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SCHOOL BOUNDARY PERMEABILITY AND EDUCATIONAL VALUES:

A MULTIPLE DISCRIMINANT ANALYSIS

OF PARENT CHARACTERISTICS

A DISSERTATION

SUBMITTED TO THE GRADUATE FACULTY

in partial fulfillment of the requirements for the

degree of

DOCTOR OF PHILOSOPHY

BY

PETER HARLAN HACKBERT

Norman, Oklahoma

1976

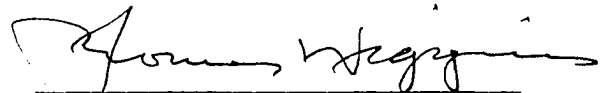
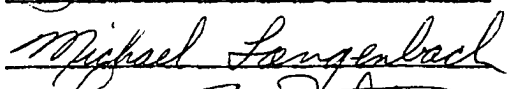
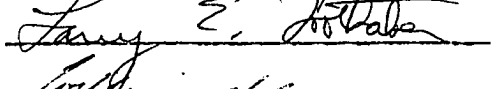
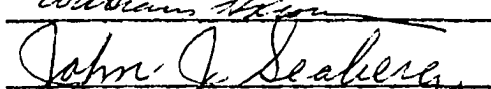
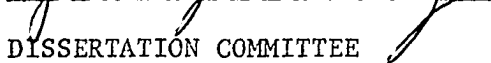
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SCHOOL BOUNDARY PERMEABILITY AND EDUCATIONAL VALUES:
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OF PARENT CHARACTERISTICS

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School Boundary Permeability and Educational Values:

A Multiple Discriminant Analysis

of Parent Characteristics

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Running Head: School Boundary Permeability and Educational Values:

Abstract

A virgin area of study in organizational theory as it applies to public school educational administration is concerned with the nature and permeability of the boundary lines that mark off a school from its constituent parent community. Using the conceptual and operational constructs of school boundary permeability by Weiner and educational values by Schutz, data were obtained from 147 parents in four non-metropolitan schools. Multiple analysis of variance was performed across schools, socioeconomic status and ethnic parental groups. Multiple discriminant function analysis was performed across the four schools and ethnic parental groups. The results of this research can be summarized as follows: (1) Schools differed significantly in terms of the educational values as perceived by primary groups of parents. (2) Contrast between schools was explained on the basis of the educational values of parents. Discriminatory power for the parental group was .52. (3) When grouping parents on socioeconomic indicators, no significant differences were reported. (4) There were significant differences in both educational values and school boundary permeability, irrespective of socioeconomic status based on the ethnicity of parents. Discriminatory power for the ethnic grouping of parents was .48.

School Boundary Permeability and Educational Values:

A Multiple Discriminant Analysis

of Parent Characteristics

Open systems theory has stimulated a number of theoretical discussions, yet many implications of the theory still remain to be explored (Katz and Kahn, 1966; Miller, 1955; Buckley, 1967), particularly applied to educational organizations (Carlson, 1964; Corwin, 1974). The purpose of this paper is twofold: (1) to consider the conceptual and operational constructs of school boundary permeability and educational values as important variables in the study of organizational phenomena, and (2) to empirically investigate these constructs in a field study. The problem for this research is: What is the relationship between school boundary permeability and educational values in public independent non-metropolitan schools in Oklahoma? It will be shown that conceptualizing school organizations in terms of boundary maintaining systems provides a theoretical link between several concepts that have previously not been treated together. The specific research questions were:

1. Are there significant parent group differences between school boundary permeability and educational values?
2. How can school boundary permeability and educational values be explained and contrasted on the basis of different demographic groups of parents?

Theory and Relevant Concepts

Before discussing the concept boundary permeability, it is useful to consider the important contributions to the theoretical literature in education administration which has guided research on organizations in education. Bidwell's (1965) review and analysis of the school as a formal organization was an attempt "to move toward a formulation of the organizational character of schools" (1964:972), and while it was theoretically eclectic, it stands as a significant contribution to the literature. The same can be said of Corwin's examination of models of organizations which is considered next.

Corwin (1974) proposed and implemented a framework for advancing the diversity of work on educational organizations. His thesis consisted of the identification and analytical review of four primary models and derivative models that describe patterns of relationship among a key number of concepts.

Following Gouldner (1959) two distinct models, the rational and natural systems, were designated "primary models." The rational model was discussed basically in terms of bureaucratic theory with applications to educational administration being delineated in terms of administrative decision-making (Bridges, 1967; Griffiths, 1958; Ohm, 1968) and industrial relations (Callahan, 1962).

The natural systems model explored deviation from, or unintended consequences of the ideal type rationality, in Page's (1946) view, bureaucracy's other face. Corwin discussed concepts such as autonomy, control influence, and power and further argued that both primary models suffer limitations in their application to public schools. For example,

the rational model was described as being more applicable to organizations with fewer levels in their hierarchy. A reconciliation of the models was suggested that involved examination of the variables used to integrate social organizations and the organizational conditions that influence organization-environment integrating mechanisms. An example of an integrating mechanism is consensus among the membership on values, norms and behavior. An example of an organizational condition is the degree of insulation the organization maintains from outsiders.

A second set of primary models considered by Corwin was termed open and closed models of organization. The latter concentrates on internal organizational features and ignored environmental circumstances, while the former included environmental variables. Arguing that most organizations range somewhere between the polar types represented by the four primary models, Corwin then considered a number of "derivative" models. These included organic models represented by social systems (Coleman, 1961), functional model (Parsons, 1959; Dreeben, 1968), cybernetic model (Griffiths, 1965), equilibration and exchange models (Corwin, 1970), conflict model (Corwin, 1969), and role model (Gross, 1958; Getzels and Guba, 1955). Finally, the complex organization model, depicted largely in the work of Thompson (1972) was seen as a potential source of synthesis, apparently because structural shifts of various points in the organization in response to uncertainty could sometimes be viewed as characteristics of one of the primary models, and sometimes characteristic of another. Corwin concluded his essay with an analysis of three types of organizational constraints; those that arise from the environment, technology, and organizational size.

Corwin's approach to educational organizations is noteworthy in that it began with broad theoretical categories and used relevant speculation and empirical studies to advance new propositions. While some writers employ rational and closed system models as straw men, Corwin identifies explicit limitations and advantages of each of the models considered. The models often are not mutually exclusive in the sense that certain ideas can be subsumed under several of them. For example, the notion that organizations behave in ways that reduce uncertainty can be comfortably incorporated in both open and natural systems models.

Nonetheless, Corwin's work represents an important effort to spell out the implications for educational organizations of theories of organizations. Moreover, the strategy employed unearthed neglected variables, suggested gaps and proposed useful variables and hypotheses.

The above discussion of the theoretical literature in educational administration was only intended to highlight certain key concepts to the study of organizations. The remainder of the paper demonstrates the utility of the open systems theory by applying it to the study of school boundary permeability and educational values. The aim is to integrate the concepts by means of a common perspective.

Elements of Boundary Permeability in Public Schools

Organizational theorists have traditionally grounded their conceptualization of boundary permeability within the open-systems or organization-environment perspective. Indeed, the open-systems perspective allows us to deal with concepts and variables that focus on power

relationships between sociocultural characteristics (i.e., the locus of control) rather than analyzing the logic behind administrative decision-making. Further, the perspective alerts us to the fact that the source of many school organization problems lies outside the organization, in the organization's environments. The organizational theorists are thus forced to concentrate their attention on variations both in the organization and in the environment, since the open-systems perspective requires one to look at both sides of an organizational-environment relationship. Such a perspective can be found in previous studies dealing with the impact of the demographic characteristics of a community on cooperation, competition and other processes by which publics in contact are made congruent with organizational needs (Blau and Scott, 1962) or studies in which organizations emerge as the demographic host of the community (Smigel, 1960; Thompson and McEwen, 1958). Application of this approach to the study of educational organizations are found in Corwin (1967), Dahl (1961), Sykes (1956) and Vidich and Bensman (1960). Moreover, social scientists have investigated how school organizations resist outside influence (Katz, 1964), the exploitation of clients (Etzioni, 1964) and the sociocultural characteristics of a community and the organization (Stinson and LaBelle, 1971). This literature provides a framework for analysis of the significant variables that are identified in this study.

Conceptualizing organizations as boundary-maintaining systems provides a scheme for dealing with school boundary permeability. The concept of boundaries is present in Weber's definition of a formal organization:

A [social] relationship will . . . be called "closed" against outsiders so far as, according to its subjective meaning and the binding rules of its order, participation of certain persons is excluded, limited or subjected to conditions A social relationship which is either closed or limits the outsiders by rules, will be called a "corporate group" so far as its order is enforced by the action of specific individuals whose regular function this is, of a chief or "head" and usually also an administrative staff (Weber, 1947, pp. 139-146).

An organization is a formal organization, following Weber's definition, when there is a person in authority present. Authorities are those persons who "act in such a way as to tend to carry out the order governing the group," (Weber, 1947:146). Rephrasing the role of authorities in organizations in terms of the boundary perspective, educational administrators can be defined as those persons who are given the task of applying organizational policies and procedures to the arrangement and maintenance of school's boundaries.

Social change produces a dilemma with respect to educational organizational goals, which eventually must be faced: if schools do not adapt their objectives to changing environments, administrators are likely to be judged ineffective; yet, in adapting their goals, they may violate prior commitments. Vidich and Bensman (1960) described the social policy transformation from the vantage point of residents of a small town who at one time agreed to permit farmers in the surrounding community to control the school board in exchange for the rural area's support of a consolidated school to be built within the city limits.

Over time, the consolidated school maintained a strong vocational agricultural program and other evidences of rural domination had become useless to high school graduates. Thus, the degree to which educational goals are compromised by outside pressures depends on the organization's ability to defend its boundaries.

The concept, boundary, is implicit in discussions of school-community relations and it is the school administrators who control the psychological and structural properties of the school-community interface. School-community relations represent a continuing concern for school administrators, because as Campbell (et. al, 1966) suggests, education is seen as a public policy issue and thus it is the public who is responsible. Though legally under lay control and traditionally subject to a community-school ideology favoring "democratic" participation of parents in school affairs, Corwin (1967) documents that a school is subject to the same principles of other organizations--outside control over the organization interrupts its direction, interferes with its coordination, and undermines its authority system.

With the American public school in the midst of changes more rapid than at any time in the history of the common school, the systematic analysis of parents' perceptions of the boundary of the school and their educational values is called for. Environmental and community changes includes the number and social-class membership of students of any particular school; the attitudes, perceptions and values that ethnic minorities bring to the school program; the explosion of knowledge underlying school subject matter; and the political, social and economic structures surrounding the school.

Since the 1954 Supreme Court school desegregation decision, educators have focused on changes in school ethnic composition as one means of creating quality education for minority group children. Recognizing the ineffectiveness of past efforts to integrate the schools, both educators and minority group parents now accept that the neighborhood school will continue to exist and may even have intrinsic value. Thus, those concerned with quality education emphasize the importance of strengthening the integrity of the neighborhood school and the community it serves.

Elements of the Environment

"At one level, environment is not a mysterious concept. It means the surrounding of an organization--'the climate' in which the organization functions" (Dill, 1967:95). The complexity of the concept comes into focus when we move from simple description of the environment to analysis of its properties.

Osborn (1971) has grouped the infinite set of elements outside the boundaries of an organization such as other organizations, associations of individuals and broad forces into three categories: macro, aggregation, and task environment. The macro and aggregation segments may be seen as the larger and more general framework in which all organizations within a state, nation or geographic area must operate. Dill (1960), and Thorelli (1967), defined the task environment as that portion of the total setting which is relevant for goal setting and goal attainment. Much of the empirical research related to the organization-environment relationship is based on this view. Empirical studies show that

conditions in this environmental category alter the autonomy of top-level managers (Dill, 1958), managerial perceptions of uncertainty (Duncan, 1971), time spent in internal versus external constants (Kefals, 1971), management's approach to goal attainment (Neghandi and Reimann, 1972) and even the goals set by the organizations (Simpson and Gully, 1962).

The works of Burns and Stalker (1961), Emery and Trist (1965), Lawrence and Lorsch (1967), Simpson and Gully (1962), Terreberry (1968), Thompson and McEwen (1958), Turk (1970), Udy (1958, 1962), and Woodward (1965), among others, have indicated that as the environment becomes more dynamic, the organization must become not only more receptive to change, but alter its internal structure and operations to maintain and/or establish a high survival potential. As yet, however, a solid body of knowledge about the organizational-environmental interface as it relates to educational organizations has not emerged from behavioral science research (Carlson, 1964; Halpin, 1975).

To simplify description and analysis, this research focuses on the inputs which bear upon goal setting and on goal attainment of the school organization as perceived by primary groups outside the organization. These elements form, for the school, its task environment. A distinction is made among things that the school does (activities), things that the school sets itself to do (tasks), or stimuli to which the school might respond (task environment). This research examines the task environment of the primary groups of parents with various demographic characteristics hypothesized as affecting school boundary permeability.

Conceptually, a number of sociologists (Weber, 1947; Tonnies, 1940; Schumpeter, 1947; Parsons, 1959; Theodorson, 1953) have analyzed how organizations and external primary groups, such as family and neighborhood, coordinate their behavior to achieve optimal social goals. More recently, Litwak and Meyer (1966) have proposed a balance theory of coordination applicable for analysis of school-community dynamics. Their theory builds upon the assumption that the process of education requires both technically trained professional experts and the non-expert members of families and other groups in the community. In addition, the analysis suggested that experts in schools and non-experts in the community must communicate and interact in order to optimize the social goal of education. In the late 1960's and early 1970's a major dispute between professional educators and external primary groups occurred when it became obvious that the public educational system was markedly less effective for the poor. The educators argued that inadequacies of poor families were mainly responsible; spokesman for the community tended to blame the professionals, charging discriminating, maldistribution of resources and unrelevance or indifference in educational programs.

The family as a primary group plays an important role in educational motivation in a variety of ways. It provides supervision of home study, inculcates values that affect attitudes and behaviors in school, exposes children to significant models, and in many other ways makes them ready for school. The family sustains or dampens interest in the more formal learning of the classroom. The degree to which the child perceives his parents as encouraging or even pressuring him to have high educational goals is one factor which has come in for considerable emphasis.

Parental attitudes, values and feelings. The research reviewed indicates that there are differences in educational aspirations and attitudes of lower social class parents in comparison to the attitudes of other parents and that educational encouragement may differ among types of parents.

Kahl (1953) first suggested the importance of parental encouragement in his study of the educational and occupational aspirations of common boys. After finding that intelligence and social class position accounted for the major variations in college aspiration of boys of "common-man" or working class origins, he noted that the attitudes of the parents regarding the importance of occupational success for personal happiness was the critical factor.

Kohn's (1959) investigation suggested parental values as another critical variable in the school-community interface. In this study of social class and parental values, Kohn found that parents of all social classes thought their children should be honest, happy, considerate, obedient and dependable. However, middle-class parental values emphasized such self-direction and internal standards of conduct as self-control, consideration, and courtesy. Working class parental values centered on qualities that assured respectability, obedience, neatness and cleanliness. This emphasis to external prescription, Kohn suggested, proceeded from the nature of working class occupations, ones that required the following of explicit rules set down by someone in authority. Adults of the lower class were often found to vent their hostility in overt acts of aggression against others, while those of higher status were more likely to turn their hostility inward, expressing it in self-

deprecatory attitudes and suicide (Good, 1958; Henry and Short, 1954; Zigler and Phillips, 1960).

Children bring certain attitudes to school which seem to be associated with their home life and economic status. Crawford (1967) said in his discussion of the Chippewa Indian that true poverty involved something much more significant to children than just low income. Poverty involved certain prevalent attitudes which affected the children as they grew up. One common attitude which the poor have was the feeling that they are trapped and that there are no promising choices open to them in solving their problems. This attitude carries over in school activities.

Parental socio-economic status. Poverty is a widespread condition among residents of non-metropolitan areas. Jenkins (1963) and Taylor and Jones (1963) reported that non-metropolitan income per capita did not match urban income per capita, and that as a result rural residents were disadvantaged in terms of the larger society. Jenkins further stated that as a result of this and other factors, there were many rural children who had extremely limited and even impoverished social contacts limiting opportunities to learn, which resulting in an increased incidence of cultural and mental retardation in the poorer rural areas.

On all socio-economic levels, children may be hampered by characteristics resulting, directly or indirectly, from their parents' situation. Thruston, Feldhusen and Benning (1964), in a study of factors affecting behavior of rural and urban youth, found that parents with low occupational and educational levels were likely to have children with excessively aggressive behavior. Bass and Burger (1967) pointed

out that the American Indian is the most disadvantaged rural group. In comparison to the general population, their income was only two-ninths as much; their unemployment rate was almost ten times greater; their life expectancy was seven years less; half again as many of their infants died; their school dropout rate was almost double that of the general population, and they had less than half the years of schooling.

In general, research has yielded results which show that students from lower socio-economic backgrounds do not have favorable attitudes toward school and teachers. Neale and Proshek (1967) and Glick (1970) have reported that children in schools located in upper socio-economic status areas held more positive attitudes toward teachers and school than children in schools located in lower socio-economic areas. Yee (1966, 1968) suggested that since lower class pupils often have fewer potent sources of adult warmth and support at home, they were influenced more by the teachers in school than students of middle-class backgrounds. Teachers' less positive attitudes toward students in lower-class schools tend to make pupils' attitudes toward teachers become less favorable. Coster (1958) reported no differences between three income groups in students' attitudes toward school and the value of education.

Hypotheses

Considering the research on variables within the school environment, it may be concluded that a significant relationship does exist between school boundary permeability, educational values and demographic characteristics of parents in non-metropolitan independent schools in Oklahoma. Multiple discriminant function analysis and analysis of variance were employed to answer the following research hypotheses:

Null Hypothesis I: There are no significant differences between schools on educational values and perceived school boundary permeability.

Null Hypothesis II: There are no significant differences between socio-economic parental groups on educational values and school boundary permeability.

Null Hypothesis III: There are no significant differences between ethnic parental groups on educational values and school boundary permeability.

Null Hypothesis IV: The collection of discriminating variables cannot be identified using a linear composite of educational values and perceived school boundary permeability to determine contrasts between types of parental groups.

Method

Subjects

Results reported here are based on data obtained from 147 parents of school-age children in four (K-12) schools from unified districts in non-metropolitan Oklahoma. The school districts were participating in the Non Profit Indian Community Evolvment Project funded by the U.S. Office of Education, Emergency School Aid Act, Title III (July 1973-June 1974). The sample was drawn randomly from a classification of ethnic membership of parents. Table 1 reports the comparison of frequencies and percentages of selected sample characteristics with known population parameters.

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Insert Table 1 About Here
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An index of socio-economic status was computed for these subjects by assigning values from zero to 96 to the father's occupation in accordance with instructions for the Duncan Occupational Status Scale (Duncan, 1961). Refining the 11 broad categories the Census Bureau uses to group the labor force, the subjects fell into six major occupational categories: professional (11%), managers (13%), clerical (15%), craftsman/foreman (30%), operatives (8%) and service workers (30%) (Duncan, 1963). Sixty-six percent of the subjects had completed high school and 39% were male. Forty-four percent of the subjects were White, 42 percent American Indian, 14 percent Black, 1 percent Mexican-American. The degree of similarities among the demographic characteristics of the four schools are reported in Table 2.

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Selection and Training of Interviewers as Data Collectors

School-community coordinator applicants from each school district were told that they would attend a 5-day training session before they were hired as a school-community coordinator, but that they would be paid for attending the session. In the training session, the applicants learned and worked on simulated materials related to a school-community coordinator and obtained feedback on their performance. The training activities were used for selection purposes, since trainee performance on the simulated interview tasks could be used as an objective measure and predictor of interview and school liaison performance in the field. Of a total of 24 trainees, 10 were hired upon analysis

of interview ratings, and performance information acquired as to the functions of school-community coordinators.

Interviews

The first contacts that subjects had with the study were letters from the Southwest Center for Human Relations Studies, the University of Oklahoma, explaining the purpose of the study and asking for the subjects' cooperation. After receiving the letters, the subjects were contacted by the trained school-community coordinators and asked if they would agree to be interviewed. Over 70% agreed to participate in the study. The interview lasted about 1½ hours and was conducted in the subject's home by trained interviewers from each of the school-communities. The interviewers explained to the subjects the purpose of the study and stressed that all responses would be confidential. The subjects were given the option of not being interviewed and 30% declined. The structure interview contained two scaled questionnaires.

Instrumentation

The instruments used to measure parental perceptions in this investigation were, respectively, the Parent School Communication Questionnaire (PSCQ) developed by Wiener and Blumberg (1973) and the Val-Ed Survey designed by Schutz (1973). The Wiener-Blumberg instrument yielded a measure of five quantifiable dimensions of the permeability of the boundary of a school as an indicant of the openness of school personnel to input from their environment. The fifty item instrument elicits information concerning the following dimensions:

1. Mechanical-Statements concerning the process through which parents make contact with school personnel.
2. Outreach-Statements concerning the attempts by school personnel to contact parents.
3. Organizational Climate-Statements concerning the parents' general feeling of the total school organization.
4. Interpersonal Climate-Statements concerning the relationship with specific members of the school organization.
5. Influence-Statements concerning the parents' perceptions of the impact of their relations with school personnel.

The PSCQ history and validation are described in Wiener and Blumberg (1973). The reliability characteristics of the five dimensions analyzed by means of the Cronbach Alpha reliability coefficient for internal consistency were .55 for the MECHANICAL dimension; .66 for OUTREACH; .84 for ORGANIZATIONAL CLIMATE; .82 for INTERPERSONAL CLIMATE; and .77 for the INFLUENCE dimension with a total overall internal consistency of .93 (Cronbach, 1951).

The task environment of interpersonal relationships plays a crucial role of the teacher-student interaction for learning (Pearson, 1952) and was measured utilizing the educational values instrument. Derived from the theory of group development originally presented by Schutz (1958), the history, validation and intercorrelation research are more recently described in Schutz (1973). The instrument measures respondents' values on fourteen scales designated as follows:

1. Importance (Imp): Education has intrinsic value beyond its occupational advantages.
2. Mind (Mind): The school should concern itself primarily with

developing the mind of the student rather than with developing his whole personality.

3. School-Child: Control (SC:C): The school should help the child to realize and use his own abilities and judgment most effectively.
4. Teacher-Child: Control (TC:C): The teacher should regulate completely classroom lessons and activities.
5. Teacher-Child: Affection (TC:A): The teacher should be personally friendly and warm toward the children.
6. Teacher-Community: Inclusion (TCm:I): The teacher should participate in community activities and be encouraged to do so by community members.
7. Teacher-Community: Control (TCm:C): The teacher should conform to the dominant values of the community.
8. Teacher-Community: Affection (TCm:A): The teachers and people in the community should be personally friendly with each other.
9. Administrator-Teacher: Inclusion (AT:I): The administrator should take account of teachers' opinions when making policy decisions.
10. Administrator-Teacher: Control (AT:C): The administrator should control the activities of the teachers, both in the classroom and in the community.
11. Administrator-Teacher: Affection (AT:A): The administrator should be personally close with teachers and express his feelings openly.

12. Administrator-Community: Inclusion (ACm:I): The administrator and the people in the community should be involved jointly in school and community affairs.
13. Administrator-Community: Control (ACm:C): The desires of the community should determine school policy.
14. Administrator-Community: Affection (ACm:A): The administrator and the people in the community should be personally friendly with each other.

Analysis

The objective of a discriminant analysis is to classify objects, by a set of independent variables, into mutually exclusive and exhaustive categories. The statistical theory of discriminant analysis assumes that the discriminating variables have a multivariate normal distribution and equal variance-covariance matrices within each group. In practice, the technique is robust and these assumptions need not be strongly adhered to (Klecka, 1975). The techniques are described in several multivariate texts, such as Cooley and Lohnes (1971: 243-250) and Tatsuoka (1971: 157-164).

Overall and Klett (1972) offer the solution to discriminant analysis by determining weights to be given each of the nineteen original measurements in order that the resulting composite score will have maximum utility in distinguishing between membership of the parent groups. The desired discriminant function is thus of the form

$$y = a_1x_1 + a_2x_2 + \cdots + a_px_p$$

where $a_1, a_2, \dots, a_p$ are the weighted coefficients applied to the p original scores for each individual.

Results

The main purpose of the study was to examine the relationship between school boundary permeability and educational values. Table 3 contains the intercorrelations among demographic variables and their means and standard deviations for the total sample. The strongest relationship was a tendency for socio-economic status to increase with

Insert Table 3 About Here

increasing school grade completion. The five relatively independent variables, highest grade completed, age, sex, race, and socio-economic status, represented parsimonious yet potentially powerful antecedent measures for the study of variables associated with the perception of school boundary and parental educational values.

Table 4 represents the inter and intra measure item correlations for the five measures of school boundary permeability (PSCQ) and the fourteen measures of educational values (Val-Ed) for all respondents.

Insert Table 4 About Here

The intrameasures for PSCQ indicated that the permeability scales were not significantly related to each other and each dimension was assessing five different characteristics of the organization, i.e., the processes made available to parents to contact school personnel; the attempt by

school personnel to contact parents, parental perceptions of the general character of the school organization, the quality and nature of parent-teacher interaction, and finally, the parental perceptions of the impact of their relations on school personnel. The Val-Ed scales each revealed significant intracorrelations, while there were no significant intercorrelations between the Val-Ed and PSCQ. Further, these obtained scale intracorrelations of the Val-Ed closely mirrored the initial developmental data for each of the scales with the Affection and Inclusion scales tending more toward colinearity than either related to Control (Schutz, 1973). Group means and standard deviations for each of the predictor variables, PSCQ scales and Val-Ed scales, are reported in Table 5 across schools, in Table 6 across ethnic groups, and in Table 7 across six levels of socio-economic status.

 Insert Tables 5, 6, 7 About Here

To test the first null hypothesis that there were differences in the multivariate group centroids, a multivariate analysis of variance (MANOVA) with one factor, schools, was performed on the scores of PSCQ and the Val-Ed. Rather than testing the significance of the main differences on each of the nineteen predictor variables separately, which would have increased the probability of a Type I error, the Wilks (1932) Λ criterion was used to test for significant mean vector differences. The MANOVA (The University of North Carolina Psychometric Laboratory, 1970) revealed statistically significant differences between group centroids. (Rao's F approximation (Rao, 1952) = 1.487, df = (57,373.5) $p < 0.017$, η = 0.514). After establishment of the overall significant

differences, and, thus, rejection of the null hypothesis, a series of univariate analysis of variance (ANOVA) tests were performed in order to examine the variables along which schools differed. The F-values and associated p-values for all predictor variables across schools are shown in Table 8. Given the high overall MANOVA F-ratio, inspection of Table 8 revealed that five of the nineteen predictor variables were associated with F-ratios that were significant at the 0.05 level of significance.

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Insert Table 8 About Here
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The highest F-value was associated with the Val-Ed scale TEACHER-COMMUNITY: CONTROL. This scale measured the degree to which parents believed that the teacher should conform to the dominant values of the community. The Val-Ed scale associated with the next highest F-value in Table 8 was ADMINISTRATOR-COMMUNITY: AFFECTION. This scale measured the parents' beliefs that the administrator and the people in the community should be personally friendly with each other. Another Val-Ed scale that was associated with significant differences across schools was TEACHER-COMMUNITY: AFFECTION, or the degree to which the parents believed that the teacher and the people of the community should be personally friendly with each other. Another significant F-value was associated with the Val-Ed scale, MIND. This scale measured parents' beliefs that the school should focus itself primarily on the mind of the student rather than developing the student's whole personality. The last F-value associated with significant differences among schools was IMPORTANCE, another Val-Ed scale. This scale measured the degree

to which education has intrinsic value beyond its occupational advantages as perceived by parents.

To test the second null hypothesis that there was no difference in the multivariate group centroids, a second multivariate analysis of variance with one factor, socio-economic groups, was performed on the scores of the PSCQ and the Val-Ed. The MANOVA, using a Wilks Δ criterion revealed non-significant differences between group centroids (Rao's F approximation = 0.823, $df = (95, 603.1)$, $p < 0.880$, and $\eta^2 = 0.415$). Thus, the null hypothesis was not rejected.

To test the third hypothesis that there was no difference in multivariate group centroids, a third multivariate analysis of variance with one factor, ethnicity, was performed on the scores of the PSCQ and Val-Ed. The Hotelling T^2 statistic was used to test for significant mean vector differences. The MANOVA, using Wilks Δ criterion, revealed a significant difference between group centroids. ($F = 1.458$, $df = (38, 252)$, $p < 0.048$, $\eta^2 = 0.446$). After establishment of an overall significant difference and thus rejection of the null hypothesis, a series of univariate F tests were performed to examine the variable/s along which groups differed. The F -values and the associated p -values for all predictor variables across ethnic groups are shown in Table 9. Given the high overall MANOVA F -ratio, inspection revealed that three of the nineteen predictor variables were associated with F -ratios that were significant at the 0.05 level or beyond.

- - - - -
Insert Table 9 About Here
- - - - -

As reported above for school groups the highest F-value was associated with the Val-Ed scale MIND. The PSCQ scale associated with the next highest F-value in Table 9 was INFLUENCE. This scale measured parental perceptions of their relations and influence with school personnel. Included in the scale were measures related to the amount of attention the school personnel gave to parental input, response to group and individual input and the role of school personnel and parents in problem solving.

A second PSCQ scale associated with a significant difference among ethnic groups was MECHANICAL. This scale concerned the perceived process through which parents made contact with school personnel. Questions of the scale elicited information as to difficulties encountered in contacting a principal or teacher and the layers of the organization required to be penetrated before contact with the desired individual was made.

The fourth hypothesis postulated that a collection of discriminating variables existed on which parental groups were expected to differ. The multiple discriminant analysis provided the additional evidence to determine the extent and nature of the differences between types of parents in terms of multiple measures.

The constructs inherent in discriminant analysis indicated the combinations of variables that were most sensitive to the deviations from the null hypothesis of the MANOVA. Correlations between the discriminant functions and individual predictor variables helped to locate variables in the set that contributed to the group differences in orthogonal directions. Further, when the coefficients were applied to group

means, a graphical representation of the contrasts for significant functions yielded pictorial representation of the group contrasts. As in the MANOVA analysis, the multiple discriminant function analysis was based on nineteen predictor variables and focused on contrasts between schools and contrasts between ethnicity.

Related to contrast between schools, three discriminant functions emerged and were significant at or beyond the 0.02 level and jointly accounted for 51.4% of the total variance. The standardized discriminant function coefficients are presented in Table 10 and denote the relative contribution of each associated variable to the discriminant function.

Insert Table 10 About Here

To assess the relative discriminating efficiency of these discriminant functions three measures were computed and reported in Table 11. The first measure was the associated eigenvalues which were computed in the process of deriving the discriminant functions. Since the

Insert Table 11 About Here

sum of all eigenvalues was a measure of the total variance in the set of discriminating variables, each eigenvalue was a measure of the relative importance of the discriminant function. The second measure of discriminating efficiency was the relative percentage of dispersion accounted for by each discriminant function. These percentages were ratios of the magnitude of each eigenvalue to the total sum of eigenvalues. The final measure utilized was the canonical correlation expressing the

degree of association between the discriminant function and group membership. These measures of discriminating efficiency were presented in Table 11.

The best single measures of the discriminating functions were TEACHER-COMMUNITY: AFFECTION, TEACHER-COMMUNITY: CONTROL, and IMPORTANCE. Not only were these variables significantly different (See Table 12), they were highly associated with a discriminant function, i.e., TEACHER-COMMUNITY: AFFECTION was highly correlated with the first discriminant function ($r = .39$); TEACHER-COMMUNITY: CONTROL was highly correlated with the second discriminant function ($r = .74$); and IMPORTANCE was highly correlated with the third discriminant function ($r = .54$). The correlations between all of the predictor variables and the discriminant dimensions are presented in Table 12. The means of each school on the

Insert Table 12 About Here

best measure of each discriminant function is reported in Table 13.

Insert Table 13 About Here

The results are depicted graphically in Figure 1.

Insert Figure 1 About Here

Related to ethnicity, two discriminant functions emerged. The standardized discriminant function coefficients for ethnic groups are presented in Table 14.

Insert Table 14 About Here

As reported for schools, three measures of relative discriminating efficiency were computed and reported in Table 15. The first

Insert Table 15 About Here

measure was the associated eigenvalues. Each eigenvalue was a measure of the relative importance of the discriminant function. The second measure of discriminating efficiency was the relative percentage of dispersion accounted for by each discriminant function. These percentages were ratios of the magnitude of each eigenvalue to the total sum of eigenvalues. The final measure utilized was the canonical correlation expressing the degree of association between the discriminant function and group membership.

The best single measures of the discriminating functions were MIND and INFLUENCE. Not only were these variables significantly different (see Table 10), they were highly associated with a discriminant function, i.e., MIND was highly correlated with the first discriminant function ($r = .51$) while INFLUENCE was highly correlated with the second function ($r = .61$). The correlations between all of the predictor variables and the discriminant dimensions are presented in Table 16. The means of each parental ethnic group on the best measure of each discriminant

Insert Table 16 About Here

function is reported in Table 17. These results are depicted graphically

Insert Table 17 About Here

in Figure 2.

Insert Figure 2 About Here

Discussion

The intent of this paper was to bring to the attention of organizational theorists the potential that open systems theory has for integrating the organization-environmental relationship within a public school setting. Results of this study demonstrated that schools differ significantly in parents' perceptions of school boundary permeability and educational values: five of the nineteen predicted variables were associated with F-ratios that were significant at the 0.05 level or beyond. Further, results of this study contrasted schools on the basis of boundary perceptions and educational value, leading to a relatively high degree of discriminatory power between schools: 51% of the variability between schools was explainable on the basis of the educational values of parents. It was shown that when grouping parents on the basis of socio-economic indicators that there were not significant differences in parents' perceptions of school boundary permeability or educational values. Results indicated differences in educational values and perceptions of the schools of white parents in comparison to the values and perceptions of black and Indian parents irrespective of socio-economic status. Finally, it was shown that contrasting parents on the basis of ethnicity led to a relatively high degree of discriminatory power between the ethnic groups: 48% of the variability of parents' differences were explainable on the basis of their ethnic membership.

In an earlier paper concerned with organizational boundaries the point was made that:

. . . the fact that boundaries are treated as variables has obvious advantages . . . but in some ways this perspective can confound the problem of conceptualizing organization-environment relations.

Thus the question arises whether characteristics of the environment should be treated as integral organizational variables or as outside constraints on organizations (Corwin, 1974:269).

The present research was aimed in this latter direction, although it is still limited because of the major emphasis on the subpopulations within the environmental context. By examining the organizational-environment relations in terms of four research questions, it was clear that no single process occurred. Thus, it may be unreasonable to expect any single theory to account for the tightening and strengthening of the organizations' boundaries within a systems framework. However, it may still be possible to develop an "integrated conceptual view" by combining several particular concepts from several disciplines which concern particular components in the boundary permeability perspective.

Besides the richness and complexity of the boundary phenomena, there is a second reason why a theory of organizational boundary permeability may never emerge. This reason stems from the fact that the definition of this research area is in terms of subjects, or at least situations, rather than concepts. In a sense organizational boundary research is more ideographic than nomothetic, because the ideal is to study the totality of the events and interactions that occur. This research is also similar to that in comparative studies of organizational behavior, i.e., where concepts or theories from one area of research are tested on a particular class of organizations.

There are other implications for this conceptualization of the boundary perspective. For example, questions of external validity, or generalizability, are more limited since the borderline of this research

is drawn around a relatively homogeneous group of rural independent schools with no existing school-community relations program. This homogeneity reduces the range of variance in perceived boundary permeability.

Besides problems such as these, the more common field study research problems of field interviewing validity, reliability and supervision as well as low response rates also existed. The problem of obtaining measures on a reasonable number of people was greater than expected.

This research is not without its strengths, however. By defining a research area in terms of a particular situation, one must rely on a variety of conceptual tools. In this case the concepts used to explain organizational boundary permeability and educational values were developed from behavioral phenomena in other situations. The integration of such concepts with these data serves to enhance the validity of the concepts. One of the major problems in behavioral science research is that theories are too often bounded within a single organizational context.

A final strength is the link between school boundaries and socio-cultural characteristics. Evidence was found indicating that schools strive to maintain a balance between autonomy and social distance with outside parent groups. Further, school parental groups differ in their perception of values as well as boundary permeability. The results here suggest strong relationships between the task environment and demographic characteristics of parents.

The results of this research can be summarized as follows:

1. Schools differ significantly in terms of the task environment as perceived by groups of parents.

2. The variability between schools can be explained on the basis of educational values of parents.
3. When grouping parents on socio-economic indicators, no significant differences were reported.
4. There were significant differences in both educational values and perceived school boundary permeability, irrespective of socio-economic status, based on ethnicity of parents.
5. A relatively high degree of discriminatory power exists among groups of parents on the basis of ethnicity.

Within the present attempt to incorporate the organization theory concepts to a public school setting, additional research thrusts can and need to be forged. First, long term research could be conducted which would include a study of the coordination procedures and linking mechanisms that organizations use to build relationships with outside external groups. Within a public school context, this would take the form of studying interactions at the boundary level with specialists in boundary roles (i.e., school truant officers, home-school coordinators who work with members of the local police department or social service agencies). Further research is suggested that examines the general tendency for schools to use mechanisms that increase the social distance from the outside clientele where the clientele are already closely involved with the school. In a multi-cultural setting, where social distance is presumably high, schools are not voluntarily reaching out, but instead wall themselves off with highly bureaucratic procedures and controls. Further analysis of how schools use bureaucratic means to control not only teacher and students but also parents in the community is called for. Such activity could help in future pooling of research knowledge on organizational boundary.

References

- Aldrich, H. Organizational Boundaries and Inter-Organizational Conflict. Human Relations, 1970, 4, 279-293.
- Bass, W. P., and Burger, H. G. American Indians and Educational Laboratories. Albuquerque, N.M.: Southwestern Cooperative Educational Laboratory, 1967. ERIC:ED 014 369.
- Bidwell, C. E. The School as a Formal Organization. In March, J. (Ed.), Handbook of Organization, Skokie, Ill.: Rand McNally and Company, 1965, 972-1022.
- Blau, P. M., and Scott, W. R. Formal Organization. San Francisco: Chandler, 1962.
- Bridges, E. M. A Model for Shared Decision Making in the School Principalsip. Educational Administration Quarterly, 1967, 3, 49-61.
- Buckley, W. Sociology and Modern Systems Theory. Englewood Cliffs, New Jersey: Prentice-Hall, 1967.
- Bullock, R. P. School-Community Attitude Analysis of Educational Administration. SCDS Monograph #7. Columbus, Ohio: The Ohio State University, 1959.
- Burns, T., and Stalker, G. M. The Management of Innovation. London: Tavistock, 1961.
- Callahan, R. E. Education and the Cult of Efficiency. Chicago: University of Chicago Press, 1962.
- Campbell, F. F., Corbally, J. E., and Ramseyer, J. A. Introduction to Educational Administration. Boston: Allyn and Bacon, 1966.

- Carlson, R. O. Environmental Constraints and Organizational Consequences: The Public School and Its Clients. In D. E. Griffiths (Ed.), Behavioral Science and Educational Administration. Chicago: University of Chicago Press, 1964, 264-276.
- Coleman, J. The Adolescent Society. New York: Free Press, 1961.
- Cooley, W. W., and Lohnes, P. R. Multivariate Data Analysis. New York: Wiley, 1971.
- Corwin, R. G. Models of Educational Organizations. In I. N. Kerlinger and J. B. Carroll, (Eds.), Review of Research in Education. Itasca, Illinois: Peacock Publishers, 1974, 247-295.
- Corwin, R. G. Educational and the Sociology of Complex Organizations. In D. Hanson and J. Gersh (Eds.), On Education: Sociological Perspectives. New York: Wiley, 1967, 156-223.
- Corwin, R. G. Militant Professionalism: A Study of Bureaucratic Conflict in High Schools. New York: Appleton-Century-Crofts, 1970.
- Corwin, R. G. Patterns of Organizational Conflict. Administrative Science Quarterly, 1969, 14, 507-520.
- Coster, J. K. Attitudes Toward School of High School Pupils from Three Income Levels. Journal of Educational Psychology, 1958, 49, 61-66.
- Crawford, D. A., Peterson, D. L., and Wurr, V. Minnesota Chippewa Indians, A Handbook for Teachers. St. Paul, Minn.: Upper Midwest Regional Educational Laboratory, 1967. ERIC:ED 017 383.
- Cronbach, L. J. Coefficient Alpha and the Internal Structure of Tests. Psychometrika, 1951, 16, 297-334.
- Dahl, R. A. Who Governs? Democracy and Power in An American City. New Haven, Connecticut: Yale University Press, 1961.

- Dill, W. R. Environment as an Influence on Autonomy. In J. D. Thompson (Ed.), Comparative Studies in Administration. Pittsburgh: University of Pittsburgh, 1960, 131-161.
- Dill, W. R. Environment as an Influence on Managerial Autonomy. Administrative Science Quarterly, 1958, 2, 409-443.
- Dill, W. R. The Impact of Environment on Organizational Development. In J. D. Thompson (Ed.), Comparative Studies in Administration. Pittsburgh: University of Pittsburgh, 1967.
- Downey, L. W. The Task of Public Education. Chicago: Midwest Administration Center, University of Chicago, 1960.
- Dreeben, R. On What is Learned in School. Reading, Mass.: Addison-Wesley, 1968.
- Duncan, O. D. A Socioeconomic Index for All Occupations. In Reiss, A. J., Occupations and Social Status. New York: Free Press, 1961.
- Duncan, O. D. Methodology and Scores of Socioeconomic Status (U.S. Bureau of the Census, Working Paper No. 15). Washington, D.C.: U. S. Government Printing Office, 1963.
- Duncan, R. B. Multiple Decision-Making Structure in Adapting to Environmental Uncertainty: The Impact on Organizational Effectiveness (Working Paper No. 54-71). Evanston, Illinois: Northwestern University, 1971.
- Emergy, F. E. and Trist, E. L. The Causal Texture of Organizational Environments. Human Relations, 1965, 18, 21-31.
- Etzioni, A. Modern Organizations. Englewood Cliffs, New Jersey: Prentice Hall, 1964.
- Getzels, J. W. and Guba, E. G. The Structure of Role and Role Conflict in the Teaching Situation. Journal of Educational Sociology, 1955, 29, 30-40.

- Glick, O. Sixth Graders' Attitudes Toward School and Interpersonal Conditions in the Classroom. Journal of Experimental Education, 1970, 38, 17-22.
- Gold, M. Suicide, Homicide and the Socialization of Aggression. American Journal of Sociology, 1958, 63, 651-661.
- Gouldner, A. W. Organizational Tensions. In R. K. Merton, L. Bloom, and L. S. Cottrell, Jr., (Eds.), Sociology Today. New York: Basic Books, 1959.
- Griffiths, D. E. Administrative Theory in Education. In A. W. Halpin (Ed.), Chicago: Midwest Administrative Center, University of Chicago, 1958.
- Griffiths, D. E. System Theory and School Districts. Ontario Journal of Education Research, 1965, 8, 1.
- Gross, N., Mason, W. S., and McEachern, A. W. Explorations in the Role Analysis Studies of the School Superintendency Role. New York: Wiley, 1958.
- Halpin, A. The Broken Ikon: or, Whatever Happened to Theory. Paper delivered at Educational Administration Twenty Years Later: 1954-1974, a conference in honor of Roald F. Campbell, The Ohio State University, Columbus, Ohio, April, 1975.
- Henry, A. G., and Short, J. F. Suicide and Homicide: Some Economic, Sociological and Psychological Aspects of Aggression. Glencoe, Illinois: Free Press, 1954.
- Jenkins, R. L. Incidence of Emotional Disturbance and Mental Illness Among Rural Children and Youth. Washington, D. C.: National Committee for Children and Youth, 1963. ERIC:ED 012 649.

- Kahl, J. A. Educational and Occupational Aspirations of 'Common Man' Boys. Harvard Educational Review, 1953, 23, 186-203.
- Katz, D., and Kahn, R. The Social Psychology of Organizations. New York: John Wiley and Sons, 1966.
- Katz, F. E. The School as a Complex Social Organization. Harvard Educational Review, 1964, 34, 428-455.
- Kefalas, A. Scanning the External Business Environment: A Systems Viewpoint. Paper presented at the Fourteenth Annual Midwest Academy of Management Conference, Cleveland, Ohio, 1971.
- Klecka, W. R. Discriminant Analysis. In N. H. Nie, C. H. Aull, J. C. Jenkins, K. Steinbrenner, and D. H. Bent. SPSS: Statistical Package for the Social Sciences. New York: McGraw-Hill, 1975: 434-467.
- Kohn, M. L. Social Class and Parental Values. American Journal of Sociology, 1959, 64, 337-351.
- Lawrence, P. R., and Lorsch, J. W. Differentiation and Integration in Complex Organizations. Administrative Science Quarterly, 1967, 12, 1-47.
- Litwak, E., and Meyer, H. J. Relationship Between School-Community Coordinating Procedures and Reading Achievement (Office of Education Project No. 5-0355, Contract No. OE-3-10-033). Ann Arbor, Michigan: University of Michigan, 1966.
- Miller, J. Toward a General Theory for the Behavioral Sciences. American Psychologist, 1955, 10, 513-531.
- Neale, D. C., and Proshek, J. M. School Related Attitudes of Culturally Disadvantaged Elementary School Children. Journal of Educational Psychology, 1967, 58, 238-244.

- Negandi, A. R., and Reimann, B. C. Task Environment, Decentralization and Organizational Effectiveness. Human Relations, 1972, 26, 203-214.
- Ohm, R. E. A Game Model Analysis of Conflicts of Interest Situations in Administration. Educational Administration Quarterly, 1968, 4, 70-84.
- Osborn, R. N. Organizational Effectiveness: A Model and a Test. Unpublished doctoral dissertation, Kent State University, 1971.
- Overall, J. L., and Klett, C. J. Applied Multivariate Analysis. New York: McGraw-Hill, 1972.
- Page, C. H. Bureaucracy's Other Face. Social Forces, 1946, 25, 91-100.
- Parsons, T. The School Class as a Social System. Harvard Educational Review, 1959, 29, 297-318.
- Parsons, T. The Social Structure of the Family. In R. N. Anshen (Ed.), The Family: Its Function and Destiny. New York: Harper, 1959.
- Pearson, G. H. J. A Survey of Learning Difficulties in Children. Journal of Psychoanalytic Study of the Child, 1952, 7, 322-386.
- Perrow, C. Goals and Power Structures: A Historical Case Study. In E. Friedson (Ed.), The Hospital in Modern Society. Glencoe: The Free Press, 1963.
- Rao, C. R. Advanced Statistical Methods in Biometric Research. New York: Wiley, 1952.
- Schumpeter, J. A. Capitalism, Socialism and Democracy. New York: Harper, 1947.
- Schutz, W. C. FIRO: A Three-Dimensional Theory of Interpersonal Behavior. New York: Holt, Rinehart and Winston, 1958.
- Schutz, W. C. Val-Ed. Palo Alto, California: Consulting Psychologists Press, Inc., 1973.

- Simpson, R., and Gulley, W. Goals, Environmental Pressures and Organizational Characteristics. American Sociological Review, 1962, 27, 344-351.
- Smigel, E. The Impact of Recruitment on the Organization of the Large Law Firm. American Sociological Review, 1960, 25, 56-66.
- Stimson, J., and LaBelle, T. J. The Organizational Climate of Paraguayan Elementary Schools: Rural-Urban Differences. Education and Urban Society, 1971, 3, 333-349.
- Sykes, G. The Corruption of Authority and Rehabilitation. Social Forces, 1956, 34, 257-262.
- Tatsuoka, M. M. Multivariate Analysis. New York: Wiley, 1971.
- Taylor, L., and Jones, A. A., Jr. White Youth from Low-Income Rural Families: Achievement Milieu and Agribusiness Opportunities. Paper prepared for the National Conference on Problems of Rural Youth in a Changing Environment, Sept. 1963. ERIC:ED 012 663.
- Terreberry, S. The Evaluation of Administrative Environments. Administrative Science Quarterly, 1968, 12, 590-613.
- Theodorson, G. A. Acceptance of Industrialization and Its Attended Consequences for the Social Patterns of Non-Western Societies. American Sociological Review, 1953, 18, 480-481.
- Thompson, J. D., and McEwen, W. Organizational Goals and Environment: Goal Setting as an Interaction Process. American Sociological Review, 1958, 4, 23-31.
- Thompson, J. D. Society's Frontiers for Organizing Activities. Paper presented at the annual meeting of the American Sociological Association, New Orleans, August 1972.

- Thorelli, H. Organizational Theory: An Ecological View. Proceedings of the Academy of Management, 1967, 66-84.
- Thruston, J. R., Feldhusen, J. F., and Benning, J. J. Eau Claire County Youth Study 1961-1964. Eau Claire: Wisconsin State College, 1964. ERIC:ED 014 335.
- Tonnies, F. Fundamental Concepts of Sociology. New York: American Book, 1940.
- Turk, H. Interorganizational Networks in Urban Society: Initial Perspectives and Comparative Research. American Sociological Review, 1970, 35, 1-18.
- Udy, S. H., Jr. Administrative Rationality, Social Setting and Organizational Development. American Journal of Sociology, 1962, 68, 299-308.
- Udy, S. H., Jr. Bureaucratic Elements in Organizations: Some Research Findings. American Sociological Review, 1958, 23, 415-418.
- Vidich, A., and Bensman, J. Small Town in Mass Society. Garden City, New York: Doubleday, 1960.
- Weber, M. The Theory of Social and Economic Organization. A. M. Henderson and T. Parsons (trans.). New York: Oxford University, 1947.
- Wiener, W. K., and Blumberg, A. The Parent School Communication Questionnaire: A Measure of School Boundary Permeability. Paper delivered at the Meeting of the American Educational Research Association, New Orleans, Louisiana, April, 1973.
- Wilks, S. S. Certain Generalizations in the Analysis of Variance. Biometrika, 1932, 24, 471-494.

Woodward, J. Industrial Organization. London, England: Oxford University Press, 1965.

Yee, A. H. Factors Involved in Determining the Relationship Between Teachers' and Pupils' Attitudes. Austin, Texas: University of Texas, 1966. ERIC:ED 010 366.

Yee, A. H. Source and Direction of Causal Influence in Teacher-Pupil Relationships. Journal of Educational Psychology, 1968, 59, 276-282.

Zigler, E., and Phillips, L. Some Effectiveness of Symptomatic Behaviors. Journal of Abnormal and Social Psychology, 1960, 61, 231-238.

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TABLE 1
COMPARISONS OF FREQUENCIES AND PERCENTAGES
OF SELECTED SAMPLE CHARACTERISTICS
WITH KNOWN POPULATION PARAMETERS

Group	Population		Sample		
	Frequency	Percentage	Parents Contacted	Frequency Interviewed	Percentage Interviewed
School A	397	100	60	50	13
School B	300	100	45	30	10
School C	256	100	36	13	05
School D	463	100	69	54	12
			210	147	

TABLE 2
COMPARISON OF SCHOOLS ON DEMOGRAPHIC CHARACTERISTICS

Variable	School				Test of Significance
	A	B	C	D	
Occupational Status					
% Professional	2	46	7	0	
% Managers	14	10	7	16	
% Clerical	26	6	0	14	
% Craftman/Foreman	34	30	23	29	
% Operatives	8	3	23	9	
% Service Workers	16	0	30	25	$\chi^2 = 71.58$ (df = 15)*
Mean Grade Completed	10.36	12.80	11.77	10.91	$F = 2225$ (df = 3, 146)
Sex					
% Men	76	40	31	62	
% Women	24	60	69	38	$\chi^2 = 18.33$ (df = 3)*
Race					
% American Indian	2	43	12	10	
% Black American	55	13	54	44	
% Caucasian	41	43	38	46	$\chi^2 = 34.23$ (df = 6)*
Mean Age	40.74	36.96	38.69	41.35	$F = 1.80$ (df = 3, 146)
Mean Socio-Economic Status	352.9	538.7	281.2	319.5	$F = 15.19$ (df = 3, 146)*

*Significant at less than 0.001 level of significance.

TABLE 3
INTERCORRELATIONS, MEANS AND STANDARD DEVIATIONS
FOR TOTAL SAMPLE

Demographic Variable	Age	Sex	Race	SES	Mean	S.D.
Highest Grade Completed	-.06	.15	-.13	.55	11.18	2.90
Age		.09	-.05	-.01	40.01	8.93
Sex (1 = male, 2 = female)			.00	.07	1.39	0.50
Race (1 = White, 2 = Indian, 3 = Black)				-.01	1.70	0.70
Socioeconomic Status (1 = Low, 7 = High)					37.39	1.77
					N = 147	

TABLE 4

INTER- AND INTRA-MEASURE ITEM CORRELATIONS FOR PREDICTOR VARIABLES: FIVE MEASURES OF SCHOOL BOUNDARY AND FOURTEEN MEASURES OF EDUCATIONAL VALUES FOR ALL RESPONDENTS

Item		A ₁	B ₁	C ₁	D ₁	E ₁	A ₂	B ₂	C ₂	D ₂	E ₂	F ₂	G ₂	H ₂	I ₂	J ₂	K ₂	L ₂	M ₂	N ₂
PSCQ																				
Mechanical	(A ₁)	--																		
Outreach	(B ₁)	-07	--																	
Organizational Climate	(C ₁)	19	33	--																
Interpersonal Climate	(D ₁)	08	24	36	--															
Influence	(E ₁)	13	25	22	-05	--														
VAL-ED																				
Importance	(A ₂)	-04	07	17	05	04	--													
Mind	(B ₂)	-11	13	02	-17	-05	-19	--												
School-Child: Control	(C ₂)	19	-03	17	-17	-02	34	-28	--											
Teacher-Child: Control	(D ₂)	11	05	10	05	01	05	14	40	--										
Teacher-Child: Affection	(E ₂)	17	01	10	00	-01	01	05	32	26	---									
Teacher-Community: Inclusion	(F ₂)	22	-03	10	-12	10	17	-23	25	21	40	--								
Teacher-Community: Control	(G ₂)	04	01	-03	-10	-08	01	19	19	20	40	26	--							
Teacher-Community: Affection	(H ₂)	10	-12	-02	-05	18	16	-06	08	15	17	61	30	--						
Admin-Teacher: Inclusion	(I ₂)	11	08	02	-04	17	46	-04	19	13	24	50	22	61	--					
Admin-Teacher: Control	(J ₂)	06	07	-05	07	-08	00	16	01	30	22	42	47	44	46	--				
Admin-Teacher: Affection	(K ₂)	14	07	10	02	12	05	-09	06	08	38	50	28	66	68	43	--			
Admin-Community: Inclusion	(L ₂)	15	-01	06	-17	06	14	-17	34	22	21	68	52	57	54	41	52	--		
Admin-Community: Control	(M ₂)	08	09	04	00	04	05	14	06	26	33	51	52	51	62	46	61	50	---	
Admin-Community: Affection	(N ₂)	07	15	01	-02	07	11	06	08	16	31	59	42	79	66	68	72	64	69	--

NOTE: Decimals omitted. N = 147. PSCQ = Parent School Communication Questionnaire, Val-Ed = Educational Values Questionnaire.

TABLE 5

MEAN AND STANDARD DEVIATION FOR PREDICTOR
VARIABLES BY SCHOOL

Predictor Variables	Schools							
	A		B		C		D	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
PSCQ								
Mechanical	2.44	0.58	2.53	0.57	2.62	0.51	2.39	0.50
Outreach	1.78	0.41	1.73	0.52	1.84	0.38	1.80	0.41
Organizational Climate	2.38	0.53	2.50	0.71	2.62	0.51	2.33	0.51
Interpersonal Climate	2.00	0.20	2.00	0.59	2.00	0.00	2.00	0.28
Influence	2.06	0.37	2.17	0.60	2.15	0.56	2.07	0.38
VAL-ED								
Importance	3.10	1.60	3.77	1.14	4.15	1.73	3.96	1.92
Mind	4.26	1.74	3.50	1.68	2.85	1.57	3.90	1.74
School-Child: Control	4.24	2.08	3.87	2.46	5.79	2.86	4.19	2.70
Teacher-Child: Control	4.14	1.51	4.14	1.93	4.16	1.96	4.02	1.71
Teacher-Child: Affection	6.65	2.06	5.70	1.90	6.31	2.32	5.80	1.65
Teacher-Community: Inclusion	4.39	2.20	5.20	2.42	4.39	3.04	4.94	2.23
Teacher-Community: Control	5.12	1.89	3.80	2.36	4.30	2.84	5.50	1.96
Teacher-Community: Affection	4.41	1.89	3.40	2.27	3.46	2.40	5.33	2.47
Admin-Teacher: Inclusion	3.87	2.26	4.27	2.29	3.39	2.20	4.46	1.82
Admin-Teacher: Control	3.86	2.35	3.70	1.86	3.00	2.74	4.26	1.85
Admin-Teacher: Affection	4.26	2.62	4.63	2.41	3.30	3.03	4.39	2.31
Admin-Community: Inclusion	3.55	2.50	3.77	2.36	3.23	3.54	4.20	2.43
Admin-Community: Control	5.28	2.63	4.87	2.38	3.39	2.90	5.11	1.99
Admin-Community: Affection	4.28	2.30	4.97	2.16	3.23	2.42	5.41	2.38

TABLE 6

MEAN AND STANDARD DEVIATION FOR PREDICTOR

VARIABLES BY ETHNIC GROUPS

Predictor Variables	Ethnic Groups					
	White		Indian		Black	
	Mean	S.D.	Mean	S.D.	Mean	S.D.
PSCQ						
Mechanical	2.91	0.42	2.79	0.42	3.04	0.29
Outreach	2.20	0.26	2.14	0.33	2.09	0.46
Organizational Climate	2.88	0.37	2.80	0.35	2.67	0.76
Interpersonal Climate	2.62	0.28	2.48	0.30	2.50	0.66
Influence	2.68	0.26	2.49	0.38	2.59	0.52
VAL-ED						
Importance	3.48	1.50	3.65	1.91	4.20	1.47
Mind	3.88	1.70	4.18	1.70	2.85	1.80
School-Child: Control	4.56	2.36	4.00	2.52	4.15	2.87
Teacher-Child: Control	4.31	1.62	3.94	1.66	3.85	2.03
Teacher-Child: Affection	6.39	1.81	5.84	2.05	6.00	1.95
Teacher-Community: Inclusion	4.86	2.12	4.38	2.45	5.50	2.57
Teacher-Community: Control	5.19	2.13	4.89	2.17	4.00	2.25
Teacher-Community: Affection	5.12	2.22	4.44	2.37	5.80	2.09
Admin-Teacher: Inclusion	4.28	2.07	3.73	2.21	4.95	2.20
Admin-Teacher: Control	4.22	2.04	3.64	2.31	3.60	1.70
Admin-Teacher: Affection	4.50	2.63	3.89	2.48	4.85	2.13
Admin-Community: Inclusion	4.08	2.73	3.49	2.85	3.75	2.31
Admin-Community: Control	5.17	2.32	4.71	2.60	5.40	1.93
Admin-Community: Affection	4.84	2.26	4.48	2.60	5.25	2.12

TABLE 7

MEAN AND STANDARD DEVIATION FOR PREDICTOR VARIABLE BY SOCIOECONOMIC GROUP

Predictor Variables	Socioeconomic Groups											
	SES 1		SES 2		SES 3		SES 4		SES 5		SES 6	
	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
PSCQ												
Mechanical	2.55	0.50	2.38	0.65	2.49	0.55	2.44	0.51	2.25	0.44	2.53	0.62
Outreach	1.86	0.35	1.84	0.38	1.84	0.36	1.65	0.49	1.75	0.44	1.65	0.61
Organizational Climate	2.28	0.49	2.46	0.52	2.49	0.51	2.39	0.58	2.25	0.64	2.41	0.80
Interpersonal Climate	1.93	0.26	2.00	0.00	2.11	0.32	2.04	0.21	1.95	0.22	1.81	0.64
Influence	2.21	0.41	2.00	0.41	2.11	0.38	1.91	0.42	2.15	0.37	2.12	0.70
VAL-ED												
Importance	3.79	1.92	3.39	1.90	3.91	1.72	3.48	1.12	3.00	2.00	3.94	1.20
Mind	3.66	1.80	3.15	2.15	3.98	1.55	4.22	1.51	4.40	1.96	3.35	1.77
School-Child: Control	4.00	2.45	5.00	2.83	4.38	2.52	4.44	2.54	3.75	2.45	4.24	2.39
Teacher-Child: Control	4.00	1.56	3.47	2.07	4.18	1.66	4.35	1.87	4.45	1.57	3.71	1.69
Teacher-Child: Affection	6.10	1.86	6.23	2.13	6.18	1.96	5.96	2.16	6.65	1.46	5.35	2.06
Teacher-Community: Inclusion	4.83	2.47	4.85	1.38	4.58	2.25	4.44	2.50	5.10	1.94	4.94	2.77
Teacher-Community: Control	4.96	2.04	5.31	2.32	5.11	2.19	5.17	2.10	4.90	1.92	3.58	2.45
Teacher-Community: Affection	4.90	2.19	4.77	2.59	4.67	2.45	4.70	2.25	5.55	1.73	4.94	2.66
Admin-Teacher: Inclusion	4.10	2.12	3.69	2.36	3.87	2.06	4.17	2.39	4.45	1.73	4.59	2.62
Admin-Teacher: Control	3.76	1.99	3.00	2.24	4.31	2.27	4.00	2.02	4.15	2.16	3.18	1.88
Admin-Teacher: Affection	4.20	2.56	4.23	2.80	4.09	2.63	4.65	2.55	4.30	1.69	4.47	2.96
Admin-Community: Inclusion	2.53	2.72	3.85	3.00	3.62	2.59	4.39	2.87	3.65	2.60	4.18	3.09
Admin-Community: Control	4.97	2.47	4.39	2.93	4.93	2.40	5.35	2.27	5.80	1.82	4.35	2.57
Admin-Community: Affection	4.52	2.50	4.46	2.81	4.84	2.36	4.83	2.57	5.00	1.84	4.65	2.57

TABLE 8

F-VALUES AND p-VALUES WITH 3 AND 146 DEGREES OF FREEDOM
FOR EACH VARIABLE ACROSS SCHOOL

Predictor Variables	Obtained F-Value	p-Value
PSCQ		
Mechanical	0.875	0.456
Outreach	0.072	0.975
Organizational Climate	1.074	0.362
Interpersonal Climate	0.989	0.400
Influence	0.694	0.557
VAL-ED		
Importance	2.786	0.043*
Mind	3.083	0.029*
School-Child: Control	1.890	0.134
Teacher-Child: Control	0.049	0.986
Teacher-Child: Affection	2.172	0.094
Teacher-Community: Inclusion	1.112	0.346
Teacher-Community: Control	4.645	0.004*
Teacher-Community: Affection	3.661	0.014*
Admin-Teacher: Inclusion	1.325	0.269
Admin-Teacher: Control	1.409	0.243
Admin-Teacher: Affection	0.885	0.450
Admin-Community: Inclusion	0.811	0.490
Admin-Community: Control	1.143	0.334
Admin-Community: Affection	4.070	0.008*

*Significant at less than 0.05 level of significance.

TABLE 9

F-VALUES AND p-VALUES WITH 3 AND 146 DEGREES OF FREEDOM
FOR EACH PREDICTOR VARIABLE ACROSS ETHNIC GROUPS

Predictor Variables	Obtained F-Value	p-Value
PSCQ		
Mechanical	3.186	0.044*
Outreach	1.119	0.330
Organizational Climate	1.976	0.142
Interpersonal Climate	2.430	0.092
Influence	4.464	0.013*
VAL-ED		
Importance	1.372	0.257
Mind	4.583	0.012*
School-Child: Control	0.828	0.439
Teacher-Child: Control	1.004	0.369
Teacher-Child: Affection	1.315	0.272
Teacher-Community: Inclusion	1.901	0.153
Teacher-Community: Control	2.303	0.104
Teacher-Community: Affection	2.917	0.057
Admin-Teacher: Inclusion	2.074	0.129
Admin-Teacher: Control	1.410	0.248
Admin-Teacher: Affection	0.896	0.411
Admin-Community: Inclusion	0.734	0.482
Admin-Community: Control	0.888	0.414
Admin-Community: Affection	0.896	0.411

*Significant at less than 0.05 level of significance.

TABLE 10
STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS
FOR SCHOOLS

Variables	Discriminant Function One	Discriminant Function Two	Discriminant Function Three
PSCQ			
Mechanical	-0.0081	-0.6083	0.0232
Outreach	-0.8480	0.4230	-0.6839
Organizational Climate	-0.1843	-0.3353	0.1900
Interpersonal Climate	0.1300	-0.3106	-0.4995
Influence	0.1876	-0.0999	0.3191
VAL-ED			
Importance	0.0793	-0.0051	-0.1360
Mind	-0.0050	0.1271	0.1810
School-Child: Control	-0.0632	-0.0155	-0.0553
Teacher-Child: Control	0.0937	-0.1707	0.0472
Teacher-Child: Affection	-0.2383	-0.0175	-0.0038
Teacher-Community: Inclusion	0.0896	-0.1236	-0.0213
Teacher-Community: Control	0.0857	-0.0043	0.1452
Teacher-Community: Affection	-0.0198	0.3746	-0.1171
Admin-Teacher: Inclusion	0.0541	0.0712	-0.0960
Admin-Teacher: Control	-0.0673	-0.0049	0.0243
Admin-Teacher: Affection	-0.0457	-0.1164	0.1230
Admin-Community: Inclusion	-0.0832	0.0972	-0.0187
Admin-Community: Control	-0.1372	0.0406	0.1110
Admin-Community: Affection	0.2864	0.0317	-0.1265

TABLE 11
RELATIVE DISCRIMINATING EFFICIENCY OF FUNCTIONS
FOR SCHOOLS

Discriminant Function	Eigenvalue	Relative* Percentage	Canonical Correlation
1	0.348	51.9	0.51
2	0.188	28.1	0.40
3	0.133	19.9	0.35

*Percentages do not sum to 100% due to round-off error.

TABLE 12

CORRELATIONS BETWEEN THE PREDICTOR VARIABLES AND THE
DISCRIMINANT FUNCTIONS FOR SCHOOLS

Predictor Variables	Discriminant Function One	Discriminant Function Two	Discriminant Function Three
PSCQ			
Mechanical	-0.0699	-0.3558	-0.0931
Outreach	-0.2006	-0.0515	-0.2632
Organizational Climate	-0.2081	-0.2737	-0.1772
Interpersonal Climate	-0.1115	-0.2651	-0.1611
Influence	-0.0015	-0.1871	-0.0030
VAL-ED			
Importance	0.2831	-0.0737	-0.5328
Mind	-0.1076	0.4337	0.4843
School-Child: Control	-0.2138	-0.0961	-0.4580
Teacher-Child: Control	-0.0349	-0.0628	0.0253
Teacher-Child: Affection	-0.3920	0.0678	0.1603
Teacher-Community: Inclusion	0.2900	-0.0790	-0.0140
Teacher-Community: Control	-0.0407	0.7362	-0.1308
Teacher-Community: Affection	0.4930	0.1305	0.2180
Admin-Teacher: Inclusion	0.2996	0.1502	0.0401
Admin-Teacher: Control	0.1867	0.3395	0.1055
Admin-Teacher: Affection	0.1947	0.0401	0.2626
Admin-Community: Inclusion	0.2135	0.1695	-0.0538
Admin-Community: Control	0.0359	0.2522	0.3308
Admin-Community: Affection	0.4882	0.3076	0.1246

TABLE 13
MEANS OF EACH OF THE FOUR SCHOOLS ON THE BEST
MEASURE OF EACH DISCRIMINANT FUNCTION

School	Discriminant Function One	Discriminant Function Two	Discriminant Function Three
A	4.44	5.06	3.12
B	5.40	3.80	3.77
C	3.46	4.31	4.15
D	5.33	5.50	3.96

TABLE 14

STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS

FOR ETHNIC GROUP

Variables	Discriminant Function One	Discriminant Function Two
PSCQ		
Mechanical	-0.1293	-0.1840
Outreach	-0.2072	-0.1890
Organizational Climate	-0.2323	-0.1964
Interpersonal Climate	-0.1571	-0.1589
Influence	-0.1735	-0.1557
VAL-ED		
Importance	0.0053	-0.0024
Mind	-0.0110	-0.0008
School-Child: Control	-0.0014	0.0010
Teacher-Child: Control	0.0022	-0.0003
Teacher-Child: Affection	-0.0011	0.0017
Teacher-Community: Inclusion	0.0015	-0.0022
Teacher-Community: Control	-0.0081	-0.0004
Teacher-Community: Affection	0.0073	0.0010
Admin-Teacher: Inclusion	0.0031	0.0014
Admin-Teacher: Control	-0.0075	0.0037
Admin-Teacher: Affection	-0.0033	-0.0005
Admin-Community: Inclusion	-0.0091	0.0014
Admin-Community: Control	0.0053	-0.0003
Admin-Community: Affection	0.0089	-0.0027

TABLE 15
RELATIVE DISCRIMINATING EFFICIENCY OF FUNCTIONS
FOR ETHNIC GROUPS

Discriminant Function	Eigenvalue	Relative Percentage	Canonical Correlation
1	0.298	64.9	0.480
2	0.161	35.1	0.372

TABLE 16

CORRELATIONS BETWEEN THE PREDICTOR VARIABLES AND THE
TWO DISCRIMINANT FUNCTIONS FOR ETHNIC GROUPS

Predictor Variables	Discriminant Function One	Discriminant Function Two
PSCQ		
Mechanical	0.3705	0.2809
Outreach	-0.1615	0.2504
Organizational Climate	-0.2687	0.2698
Interpersonal Climate	-0.0468	0.4585
Influence	0.0879	0.6093
VAL-ED		
Importance	0.2575	0.1674
Mind	-0.5141	-0.1084
School-Child: Control	-0.0053	0.2717
Teacher-Child: Control	-0.0850	0.2821
Teacher-Child: Affection	-0.0018	0.3425
Teacher-Community: Inclusion	0.3031	0.1883
Teacher-Community: Control	-0.3263	0.2267
Teacher-Community: Affection	0.3746	0.2277
Admin-Teacher: Inclusion	0.2871	0.2512
Admin-Teacher: Control	-0.0714	0.3440
Admin-Teacher: Affection	0.2250	0.2496
Admin-Community: Inclusion	0.0221	0.2546
Admin-Community: Control	0.1665	0.1981
Admin-Community: Affection	0.2016	0.1462

TABLE 17
MEANS OF EACH OF THE THREE ETHNIC GROUPS
ON THE BEST MEASURE OF EACH
DISCRIMINANT FUNCTION

Ethnic Group	Discriminant Function One	Discriminant Function Two
White	3.88	2.68
Indians	4.17	2.49
Blacks	2.85	2.59

Figure Caption

Figure 1. Means of each of the four schools on the best measure of each discriminant function.

Figure 2. Means of each of the parental ethnic groups on the best measure of each discriminant dimension.

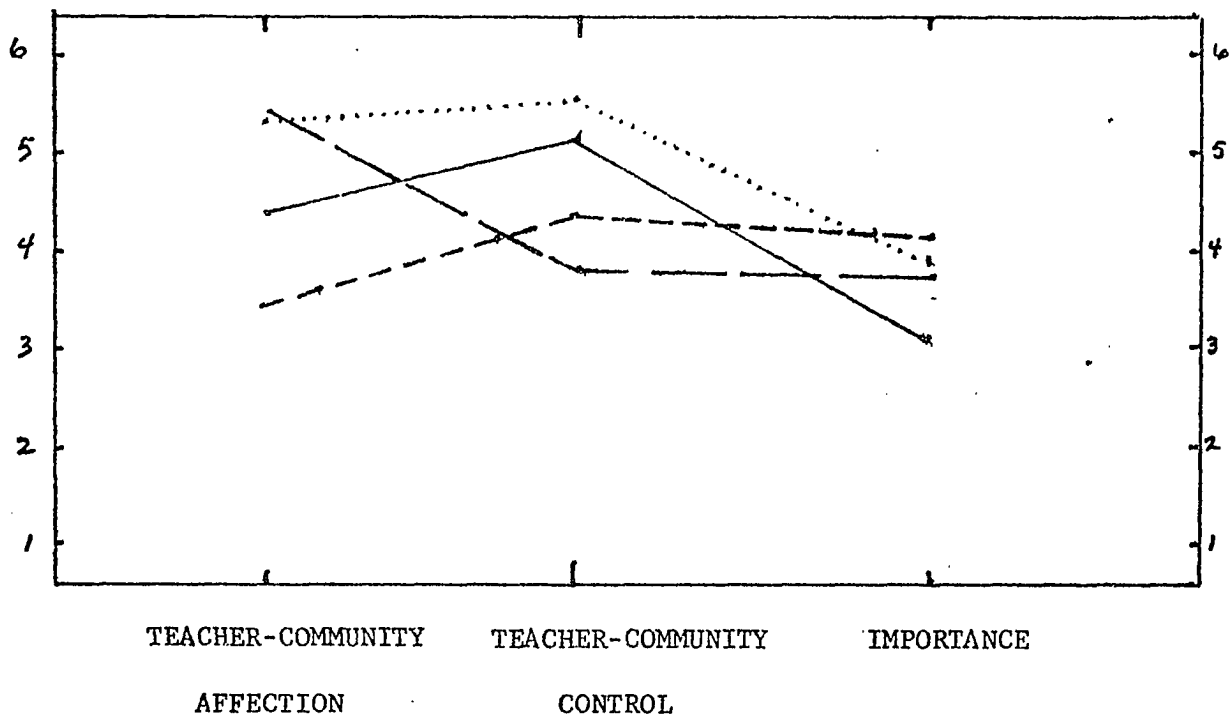
FIGURE 1

School Boundary

MEANS OF EACH OF THE FOUR SCHOOLS

62

ON THE BEST MEASURE OF
EACH DISCRIMINANT FUNCTION



SCHOOL A: —————

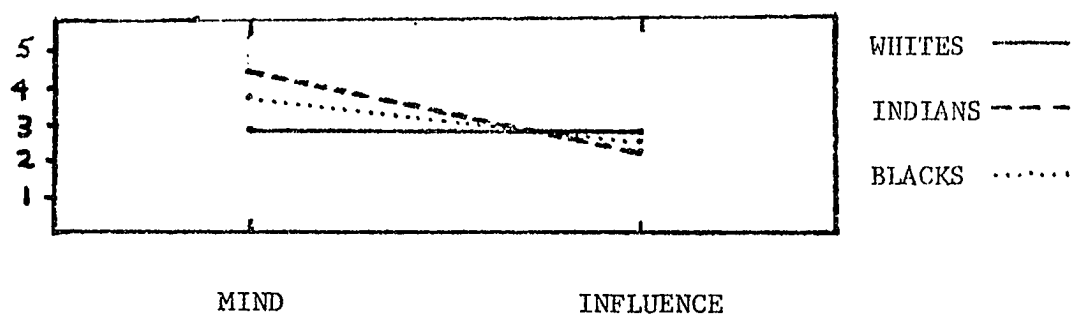
SCHOOL C: - - - - -

SCHOOL B: — — — — —

SCHOOL D: , ,

FIGURE 2

MEANS OF EACH OF THE PARENTAL ETHNIC
GROUPS ON THE BEST MEASURE OF
EACH DISCRIMINANT DIMENSION



APPENDIX A
DISSERTATION PROSPECTUS

DISSERTATION PROSPECTUS

- I. TITLE: SCHOOL BOUNDARY PERMEABILITY AND EDUCATIONAL VALUES: A
MULTIPLE DISCRIMINANT ANALYSIS OF PARENT CHARACTERISTICS
- II. NAME AND FIELD OF STUDY: Peter Harlan Hackbert
Educational Administration
- III. ADVISORY COMMITTEE: Thomas Wiggins, Chairman
William H. Keown, Member
Michael Langenbach, Member
John L. Seaberg, Jr., Member
- IV. INTRODUCTION:

Organizational theory as it applies to educational organizations needs propositions about the ways in which environmental factors constrain the structure of the organization and the behaviors of organizational participants. Research to study the relationship of the environment on organizations and particularly school systems focusing on the external community is rare. The literature on the environment of an organization and its direct and indirect impact upon organizational processes and outcomes is in a formative stage (Osborn and Hunt, 1974). It is accepted that as the environment becomes more complex, the organization must adjust its internal structure and processes to maintain and/or increase effectiveness. There is little agreement, however, beyond this point, especially as it relates to educational organizations.

Organizational researchers agree that information external to the organization is vital for any organization's survival, stability, purpose and membership. March and Simon (1958) construct a theory of organizations on the belief that organizational administrators are complex information processors and that organizations are basically large decision-making units. Their thesis suggests that the foundation of the organization is the flow and rational application of knowledge to problems confronting the organization. Similarly, Deutsch (1963) cites the critical nature of information flow for survival of the regulatory mechanisms of governmental structures. Deutsch describes information channels as the "nerves of government," the essential connectors which allow the aggregate of parts to function as a whole. Other authors who stress the significance of input flow are Etzioni (1964), Guetzkow (1966) and Seashore (1967).

Educational public school administrators find it difficult to assess the ambiguity and complexity of environmental influences, perceptions and inputs surrounding the school organization. In order to fulfill school system objectives, there must be communication with the external community. With the American public school in the midst of environmental changes more rapid than at any time in the history of the common school, the systematic analysis of the "environmental influences" is called for. Environmental changes include the numbers and social-class memberships of students appearing at any particular school; the attitudes, perceptions, and values that ethnic minorities bring to the school program; the explosion of knowledge underlying school subject matter; and the political, social and economic structures surrounding

the school.

Historically, there has been little systematic research analysis of the school as an open system. Studies of school effectiveness conducted largely by economists have implicitly adopted an open systems approach (Burkhead, 1967; Kershaw and McKean, 1959; Benson, 1965). Some investigations have focused upon the school as a formal organization (Bidwell, 1965; Charters, 1964; Corwin, 1967; Etzioni, 1957; Fraser, 1967, Katz, 1964) while others have treated it primarily as a closed social system (Coleman, 1961; Gordon, 1957; Goslin, 1965; Charters, 1952; Parsons, 1959). The fundamental open nature of the public school as a social system has not been explicitly investigated. Empirical studies in which particular attributes of the school's environment have been investigated implicitly include Gross (1958) and Clark (1960). Speculative rather than empirical studies include Reiss (1965), Griffiths (1967), Lonsdale (1964), Siegal (1955).

Educational organizations exist in a social and value context. While perhaps a small sub-part of a wider administrative complex, organizations differ widely in terms of the control they exert over the nature of their inputs, the definition of their boundaries, and the structures and processes designed to accomplish their goals. If individual schools have an existence basically shaped by conditions laid down by government and the legal system, as well as receiving additional value-determined demands from local community, parents, industry, curriculum developers, and a host of other minor agencies, then either schools are highly successful at reconciling a number of widely differing demands, or schools tend to develop devices for insulation against some of the

pressures facing them (Clark, 1960).

At the level of demand-making agencies, parents are the most real source of discord for the school organization. The rigidity of the boundaries thrown up by schools to resist parents cannot simply be explained in terms of a conspiracy on the part of teachers or a culture gap between them and parents. The problem is the relationship between any complex organization and the primary groupings with which it comes into contact, clearly stemming from a systems perspective.

Katz and Kahn (1966) elaborating on Lewin's (1951) concept of group boundary lines and their permeability suggest that a social system is surrounded by a psychological boundary insulating it from its environment. The degree to which this boundary is permeable to input from the environment of the social system is directly proportional to the openness of the internal system. Apply this concept to a school situation, an openness concerning parental input into the school might range from totally closed - i.e., a school when parents feel hesitant, powerless, unable to complain if they hear of a teacher behavior or a curriculum item of which they disapprove, and seem that teachers or principals would act defensively - to completely open - i.e., a school where the parents are totally free to enter any classroom at any time and interact with all school personnel. This continuum may be applied to boundary permeability. The totally closed school suggests a solidification of system boundaries while the completely open school reflects extremely permeable boundaries. Thus, the identification of relevant organizational environment variables and the prediction of their impact on behavior demands consideration to advance understanding of organizational

phenomena.

V. BACKGROUND OF THE PROBLEM:

A. Statement of the Problem

The problem for this research is: What is the relationship between school boundary permeability and the educational values of parents in independent, non-metropolitan schools in Oklahoma?

The writer proposes to analyze school boundary permeability in elementary public school settings in relation to environmental influences of selected schools in Oklahoma.

Two questions to be investigated:

1. Are there differences in the school boundary permeability as a function of educational values of parents in public school in Oklahoma?
2. How can the boundary permeability of public elementary schools be explained and predicted on the basis of educational values?

B. Related Literature

It is necessary to examine the literature on organizational analysis with special reference to viewing the school organization as a whole, but within the larger context of other organizations.

A first focus of inquiry lies in the existing literature of the organizational-environmental interface and suggests four distinct traditions of analysis. The first and most popular owes its principal debt to Weber's (1947) original conception of bureaucracy. A diversity of organizational contexts have been examined from this perspective (Crozier,

1964; Merton, 1949; Stinchcombe, 1959; Udy, 1958) with public schools most recently described as bureaucracies (Anderson, 1968; Eddy, 1969; Gittel, 1967; Moore, 1967; Rogers, 1968; Wilson, 1962). The second tradition is represented by the symbolic interactionists (Bensman and Gerver, 1963; Glaser and Strauss, 1965; Goffman, 1956) providing a backdrop against which processes of self-identity, situational definition and role emergence are examined.

The third tradition of a social systems perspective and the fourth tradition of studies dealing with the impact of the demographic characteristics of the surrounding community upon the organization are integrated in this research. Previous studies include the community structure approach focusing on cooptation, competition and other processes by which publics in contact are made congruent with organizational needs (Blau and Scott, 1962; Perrow, 1963) or upon the manner in which organizations emerge as the demographic host of the community (Smigel, 1960; Thompson and McEwen, 1958). Application of these approaches to the study of educational organizations are found in Corwin (1967), Dahl (1961), Sykes (1956), and Vidich and Bensman (1960). Moreover, social scientist have investigated how school organizations resist outside influence (Katz, 1964), the exploitation of clients (Etzioni, 1964) and the relationship between sociocultural characteristics of the community and the organization (Stimson and LaBelle, 1971). This provides a framework for analysis of the significant features of the context that are identified in this study.

A second focus of inquiry falls within the rubric of values, behavior and influences of clients of the organization to include such

features as values of education, social-class differences, as well as ethnic distinctions. Research by Rokeach (1970), for example, rejects the idea that there are racial differences in basic values, stating that it would be unfortunate if social policy were now predicated on the idea that there are substantial cultural differences between blacks and whites. Anderson and Johnson's (1971) findings agree with Rokeach when Mexican-American families versus other families in the Southwest are compared regarding the amount of emphasis placed on education. However, social class differences in values are sometimes assumed to exist especially when interpreting data that shows inter-class differences on some other variables, the logic being to argue that the differences observed are reflections of underlying values which differentiate the social classes (Sugarman, 1966:388).

What is obviously required is empirical evidence on the degree to which individuals in different social strata value the culturally prescribed goal of education. Furthermore, inquiry into the practical applications of systems theory is providing a firm basis for dealing with broad questions of educational policy. The need for analytical studies to help develop a better understanding of the collection of human activities that go by the name of "educational process" become apparent during re-analysis of the Coleman Survey (1966). The investigation touched on this domain to some extent by giving attention to the relations of academic achievement to environmental conditions and certain attitudes of pupils, parents, teachers and principals. Gross disparities in educational attainment between minority and majority students, between social classes and between schools with contrasting

ethnic or social class composition have been repeatedly documented. Yet the extent to which inequities might be attributed to prior differences in native endowments of the students, diverging familial socialization during infancy and contrasting extra-school community experience has not been clearly analyzed.

C. Delimitation of the Study

At one level, environment is not a very mysterious concept. It means the surrounding of an organization - the climate in which the organization functions. The concept becomes challenging when movement is made from simple description to analysis of its properties. The complexity of the data is not consistent with the standards of precision and parsimony that social scientists have come to respect. Good bases for general propositions about environmental influences or systematic classification and comparison of different environments are hard to find.

To simplify description and analysis, this research focus will attend to the inputs which bear potentially on goal setting and on goal attainment of the organization as perceived by primary groups outside the organization. These elements form, for the organization, its task environment. Dill (1960) defines the task environment of organizations as the inputs of information from external sources relevant to goal setting and goal attainment. A distinction is made among things that the organization does (activities), things that the organization sets itself to do (tasks), or stimuli that the organization might respond to (task environment). The research will examine the task environment of the primary groups of parents with various demographic characteristics hypothesized as affecting school boundary permeability.

D. Definition of Terms

The following terms have been developed in connection with this study.

Parent: a legal guardian of a child attending a public school.

Demographic Characteristics: vital statistics to include:

- a. occupational status - as measured by the Otis Duncan Scale (1961).
- b. education level - as measured by the highest grade completed.
- c. age - as recorded during the community interview.
- d. race - as recorded during the community interview.
- e. socioeconomic status - as measured by the Duncan SES Scale (1961).
- f. tribal affiliation - as measured during the community interview.
- g. grade level of child - as measured during the fall of 1974.

School Boundary Permeability: as measured by the Parent School Communication Questionnaire developed by Wiener and Blumberg (1973).

Task Environment: as measured by the Val-ed Survey developed by Schutz (1973).

Non-Metropolitan: an area which is not a Standard Metropolitan Statistical Area, as defined by the U. S. Census Bureau, 1970.

E. Hypotheses

1. General Hypothesis

Considering the research on school boundary maintenance, it may be concluded that there does exist a significant relationship between school boundary permeability, educational values and demographic characteristics of parents in non-metropolitan independent schools in Oklahoma.

2. Specific Hypotheses

Hypothesis I: No classification of schools can be correctly identified on the basis of educational values and demographic characteristics of parents variables considered individually.

Hypothesis II: There is no weighted combination of educational values and parent demographic characteristics variables which will provide a classification system to separate schools into groups.

VI. THEORETICAL FRAMEWORK AND REVIEW OF RELATED LITERATURE

A. Theoretical Framework

The basic concepts of systems theory and its application to organizational behavior draw primarily upon the works of Buckley, Homans, Katz and Kahn, and von Bertalanffy. However, reliance on these theorists is selective and aimed at developing a limited framework for the study. The approach is less an attempt to present a "theory" than to present the conceptual basis for a "heuristic model."

In scientific literature, "system" is typically used in a general manner. To von Bertalanffy (1967:2), a system is simply "...complexes of elements standing in interaction." Hall and Fagan (1968:81) present a more complete definition. To them a system is "...a set of objects together with relationships between the objects and between the attributes." Objects are components of the system, whereas attributes are properties of those objects. In general, it is the relationship between objects and their attributes that form a system. Hall and Fagan emphasize "relationships" in their definition, rather than physical objects, although objects and their attributes are seen as part of the system. The most important relationships between objects and their attributes are a function of the problem being considered by the investigator of the system (Hall and Fagan, 1968:82).

Environment-System Interface

Every system exists within an environment. Hall and Fagan define an environment as "...a set of objects a change of whose attributes are changed by the behavior of the system" (1968:83). The emphasis in this definition is upon those objects influencing or being influenced by the system. Von Foerster goes a step further in viewing the environment as "...an accumulation of successful solutions (for the system) to the problem of selecting such conditions in the physical world which are at least survivable" (1968:171). This latter view of the environment implies, according to von Foerster, that a specific system has a specific environment and vice versa. Further,

Further, such a definition recognizes the predominantly functional nature of the system-environment nexus, wherein the interaction of the two is somewhat symmetrical in that changes in either one are associated with changes in the other. Given the previous definition of system, environment is defined as those objects and patterns of relationships that exist outside a system but which significantly influence it or are influenced by it. Implicit in this definition is the assumption that although a system is transitional in nature, at a specific point in time a system is particular to its environment and must come to terms with it.

A system characteristically regulates itself to insure a steady state called homeostasis (Hall and Fagen, 1968:18). On the physiological level, an example of homeostasis would be the body's ability to adjust to variable food or oxygen inputs (within limits) in order to sustain a particular level of operating effectiveness, or the ability of an organism to compensate for internal malfunctions in various organs in order to sustain itself. To achieve such an end, an open system uses a variety of means, which may proceed from differing original states (von Bertalanffy, 1956). Homeostasis is not a static equilibrium, but rather, a dynamic, continuous adaptation to a variety of internal and external pressures or tensions. The homeostasis of the school may be viewed as its ongoing effort to meet its negative entropic requirements expressed as internal needs consistent with the constraints imposed by institutional and other environmental requirements. The school must concern itself, in other words, not only with adequate inputs and their efficient use internally but also

with institutional requirements and local needs in maintaining a homeostasis with its environment. For example, the organization, in attempting to fulfill its function, may wish to allocate energy to the use of new technological innovations consistent with the adaptive process. At the same time, however, the local environment may be indifferent or opposed to such a change and require the organization to allocate energy to other developments (for example, a stronger football team). Simultaneously, organizational changes can require the introduction of a new curriculum. How the school responds to these requirements will undoubtedly vary with important aspects of its environment. When schools are viewed as open systems, its principal consideration will be to maintain itself in a viable state--to maintain homeostasis.

At the most abstract level, all purposeful systems receive environmental energy. Although most of such input is associated directly with the maintenance or productive concerns of a system, and hence is destined for system consumption, some portion of it is a result of previous system dynamics associated with the system's primary directional state. Inputs of this type are generally referred to as feedback. The classic examples of feedback, servo-mechanisms, are designed to react to environmental contingencies in a compensatory manner to redirect deviant system efforts toward some end state. In schools, feedback includes the academic performance of the school's graduates, the nature and extent of dropouts, reactions to various changes or lack of changes in school curriculum, teacher recruitment,

subject matter content, physical facilities, and the like. Such information can come from a number of sources. For schools, the most important of these seem to be the local environment, educational agencies and other organizations that receive the school's output. Since the school is a contrived purposive system, with the meaning of formal education dependent in part upon its local sociocultural context, feedback is a function of the directional state of the school within the community context.

In an "ideal" socially homogeneous setting, everyone would agree about the purpose of the school and the school would use feedback simply to correct output deviations from its socially agreed-upon purpose. But usually, schools confront heterogeneous sources of information. Accordingly, specific feedback is in part a function of the importance of the source of the information to the school and in part a function of the meaning assigned to that feedback by the school. The school is selectively "open" to feedback, and its interpretation of it is guided by its basic homeostatic requirement to maintain its viability on one hand, and by its need to maintain a negative entropic state through growth and increasing complexity on the other. Thus feedback from universities, colleges, teacher organizations, or powerful political groups in the community would influence the school to change. On the other hand, feedback from politically weak groups in the community peripheral to the organization's institutional role would have little effect upon organizational behavior.

Among the earliest and most generally useful systematic con-

ceptualizations of organizational behavior was the theory put forth by Homans (1950). Homans commenced by positing that any social system exists in a three-part environment: a physical environment (geography, climate, etc.), a cultural environment (the norms and values and goals of the society at large), and a technological environment (the state of knowledge and instrumentation available to the system). At the next level the social system itself has certain requirements and goals that are translated into specified activities and interactions for members of the system. The behavior required by the system or determined by its environment is called the external system by Homans. For example, in a school organization, administration constitutes a large element of the external system by making decisions that bring certain people together in particular ways, for instance, through job specifications, work methods, prescribed schedules and personnel selection.

Although the people brought together by the administration may be strangers at first, they eventually come to know one another, develop cliques and friendships, socialize on and off the job, help one another in their work, agree on norms, and so on. They now have another basis on which to associate, one that modifies and influences their behavior over and above the effects of the external system. The new form of behavior comes about as a reaction to the demands of the external system. Homans called this phenomenon the internal system.

Homans further specified that the elements of a social

system can be sorted into three categories which contain aspects of both the internal and external systems: activities (the things people do, the acts they perform), interactions (activities that link people together so that the activity of one person has an effect on the activity of another), and sentiments (internal psychological states, e.g., emotions, feelings, beliefs, values). Homans postulated that activities, interactions, and sentiments are mutually dependent on one another so that a change in any one will produce a change in the others. For example, positive sentiments between two people lead to increased interaction, or vice versa. Homans further argued that the internal and external systems are mutually dependent; for instance, technology influences interaction, which affects informal relationships. Conversely, the Hawthorne studies demonstrated how the informal system influenced formal production quotas.

Lastly, the two systems and the environment are mutually dependent. The environment may change the formal organizations (e.g., through federal and state legislation, desegregation activities), which, in turn, will serve to alter informal organizational relations. Contained in Homans' formulations is the explicit recognition that a social organization, at any point in time, is the outcome of a pattern of interactions between the organization's stated requirements, its environment, and the characteristics of the people who populate it. It ties the emergent system of people's actual everyday behavior to organizations and the external system of formal plans, culture and other groups that mold emergent behavior.

Organizations as Systems

A more recent comprehensive discussion of organizations as open social systems by Katz and Kahn (1966) gives precision to many concepts of organization by including them as part of a formal model within which concepts are defined partly in terms of their relations to other concepts.

Katz and Kahn discuss ten common characteristics of open systems:

1. Open systems, like biological organisms, must import some form of energy from the environment in order to survive.
2. Open systems contain a through-put process by which the imported energy is transformed; the through-put of an organization may be the creation of a new product, the providing of a service, the modification or treatment of human beings, etc.
3. "Open systems export some product into the environment, whether it be the invention of an inquiring mind or a bridge constructed by an engineering firm" (Katz and Kahn, 1966:20).
4. An open system consists of cycles of events. The product exported to the environment furnishes sources of energy renewal for the input so that the cycle may be repeated. It is important to note in this context that the structure of a social system

is to be found in an interrelated set of events which return upon themselves to complete and renew a cycle of activities. It is events rather than things which are structured, so that social structure is a dynamic rather than a static concept.

(Katz and Kahn, 1966:21)

5. Open systems are further characterized by negative entropy. An open system imports more energy from its environment than it expends; it can thus store energy to counter entropic forces.
6. Energetic inputs, which become transformed or altered by the through-puts, are not the only form of system inputs. Information inputs, negative feedback, and the coding processes are inputs of an informative character and serve to provide the system with information concerning its own functioning in relation to its environment.
7. An open system is characterized by a steady state and dynamic homeostasis. This does not imply a motionless or true equilibrium, but rather a force that seeks to preserve a constant ratio between the parts of the system. Thus, when one element in the system changes, forces are exerted to preserve the character of the system by the proportional alteration of all other elements. Thus, as with living organisms, organizational evolution is a symmetrical process.
8. Open systems become more differentiated and elaborated over time. Diffuse global patterns give way to more

specialized functions.

9. Open systems are characterized by the principle of equifinality. There is no one best way for a system to reach a given final state from a particular initial state. Given similar initial states, open systems may reach quite a different final states. In short, there are a variety of paths between any two given points in a system's existence.
10. Open systems are directly proportional to the degree to which the boundary insulating it from the environment is permeable.

The underlying notions of open-system theory is that everything that does or can happen is dependent on everything else that does or can happen; that is, all events are correlated. While a closed system uses up all its energy in the through put process and becomes simpler over time as a result of entropic processes, an open system has a permeable boundary that allows it to draw the required sustenance from its environment. Newcomb (1959:388) has written:

I have chosen to emphasize "system properties" rather than single variables which contribute to them, and consequently none of the variables has an enfuring status either as independent or as dependent.... A change in one system variable is likely (under certain conditions) to be followed by a specified change in another system variable, but according to others a change in the second is a precondition for a change in the first.

All elements of the system change when the value of any one is changed. That is, there is a redistribution of energy through some form of equilibration process. An open system is, therefore,

dynamic; it is expending energy, and as a result, it is in process and ongoing.

A key aspect of open systems theory, then, is the relationship of the organization to its environment. Because school systems are fraught with challenges from without, this environmental approach to organizational analysis should prove to be a useful frame of reference for studying school systems.

B. Review of Related Literature

The discussion of environmental characteristics have concentrated on internal organizational characteristics as though they function independently from external influences. Research on span of control of organizations, extending from Gulick and Urwick (1937) to that of Blau and Schoenherr (1970) and Meyer (1973), illustrates this approach. Some studies of schools have assumed a relatively closed system approach (Anderson, 1968; Corwin, 1970; Gross and Herriott, 1965; Halpin and Croft, 1962; Moeller, 1966). The defects of the closed model became apparent in Waller's (1932) attempt to treat the school as a closed system differentiated from its social environment.

More recently, writers have regarded openness as the key to organizational analysis and environmental influences (Clark, 1956; Dill, 1958; Etzioni, 1960; Katz and Kahn, 1966; Lawrence and Losch, 1967; Parsons, 1967; Presthus, 1959; Simpson and Gulley, 1962; Terreberry, 1965; and Turk, 1970). Several distinct approaches have been taken to organization-environment relationships which have relevance to this research.

1. Organizational Maintenance Studies: Katz (1964) has investigated how school organizations resist outside influence. The school, he suggests, need some autonomy from parents in order to maintain objectivity and uphold standards of fairness while enforcing its own academic standards. Dahl (1961), Sykes (1956), Vidich and Bensman (1960) suggest strategies school officials have employed to maintain their autonomy from the environment. Corwin (1967) identified implicit strategies of coercion and retaliation against children, doing favors in exchange for support from influential members of the community, joining community organizations, and expanding school jurisdiction to increase the scope of control.

Katz (1968) observes, that clientele also need a certain amount of autonomy. As Etzioni (1964) points out, organizations tend to exploit their authority over clients. Friedson (1970) examines the exploitation theme as a central characteristic of dominant professions.

Using the variables discussed above, the following interpretations are made: Schools try to maximize their control and voluntarily sacrifice autonomy (i.e., become less isolated) only if it does not entail loss in control. As schools voluntarily reach out, they are attempting to extend their own control. Autonomy has been greater where educational personnel feel invulnerable vis-à-vis their constituency, particularly in lower-class neighborhoods.

2. Environmental Influence Studies. Bennett (1967), Crozier (1964), Farrell (1969), and Larkin (1973) have investigated the relationship between sociocultural characteristics and the organization.

Stimson and LaBelle (1971) in a study of thirty elementary schools in Paraguay tested Crozier's (1964) hypothesis that a given educational institution mirrors the cultural values and traditions characteristic of the society in which it is located. The Paraguayan school system was described as closed, autocratic, and centralized. The Halpin and Croft (1962) Organizational Climate Description Questionnaire administered to teachers indicated that the school-organization exhibited a closed, or "paternal" climate similar to that of the culture as a whole.

Another pioneering study providing clues about the effects of the local community on schools (Anderson, 1968) suggested that social class may be an important variable that affects patterns of control within schools. Junior high schools serving lower-class students made greater uses of rules governing teacher behavior than did schools in middle-class neighborhoods.

VII. METHODOLOGY

A. Selection of the Subjects

The problem is to be treated as a comparative field study of five non-metropolitan public elementary school districts from the state of Oklahoma meeting the following school district enrollment criteria:

1. The school district must have 300 students.
2. The school district must have at least 10% ethnic minority student enrollment.

3. The school district must be independent, thus providing kindergarden through grade 12.

The school district enrollment criteria is established to provide for adequate data collection procedures and analysis. A stratified random sample classifying ethnic membership of students on class rolls will be selected from grades kindergarden through eight using a table of random numbers. The subjects will consist of the parents of the sampled students. This sampling procedure equates the proportion of the three largest ethnic groups in the non-metropolitan public elementary schools in Oklahoma which is a demographic variable of this research. The unit of analysis is the selected parent group.

B. Procedures for Collecting Data

The ex post facto design includes training school-community coordinators in structural face-to-face interview techniques, and administration of scales questionnaires in the homes of sampled parents. The unit of analysis is the selected parent group.

C. Instrumentation

The instruments used to measure parental perceptions in this investigation are, respectively, the Parent School Communication Questionnaire (PSCQ) developed by Wiener and Blumberg (1973) and The Val-Ed Survey designed by Schutz (1973). The Wiener-Blumberg instrument yields a measure of five quantifiable dimensions of the permeability of the boundary of a school as an indicant of the openness of school personnel to input from their environment. The history, validation and reliability of the PSCQ are described in Wiener and Blumberg (1973).

The task environment will be measured utilizing the educational value instruments yielding measures on fourteen scales designed to measure respondent's values in the area of education derived from the theory originally presented by Schutz (1958). The history, validation and intercorrelation research are described in Schutz (1973).

D. Presentation and Analysis of Data

The purpose of this study is to assess the school boundary permeability of public schools in relation to demographic characteristics of parents and task environment hypothesized as being characteristic of non-metropolitan elementary public schools in Oklahoma. A multivariate analysis is used to classify into groups the school boundary characteristics using a stepwise Discriminant Analysis (BMD07M) computer program. The presentation and analysis of data are projected as follows:

1. Comparison of Schools on Demographic Characteristics.
2. General Characteristics of the Schools.
3. Intercorrelation of Matrix among Criterion Variables.
4. F-Values and Classification Power of Single Variables, Composite and Most Parsimonious Composite.
5. Classification Matrix for Criterion Variables, Composite and Most Parsimonious Composite for Variables.

6. Configuration of Parent Groups Derived from Analysis of Criterion Variables Scores.
 7. Factor-Discriminant Correlations and Canonical Correlations of the Variables.
 8. Within Demographic Group Correlation Matrix.
- E. Limitations of the Study

The research procedures of this study are such that the investigation will be an ex post facto design. Kerlinger defines ex post facto research as:

Ex post facto research is systematic empirical inquiry in which the scientist does not have direct control of independent variables because their manifestations have already occurred or because they are inherently not manipulable. Inferences about relations among variables are made, without direct intervention, from concomitant variation of independent and dependent variables. (1973:379).

The most serious limitations are those inherent in an ex post facto design. They are the inability to manipulate independent variables and to exercise proper control over the randomization of the subjects. In this study, the criterion variables are educational values and school boundary perceptions. The predictor variables are age, sex, race, tribal affiliation, highest grade level attained, and socio-economic status.

Kerlinger states that despite its weaknesses, much ex post facto research must be conducted in the behavioral sciences simply because many research problems do not lend themselves to experimental inquiry. This study is limited to parents of school children in predominately rural communities. The subject pool comprise a specific

type of population which may not be typical of any other population. This investigation is further limited by the response rates anticipated to be a factor influencing the results.

VIII. SIGNIFICANCE OF THE STUDY:

Organizational administrators and particularly administrators of educational organizations are challenged when expected to organize and manage programs in ambiguous, complex and pluralistic environments where transience is permanent. No problem in organizational theory has attracted more attention in the last five years than the relationship between the organization and its environment. Reasons for this concern about this relationship is that it is moving and changing faster than in the past.

This research of school boundary permeability and educational values is an effort to provide empirical data on one aspect of the challenge. This study may contribute to organizational research in educational administration in terms of implication as to the mechanical process through which parents make contact with schools, information concerning the outreach of the school into the community, assessment concerning the affective perception of various client groups towards the organization, and finally analysis of quality of educational values deemed appropriate by various parent groups.

References

- Anderson, J. C. Bureaucracy in Education. Baltimore: Johns Hopkins Press, 1968.
- Anderson, J. G., and Johnson, W. H. Stability and Change Among three Generations of Mexican-Americans: Factors Affecting Achievement. American Educational Research Journal, 1971, 1, 285-309.
- Bensman, J., and Gerver, I. Crime and Punishment in the Factory. In A. Gouldner and H. Gouldner (Eds.), Modern Society. New York: Harcourt Brace and World, 1963, 593-596.
- Benson, C. State and Local Fiscal Responsibilities in Public Education in California. Sacramento, California: Senate of the State of California, 1965.
- von Bertalanffy, L. General System Theory. In von Bertalanffy and Rapoport, General Systems, Vol. I-III. Yearbook of the Society for the Advancement of General Systems Theory. Ann Arbor, Michigan: SACST, 1956.
- Bidwell, C. E. The School as a Formal Organization. In J. March (Ed.), Handbook of Organization. Skokie, Ill.: Rand McNally and Company, 1965, 972-1022.
- Blau, P. M., and Schoenherr, R. A. The Structure of Organizations. New York: Basic Books, 1970.
- Blau, P. M., and Scott, W. R. Formal Organizations. San Francisco: Chandler, 1962.
- Burkhead, J. Input and Output in Large-City High Schools. Syracuse, New York: Syracuse University Press, 1967.
- Charters, W. W. Jr. The School as a Social System. Review of Educa-

- tional Research. 1952, 22, 41-50.
- Charters, W. W. Jr. An Approach to the Formal Organization of the School. In D. E. Griffiths (Ed.), Behavioral Science and Educational Administration, Yearbook of the National Society for the Study of Education. 1964, 63, 243-261.
- Clark, B. R. Organizational Adaptation and Precarious Values: A Case Study. American Sociological Review, 1956, 21, 327-338.
- Clark, B. R. The Open Door College: A Case Study. New York: McGraw-Hill Book Co., 1960.
- Coleman, J. The Adolescent Society. New York: Free Press, 1961.
- Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., and York, R. L. Equality of Educational Opportunity. Washington, D. C.: U. S. Government Printing Office, 1966.
- Corwin, R. G. Education and the Sociology of Complex Organizations. In D. Hanson and J. Gerstl (Eds.), On Education: Sociological Perspectives. New York: Wiley, 1967, 156-223.
- Corwin, R. G. Militant Professionalism: A Study of Bureaucratic Conflict in High Schools. New York: Appleton-Century-Crofts, 1970.
- Crozier, M. The Bureaucratic Phenomenon. Chicago: University of Chicago Press, 1964.
- Dahl, R. A. Who Governs? Democracy and Power in an American City. New Haven, Connecticut: Yale University Press, 1961.
- Deutsch, K. W. The Nerves of Government: Models of Political Communication and Control. New York: Free Press of Glencoe, 1963.
- Dill, W. R. Environment As An Influence On Managerial Antonomy. Admin-

- istrative Science Quarterly, 1958, 2, 409-443.
- Dill, W. R. Environment as an Influence Antonomy. In J. D. Thompson (Ed.), Comparative Studies In Administration. Pittsburgh: University of Pittsburgh, 1960, 131-161.
- Duncan, O. D. A Socioeconomic Index of All Occupations. In A. J. Reiss, Occupations and Social Status. New York: Free Press, 1961.
- Eddy, E. M. Becoming a Teacher: the Passage to Professional Status. New York: Teachers College Press, 1969.
- Etzioni, A. The Organizational Structure of "Closed" Educational Institutions in Israel. Harvard Educational Review, 1957, 27, 107-125.
- Etzioni, A. New Directions in the Study of Organizations and Society. Social Research. 1960, 27, 223-228.
- Etzioni, A. Modern Organizations. Englewood Cliffs, New Jersey: Prentice Hall, 1964.
- von Foerster, H. From Stimulus to Symbol: the Economy of Biological Computation. In W. Buckley (Ed.), Modern Systems Research. Chicago: Aldine Publishing Company, 1968.
- Fraser, C. Some Properties of Schools As Organizations. Delta One. August 1967, 23-30.
- Friedson, E. Dominant Professions, Bureaucracy and Client Services. In W. R. Rosengren and M. Lefton (Eds.), Organization and Clients. Columbus, Ohio: Charles E. Merrill, 1970: 71-92.
- Gittell, M. Participants and Participation: A Study of School Policy in New York City. New York: Frederick A. Praeger, 1967.
- Glaser, B., and Strauss, A. Awareness of Dying. Chicago: Aldine Press, 1965.

- Goffman, E. The Presentation of Self in Everyday Life. Edinburgh: The University of Edinburgh Press, 1956.
- Gordon, C. W. The Social System of the High School. New York: Free Press, 1957.
- Goslin, D. A. The School in Contemporary Society. Glenview, Illinois: Scott, Foreman and Company, 1965.
- Griffiths, D. E. Systems Theory and School Districts. In P. C. Sexton (Ed.), Readings on the School In Society. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1967, 175-84.
- Gross, N., and Herriott, R. E. Staff Leadership In Public Schools: A Sociological Inquiry. New York: Wiley, 1965.
- Gross, N., Mason, W. S., and McEachern, A. W. Explorations In Role Analysis: Studies of the School Superintendency Role. New York: Wiley, 1958.
- Guetzkow, H. Communication In Organizations. In J. March (Ed.), Handbook of Organization. New York: Rand McNally, 1966.
- Gulick, I., and Urwick, L. (Eds.) Papers on the Science of Administration. New York: Institute of Public Administration, 1937.
- Hall, A. D., and Fagen, R. E. Definition of System. In W. Buckley (Ed.), Modern Systems Research for the Behavioral Scientists. Chicago: Aldine Publishing Company, 1968.
- Halpin, A. W. and Croft, D. B. The Organizational Climate of Schools. Cooperative Research Report, U. S. Office of Education, Washington, D. C., 1962.
- Homan, G. C. The Human Group. New York: Harcourt, Brace and World, 1950.

- Katz, D., and Kahn, R. L. The Social Psychology of Organizations. New York: Wiley, 1966.
- Kerlinger, F. N. Foundation of Behavioral Research. (2nd. Ed.) New York: Holt, Rinehart and Winston, 1973.
- Kershaw, J. A., and McKean, R. N. Systems Analysis of Education. Unpublished research report. Santa Monica, California: The Rand Corporation, 1959.
- Lawrence, P. R., and Lorsch, J. W. Differentiation and Integration in Complex Organizations. Administrative Science Quarterly, 1967, 12, 1-47.
- Lewin, K. Field Theory in Social Science. New York: Harpers, 1951.
- Longsdale, R. C. Maintaining the Organization in Dynamic Equilibrium. In D. E. Griffiths (Ed.), Behavioral Science and Educational Administration, The Sixty-third Yearbook of the National Society for the Study of Education. 1964: 142-177.
- March, J., and Simon, H. Organizations. New York: Wiley and Sons, 1958.
- Merton, R. Bureaucratic Structure and Personality. In R. Merton (Ed.), Social Theory and Social Structure. Glencoe: The Free Press, 1949, 151-160.
- Meyer, M. W. Size and the Structure of Organizations: A Casual Analysis. American Sociological Review. 1972, 37, 434-440.
- Moeller, G. W. and Charters, W. W. Relation of Bureaucratization to Source of Power among Teachers. Administrative Science Quarterly, 1966, 10, 444-465.
- Moore, G. A., Jr. Realities of the Urban Classroom: Observations in Elementary Schools. Garden City, New York: Doubleday, 1967.

- Newcomb, T. M. Individual Systems of Orientation. in S. Koch, Psychology: A Study of a Science. New York: McGraw-Hill, 1959.
- Osborn, R. N., and Hunt, J. G. Environment and Organizational Effectiveness. Administrative Science Quarterly, 1974, 231-246.
- Parsons, T. The School Class As A Social System. Harvard Educational Review, 1959, 29, 297-318.
- Parsons, T. Some Ingredients of a General Theory of Formal Organization. In A. Halpin (Ed.), Administrative Theory in Education. New York: Macmillan, 1967, 40-72.
- Perrow, C. Goals and Power Structures: A Historical Case Study. In E. Friedson (Ed.), The Hospital in Modern Society. Glencoe: The Free Press, 1963.
- Presthus, R. The Social Basis of Bureaucratic Organizations. Social Forces, 1959, 38, 103-109.
- Reiss, A. J. An Introduction. In A. J. Reiss (Ed.), Schools In A Changing Society. New York: The Free Press, 1965, 1-19.
- Rogers, D. 110 Livingston Street. New York: Random House, 1968.
- Rokeach, M., and Parker, S. Values As Social Indicators of Poverty and Race Relations in America. The Journal of the American Academy of Political and Social Science. 1970, 338, 97-112.
- Schutz, W. C. Val-Ed. Palo Alto, California: Consulting Psychologists Press, Inc., 1973.
- Seashore, S. E. Communication. Background Paper, Mid-Career Education Project, 1967.
- Siegal, B. J. Models for the Analysis of the Educational Process in American Communities. In G. D. Spindler (Ed.), Education and Anthro-

- pology. Stanford, California: Stanford University Press, 1955, 38-49.
- Simpson, R., and Gulley, W. Goals, Environmental Pressures and Organizational Characteristics. American Sociological Review. 1962, 27, 344-351.
- Smigel, E. The Impact of Recruitment on the Organization of the Large Law Firm. American Sociological Review, 1960, 25, 56-66.
- Stimson, J., and LaBelle, T. J. The Organizational Climate of Parayan Elementary Schools: Rural-Urban Differences. Education and Urban Society, 1971, 3, 333-349.
- Stinchcombe, A. Bureaucratic and Craft Administration of Production. Administrative Science Quarterly, 1959, 4, 168-187.
- Sugarman, B. Social Class and Values as related to Achievement and Conduct in School. Sociological Review, 1966, 14, 287-301.
- Sykes, G. The Corruption of Authority and Rehabilitation. Social Forces, 1956, 34, 257-262.
- Terreberry, S. The Evolution of Administrative Environments. Administrative Science Quarterly, 1968, 12, 590-613.
- Thompson, J. D., and McEwen, W. Organizational Goals and Environment: Goal Setting as an Interaction Process. American Sociological Review, 1958, 4, 23-31.
- Turk, H. Interorganizational Networks in Urban Society: Initial Perspectives and Comparative Research. American Sociological Review, 1970, 35, 1-18.
- Udy, S. H. Jr. Bureaucratic Elements in Organizations: Some Research Findings. American Sociological Review, 1958, 23, 415-418.

- Vidich, A., and Bensman, J. Small Town in Mass Society. Garden City, New York: Doubleday, 1960.
- Waller, W. The Sociology of Teaching. New York: Wiley, 1932.
- Weber, M. The Theory of Social and Economic Organization. A. M. Henderson and T. Parsons (Trans.). New York: Oxford University, 1947.
- Wiener, W. K., and Blumberg, A. The Parent School Communication Questionnaire: A Measure of School Boundary Permeability. A Paper delivered at the 1973 Convention of the American Educational Research Association, New Orleans, Louisiana.
- Wilson, B. R. The Teacher's Role - A Sociological Analysis. British Journal of Sociology. 1962, 13, 15-32.

APPENDIX B

INDEX: UNITED STATES 1960 CENSUS
SOCIO-ECONOMIC STATUS SCORES

INDEX: UNITED STATES 1960 CENSUS
SOCIOECONOMIC STATUS SCORES

DESCRIPTION: The socioeconomic status score is a multiple-item measure derived by averaging scores for the component items of occupation, education, and family income. A second socioeconomic measure was developed in connection with the 1960 Census program. This is a status consistency measure which indicates whether the components of the multiple-item score are at about the same or different levels and, if at different levels, the pattern of their inconsistency. These indexes were derived from chief income recipients in families, and assigned to other family members, and for non-family members.

WHERE PUBLISHED: U.S. Bureau of the Census, Methodology and Scores of Socioeconomic Status, Working Paper No. 15 (Washington, D.C.: U.S. Government Printing Office, 1963).

RELIABILITY: The socioeconomic scores for detailed occupations were based upon the data most recently available at the time of analysis, i.e. for those males 14 years old and over in the experienced civilian labor force as of 1950. The Pearsonian coefficient of correlation between the 1950 scores and scores based upon 1960 data is .96. However for a few specific occupations there was a substantial discrepancy. Charles B. Nam and Mary G. Powers, "Variations in Socioeconomic Structure by Race, Residence, and the Life Cycle," American Sociological Review, 30 (February, 1965), 97-103.

VALIDITY: Negative relationship exists between socioeconomic scores and non-white persons in 1960.

Highest scores correlated with urban fringe areas of large cities; lowest in rural areas.

Rates of unemployment for males were inversely related to level of socioeconomic status.

Relatively more persons age 45 and over than under 45 years of age had low status scores. Scores for non-white remained generally lower than those for the total population at each age. U.S. Bureau of the Census, Current Population Reports, Socioeconomic Characteristics of the Population, 1960, Technical Studies, Series P. 23, No. 12 (Washington, D.C.: U.S. Government Printing Office, July 12, 1964).

UTILITY: A socioeconomic score for 297 occupational categories can be quickly assigned. Comparisons with United States Census research can be made. This means any sample can be compared with a United States national population. Range of scores: 1-99.

RESEARCH APPLICATIONS:

NAM, CHARLES B., and POWERS, MARY G. "Variations in Socioeconomic Structure by Race, Residence, and Life Cycle," American Sociological Review, 30 (February, 1965), 97-103.

_____. "Changes in the Relative Status Level of Workers in the United States, 1950-1960," paper read at annual meeting of the American Sociological Association, San Francisco, Calif., August 30, 1967.

U.S. BUREAU OF THE CENSUS, U.S. Census of Population, 1960. Socioeconomic Status, Final Rept. PC(2)-5C (Washington, D.C.: U.S. Government Printing Office, 1967).

100
SOCIOECONOMIC STATUS SCORES FOR CATEGORIES OF
OCCUPATION COMPONENT*

(Based on Average Levels of Education and Income for Males)

Score	Category
	Professional, technical and kindred workers
92	Accountants and auditors
84	Actors
96	Airplane pilots and navigators
98	Architects
88	Artists and art teachers
60	Athletes
93	Authors
89	Chiropractors
67	Clergymen
96	College presidents, professors, and instructs (n.e.c.)
61	Dancers and dancing teachers
99	Dentists
91	Designers
65	Dietitians and nutritionists
87	Draftsmen
95	Editors and reporters
	Engineers, technical
97	Aeronautical
98	Chemical
96	Civil
97	Electrical
95	Industrial
96	Mechanical
97	Metallurgical, and metallurgists
97	Mining
96	Not elsewhere classified
48	Entertainers (n.e.c.)
94	Farm and home management advisors
78	Foresters and conservationists
83	Funeral directors and embalmers
98	Lawyers and Judges
64	Librarians
72	Musicians and music teachers
	Natural scientists
94	Chemists
95	Other natural scientists

*Charles B. Nam, Chief, Education and Social Stratification Branch, Population Division, U.S. Bureau of the Census, Washington, D.C., had the major responsibility for the preparation of the scores.

Score

Category

Engineers, technical--Cont'd.

71	Nurses, professional
50	Nurses, student professional
96	Optometrists
99	Osteopaths
96	Personnel and labor relations workers
95	Pharmacists
73	Photographers
99	Physicians and surgeons
95	Public relations men and publicity writers
90	Radio operators
84	Recreation and group workers
63	Religious workers
85	Social and welfare workers, except group
96	Social scientists
87	Sports instructors and officials
71	Surveyors
89	Teachers (n.e.c.)
73	Technicians, medical and dental
80	Technicians, electrical and electronic
80	Technicians, other engineering and physical sciences
85	Technicians (n.e.c.)
81	Therapists and healers (n.e.c.)
95	Veterinarians
86	Professional, technical and kindred workers (n.e.c.)

Managers, officials, and proprietors, except farm

92	Buyers and department heads, store
51	Buyers and shippers, farm products
73	Conductors, railroad
92	Credit men
79	Floormen and floor managers, store
	Inspectors, public administration
89	Federal public administration and postal service
81	State public administration
82	Local public administration
41	Managers and superintendents, building
79	Officers, pilots, pursers, and engineers, ship
	Officials & administrators (n.e.c.), public administration
94	Federal public administration
90	State public administration
79	Local public administration
82	Officials, lodge, society, union, etc.
82	Postmasters
92	Purchasing agents and buyers (n.e.c.)

Score	Category
	Managers, officials, and proprietors (n.e.c.)--Salaried
84	Construction
95	Manufacturing
87	Transportation
93	Communications, and utilities and sanitary services
	Wholesale trade
	Retail trade
78	Food and dairy products stores
70	Eating and drinking places
90	General merchandise and limited price variety stores
89	Apparel and accessories stores
89	Furniture, housefurnishings, and equipment stores
88	Motor vehicles and accessories retailing
63	Gasoline service stations
87	Hardware, farm implement, & building material retailing
84	Other retail trade
96	Banking and other finance
96	Insurance and real estate
96	Business services
76	Automobile repair services and garages
81	Miscellaneous repair services
78	Personal services
89	All other industries (incl. not reported)
	Managers, officials, & proprietors (n.e.c.)--Self-employed
79	Construction
88	Manufacturing
73	Transportation
72	Communications, and utilities and sanitary services
85	Wholesale trade
	Retail trade
54	Food and dairy products stores
71	Eating and drinking places
72	General merchandise and limited price variety stores
88	Apparel and accessories stores
86	Furniture, housefurnishings, and equipment stores
89	Motor vehicles and accessories retailing
63	Gasoline service stations
90	Hardware, farm implement, & building material retailing
75	Other retail trade
97	Banking and other finance
95	Insurance and real estate
91	Business services
68	Automobile repair services and garages
60	Miscellaneous repair services
68	Personal services
76	All other industries (incl. not reported)

Score	Category
	Clerical and Kindred workers
90	Agents (n.e.c.)
50	Attendants and assistants, library
56	Attendants, physicians and dentist's office
54	Baggagemen, transportation
75	Bank tellers
73	Bookkeepers
70	Cashiers
66	Collectors, bill and account
73	Dispatchers and starters, vehicle
85	Express messengers and railway mail clerks
73	File clerks
89	Insurance adjusters, examiners, and investigators
80	Mail carriers
43	Messengers and office boys
69	Office machine operators
73	Payroll and timekeeping clerks
73	Postal clerks
73	Receptionists
82	Secretaries
58	Shipping and receiving clerks
82	Stenographers
73	Stock clerks and storekeepers
33	Telegraph messengers
75	Telegraph operators
72	Telephone operators
82	Ticket, station, and express agents
82	Typists
73	Clerical and kindred workers (n.e.c.)
	Sales workers
90	Advertising agents and salesmen
67	Auctioneers
62	Demonstrators
08	Hucksters and peddlers
89	Insurance agents, brokers and underwriters
20	Newsboys
86	Real estate agents and brokers
94	Stock and bond salesmen
	Salesmen and sales clerks (n.e.c.)
88	Manufacturing
85	Wholesale trade
61	Retail trade
77	Other industries (incl. not reported)
	Craftsmen, foremen, and kindred workers
50	Bakers
31	Blacksmiths

Score

Category

Craftsmen, foremen, and kindred workers--Con'd.

59	Boilermakers
69	Bookbinders
50	Brickmasons, stonemasons, and tile setters
48	Cabinetmakers
35	Carpenters
34	Cement and concrete finishers
79	Compositors and typesetters
52	Cranemen, derrickmen, and hoistmen
67	Decorators and window dressers
74	Electricians
81	Electrotypers and stereotypers
75	Engravers, except photoengravers
57	Excavating, grading, and road machinery operators
	Foreman (n.e.c.)
65	Construction
	Manufacturing
76	Metal industries
82	Machinery, except electrical
82	Electrical machinery, equipment, and supplies
84	Transportation equipment
71	Other durable goods
66	Textiles, textile products, and apparel
79	Other nondurable goods (incl. not specified mfg.)
61	Railroads and railway express service
74	Transportation, except railroad
79	Communications, and utilities and sanitary services
73	Other industries (incl. not reported)
51	Forgemen and hammermen
66	Furriers
57	Glaziers
58	Heat treaters, annealers, and temperers
48	Inspectors, scalers, and graders, log and lumber
	Inspectors (n.e.c.)
76	Construction
65	Railroads and railway express service
74	Transportation, etc. RR., commun. & other public util.
71	Other industries (incl. not reported)
63	Jewelers, watchmakers, goldsmiths, and silversmiths
64	Job setters, metal
76	Linemen and servicemen, telegraph, telephone, and power
68	Locomotive engineers
76	Locomotive firemen
32	Loom fixers
68	Machinists
	Mechanics and repairmen
61	Air conditioning, heating, and refrigeration
79	Airplane

Score

Category

52	Automobile
66	Office Machine
62	Radio and television
52	Railroad and car shop
61	Not elsewhere classified
39	Millers, grain, flour, feed, etc.
62	Millwrights
41	Molders, metal
73	Motion picture projectionists
72	Opticians, and lens grinders and polishers
37	Painters, construction and maintenance
22	Paperhangers
74	Pattern and model makers, except paper
84	Photoengravers and lithographers
54	Piano and organ tuners and repairmen
46	Plasterers
64	Plumbers and pipe fitters
77	Pressmen and plate printers, printing
54	Rollers and roll hands, metal
34	Roofers and slaters
22	Shoemakers and repairers, except factory
72	Stationary engineers
44	Stone cutters and stone carvers
66	Structural metal workers
40	Tailors
68	Tinsmiths, coppersmiths, and sheet metal workers
77	Toolmakers, and die makers and setters
53	Upholsterers
62	Craftsmen and kindred workers (n.e.c.)
36	Former members of the Armed Forces
	Operatives and kindred workers
	Apprentices
46	Auto mechanics
57	Bricklayers and masons
50	Carpenters
61	Electricians
59	Machinists and toolmakers
60	Plumbers and pipe fitters
49	Building trades (n.e.c.)
55	Metalworking trades (n.e.c.)
57	Printing trades
51	Other specified trades
55	Trade not specified
63	Asbestos and insulation workers
61	Assemblers
44	Attendants, auto service and parking
33	Blasters and powdermen
50	Boatmen, canalmen, and lock keepers
71	Brakemen, railroad

Score

Category

Operatives and kindred workers--Con't.

65	Bus drivers
47	Chainmen, rodmen, and axmen, surveying
61	Conductors, bus and street railway
59	Deliverymen and routemen
35	Dressmakers and seamstresses, except factory
36	Dyers
57	FDlers, grinders, and polishers, metal
19	Fruit, nut, and vegetable graders and packers, exc. factory
45	Furnacemen, smeltermen, and pourers
14	Graders and sorters, mfg.
56	Heaters, metal
47	Knitters, loopers, and toppers, textile
37	Laundry and dry cleaning operatives
60	Meat cutters, except slaughter and packing house
73	Milliners
	Mine operatives and laborers (n.e.c.)
18	Coal mining
70	Crude petroleum and natural gas extraction
36	Mining and quarrying, except fuel
28	Motormen, mine, factory, logging camp, etc.
64	Motormen, street, subway, and elevated railway
44	Oilers and greasers, except auto
38	Packers and wrappers (n.e.c.)
47	Painters, except construction and maintenance
65	Photographic process workers
78	Power station operators
40	Sailors and deck hands
10	Sawyers
39	Sewers and stitchers, mfg.
20	Spinners, textile
40	Stationary firemen
72	Switchmen, railroad
37	Taxicab drivers and chauffeurs
40	Truck and tractor drivers
27	Weavers, textile
62	Welders and flame--cutters
	Operatives and kindred workers (n.e.c.)
	Manufacturing
	Durable goods
	Sawmills, planing mills, and misc. wood products
12	Sawmills, planing mills, and mill work
25	Miscellaneous wood products
27	Furniture and fixtures
	Stone, clay, and glass products
50	Glass and glass products
29	Cement, and concrete, gypsum, and plaster products

Score

Category

Operatives and kindred workers--Cont'd.
 Operatives and kindred workers (n.e.c.)--Cont'd.
 Manufacturing--Cont'd.
 Durable goods--Cont'd.
 Sawmills, planing mills, and mill work--Cont'd.

Metal industries

Primary metal industries
 49 Blast furnaces, steel works, and rolling
 and finishing mills
 39 Other primary iron and steel industries
 47 Primary nonferrous industries
 Fabricated metal industries (incl. not spec. metal)
 48 Cutlery, handtools, and other hardware
 48 Fabricated structural metal products
 48 Miscellaneous fabricated metal products
 47 Not specified metal industries

Machinery, except electrical

59 Farm machinery and equipment
 67 Office, computing, and accounting machines
 57 Miscellaneous machinery
 62 Electrical machinery, equipment, and supplies
 Transportation equipment
 61 Motor vehicles and motor vehicle equipment
 71 Aircraft and parts
 41 Ship and boat building and repairing
 56 Railroad and misc. transportation equipment
 Professional and photographic equipment, and watches
 57 Professional equipment and supplies
 73 Photographic equipment and supplies
 62 Watches, clocks, and clockwork-operated devices
 42 Miscellaneous manufacturing industries

Nondurable goods

Food and kindred products

43 Meat products
 53 Dairy products
 26 Canning and preserving fruits, vegetables, and sea foods
 36 Grain-mill products
 38 Bakery products
 34 Confectionery and related products
 48 Beverage industries
 32 Misc. food preparations and kindred products
 46 Not specified food industries
 13 Tobacco manufactures
 Textile mill products
 47 Knitting mills
 38 Dyeing & finishing textiles, exc. wool & knit goods

Score

Category

Operatives and kindred workers (n.e.c.)--Cont'd.

Manufacturing--Cont'd.

Nondurable goods--Cont'd.

Food and kindred products--Cont'd.

44	Floor coverings, except hard surface
14	Yarn, thread, and fabric mills
33	Miscellaneous textile mill products
	Apparel and other fabricated textile products
39	Apparel and accessories
36	Miscellaneous fabricated textile products
	Paper and allied products
51	Pulp, paper and paperboard mills
37	Paperboard containers and boxes
52	Miscellaneous paper and pulp products
60	Printing, publishing, and allied industries
	Chemicals and allied products
51	Synthetic fibers
57	Drugs and medicines
51	Paints, varnishes, and related products
	Petroleum and coal products
79	Petroleum refining
44	Miscellaneous petroleum and coal products
	Rubber and misc. plastic products
59	Rubber products
42	Miscellaneous plastic products
	Leather and leather products
37	Leather products, except footwear
31	Footwear, except rubber
36	Leather products, except footwear
44	Not specified manufacturing industries
	Nonmanufacturing industries (incl. not reported)
38	Construction
42	Railroads and railway express service
53	Transportation, except railroad
52	Communications, and utilities and sanitary services
38	Wholesale and retail trade
45	Business and repair services
29	Personal services
50	Public administration
36	All other industries (incl. not reported)
	Private household workers
07	Baby sitters, private household
	Housekeepers, private household
25	Living in
32	Living out
	Laundresses, private household
09	Living in
09	Living out

Score

Category

Private household workers--Cont'd.

Private household workers (n.e.c.)

26 Living in
07 Living out

Service workers, except private household

38 Attendants, hospital and other institution
46 Attendants, professional and personal service (n.e.c.)
26 Attendants, recreation and amusement
37 Barbers
46 Bartenders
35 Boarding and lodging house keepers
02 Bootblacks
18 Chambermaids and maids, except private household
15 Charwomen and cleaners
31 Cooks, except private household
41 Counter and fountain workers
28 Elevator operators
37 Hairdressers and cosmetologists
61 Housekeepers and stewards, except private household
18 Janitors and sextons
18 Kitchen workers (n.e.c.), except private household
51 Midwives
16 Porters
32 Practical nurses
Protective service workers
73 Firemen, fire protection
38 Guards, watchmen, and doorkeepers
44 Marshals and constables
Policemen and detectives
74 Public
67 Private
66 Sheriffs and bailiffs
39 Watchmen (crossing) and bridge tenders
34 Ushers, recreation and amusement
39 Waiters
18 Service workers, except private household (n.e.c.)

Laborers, except farm and mine

16 Carpenters' helpers, except logging and mining
11 Fishermen and oystermen
24 Garage laborers, and car washers and greasers
19 Gardeners, except farm, and groundskeepers
25 Longshoremen and stevedores
04 Lumbermen, raftsmen, and wood choppers
13 Teamsters
28 Truck drivers' Helpers
28 Warehousemen (n.e.c.)

Score

Category

Laborers, except farm and mine--Cont'd.

Laborers (n.e.c.)

Manufacturing

Durable goods

	Sawmills, planing mills, and misc. wood products
04	Sawmills, planing mills, and mill work
09	Miscellaneous wood products
19	Furniture and fixtures
	Stone, clay, and glass products
31	Glass and glass products
22	Cement, and concrete, gypsum, and plaster products
19	Structural clay products
30	Pottery and related products
23	Misc. nonmetallic mineral and stone products
	Metal industries
	Primary metal industries
35	Blast furnaces, steel works, and rolling and finishing mills
18	Other primary iron and steel industries
34	Primary nonferrous industries
	Fabricated metal industries (incl. not spec. metal)
27	Cutlery, hand tools, and other hardware
27	Fabricated structural metal products
27	Misc. fabricated metal products
28	Not specified metal industries
	Machinery, except electrical
38	Farm machinery and equipment
45	Office, computing, and accounting machines
32	Miscellaneous machinery
45	Electrical machinery, equipment and supplies
	Transportation equipment
42	Motor vehicles and motor vehicle equipment
51	Aircraft and parts
19	Ship and boat building and repairing
31	Railroad and misc. transportation equipment
	Professional and photographic equipment, and watches
37	Professional equipment and supplies
41	Photographic equipment and supplies
29	Watches, clocks, and clockwork-operated devices
28	Miscellaneous manufacturing industries

Nondurable goods

Food and kindred products

32	Meat products
34	Dairy products
15	Canning and preserving fruits, vegetables, and sea foods
23	Grain-mill products
30	Bakery products
33	Confectionery and related products
34	Beverage industries

Score

Category

Nondurable goods--Cont'd.

17	Misc. food preparations and kindred products
40	Not specified food industries
10	Tobacco manufactures
	Textile mill products
12	Yarn, thread, and fabric mills
14	Other textile mill products
21	Apparel and other fabricated textile products
	Paper and allied products
27	Pulp, paper, and paperboard mills
31	Paperboard containers and boxes
30	Miscellaneous paper and pulp products
50	Printing, publishing, and allied industries
	Chemical and allied products
30	Synthetic fibers
48	Drugs and medicines
42	Paints, varnishes, and related products
18	Miscellaneous chemicals and allied products
	Petroleum and coal products
59	Petroleum refining
26	Miscellaneous petroleum and coal products
41	Rubber and miscellaneous plastic products
27	Leather and leather products
26	Not specified manufacturing industries
	Nonmanufacturing industries (incl. not reported)
16	Construction
20	Railroads and railway express service
28	Transportation, except railroad
18	Communications, and utilities and sanitary services
28	Wholesale and retail trade
26	Business and repair services
01	Personal services
29	Public administration
07	All other industries (incl. not reported)
33	Occupation not reported
63	Present members of the Armed Forces