivision				
4	district	93	3	0.2	4	1,274	95	4	0	1	10	15	0	2	127
9	"	100	0.2	0	0.2	1,675	100	0	0	0	14	0	0	0	233
11	"	68	32	0	1	1,084	64	36	0	0	19	23	0	0	222
12	"	91	8	0	1	2,064	96	4	0	0	14	6	0	0	281
5	division	95	4	0.2	1	987	89	8	1	2	15	32	50	50	157
13	"	96	4	0	0.3	1,800	98	2	0	0	16	9	0	0	284
1	county	94	5	0.4	1	1,950	91	9	1	0	16	29	25	0	317
2	"	97	2	0	1	969	94	5	0	1	17	45	0	14	174
3	"	99	0.1	0.2	0.5	1,901	100	0	0	0	14	0	0	0	256
6	"	97	3	0	0.2	1,810	96	4	0	0	13	17	0	0	229
7	"	97	1	1	0.4	1,363	99	1	0	0	14	10	0	0	191
8	"	95	3	0.5	1	2,005	93	6	0.5	0.5	10	18	22	8	216
10	"	97	2	1	1	2,338	95	4	1	0.3	15	36	23	8	355
Overall		94	4	0.3	1	21,220	93	6	0.3	0.3	14	20	15	5	3,042

This did occur for Board 11, as in the limited recording time, the meeting participants attempted to formulate policies related to pupil attendance, religious holidays, and the role of the superintendent. But for all other boards, at least 91 per cent of all moves were classified as problem-solving, showing that most boards in the sample were little concerned with the formation or modification of policy.

No statements advocating implementation of existing policy were made in the meetings of six school boards, and for no board did this subdivision (IMP) exceed 1 per cent of all moves. All boards provided some NCP moves.

Superintendents

The highest percentage of the moves of any superintendent in the FORM subdivision was again in Board 11, reflecting the general emphasis in meetings of that board upon policy formation. Apart from Board 11, the percentages of all moves classified as FORM ranged for superintendents from 0 (for two boards having only 0.2 and 0.1 per cent of all moves classified as FORM) to 9 for Board 1. So most of the moves made by the superintendents of twelve boards, as with other categories of participants, were problem-solving in intent, ranging from 89 to 100 per cent for these boards.

Superintendents were quite uniform in their contributions to the PROB moves, varying from 10 to 19 per cent of all such moves, with ten in the 13 to 17 per cent range. For the eleven meetings in which FORM moves occurred, the superintendents provided from 6 to 45 per

cent of all such moves, and the distribution was far less uniform than was that for the PROB moves.

V. DISTRIBUTIONS OF SUBDIVISIONS OF ACTION, PURPOSE,
AND PROBLEM-POLICY ASPECTS OF MOVES AMONG
CATEGORIES OF PARTICIPANTS IN EACH BOARD

In this section, some general conclusions are presented concerning the distributions of the verbal move aspect subdivisions among the meetings of the different boards. These are based on data in Table XXIX in Appendix F.

Action Aspect

Most of the moves made by each category of participants in each board were classified MOD (intermediate)--this could have been expected. All categories except the chairmen generally had a higher percentage of initiating than terminating moves.

Chairmen provided the highest percentage of all initiating moves in ten boards, the secretary-treasurers in three (all counties), and in one board the trustees had a percentage equal to that of the chairman. In ten boards, trustees ranked first in the percentages of intermediate moves, but for Boards 9, 12, and 13 chairmen provided the highest MOD percentage. This indicated an unexpected and perhaps undesirable dominance by these chairmen, which was possibly at least partly explained by the small mean numbers of trustees, namely 4, 3.5, and 3, present at both meetings.

For all boards, the chairmen supplied the highest percentages of the terminating moves.

Purpose Aspect

Generally, all categories of participants in all boards had percentages of the purpose aspect of their moves in the descending order of discussion (GOAD), procedural (GOAP), and system maintenance (SYM).

Trustees supplied the highest percentage of the GOAD moves in nine boards, but this role was taken by chairmen in Boards 4, 9, 12, and 13. (The chairmen of Boards 9, 12, and 13 also ranked first in the percentage of MOD moves.) The highest percentages of all system maintenance moves were also made by the chairmen of Boards 4, 11, and 13, with trustees ranked first in the other ten boards. Chairmen provided 55 per cent or more of all procedural moves for all boards except Board 8, in which the figure was 43 per cent.

Problem-Policy Aspect

In every board, PROB moves formed the highest percentage of the moves made by each category of participants in the problem-policy aspect. The overall order of the percentages for each category was usually PROB, FORM, NCP, and IMP.

Of all the PROB moves for each board, trustees made the highest percentage in nine boards, but the chairmen ranked first in Boards 4, 9, 12, and 13, (which have been mentioned before because of chairman dominance), and in Board 5.

Chairmen and trustees shared approximately equally the number of times each category of participants provided the highest percentages of both FORM and IMP moves. Again, the chairmen of Boards 4, 9, 12, and 13 were dominant in their respective meetings in the FORM subdivision. The superintendents of Boards 2 and 5, however, provided the highest percentages of the FORM moves in their meetings. Chairmen supplied the highest or equal highest percentage of NCP moves in twelve boards.

VI. SUMMARY OF CHAPTER VII

The most common subdivisions of the action, purpose, and problem-policy aspects of verbal moves for all boards, and for all categories of participants, were the intermediate, goal discussion, and problem-solving types respectively. Initiating, procedural, and policy-formation statements were the second most common subdivisions respectively.

Participation of the superintendents, secretary-treasurers, and "others" in the various move aspect subdivisions was generally subordinate to that of the chairmen and trustees. The only exception was the initiating subdivision, in which superintendents and secretary-treasurers contributed more moves than did the trustees.

Certain consistencies occurred among the boards; for example, the percentage distributions of initiating, intermediate, and terminating moves, and the percentage contributions of superintendents to all problem-solving and goal discussion moves were generally

similar. However, considerable variations in distributions also existed, as exemplified by wide discrepancies in the contributions of superintendents to the terminating, procedural, system maintenance, and policy formulation subdivisions.

The chairmen of three boards, which had small numbers of trustees, consistently produced higher percentages of the subdivisions than did all their trustees combined. In nine other boards trustees were usually predominant.

CHAPTER VIII

DISTRIBUTION OF VERBAL MOVES CLASSIFIED ACCORDING TO TASK AREA

In this chapter, various distributions of the verbal moves classified by task area are reported. These include frequency and percentage frequency distributions by task of all verbal moves made by the various categories of meeting participants, with emphasis upon the superintendent. An inter-board comparison of the categories of participants most involved in each task area is also included.

I. DISTRIBUTIONS OF TASK ASPECT OF ALL MOVES FOR ALL BOARDS

Table XV presents the frequency and percentage frequency distributions of the task aspect of all verbal moves for all school boards taken collectively. This table was compiled from the distributions for each board presented in Table XXX in Appendix G.

The upper section of Table XV shows the total frequencies of verbal moves made by each category of participants in each task area. The middle section of this table, which contains the percentage frequency distributions of moves made in each task area by each category, is re-presented in ranked form in Table XVI. The percentage frequencies of all moves made in each task area by each category of participants are presented in the bottom section of Table XV. The highest ranks of these frequencies for each school board are presented in Table XVII.

TABLE XVI

RANKS AND PERCENTAGE FREQUENCY DISTRIBUTIONS OF NUMBERS OF MOVES MADE BY
 VARIOUS CATEGORIES OF PARTICIPANTS IN ELEVEN TASK AREAS
 FOR ALL BOARDS TAKEN COLLECTIVELY

Rank order of task category	Percentage frequency distributions of moves made by each category of participants for all boards taken collectively										
	Supt.	Sec.-Treas.	Chairman	Trustees	Others	Total					
1	EDS 32	PLA 25	PLA 20	PLA 22	PLA 42	PLA 24					
2	PLA 18	TRA 14	EDS 16	EDS 14	SAL 12	EDS 16					
3	COM 12	EDS 10	SAL 10	TRA 13	TRA 10	COM 10					
4	PUP 9	COM 9	COM 10	COM 12	COM 9	TRA 10					
5	SAL 9	FIN 7	TRA 8	SAL 10	EDS 9	SAL 10					
6	IGR 5	SAL 7	PUP 8	PUP 8	PUP 6	PUP 7					
7	TRA 4	NES 6	IGR 6	NES 6	NES 5	NES 5					
8	CUR 3	IGR 6	NES 6	IGR 5	IGR 3	IGR 5					
9	FIN 2	PUP 5	FIN 5	FIN 3	CUR 2	FIN 4					
10	NES 2	SBI 4	SBI 4	CUR 3	FIN 1	CUR 3					
11	SBI 1	CUR 2	CUR 3	SBI 2	SBI 0	SBI 2					

Tables XV and XVI show that 24 per cent of all moves for the meetings of all boards concerned buildings (PLA), and 16 per cent educational staff (EDS). Community-school relations, transportation, and salary negotiations were the next most common task areas with each occupying 10 per cent.

II. TASK AREA DISTRIBUTION OF ALL MOVES MADE BY EACH CATEGORY OF PARTICIPANTS

The highest percentages of moves made by the secretary-treasurers, chairmen, trustees, and others, were in the building task area with percentages of 25, 20, 22, and 42 respectively. This tended to distinguish their involvement from that of the superintendents who had 32 per cent of their moves in the educational staff area, and 18 per cent in the building area. The chairmen and trustees had educational staff as their second most common task category with 16 per cent and 14 per cent respectively.

Several other general statements can be made from Tables XV and XVI. All categories of participants had approximately equal proportions of their moves in community-school relations (COM, 10 per cent), curriculum (CUR, 3 per cent), inter-governmental relations (IGR, 5 per cent), and salary negotiations (SAL, 10 per cent).

The superintendents had lower percentages of their moves than did the other participants in school finance (FIN, 2 per cent compared with about 5 per cent), non-educational staff (NES, 2 per cent, 6 per cent), school board internal matters (SBI, 1 per cent, 3 per cent), and

transportation (TRA, 4 per cent, 11 per cent). Transportation concerned the secretary-treasurers and trustees more (14 per cent and 13 per cent of all their moves) than it did the superintendents and chairmen (4 per cent and 8 per cent of all their moves). The superintendents, chairmen and trustees had similar percentages (9, 8, 8) for moves dealing with pupils (PUP).

III. DISTRIBUTIONS OF INVOLVEMENT OF CATEGORIES OF PARTICIPANTS IN EACH TASK AREA

The following three main distributions of moves made in each task area by the categories of participants are presented in this section: (1) the percentage distribution for all categories for all boards taken collectively; (2) the top ranks of the ranked distributions for all categories for each board; and (3) the percentage distributions for the superintendents of each board.

All Boards

The bottom section of Table XV deals with the percentage distributions of moves by the different categories of participants within each task area.

The task areas in which the majority of moves for all boards taken collectively were made by the chairmen and trustees were COM (with respective percentages of 26 and 37), CUR (29, 35), IGR (34, 31), NES (31, 40), PUP (30, 34), SAL (29, 34), SBI (42, 30), and TRA (23, 43). Interpretation of these percentages should, however, be associated with the finding reported in Chapter VII that 19 per

cent of all moves made by the chairmen were procedural, as compared with respective percentages of only 3, 6, and 8 for the superintendents, secretary-treasurers and trustees.

The only task area in which the percentage of moves made by the superintendents closely approached those of the chairmen and trustees was educational staff, which contained respective percentages of 28, 29, and 29. The next most common participation of superintendents was in the CUR (18 per cent), PUP (18 per cent), COM (17 per cent), IGR (15 per cent), SAL (13 per cent), PLA (11 per cent), and FIN (10 per cent) task areas.

In the finance task area, the secretary-treasurers contributed 23 per cent of all the moves, a figure approximately equal to that of the trustees (26 per cent), but less than that of the chairmen (38 per cent). Even after adjusting for procedural moves, the chairmen would still have made approximately 31 per cent of all finance moves. The next highest participation of secretary-treasurers was in the SBI (20 per cent of all SBI moves), TRA (16 per cent), NES (14 per cent), IGR (13 per cent), and PLA (13 per cent) task areas.

Persons other than the regular meeting participants ("others") were most involved in buildings, contributing 21 per cent of all moves in this task area. This mainly reflects discussions held with architects during meetings. "Others" were also appreciably concerned with the SAL (15 per cent of all SAL moves), TRA (12 per cent), and COM, NES, and PUP (each 10 per cent) task areas.

Comparison among Boards

Table XVII, page 105, compares the ranks of the percentages of moves made in each task area by each category of participants in the meetings of each board. For simplicity and meaningfulness of presentation, the three following procedures were adopted. (1) Only the ranks of the highest contributing percentages were included: for example, for Board 4 in the EDS task area, ranks of 1 and 2 were given to percentages 42 and 33--the next highest percentage of 13 was excluded. (2) Whole number ranks were used so that equal first rank was represented by 1 rather than by 1.5. (3) Only those task categories containing at least twenty-five moves per board were included--a blank entry opposite a board number and under a task area in Table XVII (for example, Board 11--COM) indicates a total number of moves of less than twenty-five. This figure was chosen arbitrarily to reduce distortion which may have arisen from analysis of limited discussion in a task area.

The following general conclusions were drawn.

1. Whereas the chairmen were commonly ranked first in the districts (twenty-one first ranks compared with seven for trustees), the trustees were dominant in the counties (thirty-seven first ranks compared with thirteen for chairmen). For the two divisions the first ranks were nine for chairmen and five for trustees. The dominance of chairmen and trustees taken as a group was noted especially in the COM, IGR, NES, PUP, and SAL task areas, and to a lesser extent in the CUR, FIN, PLA, and SBI task areas.

2. The county and division superintendents were generally ranked 1 or 2 in the EDS task area, but the locally appointed district superintendents were less prominent. Only in the CUR, EDS, PUP, and SAL task areas were provincially appointed superintendents prominent in the number of verbal moves, and this was not common throughout all jurisdictions. The locally appointed district superintendents were not prominent in any particular task area.

3. The district secretary-treasurers only ranked highly in the finance task area, and then for only two of the four boards.

4. "Others" were only uniformly prominent in the buildings task area with seven ranks of either 1 or 2.

5. With the exception of the trends mentioned above, a considerable degree of variation existed in the ranks.

Superintendents

Table XVIII compares the percentages of verbal moves made by all the superintendents in the various task areas. Because only a few moves were made in some task areas in the meetings of certain boards, complete comparisons could not be made.

The percentage involvement of all superintendents was approximately uniform in the COM and EDS task areas, in which the superintendents supplied means of 17 and 28 per cent of all moves--the superintendent of Board 4 was an exception. Considerable variations existed in the extent of participation of superintendents in CUR (range, 7 to 39 per cent of all CUR moves), FIN (0 to 22), IGR (3 to

TABLE XVIII

PERCENTAGE FREQUENCY DISTRIBUTIONS OF SUPERINTENDENTS' PROPORTIONS
OF ALL MOVES IN EACH TASK AREA*

Board	Board type	Superintendent's Percentage of All Moves Made in Each Task Area										
		COM	CUR	EDS	FIN	IGR	NES	PLA	PUP	SAL	SBI	TRA
4	district	8		13	13	15	4	15	3			2
9	"	17	15	38	12			20	43	6		
11	"		9	23	10	13		27	24	16		
12	"	24		22	22	22	18	7	13		2	18
5	division			34	5	4	2	16	30			4
13	"	15		38	0	20	0	4	22		2	9
1	county	16		32			2	9	31	27	8	9
2	"			37			13	19	20	9	11	0
3	"	20	14	22	14		1	1	19	29		0.4
6	"	19		29		3	6	8				2
7	"	15	7	28		18	0	10	7	5		3
8	"		39	24		7	0	7	4	10		5
10	"	15	24	32	2	18	6	13	14	4		

*A percentage is entered in this table only if at least twenty-five verbal moves were made in the task area at meetings of the particular board; a lesser number of moves is indicated by a blank.

22), NES (0 to 18), PLA (1 to 27), PUP (3 to 43), SAL (4 to 29), SBI (2 to 11), and TRA (0 to 18) task areas.

Because the sample was restricted in size, meaningful comparisons could not be made among superintendents of the districts, divisions, and counties. However, some differences were indicated. For example, in discussion of buildings, the locally appointed superintendents were more involved (mean of 17 per cent) than were those provincially appointed (mean of 10 per cent).

IV. RELATIONSHIPS BETWEEN THE FINDINGS AND STATEMENTS IN THE LITERATURE

Certain opinions and research findings relevant to the above results are included in Chapter II. The statements by Andrews and Tuttle that matters of business detail restrict school boards from considering educational problems, are supported by the percentage distributions of moves in the various task areas. Although moves in the two most common task areas, buildings (24 per cent) and educational staff (16 per cent), could be perceived as relevant to school programs, actual moves were assessed as being generally more in the nature of "housekeeping" than of planning. Moves directly related to the school program (CUR) comprised only 3 per cent of all meeting moves.

A close similarity exists between some of the percentage distributions of decisions in various task areas recorded by Maertz and the distributions noted above. Maertz recorded that 21 per cent of all decisions were related to buildings (as compared with 24 per cent

of all moves in this study), 19 per cent to staff (21 per cent), 9 per cent to transportation (10 per cent), 8 per cent to pupils (7 per cent), and 2.5 per cent to program (3 per cent). The other 40 per cent of the decisions classified by Maertz were in "school board" and "business management and accounting" areas which were not used in this study. Nevertheless, the close similarities which were obtained do suggest, in view of the comprehensive analysis performed by Maertz on the decisions of sixteen school boards over one year, that the task area distribution obtained in this study is probably representative of that pertaining throughout the year.

It is more difficult to interpret Finlay's findings concerning trustees' expectations for provincially appointed superintendents in the light of the distributions of moves. Of the seven task areas presented to them by Finlay, the trustees expected the superintendents to be mostly involved in (1) instruction, (2) staff personnel management and selection, and (3) pupil personnel. But for the two divisional and seven county boards, the overall percentages of moves made in the staff and pupil task areas were 17.3 and 6.6 respectively. These figures possibly reflect a desire of trustees to discuss these matters to some extent even though they may feel or state that they are the concern of full-time educators. It was observed, however, that occasionally the superintendents wanted the trustees to discuss topics in these two task areas.

Some consistency was noted between Finlay's results and the percentage involvement of the superintendents in discussing the three

task areas of curriculum, educational staff, and pupils. These three areas were those in which the trustees expected the superintendents to be most active--the respective overall move percentages of 18, 28, and 18 in these task areas were the highest obtained by the superintendents.

V. SUMMARY OF CHAPTER VIII

Of all the recorded verbal moves, 40 per cent involved buildings and educational staff, and another 30 per cent the community, transportation, and salaries. The remaining 30 per cent was related to task areas classified as curriculum, finance, inter-governmental relations, non-educational staff, pupils, school board internal, other educational matters, and non-educational matters.

The superintendents had the highest percentage of their moves in the educational staff area, but all other categories of participants were mostly concerned with buildings.

The chairmen and trustees provided the majority of moves in all task areas. Superintendents were considerably involved in educational staff discussions, secretary-treasurers in finance and school board internal matters, and "others" with school plant and salary negotiations. In most of the task areas, the chairmen of districts and divisions supplied more moves than did the trustees--the reverse applied in counties.

The percentages of involvement of superintendents in discussion of both community and educational staff tasks were approximately uniform, but the rank order of their involvement in educational staff

discussion, as determined among the categories of participants, was higher for provincially appointed superintendents than for those locally appointed.

Claims that school boards are overly concerned with business matters were supported by the data and observations. School boards did discuss in detail the task areas of educational staff and pupil personnel which trustees stated are mostly the concern of educators. Nevertheless, superintendents were most active in discussion in those areas in which trustees expected them to be most involved.

CHAPTER IX

DISTRIBUTION OF TYPES OF VERBAL CYCLES

This chapter contains examples of the various types of verbal cycles identified in the transcripts. Comparisons of the percentage distributions of types of cycles between different meetings of each board, and comparisons among the overall distributions for all thirteen boards, are provided.

Also included are the overall percentage distributions of types of cycles for all boards and their overall cycle rate. These two findings are compared with those obtained by Bellack.

Examples of Types of Cycles

The procedures used by Bellack in coding verbal cycles were generally followed, but the formal aspect of the meetings required some changes. For example, whereas Bellack permitted only one STR move per cycle, it was deemed suitable to allow both an initiating STRP move (procedural), and a STRF, STRO, or STROM move which followed immediately, to be placed in the same cycle. This is demonstrated in the following excerpt, which also shows how a SOL move can begin a new cycle.

CYCLE 1	C	STRP	"Business from minutes."
	T8	STRO	"Yes. Broadcasting the change of schedules at 7 a.m. is not early enough for the bus drivers."
	C	SOLO	"Not soon enough?"
	T8	RESO	"No--the bus drivers leave at 6:45 a.m."
	S	REAE	"Could be at 6 a.m.--the broadcast."
	T8	REAE	"Then 6:30 and every half-hour."
	S	REAE	"If it was really severe weather we'd be broadcasting the day before."

CYCLE 2 T8 SOLO "Could we put this in the minutes for future policy?"

Some cycles appeared to be incomplete because of non-verbal behavior. For example, the SOLN move, "Will we move to the agenda?" could have received a response of head-nodding or silent acquiescence. Other SOLN moves, such as giving people permission to speak, were, following Bellack's convention, ignored for coding the cycles, so no acknowledging SOLN could start a cycle. (1:p.260)

The following cycle demonstrates how a reaction rather than a response can follow a solicitation, as well as showing how a structuring move can differ from a reacting move and so begin a new cycle.

CYCLE 1 S SOLF "Is that what they have done here?"
C REAE "This was, if you'll pardon the expression, on our part, an exercise in frustration. And, I think that possibly we could benefit somewhat by our sad experiences of the past when we start the thing again."

CYCLE 2 ST STRO "Well, actually we should write back and get more details in what they want to do in each of the four or five categories, because"

One problem in coding was that of identification of augmented cycles which contain (1) repetition, or (2) imperative solicitation, or (3) clarifying solicitation. (1:p.206) An augmented cycle, such as the following, was coded as one cycle, and not as the separate sub-cycles, because of similar content and purposes of the moves.

T3 SOLF "How does the motion read _____?"
ST RESF "'Any school committee member wishing to attend be a delegate to the Zone Annual Meeting.'"
T3 SOLF "Any school . . .?")
ST RESF ". . . committee member.") augmenting section
T3 REAN "I got it wrong.")

ST SOLF "Pardon?")
 T3 RESF "I said I got it wrong the first) augmenting section
 time. That's O.K. then.")

Comparison between Percentage Distributions of Types of Cycles in
 Different Meetings of Each Board

In order to assess whether the verbal patterns were consistent between different meetings of each board, the percentage distributions of types of cycles for different meetings of each of eleven boards were compared.

In Table XIX, which shows these distributions, the numbers 1 to 21 correspond to Bellack's cycle types. (1:p.195) Cycles 22, 23, and 24, which are SOL REA.. RES.., SOL REA RES REA, and SOL RES.. REA.., were not encountered by Bellack. A visual examination of the pairs of percentage distributions for each type of cycle (the method used by Bellack) showed that general similarities existed between both meetings for each board. Although differences in percentages such as 39.3 and 22.8 for Board 3 in Cycle Type 14 occurred, these figures still represented the largest percentage in each distribution. Considerable differences in lesser percentages such as 1.4 and 6.8 (Board 7, Cycle Type 5), and 6.9 and 2.2 (Board 1, Cycle Type 1) were not common.

Spearman's coefficient of ranked correlation was used to examine these distributions further. The coefficients for the eleven boards in Table XIX were respectively 0.93, 0.95, 0.96, 0.92, 0.88, 0.89, 0.94, 0.94, 0.94, 0.94, 0.90, and 0.94, all above the coefficient of 0.51 needed for 0.01 significance. Therefore, the rank order of

TABLE XIX
 PERCENTAGE FREQUENCY DISTRIBUTIONS OF TYPES OF CYCLE FOR THE TWO MEETINGS RECORDED FOR EACH OF ELEVEN BOARDS

No.	TYPE OF CYCLE Pattern	BOARD 1		BOARD 3		BOARD 4		BOARD 6		BOARD 7		BOARD 8		BOARD 9		BOARD 10		BOARD 11		BOARD 12		BOARD 13	
		%1	%2	%1	%2	%1	%2	%1	%2	%1	%2	%1	%2	%1	%2	%1	%2	%1	%2	%1	%2	%1	%2
1	STR	6.9	2.2	2.2	5.9	9.9	9.3	3.8	8.5	6.8	4.9	6.6	1.5	3.6	5.9	6.8	5.9	6.1	5.6	2.3	12.6	4.9	7.7
2	STR SOL	6.3	3.4	3.7	5.9	10.9	12.9	3.8	2.0	8.2	3.4	1.6	1.5	5.2	4.4	4.8	7.0	5.3	2.6	4.3	12.1	4.9	5.4
3	STR REA	3.4	2.8	2.8	7.4	8.2	7.1	9.2	10.0	8.2	7.3	4.4	5.0	7.3	6.8	9.3	9.8	7.6	7.3	5.3	4.8	6.1	7.2
4	STR REA REA..	9.2	8.9	9.0	8.3	5.1	6.2	14.8	16.4	12.3	12.8	12.3	6.5	7.3	13.6	16.1	26.6	6.1	14.1	8.8	7.2	7.5	5.0
5	STR SOL RES	3.7	4.0	5.1	5.6	3.8	3.2	5.6	2.5	1.4	6.8	3.5	1.1	7.3	4.1	4.4	7.4	3.0	6.8	6.0	5.8	7.9	12.2
6	STR SOL RES RES..																						
7	STR SOL REA	0.3	0.9	0.8	1.2	0.7	0.4	0.8	0.5	0.4	0.4	0.3		2.1	0.3	0.6	0.4	0.8	1.7	1.0	1.0	0.4	1.8
8	STR SOL REA REA..	1.4	1.2		0.3	1.4	1.8	0.8	2.0	2.7	0.6	0.3	0.8	1.0	1.2	0.4	0.4	0.8	0.9	0.2	1.0	0.4	1.4
9	STR SOL RES REA	0.9	1.8	2.0	1.2	1.4	1.8	2.3	0.5	1.4	1.7	1.3	1.5	2.1	1.2	2.5	1.2	3.0	1.7	1.2	2.4	2.6	1.8
10	STR SOL RES REA REA..	2.0	0.9	0.8	2.5	0.3	0.4	3.8	6.0	4.1	2.1	4.1	3.8	2.1	3.0	1.9	3.1	4.5	1.3	1.5	2.4	2.2	3.6
11	STR SOL RES REA RES..																						
12	STR SOL RES REA RES.. REA..																						
13	SOL	12.1	7.4	9.0	13.0	23.2	23.1	8.2	5.0	8.2	15.2	12.0	12.6	14.6	9.2	11.4	5.1	11.4	9.8	17.4	19.3	14.8	10.0
14	SOL RES	30.3	32.6	39.3	22.8	14.7	16.4	22.5	20.4	30.1	23.9	22.7	22.2	17.2	18.9	19.3	12.9	27.3	17.9	26.8	17.4	30.6	26.7
15	SOL RES RES..	0.3	0.6	0.3	0.3	0.3		0.5		1.4	0.9	0.6	0.4	0.5	1.8	0.4							
16	SOL REA	3.4	3.7	1.7	1.5	3.1	5.8	3.8	2.5	2.7	3.6	3.2	1.9	3.6	3.3	1.4	1.6	2.3	2.1	2.8	1.9	1.2	1.8
17	SOL REA REA..	1.7	3.7	3.1	3.1	2.7	1.8	2.3	3.0	1.5	0.6	4.2	3.1	1.8	3.1	3.1	2.0	2.3	6.8	2.3	1.4	0.8	0.5
18	SOL RES REA	9.5	9.2	6.5	8.3	6.5	4.4	8.2	8.0	8.2	6.6	7.3	8.8	6.8	8.9	5.8	5.5	8.3	7.7	10.4	4.8	7.5	6.8
19	SOL RES REA REA..	7.8	16.0	13.2	12.7	6.8	4.4	9.0	11.4	4.1	7.5	18.0	26.4	15.6	14.2	9.5	9.8	11.4	13.7	9.0	5.8	8.1	7.2
20	SOL RES REA RES..	0.3													0.3								
21	SOL RES REA RES.. REA..																						
22	SOL REA.. RES..	0.3	0.3	0.3	0.3	0.3	0.9	0.5		0.6										0.2			
23	SOL REA RES REA							0.3		0.4	0.3									0.2			
24	SOL RES.. REA..	0.3	0.3	0.3		0.7		0.3	1.0	0.2	0.3	1.5	0.5	0.3	0.3	1.4	0.8			0.2		0.2	0.5
No. of cycles per meeting		347	325	356	324	293	225	391	201	73	468	317	261	192	338	517	256	132	234	599	207	494	221

cycle types was significantly similar between different meetings of each board and indicated a consistency in the patterns of verbal interaction.

Comparison among Percentage Distributions of Types of Cycles
for All Thirteen Boards

Table XX shows the percentage distributions of types of cycles for all meetings of the thirteen school boards. The percentage distributions for three-quarters of the types of cycles, namely, 1, 3, 5, 6, 7, 8, 9, 11, 12 (nil), 15, 16, 17, 18, 20, 21 (nil), 22, 23, and 24, were approximately equivalent among the boards. Considerable differences were noted in the percentage distributions for Cycle Types 2 (range 1.6 to 11.8), 4 (5.6 to 16.6), 10 (0.4 to 4.6), 13 (7.1 to 23.2), 14 (15.4 to 31.5), and 19 (7.0 to 21.8).

The ranked distributions of types of cycles for all boards were intercorrelated using Spearman coefficients. Table XXI shows that each pair of distributions produced a coefficient above that of 0.51 needed for 0.01 significance, as the lowest coefficient obtained was 0.70 and the mean of all coefficients was 0.91. That is, the ranked distributions of types of cycles for meetings of the different boards were highly similar.

For boards 1, 2, 3, 5, 6, 7, 8, 9, 11, 12, and 13, the most common type of cycle was SOL RES. For board 4, the only board which used the Davies-Brickell System, the most common type of cycle was SOL, and for board 10, STR REA REA... The second most common type for boards 4 and 10 was SOL RES. Taken overall, the four most common

TABLE XX
 PERCENTAGE FREQUENCY DISTRIBUTIONS AND MEANS OF TYPES OF CYCLES FOR ALL MEETINGS

No.	TYPE OF CYCLE Pattern	Board 1	Board 2	Board 3	Board 4	Board 5	Board 6	Board 7	Board 8	Board 9	Board 10	Board 11	Board 12	Board 13	Mean	Classroom Mean (Bellack)
1	STR	4.6	5.3	4.0	9.7	3.6	5.4	5.2	4.3	5.1	6.5	5.7	5.0	5.7	5.4	1.9
2	STR SOL	4.9	9.1	4.7	11.8	6.8	3.2	4.1	1.6	4.7	5.6	3.6	6.3	5.0	5.5	1.8
3	STR REA	3.1	9.1	4.9	7.7	4.7	9.5	7.3	4.7	7.0	9.4	7.4	5.2	6.4	6.6	1.4
4	STR REA REA..	9.1	12.6	8.7	5.6	16.6	15.4	12.8	9.7	11.3	19.5	11.2	8.4	6.7	11.4	0.8
5	STR SOL RES	3.9	6.2	5.3	3.5	2.7	4.6	6.1	2.4	5.3	5.4	5.5	6.0	9.2	5.1	3.2
6	STR SOL RES RES..									0.4	0.3			0.1	0.1	0.1
7	STR SOL REA	0.6	2.3	1.0	0.6	0.6	0.7	0.4	0.2	0.9	0.8	1.4	1.0	0.8	0.9	0.3
8	STR SOL REA REA..	1.3	1.2	0.1	1.5	0.6	1.2	0.9	0.5	1.1	0.4	0.8	0.4	0.7	0.8	0.1
9	STR SOL RES REA	1.3	2.6	1.6	1.5	2.4	1.7	1.7	1.4	1.5	2.1	2.2	1.5	2.4	1.8	5.9
10	STR SOL RES REA REA..	1.5	2.3	1.6	0.4	3.9	4.6	2.4	4.0	2.6	2.3	2.5	1.7	2.7	2.5	0.8
11	STR SOL RES REA RES..									0.2	0.1				0.02	0.4
12	STR SOL RES REA RES.. REA..														0.00	1.9
13	SOL	9.8	11.7	10.9	23.2	15.4	7.1	14.2	12.3	11.1	9.3	10.4	17.9	13.3	12.8	9.9
14	SOL RES	31.4	16.7	31.5	15.4	19.3	21.8	24.8	22.5	18.3	17.2	21.3	24.4	29.4	22.6	22.9
15	SOL RES RES..	0.4	0.3	0.3	0.2		0.3	0.9	0.5	1.3	0.3				0.4	0.8
16	SOL REA	3.6	2.1	1.6	4.2	3.6	3.4	3.5	2.6	3.4	1.4	2.2	2.6	1.4	2.7	1.5
17	SOL REA REA..	2.7	2.6	3.1	2.3	3.6	2.5	1.3	2.2	2.3	2.7	5.2	2.1	0.7	2.6	0.5
18	SOL RES REA	9.4	6.7	7.4	5.6	6.8	8.1	6.8	8.0	8.1	5.7	7.9	8.9	7.3	7.4	26.7
19	SOL RES REA REA..	11.8	8.5	12.8	5.8	8.9	9.8	7.0	21.8	14.7	9.6	12.8	8.2	7.8	10.7	9.2
20	SOL RES REA RES..	0.1								0.2					0.02	2.5
21	SOL RES REA RES.. REA..														0.00	7.1
22	SOL REA.. RES..	0.1	0.3	0.1	0.6	0.3	0.2		0.3				0.1		0.2	0.0
23	SOL REA RES REA					0.3	0.2	0.4	0.2		0.3		0.1	0.1	0.1	0.0
24	SOL RES.. REA..	0.3	0.3	0.1	0.4		0.5	0.2	0.9	0.4	1.2		0.1	0.1	0.4	0.0
Total number of cycles		672	341	680	518	337	592	541	578	530	773	366	806	715	7,449	4,478

TABLE XXI
 SPEARMAN INTERCORRELATION MATRIX OF RANKS OF FREQUENCIES OF OCCURRENCE
 OF TWENTY-TWO TYPES OF CYCLES

Board	1	2	3	4	5	6	7	8	9	10	11	12	13
1	1.00	0.93	0.97	0.92	0.83	0.94	0.94	0.94	0.96	0.92	0.95	0.96	0.92
2		1.00	0.96	0.93	0.81	0.93	0.94	0.89	0.93	0.95	0.95	0.95	0.91
3			1.00	0.90	0.84	0.95	0.95	0.94	0.97	0.94	0.97	0.96	0.93
4				1.00	0.74	0.86	0.89	0.86	0.87	0.87	0.88	0.92	0.85
5					1.00	0.81	0.86	0.82	0.85	0.77	0.78	0.77	0.70
6						1.00	0.97	0.97	0.96	0.96	0.96	0.94	0.92
7							1.00	0.95	0.97	0.95	0.95	0.94	0.94
8								1.00	0.94	0.93	0.94	0.92	0.89
9									1.00	0.95	0.96	0.93	0.93
10										1.00	0.96	0.93	0.92
11											1.00	0.96	0.94
12												1.00	0.95
13													1.00

The 0.01 significance level for a one-tailed test is 0.51.

types were (14) SOL RES, with 22.6 per cent, (13) SOL, 12.8 per cent, (4) STR REA REA.., 11.4 per cent, and (19) SOL RES REA REA.., 10.7 per cent. These four types taken together with (18) SOL RES REA, 7.6 per cent, (3) STR REA, 6.6 per cent, (2) STR SOL, 5.5 per cent, (1) STR, 5.4 per cent, and (5) STR SOL RES, 5.1 per cent, accounted for 87.6 per cent of the total number of cycles.

Comparison of the Distributions of Types of Cycles for Board Meetings and Classrooms

The percentage distributions of types of cycles for the school board meetings and for Bellack's classroom research are shown in Table XX, page 121. Certain similarities are apparent. For example, Cycle Types 17, 19, and 24, which are initiated by a SOL move and ended by multiple REA moves (REA..), showed little distribution difference, with 13.7 per cent for the meeting and 16.8 per cent for the classroom. Also, Cycle Type 14, SOL RES, occupied 22.6 per cent and 22.9 per cent of the total number of cycles for the meetings and classrooms respectively, and was in both cases the most common cycle type. However, some obvious differences occurred. Cycle Types 4, 8, and 10, which begin with a STR move and end with multiple REA moves (REA..), were considerably more frequent in the meeting (14.7 per cent) than in the classroom (2.6 per cent).

Another difference between the meeting and classroom percentage distributions occurred in Cycle Types 12 and 21, which are STR SOL RES REA RES.. REA.. and SOL RES REA RES.. REA... Whereas neither of these types of cycles was identified in the meetings, Bellack obtained

frequencies of 1.9 per cent and 7.1 per cent respectively. This discrepancy probably reflects a difference in coding approaches rather than in the manner of interaction. It indicates the difficulty in assessing whether the third move after a question, and immediately following a reaction, is a response to that question or rather an additional reaction prompted by the prior reaction.

When ranked, the percentage distributions produced a Spearman correlation coefficient of 0.477 which was below that of 0.485 needed for 0.01 significance, but above the 0.05 significance figure of 0.343. This result was assumed to show, within the limits imposed by the classification scheme upon the statements, that a high degree of consistency occurred in the verbal interaction present in both the school board meeting and classroom situations.

A further comparison of the cycle distributions was obtained by grouping similar types of cycles in Table XXII. The two most common classroom groups of cycles were, (1) Group 8, having cycles commencing with SOL RES and followed by REA \pm RES moves (45.5 per cent), and (2) Group 6 containing SOL RES and SOL RES RES.. cycles (23.7 per cent). In the school board meetings, the three most common groups were again Groups 6 and 8 with 23.0 per cent and 18.5 per cent respectively, and Group 3, having STR REA and STR REA REA.. cycles, with 18.0 per cent.

These distributions reveal the greater emphasis in the classroom upon the "SOL RES \pm subsequent moves" group of cycles. This grouping was also important in the board meeting, but there a higher percentage

TABLE XXII
 PERCENTAGE FREQUENCY DISTRIBUTIONS OF GROUPS
 OF SIMILAR CYCLES

Group	TYPE OF CYCLE		Percentage distributions for all school boards	Percentage distributions for classrooms (Bellack)
	No.	Pattern		
1	1	STR	5.4	1.9
2	2	STR SOL	5.5	1.8
3	3	STR REA	18.0	2.2
	4	STR REA REA..		
4	5	STR SOL RES	11.2	12.7
	6	STR SOL RES RES..		
	7	STR SOL REA		
	8	STR SOL REA REA..		
	9	STR SOL RES REA		
	10	STR SOL RES REA REA..		
	11	STR SOL RES REA RES..		
12	STR SOL RES REA RES.. REA..			
5	13	SOL	12.8	9.9
6	14	SOL RES	23.0	23.7
	15	SOL RES RES..		
7	16	SOL REA	5.6	2.0
	17	SOL REA REA..		
	22	SOL REA.. RES..		
	23	SOL REA RES REA		
8	18	SOL RES REA	18.5	45.5
	19	SOL RES REA REA..		
	20	SOL RES REA RES..		
	21	SOL RES REA RES.. REA..		
	24	SOL RES.. REA..		

of cycles initiated by a STR move occurred, indicating both a more formal nature and more frequent expression of personal structuring opinions.

The slightly higher percentages of SOL cycles in the meetings than the classrooms (12.8 as compared with 9.9) reflects the involvement with procedural questions. In Cycle Group 7, which consists of cycles commencing with a SOL REA sequence, the boards recorded 5.6 per cent and classrooms 2.0 per cent, indicating that direct responses to solicitations, rather than reactions, occurred more commonly in the classrooms than in the meetings.

The Spearman correlation coefficient for the rankings of percentage frequencies of the groups of cycles shown in Table XXII was 0.857, which, also being above that of 0.833 needed for 0.01 significance, supports the contention that a similarity in verbal interaction existed in the two situations.

Cycle Rate

The mean rate at which cycles occurred was calculated for all boards for both the total recording time and the total discussion time, (Table XXIII). The range for the total recording time was 1.34 to 2.13 cycles per minute, with eight boards being in the range 1.56 to 1.73. An overall mean of 1.68 cycles per minute of total recording time was obtained.

By omitting the formal presentations, the overall mean was 1.87 cycles per minute of discussion, and the range 1.47 to 2.35. Bellack obtained a mean of 1.8 cycles per minute of classroom time with a range

TABLE XXIII

MEAN CYCLE RATE FOR TOTAL RECORDING TIME AND TOTAL
DISCUSSION TIME FOR ALL BOARDS

Board	Total number of cycles	Total recording time (minutes)	Total discussion time (minutes)	Average number of cycles per minute of total recording	Average number of cycles per minute of discussion
1	672	409	361	1.64	1.86
2	341	206	187	1.66	1.82
3	680	427	375	1.59	1.81
4	518	305	266	1.67	1.95
5	337	240	193	1.40	1.75
6	592	441	404	1.34	1.47
7	541	312	291	1.73	1.86
8	578	371	322	1.56	1.80
9	530	331	316	1.60	1.68
10	773	389	338	1.99	2.29
11	366	227	227	1.61	1.61
12	806	378	343	2.13	2.35
13	715	390	357	1.83	2.00
Total	7,449	4,426	3,980	1.68	1.87

of 0.9 to 3.0. (1:p.218) The cycle rate among the boards was therefore more consistent than was the cycle rate among the classrooms.

When the mean number of cycles per minute of total recording time was correlated against the estimated extent of use of the Davies-Brickell System, a Pearson coefficient of 0.907 was obtained. The coefficient for the mean number of cycles per minute of discussion time with this extent measure was 0.915. These figures were above the coefficient of 0.684 needed for 0.01 significance for a two-tailed test. In other words, in meetings which were more structured and for which more preparatory material was made available, cycles tended to be of shorter duration than they were in less structured meetings.

Mean Number of Moves per Cycle

For all boards, the mean number of moves per cycle varied from 2.52 to 3.47, (Table XXIV). The total of 21,220 moves was contained in 7,449 cycles, giving a mean of 2.85 moves per cycle. Bellack obtained a classroom mean of 3.36 moves per cycle from 15,023 moves and 4,478 cycles. (1:pp.46-48,196) Therefore, the mean meeting cycle contained slightly fewer moves than did the mean classroom cycle, but both situations approximated three moves per cycle.

The Pearson correlation coefficient between the mean number of moves per cycle and the estimated extent of use of the Davies-Brickell System was -0.898, which is above the coefficient of 0.684 required for 0.01 significance for a two-tailed test. Therefore, for this sample of boards, increased meeting structure and preparation tended to be associated with cycles containing fewer moves. Increased

TABLE XXIV
 DISTRIBUTION OF THE MEAN NUMBERS OF MOVES PER CYCLE FOR EACH SCHOOL BOARD

Board	Total number of moves	Total number of cycles	Mean number of moves per cycle	Proportion of Davies-Brickell System used (range 1 to 5)
1	1,950	672	2.90	1
2	969	341	2.84	1
3	1,901	680	2.80	3
4	1,274	518	2.46	5
5	987	337	2.93	4
6	1,810	592	3.06	3
7	1,363	541	2.52	1
8	2,005	578	3.47	2
9	1,675	530	3.16	3
10	2,338	773	3.03	3
11	1,084	366	2.96	2
12	2,064	806	2.56	3
13	1,800	715	2.52	4
Total	21,220	7,449	2.848	-

preparation could possibly have resulted in fewer multiple reacting moves and a consequent increase in the initiating moves.

Summary of Chapter IX

The criteria used to identify cycles in the protocols closely followed those of Bellack, but the formal nature of the meetings required some modifications, such as allowing two structuring moves in one cycle.

By using Spearman correlation coefficients, significant similarities in the ranked distributions of types of cycles were obtained at the 0.01 level, both between different meetings of each board and among the total meetings of all boards.

When the ranked cycle distributions for all meetings and all classrooms were compared, agreement above the 0.01 significance level was obtained. The most common cycle in both cases was SOL RES. Grouping of the cycles by similar types produced agreement between ranks below the 0.01 level. The most marked differences between the two situations was in the more common occurrence in the meetings of cycles beginning with a structuring move, together with less emphasis on cycles beginning with a soliciting move.

The meetings showed slightly more cycles per minute of discussion time, and slightly fewer moves per cycle, than did the classrooms. Both situations had means of approximately two cycles per minute and three moves per cycle.

Increased use of the Davies-Brickell System procedures tended to be associated with an increase in the cycle rate and a decrease in the number of moves per cycle.

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CHAPTER X

ASSESSMENT OF THE APPLICABILITY OF THE ANALYTICAL METHOD

Two main sections constitute this chapter. First, the results are reported of the coding of ten pages of transcript by three different coders to assess interpersonal interpretations. Secondly, a subjective evaluation of the usefulness of the adapted Bellack technique and problems encountered in its use are presented.

I. COMPARISON OF CODINGS MADE BY THREE PERSONS

Selection and Preparation of the Supplementary Coders

In order to determine some of the problems involved in interpretation of verbal moves by different people, and to obtain an indication of the extent of agreement between different coders, ten continuous pages of transcript were coded individually by the researcher and by two other graduate students.

To familiarize these students, called Coder 1 and Coder 2, with the coding system, a one-hour discussion was held in which definitions and examples of the coding categories were distributed and explained. The students then coded two of the ten selected pages-- these codings were discussed before the final eight pages were coded.

Results of Coding into Type of Tactical Move

Four aspects of the extent of agreement among coders on the tactical nature of the moves (STR, SOL, RES, REA) were assessed and reported in Table XXV. The first column presents the results before

TABLE XXV
 FREQUENCIES AND PERCENTAGE FREQUENCIES OF AGREEMENT
 AMONG CODERS ON TYPES OF TACTICAL MOVES
 (N = 159)

Number of coders agreeing with original coding of type of tactical move	Before Discussion		After Discussion					
	f	%	As reported		After accepting both (1) category variations and (2) STR and REA moves as equivalent			
			f	%	f	%		
2	93	58	126	79	147	92	157	99
1	45	28	29	18	11	7	1	1 (STR-SOL)
0	20	13	4	3	1	1	1	1 (REA-STR-RES)

the initial codings of the ten pages were discussed. All three coders agreed on 58 per cent of the 159 verbal moves. At least one coder agreed with the researcher on another 28 per cent of the moves, while for the remaining 13 per cent neither coder agreed with the researcher.

After discussion, during which the bases for the classification were further explained, the two coders altered some of their initial codings producing complete agreement on 79 per cent of the verbal moves. This still left a considerable variation in interpretation to be explained. Table XXVI shows the pairs of different codings given for each move by each of the three pairs of coders.

Of the sixty-three pairs of disagreements, thirty-one concerned differences in interpretation of whether fact or opinion was involved (for example, SOLF - SOLO), eleven concerned other variations within the same major category (for example, SOLF - SOLN), and twenty-one concerned variations between major categories (for example, STRF - REAE). The problem of deciding between fact and opinion is demonstrated in the following question asked by a chairman: "Is there enough work to keep him on steady, four hours per day?" This was coded twice as SOLF and once as SOLO.

The most common disagreement between major categories occurred with STR - REA codings for the same verbal move. Fifteen of twenty-one such disagreements were of this type, indicating the existence of the same problem encountered by Bellack, namely, how to separate the structuring and reacting moves. Of the twenty-nine pairs of disagreements between Coders 1 and 2, fourteen concerned the fact-opinion

TABLE XXVI

FREQUENCY DISTRIBUTIONS OF DISAGREEMENTS BETWEEN CODINGS
OF MOVES AMONG THREE CODERS AFTER DISCUSSION

Pairs of codings given by different coders for a move	Frequencies of Disagreement for Each Pair of Codings after Discussion			
	Coder 1-- Researcher	Coder 2-- Researcher	Coder 1-- Coder 2	Total pairs
DIFFERENCES IN FACT-OPINION IN MAJOR CATEGORY				
STRO-STRF	1			1
SOLF-SOLO		6	1	7
SOLO-SOLF		1	6	7
RESF-RESO	2	4	3	9
RESO-RESF	1	2	4	7 31
OTHER DIFFERENCES IN MAJOR CATEGORY				
SOLF-SOLN			1	1
SOLN-SOLF	1	1	1	3
SOLO-SOLN			1	1
SOLN-SOLO		1		1
REAS-REAM			1	1
REAE-REAO	1	1		2
REAO-REAE	1		1	2 11
DIFFERENCES BETWEEN MAJOR CATEGORIES				
STRF-REAE		1		1
REAE-STRF			1	1
STRO-REAE	5		3	8
REAE-STRO	1		1	2
STRO-REAM	1		1	2
REAM-STRO		1		1
STRO-SOLN			1	1
STRO-RESO			3	3
RESO-REAM		1		1
REAM-RESF		1		1 21
TOTALS FOR PAIRS OF MAJOR CATEGORIES				
STR-STR	1			1
SOL-SOL	1	9	10	20
RES-RES	3	6	7	16
REA-REA	2	1	2	5
STR-SOL	0	0	1	1
STR-RES	0	0	3	3
STR-REA	7	2	6	15
RES-REA	0	2	0	2 63
Total	14	20	29	63

difference within the same major category, and another six the STR - REA distinction.

Because of these coding difficulties, two other percentages of agreement were calculated. When variations within the major coding categories, such as STR, were accepted as equivalent, the extent of complete agreement rose to 92 per cent. When STR and REA moves also were considered as equivalent, this measure reached 99 per cent. These figures indicate the prospect of reaching a high level of agreement between trained coders operating in close consultation.

Results of Coding of Moves in Task, Action, Purpose, and Problem-

Policy Aspects

Each move was also coded by the three coders according to its task area, action, purpose, and problem-policy connotations. The extents of agreement are reported in Table XXVII. The initial codings of these aspects were not discussed and revised--this was done only with the tactical aspects which were more basic in the analytical scheme.

Task area. In only 71 per cent of the moves did all coders agree upon the task area category. Disagreements resulted largely, however, from misinterpretation of instructions and lack of familiarity with the coding system. For example, one coder placed all motions under SBI (School Board Internal). Health tests for pupils were variously coded PUP, OED, and NED, insurance of buildings both PLA and NED, and garbage collection by the city authority both PLA and IGR.

TABLE XXVII

FREQUENCIES AND PERCENTAGE FREQUENCIES OF AGREEMENT
 AMONG CODERS AFTER INITIAL CODING BY TWO CODERS
 ON TASK AREA, ACTION, PURPOSE, AND
 PROBLEM-POLICY RELATIONSHIPS
 OF EACH TACTICAL MOVE
 (N = 159)

Number of coders agreeing with original coding	Task area		Action		Purpose		Problem- Policy	
	f	%	f	%	f	%	f	%
2	113	71	132	83	141	89	131	82
1	37	23	25	16	15	9	27	17
0	9	6	2	1	1	1	1	1

Action. The three coders agreed on the action interpretation (INI, MOD, TER) in 83 per cent of all verbal moves. Three major problems caused the disagreements. First, one coder identified each final statement on a topic as TER, even though the speaker may not have had the intention to terminate discussion. For example, the statement, "Congratulations: your election is partly a vote of confidence for the board," was coded as MOD by two, and TER by one, even though additional statements on this matter could have followed.

Secondly, the coding of INI statements caused problems, which are identified by reference to this excerpt:

C "Business from minutes?"
 T8 "Yes. Broadcasting the change of schedules at 7 a.m.
 is not early enough for bus drivers."

Two coders categorized the statement of Trustee 8 as INI, as it introduced a topic, whereas the other classed it as MOD. The third problem area developed when one coder labelled moves introducing new aspects as INI, rather than reserving that category for moves introducing new topics.

Purpose. The highest agreement among coders in any aspect was noted in the purpose category with 89 per cent. The difference in application of GOAD (discussion) or GOAP (procedural) accounted for most of the disagreement. This was noted in statements such as, "I don't think we need a motion," and "Any questions on furniture?" as well as in introduction of a delegation and agenda announcements.

Some differences also were noted in the use of GOAD and SYM (system maintenance). For example, the giving of congratulations

to a new trustee upon his election, and the statements, "Good. O.K." and "He hasn't, eh!" were coded differently. One cause of the difference was that only the researcher had heard the tape recordings and the inflections of the speakers.

Problem-Policy. Again, a high extent of agreement, 82 per cent, existed in the coding of moves in the problem-policy category. One major cause of disagreement was that one coder applied the FORM coding (advocating or discussing policy formation) to moves which recommended action. Other problems are indicated in the following statements and their various applied codings.

"This will be a change from the original so we should have a motion." PROB FORM

"Is a change in policy--need a motion." PROB FORM

"Will we move to the agenda?" NCP PROB

"We looked over the time sheet. I agree with the need for a change at present." PROB IMP

"Order!" NCP PROB

Consideration of these problem-policy differences, as with those in the task area, action, and purpose categories, led to the conclusion that longer periods of familiarization with the coding conventions and examples, and increased discussion of independently produced codings of the same protocols, would have resulted in a high degree of consistency in coding between persons.

II. ASSESSMENT OF THE USEFULNESS OF THE TECHNIQUE

Most of the difficulties associated with varying interpretations placed upon verbal moves by different coders have been mentioned in the preceding section. When during coding of the protocols certain revisions were necessary following modification of the analytical scheme, only a small percentage of the initial codings given to all unaffected moves of the first boards to be completely coded were altered. This indicated that a high degree of reliability could be expected between separate codings by the same person, provided that he was thoroughly familiar with the conventions. However, it is probably desirable to use two coders to provide for independent checks on interpretations.

The coding system developed for this study does appear to give a comprehensive classification scheme useful in describing verbal interaction in various settings. It provides several interaction concepts, such as language game, verbal moves, and verbal cycles, which were assessed as meaningful and relevant in the meeting situation, and to be of the basic type referred to by Bantock as was mentioned in Chapter I. This framework, even when used solely as a conceptual model, does help to allow discussion to be more clearly analyzed. Possibly some modifications should be made. For example, the large number of moves in the REAE subdivision (24 per cent) could possibly be subdivided by the use of different reacting categories.

Mechanical problems were encountered infrequently in the tape recording: obtaining of the recordings presented few difficulties

and did not interfere with the conduct of the meetings. Possibly about 5 per cent of all moves made during the recording periods were not coded because of factors such as poor recording quality, non-identification of the speaker, and jumbled discourse. No problems occurred in the interpretation of the transcripts forwarded from the two boards which did their own taperecording and transcribing. It does not appear to be necessary for a coder to have attended the recorded meetings in order to produce and code the protocols, but it is desirable for the coder to be able to listen to the tape recordings.

Accurate assessment of the effect of the taperecording procedures and the observers upon the behavior of meeting participants presents many difficulties. It seemed that, because of the customary attendance of members of the public at meetings of two of the city districts, the small microphone and the remote tape recorder and observer had little effect. A much greater influence probably was present in the meetings of the other eleven boards which were usually attended by few or none of the general public.

A serious disadvantage of the technique lies in the time required for transcription, coding, tabulation, and analysis. A long period of time also appears to be necessary for a person to become familiar with the coding conventions, but this conclusion may have been confounded by the simultaneous development and modification of the analytical scheme. The time required for analysis would of course be very much reduced if the technique were applied to only one board, rather than to the comparative approach among boards which constituted

a part of this study. More sophisticated technology, possibly using sonograms and computers, may also be able to diminish the time involved.

Some of the limitations of the approach as an endeavor to obtain information about the verbal interaction accompanying decision-making have been listed previously. However, even within the recorded verbal behavior, certain statements showed that two other aspects of moves possibly should be assessed and incorporated in any comprehensive approach. First, the impact (or importance) of a move upon the participants was neglected--this could be considered as the quality dimension of the move, whereas this study assessed only the numbers of moves. The other aspect, which was measured by Bellack, was the length of each move: if the moves had been typed verbatim this variable could have been included.

When the adapted technique is compared with the widely used Bales I.P.A. method, certain observations are evident. By tape-recording the meetings a permanent record can be made at little cost, and the coding performed in an unhurried manner. Incorporation of analysis of non-verbal behavior in Bales' technique involves the more costly videotape or sound motion-picture film if post-meeting coding is employed.

By including non-verbal behavior, Bales developed a unit-coding scheme which appears to incorporate several dimensions along an approximate support to non-support continuum. His twelve categories, listed in Chapter II, can be translated into equivalent

categories of this study in the following order: (1) SYM, (2) SYM, (3) REAS, (4) STRO, (5) STRO or REAE, (6) STRF, (7) SOLF, (8) SOLO, (9) SOLO, (10) REAO, (11) REAO, and (12) REAO. Bales does use a quality aspect as seen in the range from (10) "disagrees" through (11) "shows tension" to (12) "shows antagonism." Multiple coding of moves, which was used in the present school board study and which is possible when simultaneous coding is not attempted, does appear to be preferable and to yield more information. The insight achieved by analysis of the board statements left the impression that a comprehensive analytical scheme does require categories of the type represented by SOLN, RESF, RESO, REAE, and REAM moves--these categories are not easily nor consistently identifiable in Bales' I.P.A. system.

The adapted Bellack technique was therefore assessed to be potentially useful for obtaining general information about particular verbal interaction settings, as well as specific information about particular meetings. There does not appear to be any reason why the technique could not be applied to other types of meetings such as those of school staffs, business corporations, or city councils.

As a field study, this project probably supplied more accurate information about typical school board meeting behavior than could be obtained by questionnaires dealing with perceptions of meeting roles. The fact that school board meeting interaction can be analyzed meaningfully in a variety of ways, may encourage more field studies in this area, and perhaps reduce the tendency towards simulated laboratory research which ignores the experience variables of the actual participants and the significance of the task area.

III. SUMMARY OF CHAPTER X

In order to obtain an estimate of the reliability of coding among different persons, ten pages of transcript were coded by two additional coders who had been briefly introduced to the system. Total agreement was obtained on 58 per cent of the tactical aspect of 159 verbal moves. After discussion which explained the coding conventions more thoroughly this figure reached 79 per cent. The residual difference lay mainly in the fact-opinion and structuring-reacting distinctions. In the task area, action, purpose, and problem-policy aspects the initial percentages of total agreement were 71, 83, 89, and 82.

The adapted Bellack technique was considered to provide a useful, meaningful, and comprehensive scheme for analysis of verbal interaction in school board and other meetings. With comprehensive training of coders and opportunity for discussion, a high degree of consistency of coding among different persons should be achieved.

No serious problems were met in obtaining the recordings, and this post-meeting, multiple-coding approach appears to have certain advantages over schemes such as Bales' Interaction Process Analysis. However, the procedures take considerable time, the effect of the recording upon the meeting participants could not be determined, and certain modifications, such as inclusion of the length of the statements, and subdivision of the commonly used REAE category, may be desirable.

CHAPTER XI

SUMMARY, IMPLICATIONS, AND POSSIBLE EXTENSIONS

This chapter presents a summary of the major findings of the research, along with an assessment of some of their implications and suggestions for extension of the analytical technique. The applicability of the technique is not again discussed, as this was examined in detail in Chapter X.

Summary and Implications

A total of 21,220 verbal moves was identified in nearly seventy-four hours of tape recordings of the proceedings of meetings of thirteen school boards in Alberta. These moves were contained in 7,449 cycles.

The chairmen and trustees made 62 per cent of all moves, with the superintendents, secretary-treasurers, and other participants contributing approximately equally to the remainder. It is significant to note that nearly two-fifths of all moves were made by non-elected persons. This raises the questions of whether such an extent of outside involvement is necessary or desirable in board meetings, and whether many topics involving non-elected persons could be better dealt with in a situation other than the school board meeting. It may also indicate a higher reliance upon employed personnel in school board meetings than is common for other types of elected bodies.

The chairmen of three boards consistently contributed higher percentages of subdivisions of all move aspects than did all their

trustees collectively. From this finding, the issue of the desirability of such chairman dominance is raised, along with the question of what roles the chairmen and trustees should play in reaching decisions.

A reaction to a prior move was the most common tactical move subdivision with 39 per cent of the total. The other tactical subdivisions were soliciting (27 per cent), responding (19 per cent), and structuring (15 per cent). The most common move type was the elaborating reaction--24 per cent of all moves were so classified.

All categories of participants used high percentages of reacting moves. In some protocols very long reaction sequences occurred, particularly among the trustees. It appeared that the attaining of a decision may have been better served by reduction of these sequences through leadership moves made by officials more familiar with the problems. Such moves could have been a summary of the situation, introduction of important additional information, or a statement of expert opinion.

Apart from reacting, chairmen and trustees were most involved in soliciting, with 45 and 28 per cent of their moves respectively being of this type. Even after removing the 21 per cent of the chairmen's moves involved in procedural questions, chairmen were still more involved in soliciting than were the superintendents, secretary-treasurers, and "others." For these three latter categories, responding was the second most common activity. It appeared that possibly through responses to questions, both fact-stating and opinion-stating, are educators best able to influence trustee opinion. The act of

asking indicates an interest in the problem area which may not be present when educators structure discussion or give reactions.

Most of the structuring, soliciting, and reacting moves were made by the chairmen and trustees combined, with the chairmen making more soliciting moves and trustees more structuring and reacting moves. It should be remembered, however, when these comparisons are made, that between three and nine trustees were represented collectively in this category of participants for different boards. Superintendents, "others," and trustees contributed most of the responses.

Superintendents, secretary-treasurers, and "others" contributed higher percentages of all structuring-with-a-fact and responding-with-a-fact moves than they did structuring-with-an-opinion and responding-with-an-opinion moves. The reverse applied for chairmen and trustees. These contrasting fact-opinion proportions may represent the desirable difference in function between employed and elected participants at such meetings.

A considerable degree of consistency existed among the overall percentage frequency distributions of the subdivisions of the tactical, action, purpose, and problem-policy aspects of the moves, but for each category of participants these distributions showed wide variation among boards. These variations were noted in both of the following ways used in examining meeting roles: (1) as a percentage of all moves made by each category of participants, and (2) as a percentage of all moves made in each move aspect subdivision.

An assessment was made of the extent of use by each board of the pre-meeting and meeting practices advocated by the Davies-Brickell System. Although frequent reference is made to the perceived advantages of this system, research into its effect upon verbal interaction was not evident in the literature. This study showed that increased use of the advocated practices correlated positively with the mean number of cycles per minute, negatively with the mean number of moves per minute, and negatively with the mean number of moves per cycle--all coefficients were significant above the 0.01 level.

A higher mean cycle rate showed that more topics or aspects of topics were introduced in a given time period when the meeting was more structured and preceded by more preparation. Throughout this descriptive study no reference of causality was intended, but it would be naive to suggest that some factors associated with the emphases underlying the Davies-Brickell System were not at least partially responsible for this result.

The negative association between the extent of meeting structure and preparation, and the mean move rate, meant that the moves were longer in the more structured meetings. This conformed with the observation made at the meetings--where trustees received adequate pre-meeting material and where the meeting was carefully organized, longer statements, sometimes prepared in advance, were more common.

Similarly, the negative association between the extent of meeting structure and preparation, and the mean number of moves per cycle, showed the tendency, when more preparation had occurred, for fewer moves to be made before a new topic or topic aspect was introduced.

The only board which used the Davies-Brickell System entirely was distinctive for several reasons. Its superintendent made the lowest percentage (10 per cent) of all meeting moves of any superintendent. Possibly the forwarding in advance of background information and recommendations of the administration reduced the need for superintendent involvement. This board also had the highest percentages of structuring and soliciting moves, and the lowest percentages of responding and reacting moves.

In the action aspect, 7 per cent of the moves initiated a topic, 90 per cent were intermediate discussion, and 3 per cent were intended to be terminating. Superintendents and secretary-treasurers had approximately 10 per cent of their moves classed as initiating and 1 per cent as terminating. Chairmen had more of their moves involved in terminating (9 per cent), and trustees fewer in initiating (3 per cent).

Chairmen made 45 per cent and 85 per cent respectively of all initiating and terminating moves. Trustees, as could have been anticipated, made the highest percentage of intermediate moves, 36 per cent, with chairmen contributing 25 per cent.

With regard to the purpose aspect of the moves, the overall distribution showed a predominance of goal discussion moves (89 per cent), with fewer procedural moves (9 per cent), and system maintenance moves (2 per cent). Superintendents involved themselves less with procedural matters (3 per cent of all their moves), but chairmen of course were much more evident (19 per cent). Chairmen and trustees

together contributed 59, 88 and 81 per cent respectively of all discussion, procedural, and system-maintenance moves.

Because of the controversy over division of functions between trustees and administrative personnel, the moves were also examined to assess whether they were, (1) related to problem-solving, (2) policy-formation, (3) advocacy of implementation of existing policy, or (4) none of these three. Respective percentage frequencies of 94, 4, 0.3, and 1 were obtained when all moves were coded: this finding confirmed assertions that school boards do not usually operate as policy-making bodies. However, for one board, 32 per cent of all moves were assessed to be related to policy-formulation. Superintendents had 6 per cent of their moves in the policy-formation category: this was the highest percentage of any category of participants.

The type of move which advocates implementation of existing policy was included in the coding subdivisions because of (1) the expectation that it would occur sufficiently frequently to constitute a significant percentage of all moves, and (2) the belief that it was a legitimate dimension of the problem-policy aspect. Even though only 55 moves, or 0.3 per cent of all moves, were of this type, it was still considered to be an important and necessary part of the coding scheme. If adequate policies existed, greater use of this type of move could possibly have been expected in decision-making discussions.

Chairmen and trustees together made most of the moves in each problem-policy subdivision, with 62 per cent of all problem-solving moves, 64 per cent of the policy-formation moves, 56 per cent of the policy-implementation moves, and 81 per cent of those moves not classed in one of these three categories. The other categories of participants contributed only in a minor way to each subdivision, except that superintendents made 20 per cent of all policy-formation moves.

With respect to task areas, 24 per cent of all moves were related to school plant and other buildings, 16 per cent to educational staff, and 10 per cent to each of community-school relations, pupil transportation, and salary negotiations. The superintendents had 32 per cent of all their moves associated with educational staff: all other categories of participants had the highest percentages of their moves in the plant task area.

The majority of the moves in all task areas were made by the chairmen and trustees together. Superintendents contributed 28 per cent of all educational staff task area moves, secretary-treasurers 23 per cent of finance moves, and "others" 21 per cent of plant moves. This emphasis on school buildings does suggest that training programs for superintendents should include some content dealing with school planning and design.

In summary, the major features in which the overall participation of the various categories was well above average, either as compared with the average percentage for the category or for all categories combined, were the following.

1. Superintendents:
 - (a) structuring-with-a-fact, responding, and initiating subdivisions
 - (b) factual statements
 - (c) educational staff task area
2. Secretary-treasurers:
 - (a) structuring-with-a-fact, and responding subdivisions
 - (b) factual statements
 - (c) finance task area
3. Chairmen:
 - (a) soliciting, initiating, terminating, and procedural subdivisions
4. Trustees:
 - (a) reacting and system-maintenance subdivisions
5. "Others":
 - (a) responding-with-a-fact subdivision
 - (b) plant task area

By far the most common type of verbal cycle was SOLICITING RESPONDING--22.6 per cent of all cycles were of this type, and it was the most common type for eleven boards. The next most common cycles were: SOLICITING, 12.8 per cent; STRUCTURING REACTING REACTING.., 11.4 per cent; SOLICITING RESPONDING REACTING REACTING.., 10.7 per cent. For the only board to use the Davies-Brickell System the most common cycle was SOLICITING.

The rank order of frequency of cycle types was significantly similar (higher than 0.01) between different meetings of each board, indicating that a consistency existed in this element of the verbal interaction. When the rank orders of frequencies of cycle types for all boards were intercorrelated, every coefficient was above that needed for 0.01 significance, indicating that a high degree of consistency also existed among boards.

Comparison of the School Board Meeting and Classroom Findings

A comparison of various findings from this study of school boards with those of Bellack's study was undertaken--it was considered that verbal interaction in different settings may have certain similar characteristics.

The coefficient of correlation between the overall rank orders of types of verbal cycles in the school boards and classrooms was above that needed for 0.05 significance. In both settings the cycle SOLICITING RESPONDING was the most common type with 22.6 and 22.9 per cent of the totals respectively. Despite these similarities, a basic difference occurred--a greater emphasis existed in the meeting upon cycles beginning with a structuring move, whereas in the classroom, cycles beginning with a soliciting move were more common. These results could have been predicted because of the differences in procedural and pedagogical functions.

Some similarity between the overall percentage frequency distributions of the tactical and pedagogical moves was observed. In both situations, reactions and solicitations were the two most common

moves. In meetings, reactions totalled 39 per cent and solicitations 27 per cent, with the order being reversed for classrooms which had 34 per cent solicitations and 31 per cent reactions. Responses were 19 per cent of all meeting moves, and in the classroom, reflecting the greater stress upon questioning, they accounted for 29 per cent. The procedural nature of the meeting is again reflected in the 15:6 ratio for meeting and classroom percentages of structuring moves.

Similarity was again noted in the measures of speed of the meeting and classroom moves and cycles. The mean meeting discussion rate was 5.33 moves per minute, and for classrooms, 5.89 moves per minute. The meeting and classroom cycle rates were 1.68 and 1.8 cycles per minute. Each meeting cycle contained a mean of 2.85 moves, as compared with 3.36 moves per teaching cycle.

Possible Extensions of the Study

Besides the possibility of using the developed method of analysis in meetings other than school boards, certain extensions into the school board area are suggested.

An examination of the distribution of the tactical and problem-policy verbal move aspects by categories of participants in the various task areas would provide useful information.

The transcripts also allow for tracing the decision through the discussion prior to its adoption. It would be of interest to analyze the types of moves made by the various participants, and to form an estimate of their influence upon the decision. This would be

of value particularly with respect to the superintendent and to the recommendations which he brings to the meeting.

Some of the collected data will enable general statements to be made regarding the association between seating position and the extent of verbal involvement of superintendents and other participants.

This study has ignored variables related to the extent of social influence of the meeting participants. Probably this factor could be integrated with the adapted Bellack technique to provide more information about the behavior of influentials.

The verbal moves approach does yield useful information about verbal behavior in decision-making situations. By performing these suggested additional analyses, further insight into group and organizational decision-making could be gained.

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APPENDIX A

LETTER OF INVITATION SENT TO
SCHOOL JURISDICTIONS



Dear Mr.

We are writing to request the cooperation of the members of your School Board in a research project which the Department of Educational Administration hopes to conduct in the near future.

It has often been contended that a closer examination of the operation of school boards, and of school board/superintendent relationships, would be of benefit to all concerned. In this regard, it is proposed that verbatim transcripts of between two and four meetings of several Alberta school boards be obtained and analyzed during 1967, and we would like to include your board in this research. Previous analyses based purely on the minutes of board meetings appear to have omitted several important aspects.

These transcripts would be made from tape recordings of the meetings, but complete anonymity of school district and school board members would be maintained by this Department and the five researchers involved. Neither the tape recordings nor the transcripts shall be used in any lecture or seminar.

Some of the advantages of the project are seen as the following:

- (1) A better understanding of the functioning of school boards may result from categorization and analysis of the task areas dealt with by the boards. It is anticipated that the task areas of business management, school community relations, intergovernmental relations, school plant, and staff personnel administration, shall be among those examined.
- (2) It would allow for contact between the practitioners of the School Divisions and the theorists of the Department of Educational Administration, and could make available the practical knowledge of local school people which is sometimes lacking at the university level.

- (3) The differences in procedures between the school boards using the Brickell-Davies system and those which do not shall be examined to determine relative advantages.
- (4) It may be that this analysis will suggest areas in which it would be desirable to supply to board members, on a regular basis from a central organization, current information about present or potential educational practices.

I would like to receive the reaction of your board members to this proposal. Should your board be willing to cooperate, then one member of the research team would be available to explain the project in more detail to the board and arrange for the tape recording. At that time, we would also like each member present to complete a short questionnaire seeking information on age, education, sex, occupation, etc. The procedure would cause but very little interference in the conduct of your meetings. It may be that you would be willing, or even wish to, make the verbatim transcripts from the tape recordings by using your own secretarial services. Naturally this would be of great assistance to us.

The results of our analyses would be available to your board and we are confident that you would find them of value.

We very much appreciate your consideration of our request, and would be grateful for prompt notification of the board's decision, and the times and dates of future meetings.

Yours truly,



D.A. MacKay, Associate Professor
H.D. Hemphill, Research Assistant
E.A. Holdaway, Research Assistant

DAM/ed

APPENDIX B

SHEET USED FOR RECORDING AND ANALYSIS

APPENDIX C

**QUESTIONNAIRE USED TO OBTAIN DATA
ABOUT MEETING PARTICIPANTS**

PERSONAL DATA QUESTIONNAIRE

168

(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 (REGENCY)

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 _____

APPENDIX D

**QUESTIONNAIRE USED TO OBTAIN DATA
ABOUT SCHOOL JURISDICTIONS**

SCHOOL BOARD STUDY QUESTIONNAIRE

(Questions apply to the 1966-67 school year)

1. (a) How many public meetings does your board regularly hold each month? 1 2 3 4 (Circle one)
- (b) What are the usual hours during which the meetings are held? _____
- (c) Is it board policy that these hours are always the same from year to year? Yes No (Circle one)
- (d) How could these hours be altered? That is, how could the decision to alter be made? _____

- (e) Have the days or hours of board meetings been altered recently (last 5 years) to suit individual school board members? Yes No (Circle one)

2. (a) Does your board have a policy handbook? Yes No (Circle one)
- (b) Is the policy handbook revised on a yearly basis or some other time-basis? Yes No (Circle one)

3. Enrollment for 1966-67 school year, as at January 1, 1967.

Elementary (G. 1-6) _____ Secondary (G. 7-12) _____
 Total _____

4. Board Remuneration

What remuneration do the chairman and trustees receive for their school board work? (Answer on one or more of the following bases.)

	CHAIRMAN		TRUSTEES	
	<u>Administration</u>	<u>Supervision</u>	<u>Administration</u>	<u>Supervision</u>
per meeting	\$ _____	\$ _____	\$ _____	\$ _____
per hour	\$ _____	\$ _____	\$ _____	\$ _____
per month	\$ _____	\$ _____	\$ _____	\$ _____
per year	\$ _____	\$ _____	\$ _____	\$ _____

5. Use of Closed (In Committee) Sessions

- (a) How many hours per month (average) would the board meet in sessions closed to the public? _____
- (b) How many closed session meetings (average) of the board are held each year? _____

6. Structuring of Meetings

- (a) Does the administrative staff submit in advance detailed background material and a recommendation to the board on each agenda issue _____ (Check one)
 - most agenda issues _____
 - some agenda issues _____
 - few agenda issues _____
 - no agenda issues _____

- (b) Is the information received by trustees on each agenda issue prior to each meeting best described as:
 - complete _____ (Check one)
 - reasonably complete _____
 - moderately complete _____
 - little _____
 - quite incomplete _____

- (c) Who draws up the agenda? (Check one)

superintendent _____ other _____ (fill in)
 secretary-treasurer _____ joint _____ (fill in)

- (d) Is a superintendent's report a regular feature of the agenda? Yes No (Circle one)

7. Standing Committees

List the Standing Committees of the Board, and the number of trustees permanently on each, and the titles of other members.

	<u>Standing Committee</u>	<u>No. of Trustees on Committee</u>	<u>Other persons (give office)</u>
1.	_____	_____	_____
2.	_____	_____	_____
3.	_____	_____	_____
4.	_____	_____	_____
5.	_____	_____	_____
6.	_____	_____	_____
7.	_____	_____	_____
8.	_____	_____	_____
9.	_____	_____	_____
10.	_____	_____	_____

8. Number of Trustees

(a) Total number of trustees which may be on school-board (school committee). _____

(b) Number of trustees in 1966-67 year. _____

(c) IF COUNTY, answer these questions.

(i) How many county councillors are members of the school committee? _____

(ii) How many school committee members are appointed from villages and towns? _____

9. Other Information

APPENDIX E

FREQUENCY DISTRIBUTIONS OF VERBAL MOVES
MADE BY CATEGORIES OF PARTICIPANTS
WITH MOVES CLASSIFIED BY
TACTICAL INTENT

TABLE XXVIII

FREQUENCY DISTRIBUTIONS OF TACTICAL ASPECTS OF VERBAL MOVES MADE BY FIVE CATEGORIES OF PARTICIPANTS IN ALL MEETINGS OF EACH SCHOOL BOARD

Board	Participant Category	Frequency of subdivisions of tactical aspect of verbal moves																	TOTAL			
		STRUCTURING					SOLICITING					RESPONDING					REACTING					
		F	O	M	P	Total	F	O	M	N	Total	F	O	Total	S	E	O	M		N	Total	
1	Supt.	9	21	1	31	30	15	1	46	73	35	108	25	74	8	22	3	132	317			
	Sec.-Treas.	43	7	6	56	28	24	10	62	53	8	61	15	49	2	7	5	78	257			
	Chairman	9	17	28	54	91	31	34	45	201	28	15	43	39	89	7	19	21	175	473		
	Trustees	4	27	34	65	170	62	2	234	37	33	70	38	170	15	38	21	282	651			
	Others	7	4	1	12	15	1	2	18	103	32	135	9	65	3	4	6	87	252			
	TOTAL	72	76	34	36	218	334	133	34	60	561	294	123	417	126	447	35	90	56	754	1,950	
2	Supt.	29	17		46	12	7	2	21	36	17	53	8	39	2	1	4	54	174			
	Sec.-Treas.	20	3	3	26	16	5	3	24	25	5	30	9	29	3	2	7	50	130			
	Chairman	15	16	25	56	49	23	37	30	139	12	9	21	18	48	6	10	13	95	311		
	Trustees	1	17	40	58	41	26	2	69	16	18	34	31	82	6	12	24	155	316			
	Others	5	2		7	1			1	15	2	17	2	7	1	1	2	13	38			
	TOTAL	70	55	40	28	193	119	61	37	37	254	104	51	155	68	205	18	26	50	367	969	
3	Supt.	20	18		38	9	9	1	19	57	45	102	26	52	8	11		97	256			
	Sec.-Treas.	15	5		20	9	7		16	48	8	56		21			1	22	114			
	Chairman	8	16		24	61	63	33	52	209	12	15	27	17	45	1	5	6	74	334		
	Trustees	15	61	25	101	222	68	4	294	49	66	115	53	273	36	28	48	438	948			
	Others	18	11		29	9	7	2	18	82	37	119	12	39	12	13	7	83	249			
	TOTAL	76	111	25	212	310	154	33	59	556	248	171	419	108	430	57	57	62	714	1,901		

TABLE XXVIII (continued)

Board	Participant Category	Frequency of subdivisions of tactical aspect of verbal moves																		TOTAL						
		STRUCTURING						SOLICITING						RESPONDING							REACTING					
		F	O	M	P	Total	F	O	M	N	Total	F	O	Total	S	E	O	M	N		Total					
4	Supt.	23	18	1	42	8			3	11	21	8	29	6	31	4	4	45								
	Sec.-Treas.	2	1		3	2				2	31	2	33	2	29	2	3	37								
	Chairman	12	6	65	83	37	16	78	186	317	17		17	25	29	6	4	35	99							
	Trustees	12	38	70	120	126	22		5	153	17	13	30	16	61	8	15	21	121							
	Others	8	5		13	4				4	56	13	69	3	37	4	2	46	132							
	TOTAL	57	68	70	66	261	177	38	78	194	487	142	36	178	52	187	16	30	63	348	1,274					
5	Supt.	20	12		32	11	4		2	17	17	14	31	18	45	1	8	5	77							
	Sec.-Treas.	10	9	1	20	8	5			13	22	5	27	6	36	2	8	5	57							
	Chairman	5	15	10	30	26	27	20	61	134	7	12	19	20	44	1	4	20	89							
	Trustees	6	22	18	47	62	15		2	79	4	21	25	26	62	8	9	21	126							
	Others	15	5		22	5	4			11	40	10	50	17	53	3	2	6	81							
	TOTAL	56	63	18	14	151	112	55	20	67	254	90	62	152	87	240	15	31	57	430	987					
6	Supt.	18	14		32	27	4			31	50	12	62	22	65	3	12	2	104							
	Sec.-Treas.	45	16	3	64	40	8		5	53	34	7	41	9	91	2	9	6	117							
	Chairman	6	38	20	64	61	24	12	41	138	29	23	52	17	92	12	19	19	159							
	Trustees	17	54	15	87	118	32		2	152	53	51	104	49	180	19	36	12	296							
	Others	14	16		30	26	11			39	40	13	53	26	68	7	13	18	132							
	TOTAL	100	138	15	24	277	272	79	12	50	413	206	106	312	123	496	43	89	57	808	1,810					

TABLE XXVIII (continued)

Board	Participant Category	Frequency of subdivisions of tactical aspect of verbal moves																		TOTAL						
		STRUCTURING						SOLICITING						RESPONDING							REACTING					
		F	O	OM	P	Total	F	O	M	N	Total	F	O	Total	S	E	O	M	N		Total					
7	Supt.	19	15	2	36	10	11			21	54	17	71	11	38	2	11	1	63	191						
	Sec.-Treas.	8	10	3	21	9	10	2		21	40	8	48	11	29	3	4	1	48	138						
	Chairman	7	30	19	56	86	41	25	54	206	12	13	25	33	54	6	15	19	127	414						
	Trustees	7	55	25	87	101	31	4		136	31	27	58	24	118	9	11	19	181	462						
	Others	12	12		24	5	5	1		11	49	22	71	5	29	5	7	6	52	158						
	TOTAL	53	122	25	24	224	211	98	25	61	395	186	87	273	84	268	25	48	46	471	1,363					
8	Supt.	12	6		18	20	15	4		39	29	30	59	18	60	7	7	8	100	216						
	Sec.-Treas.	19	8	2	29	25	42	4		71	55	21	76	22	119	15	11	2	169	345						
	Chairman	20	28	3	51	55	43	31	9	138	32	41	73	36	183	25	20	20	284	546						
	Trustees	10	20	23	53	130	66	4		200	50	50	100	58	270	22	26	32	408	761						
	Others	7	4	1	12	10	3	4		17	28	17	45	9	41	5	0	8	63	137						
	TOTAL	68	66	23	6	163	240	169	31	25	465	194	159	353	143	673	74	64	70	1,024	2,005					
9	Supt.	25	6	2	33	5	8	4		17	34	29	63	11	95	4	5	5	120	233						
	Sec.-Treas.	8	2		10	35	15			50	19	11	30	11	61	3	6	7	88	178						
	Chairman	39	35	28	102	39	66	37	33	175	18	66	84	19	117	21	18	20	195	556						
	Trustees	4	7	20	32	40	36	4		80	12	62	74	30	75	5	6	24	140	326						
	Others	21	29	1	51	23	59	4		86	32	33	65	24	108	19	19	10	180	382						
	TOTAL	97	79	20	32	228	142	184	37	45	408	115	201	316	95	456	52	54	66	723	1,675					

APPENDIX F

**FREQUENCY AND PERCENTAGE FREQUENCY DISTRIBUTIONS
OF ASPECTS OF MOVES MADE BY
CATEGORIES OF PARTICIPANTS**

TABLE XXIX (continued) BOARD 2

Frequency	Category	Aspect of Verbal Move													TOTAL
		ACTION			PURPOSE			PROBLEM-POLICY				TOTAL			
		INI	MOD	TER	GOAD	GOAP	SYM	PROB	FORM	IMP	NCP				
	Supt.	26	145	3	160	12	2	164	9	0	1	174			
	Sec.-Treas.	21	103	6	121	7	2	128	0	0	2	130			
	Chairman	36	231	44	229	77	5	301	6	0	4	311			
	Trustees	3	312	1	266	41	9	311	5	0	0	316			
	Others	2	34	2	38	0	0	38	0	0	0	38			
	TOTAL	88	825	56	814	137	18	942	20	0	7	969			
	Supt.	15	83	2	92	7	1	94	5	0	1	100			
	Sec.-Treas.	16	79	5	93	5	2	98	0	0	2	100			
	Chairman	12	74	14	74	25	2	97	2	0	1	100			
	Trustees	1	99	0.3	84	13	3	99	2	0	0	100			
	Others	5	89	5	100	0	0	100	0	0	0	100			
	TOTAL	9	85	6	84	14	2	97	2	0	1	100			
	Supt.	30	18	5	20	9	11	17	45	0	14	18.0			
	Sec.-Treas.	24	12	11	15	5	11	14	0	0	0	13.4			
	Chairman	41	28	79	28	56	28	32	30	0	29	32.1			
	Trustees	3	38	2	33	30	50	33	25	0	57	32.6			
	Others	2	4	4	5	0	0	4	0	0	0	3.9			
	TOTAL	100	100	100	100	100	100	100	100	0	100	100.0			

TABLE XXIX (continued) BOARD 4

Frequency	Category	Aspect of Verbal Move													TOTAL
		ACTION			PURPOSE			PROBLEM-POLICY				TOTAL			
		INI	MOD	TER	GOAD	GOAP	SYM	PROB	FORM	IMP	NCP				
	Supt.	36	91	0	122	2	3	121	5	0	1	127			
	Sec.-Treas.	1	74	0	72	3	0	68	2	0	5	75			
Total frequency	Chairman	103	333	80	381	123	12	475	13	2	26	516			
	Trustees	31	391	2	335	78	11	398	13	1	12	424			
	Others	1	130	1	131	0	1	126	0	0	6	132			
	TOTAL	172	1,019	83	1,041	206	27	1,188	33	3	50	1,274			
Frequencies of each move aspect as percentages of all moves made by each category (horizontal)	Supt.	28	72	0	96	2	3	95	4	0	1	100			
	Sec.-Treas.	1	99	0	96	4	0	91	3	0	7	100			
	Chairman	20	65	16	74	24	2	92	2	0.4	5	100			
	Trustees	7	92	0.5	79	18	3	94	3	0.2	3	100			
	Others	1	0	1	98	0	1	95	0	0	5	100			
	TOTAL	14	80	7	82	16	2	93	3	0.2	4	100			
Frequencies of each move aspect as percentages of all moves in each aspect (vertical)	Supt.	21	9	0	12	1	11	10	15	0	2	10.0			
	Sec.-Treas.	1	7	0	7	1	0	6	6	0	10	5.9			
	Chairman	60	33	96	37	60	44	40	39	67	52	40.5			
	Trustees	18	38	2	32	38	41	34	39	33	24	33.3			
	Others	1	13	1	13	0	4	11	0	0	12	10.4			
	TOTAL	100	100	100	100	100	100	100	100	100	100	100.0			

TABLE XXIX (continued) BOARD 5

Frequency	Category	Aspect of Verbal Move													TOTAL
		ACTION			PURPOSE			PROBLEM-POLICY				TOTAL			
		INI	MOD	TER	GOAD	GOAP	SYM	PROB	FORM	IMP	NCF				
Total frequency	Supt. Sec.-Treas. Chairman Trustees Others TOTAL	11 6 17 17 7 58	145 111 236 258 154 904	1 0 19 2 3 25	152 110 226 246 163 897	3 6 42 20 1 72	2 1 4 11 0 18	140 105 264 265 164 938	13 12 7 9 0 41	1 0 1 0 0 2	3 0 0 3 0 6	157 117 272 277 164 987			
Frequencies of each move aspect as percentages of all moves made by each category (horizontal)	Supt. Sec.-Treas. Chairman Trustees Others TOTAL	7 5 6 6 4 6	92 95 87 93 94 92	1 0 7 1 2 3	97 94 83 89 99 91	2 5 15 7 1 7	1 0 1 4 0 2	89 90 97 96 100 95	8 10 3 3 0 4	1 0 0.4 0 0 0.2	2 0 0 1 0 1	100 100 100 100 100 100			
Frequencies of each move aspect as percentages of all moves in each aspect (vertical)	Supt. Sec.-Treas. Chairman Trustees Others TOTAL	19 10 29 29 12 100	16 12 26 29 17 100	4 0 76 8 12 100	17 12 25 27 18 100	4 8 58 28 1 100	11 6 22 61 0 100	15 11 28 28 17 100	32 29 17 22 0 100	50 0 50 0 0 100	15.9 11.9 27.6 28.1 16.6 100.0				

TABLE XXIX (continued) BOARD 6

Frequency	Category	Aspect of Verbal Move											TOTAL
		ACTION		PURPOSE			PROBLEM-POLICY			TOTAL			
		INI	MOD	TER	GOAD	GOAP	SYM	PROB	FORM		IMP	NCP	
Total frequency	Supt. Sec.-Treas. Chairman Trustees Others TOTAL	9 46 32 10 8 105	218 229 360 629 238 1,674	2 0 21 0 8 31	228 267 367 608 243 1,713	0 8 44 23 5 80	1 0 2 8 6 17	220 268 405 607 254 1,754	9 7 7 30 0 53	0 0 0 0 0 0	0 0 1 2 0 3	229 275 413 639 254 1,810	
Frequencies of each move aspect as percentages of all moves made by each category (horizontal)	Supt. Sec.-Treas. Chairman Trustees Others TOTAL	4 17 8 2 3 6	95 83 87 98 94 92	1 0 5 0 3 2	100 97 89 95 96 95	0 3 11 4 2 4	0.4 0 0.5 1 2 1	96 97 98 95 100 97	4 3 2 5 0 3	0 0 0 0 0 0	0 0 0.2 0.3 0 0.2	100 100 100 100 100 100	
Frequencies of each move aspect as percentages of all moves in each aspect (vertical)	Supt. Sec.-Treas. Chairman Trustees Others TOTAL	9 44 30 10 8 100	13 14 22 38 14 100	6 0 68 0 26 100	13 16 21 35 14 100	0 10 55 29 6 100	6 0 12 47 35 100	13 15 23 35 14 100	17 13 13 57 0 100	0 0 0 0 0 0	0 0 33 67 0 100	12.7 15.2 22.8 35.3 14.0 100.0	

TABLE XXIX (continued) BOARD 11

Frequency	Category	Aspect of Verbal Move													TOTAL
		ACTION			PURPOSE			PROBLEM-POLICY				TOTAL			
		INI	MOD	TER	GOAD	GOAP	SYM	PROB	FORM	IMP	NCP				
Total frequency	Supt. Sec.-Treas. Chairman Trustees Others TOTAL	16 2 52 15 7 92	204 54 167 405 127 957	2 0 32 1 0 35	210 48 176 342 130 906	9 8 72 42 0 131	3 0 3 37 4 47	143 39 185 282 85 734	79 17 62 136 49 343	0 0 0 0 0 0	0 0 4 3 0 7	0 0 4 3 0 1,084	222 56 251 421 134 1,084		
Frequencies of each move aspect as percentages of all moves made by each category (horizontal)	Supt. Sec.-Treas. Chairman Trustees Others TOTAL	7 4 21 4 5 9	92 96 67 96 95 88	1 0 13 0.2 0 3	95 86 70 81 97 84	4 14 29 10 0 12	1 0 1 9 3 4	64 70 74 67 63 68	36 30 25 32 37 32	0 0 0 0 0 0	0 0 2 1 0 1	0 0 2 1 0 100	100 100 100 100 100 100		
Frequencies of each move aspect as percentages of all moves in each aspect (vertical)	Supt. Sec.-Treas. Chairman Trustees Others TOTAL	17 2 57 16 8 100	21 6 17 42 13 100	6 0 91 3 0 100	23 5 19 38 14 100	7 6 55 32 0 100	6 0 6 79 9 100	19 5 25 38 12 100	23 5 18 40 14 100	0 0 0 0 0 0	0 0 57 43 0 100	0 0 57 43 0 100	20.5 5.2 23.2 38.8 12.4 100.0		

TABLE XXIX (continued) BOARD 12

Frequency	Category	Aspect of Verbal Move													TOTAL
		ACTION				PURPOSE				PROBLEM-POLICY					
		INI	MOD	TER	GOAD	GOAP	SYM	PROB	FORM	IMP	NCP				
	Supt.	7	271	3	275	4	2	271	10	0	0	0	0	0	281
	Sec.-Treas.	10	228	2	214	17	9	204	35	0	1	1	1	1	240
	Chairman	145	636	80	640	200	21	778	67	0	16	16	16	16	861
	Trustees	38	450	5	405	80	8	439	47	0	7	7	7	7	493
	Others	7	181	1	186	1	2	189	0	0	0	0	0	0	189
	TOTAL	207	1,766	91	1,720	302	42	1,881	159	0	24	24	24	24	2,064
	Supt.	2	96	1	98	1	1	96	4	0	0	0	0	0	100
	Sec.-Treas.	4	95	1	89	7	4	85	15	0	0.4	0.4	0.4	0.4	100
	Chairman	17	74	9	74	23	2	90	8	0	2	2	2	2	100
	Trustees	8	91	1	82	16	2	89	10	0	1	1	1	1	100
	Others	4	96	1	98	1	1	100	0	0	0	0	0	0	100
	TOTAL	10	86	4	83	15	2	91	8	0	1	1	1	1	100
	Supt.	3	15	3	16	1	5	14	6	0	0	0	0	0	13.6
	Sec.-Treas.	5	13	2	12	6	21	11	22	0	4	4	4	4	11.6
	Chairman	70	36	88	37	66	50	41	42	0	67	67	67	67	41.7
	Trustees	18	25	5	24	26	19	23	30	0	29	29	29	29	23.9
	Others	3	10	1	11	0.3	5	10	0	0	0	0	0	0	9.2
	TOTAL	100	100	100	100	100	100	100	100	0	100	100	100	100	100.0

Frequencies of each move aspect as percentages of all moves made by each category (horizontal)

Frequencies of each move aspect as percentages of all moves in each aspect (vertical)

APPENDIX G

**FREQUENCY AND PERCENTAGE FREQUENCY DISTRIBUTIONS
OF VERBAL MOVES MADE BY CATEGORIES OF
PARTICIPANTS WITH MOVES CLASSIFIED BY
TASK AREA**

TABLE XXX (continued)

Board	Frequencies	Category	COM	CUR	EDS	FIN	IGR	NES	PLA	PUP	SAL	SBI	TRA	OED	NED	Total
11		Supt.	8	4	51	5	5	5	45	46	48		2		8	222
	Total	Sec.-Treas.	1		9	17	3		2	5	18				1	56
	frequencies	Chairman	11	10	60	15	16		23	27	68		2	2	17	251
		Trustees	3	12	104	15	15		31	61	158			2	20	421
		Others	18	2					64	50						134
	TOTAL	23	44	226	52	39		165	189	292		4	4	46	1,084	
Percentage		Supt.	35	9	23	10	13		27	24	16		50		17	20.5
	frequencies	Sec.-Treas.	4	23	4	33	8		1	3	6				2	5.2
	of total	Chairman	48	27	31	29	41		14	14	23		50	50	37	23.2
		Trustees	13	41	46	29	38		19	32	54			50	43	38.8
		Others	1		1				39	26						12.4
12		Supt.	12	7	71	37	43	14	42	27	2	3	10	12	1	281
	Total	Sec.-Treas.	5		20	12	17	13	111	11	2	34	8	2	5	240
	frequencies	Chairman	25	7	127	87	87	36	203	94	10	83	17	48	37	861
		Trustees	1	1	103	32	49	16	116	60	6	52	17	21	19	493
		Others	7		1		1		157	18			3		2	189
	TOTAL	50	15	322	168	197	79	629	210	20	172	55	83	64	2,064	
Percentage		Supt.	24	47	22	22	22	18	7	13	10	2	18	14	2	13.6
	frequencies	Sec.-Treas.	10		6	7	9	16	18	5	10	20	15	2	8	11.6
	of total	Chairman	50	47	39	52	44	46	32	45	50	48	31	58	58	41.7
		Trustees	2	7	32	19	25	20	18	29	30	30	31	25	30	23.9
		Others	14		0.3		1		25	9			5		3	9.2

TABLE XXX (continued)

Board Frequencies Category	COM	CUR	EDS	FIN	IGR	NES	PLA	PUP	SAL	SBI	TRA	OED	NED	Total
Supt.	15	2	147		38		20	48		1	11		2	284
Sec.-Treas.	4		7	53	12	8	24	10		4	7		3	132
Chairman	46	1	141	82	87	21	159	92	3	24	52		9	717
Trustees	29		85	38	48	14	113	62	1	17	52		5	464
Others	3		9	18	5	3	159	6						203
TOTAL	97	3	389	191	190	46	475	218	4	46	122		19	1,800
Percentage Supt.	15	67	38		20		4	22		2	9		11	15.8
Sec.-Treas.	4		2	28	6	17	5	5		9	6		16	7.3
Chairman	48	33	36	43	46	46	33	42	75	52	43		47	39.8
Trustees	30		22	20	25	30	24	28	25	37	43		26	25.8
Others	3		2	9	3	7	33	3						11.3

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