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AN EMPIRICAL STUDY OF THE RELATIONSHIPS AMONG BUREAUCRACY, TEACHER PERSONALITY NEEDS AND TEACHER SATISFACTION

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CURRICULUM STUDIORUM

Molly Josine was born January 1, 1944, in Trinidad, West Indies. She received her Bachelor of Arts degree in English Literature and Philosophy from the University of Bombay, India, in 1963. She received the Master of Education degree from the University of Ottawa in 1965. The title of her preliminary study was A Critical Evaluation of Twelve Research Reports Published in the Journal of Educational Research.

TABLE OF CONTENTS

LIST OF TABLES

Table page

LIST OF FIGURES

INTRODUCTION

It is an indisputable fact that our lives are to a large extent governed by the institutional nature of our society. Accordingly, if we are to confront the problems of living it is imperative that we try to understand the characteristics of institutions and their impact on us. In our attempt to do so we necessarily locate the study of institutions in a social context and break down the artificial barriers between disciplines.

This interdisciplinary approach has not been used sufficiently in educational administration. For example, a review of the literature on administration at the school level reveals the need to investigate administrative procedures in conjunction with the psychological characteristics of persons who are vitally concerned with school operations. In response to this need it was decided to study the relationship between the bureaucratic structure of schools and teacher personality needs and their effect on teacher satisfaction.

This problem stemmed directly from an assumption made by Getzels in his theory of administration as a social process. He postulated two basic dimensions for the analysis of a social system, namely, the institutional and the personal dimensions. He stated that when these two

dimensions were congruent the result was satisfaction. This assumption constituted the core of the present study and it was tested within the limitations of the problem and its specific experimental conditions.

In accordance with the orientation of this study, the contributions are judged as being primarily theoretical. Some extension has been made to the theory which was being tested and the bureaucratic phenomenon has been explained in terms of its relationship to teacher personality needs. These contributions are expected to have practical implications owing to the interaction between theory and practice. Increased awareness of the conditions which accompany teacher satisfaction can be useful in the selection of teachers and the promotion of morale. Moreover, if teacher satisfaction is one of the factors which determine the success of our educational endeavour then the practical value of this study is assured.

The research report is arranged in four chapters. Chapter I reviews the pertinent literature on bureaucracy and teacher personality needs and concludes with the statement of the problem and its specific hypotheses. Chapter II contains a description of the experimental design. Chapter III presents the analyses and these are then discussed in Chapter IV.

The fourth chapter is followed by a summary of the report and the conclusions. Also included are an annotated bibliography, appendices of material used in gathering data and an abstract of this thesis.

CHAPTER I

REVIEW OF THE LITERATURE

This chapter aims at providing the theoretical background essential to the understanding of the present research project. It begins with a description of the Getzels and Guba[1] model of administration and then focuses on the institutional dimension which is described in terms of the bureaucratic structure of organizations. The bureaucratic phenomenon is then examined and relevant empirical studies of school structure are discussed. At this point the literature reveals the need for investigations which are interdisciplinary and which employ both dimensions of the model. The problem and hypotheses of the present study, which were conceived in response to this need, are then stated in the final section of the chapter.

1. The Theoretical Framework.

A study of the development of educational administration reveals a new trend dating from the postwar years. This trend, referred to as the "new movement," emphasizes

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1 Jacob W. Getzels and Egon G. Guba, "Social Behaviour and the Administrative Process," School Review, Vol. 65, Winter 1957, p. 423-441.

theory-building, theory-oriented research, and the utilization of research knowledge from the social sciences. This awareness of theory is in direct contrast to the anti-theoretical prewar period which focused on the development of administrative techniques for direct application.

Considering the prewar state of the discipline, it is not surprising to find frequent expressions of discontent about the thoroughly practical approach to educational administration, and the need for greater attention to theory as a basis for both research and practice. A striking reference is the following quotation from Halpin:

> [...] we have been abashed by the poverty of theory within our own field, have been dismayed by the extent to which our own research has been anchored to "naked empiricism." Out of this realization has grown our present attempt to develop theory in educational administration.[2]

Halpin proceeded to outline what he considered obstacles to the development of theory. They include failure to clarify the meaning of theory, preoccupation with taxonomies and uncertainty about the precise domain of theory.[3] In connection with the first obstacle,

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2 Andrew W. Halpin, "The Development of Theory in Educational Administration," in A.W. Halpin (Ed.), Administrative Theory in Education, New York, Macmillan, 1958, p. 1.

3 --------, Theory and Research in Administration, New York, Macmillan, 1966, p. 6.

Feigl's definition, as quoted by Halpin, is satisfactory and will therefore be adopted in this study. Feigl defines a theory as "a set of assumptions from which can be derived by purely logico-mathematical procedures, a larger set of empirical laws."[4]

A theory which meets the requirements of the above definition and which fits into the pattern of the "new movement" is that formulated by Getzels and Guba in 1957.[5] Drawing heavily on the writings of Parsons and Weber, the theory emphasizes issues of conflict and it is founded on the idea that social relationship is a crucial factor in the administrative process because administration always functions within a network of interpersonal, or more broadly, social relationships. It is concerned primarily with the social-psychological aspects of human nature and is therefore immediately relevant to the internal dynamics of an organization.

The model illustrates a social system which consists of two major dimensions: the institution with certain roles and expectations, and the individual with a personality

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4 Herbert Feigl, "Principles and Problems of Theory Construction in Psychology," in Current Trends in Psychological Theory, Pittsburgh, University of Pittsburgh Press, 1951, p. 181, quoted by Halpin, "The Development of Theory in Educational Administration," p. 7.

5 Getzels and Guba, Op. Cit., p. 423-441.

and certain need-dispositions. While the institutional or nomothetic dimension of activity represents analysis on the sociological level, the individual or idiographic dimension represents analysis on the psychological level. Both dimensions are essential for the understanding of the social-psychological aspect of human behaviour. Getzels maintains that it is not enough to know the nature of roles and expectations; we must also know the characteristics of individuals who inhabit these roles and their modes of perceiving and reacting to expectations. An earlier graphic presentation of the model appears on the following page. In the model each term is the analytic unit of the one preceding it. For example, a role is analysed in terms of expectations, and personality is analysed in terms of need-dispositions.

Although Getzels et al.[6] define every term in the model, this review selects for definition only four terms most relevant to this study. In the definition of personality, the phrase "need-dispositions and capacities" is substituted for Allport's[7] "psychophysical systems"

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6 Jacob W. Getzels, James M. Lipham, and Roald F. Campbell, Educational Administration as a Social Process, New York, Harper and Row, 1968, p. 52-107.

7 Gordon W. Allport, Personality, New York, Holt, 1937, p. 48.

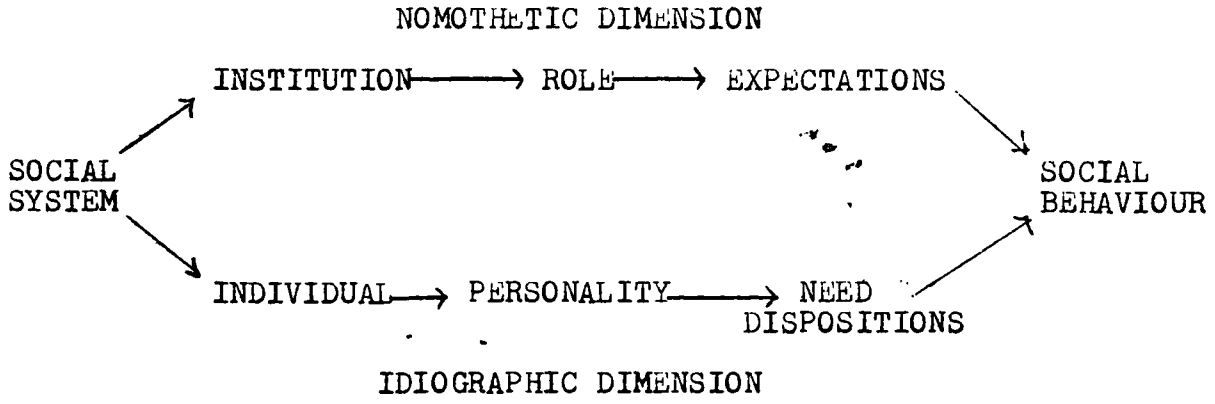

Figure 1.- General model showing the nomothetic and the idiographic dimensions of social behaviour.*

* Jacob W. Getzels and Egon G. Guba, "Social Behaviour and the Administrative Process," School Review, Vol. 65, Winter 1957, p. 429.

because the authors view the latter expression as having no exact referent. Consequently, personality is defined as "the dynamic organization within the individual of those need-dispositions and capacities that determine his unique interaction with the environment."[8] Although they focus on need-dispositions as the central concept of personality, and as "being of the greatest moment in understanding role behaviour,"[9] they recognize the significance of other individualizing attributes, e.g. interests and attitudes. They agree with Murray that a need is a coordinating force in the personality which impels the individual "to attend to or acquire some particular object," and underlies "a whole range of behaviour, both real and fantasied."[10] However, the term "need-disposition" has a double connotation. It includes not only Murray's concept of drive-reduction but also the concept of long-term directionality. Need-dispositions are described as:

> [...] determinants of cognitive and perceptual as well as other forms of behaviour. Need-dispositions influence the goals he [an individual] will try to attain in an environment and also the way he will perceive and cognize the environment itself.[11]

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8 Getzels et al., Op. Cit., p. 69.

9 Ibid., p. 74.

10 Henry A. Murray et al., Explorations in Personality, New York, Oxford University Press, 1938, p. 123-124.

11 Getzels et al., Op. Cit., p. 73.

Finally, the term "congruent" indicates the lack of discrepancy between institutional requirements and individual need-dispositions, while the term "incongruent" indicates the presence of such discrepancy. These definitions will be further clarified in the next quotation and will be adopted in this study.

Getzels and Guba have indicated some major issues which may be analysed with the aid of their theoretical framework. They are issues of conflict, staff effectiveness, efficiency, satisfaction, the nature of various leadership-followership styles, and the problem of morale. Some of the various types of conflict discussed at length are those arising between roles and within roles, between cultural values and institutional expectations, and between role expectations and personality dispositions. The last-mentioned type, that is, role-personality conflict, as well as the satisfaction issue, have direct bearing on this study and deserve to be quoted at length:

> When the expectations of the role and the need-dispositions of the individual are congruent, there is no discrepancy between what the person wants and what the role requires. Those in complementary roles see eye to eye regarding their mutual rights and obligations with consequent clarity in communication and unity in purpose. When the expectations and need-dispositions are incongruent, there is discrepancy between what the individual wants and what the role requires. Those in complementary roles do not see eye to eye regarding their mutual rights and obligations, with consequent failure in communication and loss of unity in purpose.[12]

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12 Ibid., p. 74.

Some of his examples of role-personality discrepancies are the army private with a high need for ascendance and the assembly-line worker with a high need for self-expression. In both cases there is mutual interference or incongruence between nomothetic expectations and idiographic dispositions. The individual must choose whether to fulfil the institutional expectations or his personal needs. If he chooses the former he is liable to experience unsatisfactory personal integration; if he chooses the latter, he is liable to experience unsatisfactory role adjustment. Although there is usually some compromise in practice, role-personality conflicts still exist and this has serious consequences on satisfaction and behaviour. Getzels and Guba are specific in stating the relationship between satisfaction and role-personality congruence. They assert that in terms of their model, satisfaction is a function of the congruence of institutional expectations with individual need-dispositions.[13]

In this study, the above assumption is of crucial importance because it will be subjected to empirical testing. The nomothetic and idiographic dimensions will be described with reference to the bureaucratic phenomenon in schools and teacher personality needs respectively.

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13 Getzels and Guba, Op. Cit., p. 435.

The theory of administration discussed in this section has proved its worth by generating a large number of hypotheses for research.[14] Although the hypotheses of this study will be tested in a specific situation, it is hoped that the knowledge gained will fit into the "mosaic of a more comprehensive research endeavour"[15] currently known as the "new movement."

Having outlined the theoretical framework of the present study, the writer proposes to discuss the concept of bureaucracy as delineated by Max Weber[16] and then to proceed to a discussion of some relevant empirical studies of bureaucracy in schools. As mentioned previously, the bureaucratic structure of organizations corresponds to the nomothetic dimension of the theory employed.

2. Max Weber's Theory of Bureaucracy.

Thus far the review has indicated that bureaucracy is a major factor in this study. So much confusion surrounds the meaning of the term and the nature of the Weberian theory that it is necessary to clarify both issues. Attention will

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14 Getzels et al., Op. Cit., xx-420 p.

15 Halpin, Theory and Research in Administration, p. 25.

16 Max Weber, The Theory of Social and Economic Organization, ed. by Talcott Parsons, New York, Oxford University Press, 1947, p. 328-358.

also be focused on the social and psychological dysfunctions of bureaucracy, firstly, because Weber ignores this aspect, and secondly, because we live in a bureaucratically organized society. The present section will discuss these points further.

Max Weber (1864-1920) is recognized as an influential sociologist and historian. A central phenomenon in his general sociological theory is that of authority which he describes as power viewed as legitimate because it is in line with values held by subjects. His typology of this phenomenon is based on sources which legitimize the power of superiors. The three sources of authority are:

1. Rational grounds -.resting on a belief in the 'legality' of patterns of normative rules and the right of those elevated to authority under such rules to issue commands (legal authority).

2. Traditional grounds - resting on an established belief in the sanctity of immemorial traditions and the legitimacy of the status of those exercising authority under them (traditional authority); or finally

3. Charismatic grounds - resting on devotion to the specific and exceptional sanctity, heroism or exemplary character of an individual person, and of the normative patterns or order revealed or ordained by him (charismatic authority).[17]

The first source of authority is the only one of relevance to this study. The term "rational-legal" points to

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17 Ibid., p. 328.

the central importance of rationality based on rules. When an organization employs this source of authority and an administrative staff, it is referred to as a bureaucratic organization. The term "bureaucracy" will first be discussed, then Weber's specifications of bureaucracy will be presented.

The mention of the term "bureaucracy" very often carries invidious connotations. To most people who are not students of organizations, it implies unnecessary delay, red tape, disregard for individual circumstances, insistence on meaningless details, government inefficiency, and concentration of power in the hands of officials. In this study the term will be used in a non-pejorative sense and will be elucidated by reference to the characteristics likely to be present in a bureaucratic organization. According to Max Weber's theory the fundamental bureaucratic characteristics are as follows:

1. A continuous organization of official functions bound by rules;
2. A specified sphere of competence. This involves:
   a) obligations to perform functions marked off as part of a systematic division of labour,
   b) provision of incumbents with authority to carry out these functions,
   c) means of compulsion are defined;

3. The organization of offices follows the principle of hierarchy; that is, each lower office is under the control and supervision of a higher one;
4. The rules which regulate the conduct of an office may be technical rules or norms; specialized training is necessary;
5. Members of the administrative staff should be completely separated from ownership of the means of production or administration;
6. Complete absence of appropriation of his official position by the incumbent;
7. Administrative acts, decisions, and rules are formulated and recorded in writing.[18]

Weber maintained that the development of bureaucratic administration is the most crucial phenomenon of the modern western state and that the whole pattern of everyday life is cut to fit this framework; considering the needs of mass administration today, for him the choice is only that between bureaucracy and dilettantism. Obedience, he says, is owed to the legally established impersonal order, and extends to persons only by virtue of the legality of their commands and only within the scope of authority of the office. But a more important claim for the bureaucratic form of administration is its superior efficiency which

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18 Ibid., p. 330-332.

results from extreme rationality. In a tone of conviction, he writes:

> Experience tends universally to show that the purely bureaucratic type of administrative organization [...] is, from a purely technical point of view, capable of attaining the highest degree of efficiency, and in this sense formally the most rational known means of carrying out imperative control over human beings. It is superior to any other form in precision, in stability, in the stringency of its discipline, and in its reliability [...]. It is finally superior both in intensive efficiency, and in the scope of its operations, and is formally capable of application to all kinds of administrative tasks.[19]

It must be noted that Weber is speaking of the "purely bureaucratic type" or the "ideal type." This is the term used for describing the methodological tool by which he analysed bureaucracy. The "ideal type" is both abstract and general; it describes normatively ideal courses of action rather than individual concrete cases. The bureaucratic phenomenon is conceived in its ideal, purest, and sharpest possible form. Since it is not based on empirical reality, actual organizations can only be compared to the ideal to see how closely they approximate a truly bureaucratic form.

Weber's peculiar use of the ideal-type construct has generated much controversy. Friedrich criticised Weber for setting forth his "ideal type" as mental constructs "which are neither derived by a process of deductive ratiocination from

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19 Ibid., p. 337.

higher concepts, nor built up from empirical data by relevant inference, nor demonstrably developed as working hypotheses from such data."[20]

Udy[21] pointed out that the ideal-type specifications, however ingenious and perceptive they may be, cannot be applied directly to the analysis of empirical data. It is necessary for the investigator to recast the ideal-type as a model, that is, to hypothesize a system of relationships among variables, or rest content to study the respects in which actual cases do not conform. Udy admits, however, that despite their metaphysical character, the ideal types have a definite empirical flavour. Consequently they have been useful in empirical work and have influenced organizational theory considerably.

Gouldner[22] views the ideal-type formulation of bureaucracy as a set of hypotheses which, while suggestive as guides to research, must be submitted to actual findings. He also suggested its limited use as a yardstick which

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20 Carl J. Friedrich, "Some Observations on Weber's Analysis of Bureaucracy," in Robert K. Merton et al., (Eds.), Reader in Bureaucracy, Glencoe, Illinois, Free Press, 1952, p. 28.

21 Stanley H. Udy, "'Bureaucracy' and 'Rationality' in Weber's Organization Theory; An Empirical Study," American Sociological Review, Vol. 24, No. 6, December 1959, p. 791-795.

22 Alvin W. Gouldner, "Discussion of Industrial Sociology," American Sociological Review, Vol. 13, No. 4, August 1948, p. 396-400.

enables us to determine in which particular respect an organization is bureaucratized. He says, too, that misuse of the theory is based on the fact that it is considered too often as a finished tool.

Whether Weber's conceptions are merely a list of ideal attributes, or a hypothetico-deductive theory, is debatable. It seems appropriate to consider it as a combination of both, being partly ideal and partly empirical. Blau[23] supports this idea and considers it a fundamental shortcoming of the ideal-type. He views Weber's analysis as a conceptual scheme because it calls attention to organizational aspects that should be included in an investigation, and because it supplies criteria for defining an actual organization as more or less bureaucratic. On the other hand Blau considers it a theory since it hypothesizes that bureaucratic characteristics tend to occur together, that certain historical conditions promote them, and that these characteristics increase administrative efficiency.

Weber has also been criticized for overemphasizing rationality and efficiency to the neglect of the human factor. He gave the impression that the human organism does not react unfavourably to control from authority figures, and

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23 M. Blau, "Critical Remarks on Weber's Theory of Authority," American Political Science Review, Vol. 57, June 1963, p. 305-316.

viewed the psychology of his time as being irrelevant to the study of organizations. The human relations approach to administration, especially as exemplified in the classic Hawthorne experiment,[24] has refuted Weber's position. Moreover, modern sociologists have violently attacked bureaucratic organizations on the grounds that they arrest the development of personality and deny the dignity and worth of the human being.

Regarding this latter point, it is not irrelevant to note the comments of some twentieth century sociologists because the theoretical framework of this thesis emphasizes the satisfaction of human needs. Whyte[25] speaks of the "organizational man" who suffers from group pressures, frustrations of individual creativity, and anonymity of achievement. Merton[26] writes forcefully of bureaucratic devices, which, while increasing predictability of behaviour, fosters "timidity, conservatism and technicism." Blau[27] comments on

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24 F.J. Roethlisberger, William J. Dickson, and Harold A. Wright, Management and the Worker, Cambridge, Mass., Harvard University Press, 1939, xxiv-615 p.

25 William H. Whyte, The Organization Man, New York, Simon and Schuster, 1956, 429 p.

26 Robert K. Merton, "Bureaucratic Structure and Personality," in Merton et al. (Eds.), Op. Cit., p. 361-371.

27 Peter M. Blau, Bureaucracy in Modern Society, New York, Random House, 1956, p. 21.

the increasing proportion of American people who spend their working lives as small cogs in the complex mechanism of working organizations. Gerth and Mills[28] see the professional bureaucrat as "chained to his activity by his entire material and ideal existence," and the individual bureaucrat as being unable to "squirm out of the apparatus in which he is harnessed." Argyris[29] attacks modern organizations on the grounds that they require healthy, mature individuals to become passive, dependent and immature.

Criticisms of Weber originate not only from analyses performed subjectively on the societal level, as indicated above, but also from objective models designed for hypothesis testing at the organizational level. These models, subsumed under the title of "Theories of Unanticipated Consequences," challenge Weber's claim of superior efficiency for the bureaucratic form of administration.

Very briefly, Merton's[30] model illustrates that dysfunctional organizational learning in the form of rigidity of behaviour occurs when the organization increases

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28 H.H. Gerth and C. Wright Mills, From Max Weber: Essays in Sociology, New York, Oxford University Press, 1958, p. 228.

29 Chris Argyris, Personality and Organization, New York, Harper and Row, 1957, xiii-291 p.

30 Robert K. Merton, "Bureaucratic Structure and Personality," Social Forces, Vol. 18, 1940, p. 560-568.

its standard operating procedures. Selznick's[31] model shows how increased delegation of authority leads to increased specialization, and a commitment to subunit goal over and above the organizational goal. Gouldner's[32] model shows that while rules legitimize supervision and initially reduce tension, they later depress performance and result in closer supervision and increased tension.

In spite of the shortcomings mentioned, Weber's theory of bureaucracy has been used as a common point of departure for countless studies on organizational structure and behaviour. Even Weber's critics, however severe they may be, are generous in their recognition of his genius and his contribution to sociological theory. They recognize the vast sweep of his mental constructs which are not restricted by time and place. He finds bureaucracy as far back as ancient Egypt and China, and constructed his theory out of elements which he maintained are constant regardless of social structures.

In summary, this section debated the nature and usefulness of the Weberian concept of bureaucracy because this concept is of central importance in the study of organizations

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31 P. Selznick, T.V.A. and the Grass Roots, Berkeley 1949, in James G. March and Herbert A. Simon, (Eds.), Organizations, New York, Wiley, 1958, p. 40-44.

32 A.W. Gouldner, Patterns of Industrial Bureaucracy, Glencoe, Illinois, 1954, 282 p.

and because it corresponds to the nomothetic dimension of Getzels' theoretical framework. This section was also intended to provide the background necessary for understanding subsequent sections.

In view of the countless number of studies proliferated by the Weberian concept of bureaucracy, one can afford to select only those studies which are of immediate relevance to this thesis. Accordingly, the following section will review some recent empirical studies conducted in a particular type of organization, namely, schools.

3. Empirical Studies of Bureaucracy in Schools.

Having described the general nature of the Weberian theory of bureaucracy, it is now necessary to examine its application to schools. The relevant studies, being mainly doctoral research projects conducted at different universities, were not derived from a coordinated research program. This fact, coupled with the unavailability of some theses, pose a problem in the present organization of material.

The solution seems to be the adoption of Mackay's[33] method of organizing the literature according to the number of bureaucratic dimensions employed. Consequently, studies

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33 David Allister Mackay, "Research on Bureaucracy in Schools: The Unfolding of a Strategy," paper presented at the annual meeting of the American Educational Research Association, Chicago, February 9, 1968, 12 p.

by Hall, Mackay, and Robinson will be discussed under the six-dimensional approach, while those by Anderson, Mansfield, Kolesar and Punch will be discussed under the one-dimensional and two-dimensional approach.

Hall's[34] study will be considered despite the fact that he was not concerned with school organizations. However, he constructed an instrument which purports to measure degrees of bureaucracy along six selected dimensions. This instrument, entitled the Organizational Inventory,[35] has been adapted to the Canadian educational setting and has been used extensively by researchers in educational administration.

Having investigated ten organizations of varying age, size and type, Hall found that bureaucratic characteristics did not exist in a present-absent dichotomy but ranged along a continuum; also, that organizations were indeed composed of the commonly ascribed dimensions measured by the O.I.,[36] but these existed independently. (The independence of dimensions, however, was not supported in a factor analytic study conducted by Punch.[37]) Hall's less conclusive findings

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34 Richard H. Hall, "The Concept of Bureaucracy: An Empirical Study," American Journal of Sociology, Vol. 69, No. 1, July 1963, p. 32-40.

35 Henceforth abbreviated as O.I.

36 See p. 43.

37 Keith Francis Punch, Bureaucratic Structure in Schools and Its Relationship to Leader Behaviour: An Empirical Study, unpublished doctoral thesis presented to the [Ontario Institute for Studies in Education], University of Toronto, 1967, 249 p.

were that size and age of organizations were not related to degree of bureaucratization on the six dimensions, and that the technical qualifications dimension tended to be negatively related to three other dimensions (i.e. hierarchical authority, procedural specifications and impersonality). This last point led him to question the utility of this dimension in the bureaucratic model.

A second study by Hall[38] which is of relevance here is that in which he tested specific hypotheses derived from Litwak's[39] theoretical discussion regarding intra-organizational structural variation. Litwak proposed three distinct organizational models based on the uniformity of tasks: (1) the Weberian model for organizations performing uniform tasks; (2) the human relations model for organizations stressing social skills; (3) the professional model for organizations involving both uniform and non-uniform tasks. Litwak says that the last type covers the great bulk of organizations in contemporary society.

As an alternative to the three models, Hall suggested the use of one model, the bureaucratic model, which allows us

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38 Richard H. Hall, "Intraorganizational Structural Variation," Administrative Science Quarterly, Vol. 7, No. 3, December 1962, p. 295-308.

39 Eugene Litwak, "Models of Bureaucracy Which Permit Conflict," American Journal of Sociology, Vol. 67, No. 2, September 1961, p. 177-184.

to see varying degrees of bureaucratization across departments and hierarchical levels. Employing the O.I. and a sample of ten organizations, he found that organizational departments which specialize in non-uniform tasks are significantly less bureaucratic on the dimensions of hierarchical authority, division of labour, and procedural specification than departments specializing in uniform tasks. He also found that hierarchical levels (typically the executive levels) which specialize in non-uniform tasks are significantly less bureaucratic on the dimensions of hierarchical authority, division of labour, procedural specification and impersonality than levels specializing in uniform tasks.

This study indicates that the type of task performed is an important determinant of the level of bureaucratization, but more importantly, it demonstrates the existence of both horizontal and vertical intra-organizational structural variation. It also suggests that the study of such variations can yield important contributions to the understanding of organizations, for it is the intermediate point between the officially prescribed structure and small informal work groups.

The nature of intra-organizational variation within large school systems has not been explored. Accordingly, the determination of variations between different levels in a

school system, and between different departments in a large comprehensive school will no doubt contribute a great deal to the understanding of school structure.

Hall's six-dimensional approach to the study of bureaucracy and his measuring device, the O.I., were adopted by Mackay[40] and applied to the Canadian educational setting. Mackay's study was designed to determine the applicability of Weber's model to school organizations and to relate the bureaucratic dimensions of schools to individual staff member characteristics as well as to measures of input and output.

In 1963-64 he conducted his study in thirty-one Alberta schools where grade nine is the highest grade taught. His total sample consisted of 364 staff members out of which 111 members were used for research in personality. His instruments were a slightly modified form of the O.I., the Myers-Briggs Type Indicator[41] (a personality type indicator), and a questionnaire on staff member characteristics. A

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40 David Allister Mackay, An Empirical Study of Bureaucratic Dimensions and Their Relation to Other Characteristics of School Organizations, unpublished doctoral thesis presented to the [Department of Educational Administration] University of Alberta, September 1964, xix-217 p.

41 Katharine C. Briggs and Isabel Briggs Myers, Myers-Briggs Type Indicator, Educational Testing Service, Princeton, New Jersey, 12 p., revised in 1962 and reviewed in O.K. Buros (Ed.), The Sixth Mental Measurements Yearbook, Highland Park, New Jersey, The Gryphon Press, 1965, p. 321-326.

record of the grade nine examination results was also obtained from the Alberta Department of Education.

Analysis of his data indicated that schools differed significantly in the extent to which they displayed the characteristics of hierarchical authority, specialization, rules, and impersonality; that observed emphasis on hierarchical authority correlated negatively with pupil productivity as measured by Grade IX examination results; that emphasis on all dimensions, with the exception of technical competence, correlated negatively with the effectiveness rating by the staff; and that in schools at all three levels of bureaucratization, there was no clear indication of modality of personality types.

He also found that staff members' perceptions of bureaucracy were not affected greatly by various individual characteristics examined in his study (i.e. position, sex, age, salary, academic and professional preparation, and years of teaching experience). Thus he concluded that accuracy of perception, insofar as the research design permitted, might be postulated.

Other findings of importance were:

a) that the traditional bureaucratic model was not generally descriptive of the schools studied;

b) that schools were neither completely bureaucratic nor completely non-bureaucratic, i.e. the dimensional approach is a valid method of comparing school organizations;

c) that technical competence was a non-bureaucratic dimension in all the schools studied;

d) that the bureaucratic model tended to be dysfunctional in terms of pupil productivity;

e) that staff members desired a greater degree of bureaucratization.

Points (b) and (c) confirm Hall's findings; however, point (d) contradicts Weber's claim of efficiency for the bureaucratic organization. Conclusion (e) is surprising in view of the extensive literature on the incompatibility between professionalism and bureaucracy. If this conflict is real (the evidence so far is contradictory) then Mackay's result suggests that, in general, the teachers sampled were not professional; also that those who desired greater bureaucratization were particularly lacking in professionalism. He recorded that in 146 out of 186 cases, the desire for a particular bureaucratic characteristic was significantly greater than the observed presence of the characteristic; in thirty-seven of the remaining forty cases, where the difference was not significant, "desirability" scores were higher than observed scores. There may also be, as he

suggested, a trend toward an interaction relationship between desirability of bureaucracy and observed bureaucracy.

This controversial finding stimulated a study of teachers and principals as professionals functioning in a bureaucratic structure. In 1966 Robinson[42] sought to determine whether degree of professionalism was related to degree of bureaucracy along the six selected dimensions of the O.I.

He employed a random sample of twenty-nine British Columbia schools. His instruments consisted of an improved form of the O.I., a Professional Role Orientation Scale which he developed from Corwin's Professional Status Orientation Scale,[43] an Advisory Authority Instrument, and questionnaires on personal data, school size and type. The number of instruments used gives an indication of the wide scope of his study.

With reference to the central problem of his study, he found that there were important differences between schools in degree of staff professionalism and extent of bureaucratization. There was a trend towards a positive relationship between these two factors but this was not significant.

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42 Norman Robinson, A Study of the Professional Role Orientations of Teachers and Principals and Their Relation to Other Characteristics of School Organizations, unpublished doctoral thesis presented to the [Department of Educational Administration] University of Alberta, Edmonton, Alberta, 1966, xvi-248 p.

43 Ronald G. Corwin, "Militant Professionalism, Initiative and Compliance in Public Education," Sociology in Education, Vol. 38, No. 4, Summer 1965, p. 310-331.

Staff professionalism, principal professionalism and size of school accounted for only eleven per cent of the "between school" variance in bureaucratization.

Another of Robinson's findings which is of theoretical importance is the relationship between variables. Scales II and VI, i.e. specialization and technical competence, were positively related, and Scales I, III, IV and V were also positively related, i.e. the dimensions of hierarchical authority, rules, procedural specification, and impersonality. However, Scales II and VI were negatively correlated with Scales I, III, IV and V. This finding is consistent with that of Hall and Mackay.

It is also in line with the findings of Udy[44] who studied the formal structure of one hundred and fifty organizations in non-industrial societies, noting the presence or absence of seven selected characteristics. He found a positive relationship between those characteristics designated as "bureaucratic" (hierarchical authority, an administrative staff, and differentiation of rewards according to office) and a positive relationship between those designated as "rational" (limited objectives, performance emphasis, segmental participation, and compensatory rewards). However, "bureaucratic" elements were negatively correlated with "rational" elements.

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[44] Udy, Op. Cit., p. 791-795.

The above observations are of theoretical significance. In the Weberian theory of bureaucracy all bureaucratic elements are positively related and all contribute positively to organizational rationality and efficiency. Yet the evidence stated above shows that the Weberian bureaucratic characteristics are not all positively related. There are positive relations only within the subsets of variables, but such subsets are negatively correlated, and are therefore mutually inconsistent in the same organization. This evidence has led researchers to modify the six-dimensional approach in the direction of the one-dimensional or two-dimensional approach. This is exemplified in the four studies to be cited.

Anderson[45] selected the dimension of rules as the important structural variable in the analysis of school bureaucratization. He investigated the relationship between the level of bureaucratic rules in school departments and a number of attributes characteristic of the school, the department, and the teachers. He demonstrated that control of instruction is dependent on the sex and professional specialty of the teachers, school size, and socio-economic disparities between teachers and students. He also showed

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45 James G. Anderson, Bureaucracy in Education, Baltimore, The Johns Hopkins Press, 1968, xxi-217 p.

that while rules both legitimize and impersonalize authority and thus minimize the influence of individuals, they also lay the groundwork for dysfunctions, for example, resistance to innovation.

Mansfield's[46] study of administrative communication and bureaucracy bears resemblance to Anderson's study because of their unidimensional approach. The former investigator emphasized pedagogical rules as the crucial determinant of the extent of bureaucracy. This modification of the six-dimensional approach is noteworthy because it permits a more simplified global description of school organizations.

In 1967 Kolesar[47] studied client alienation in the bureaucratic organization of schools. He used the Mackay-Robinson version of the O.I. but reordered the data to fit two major dimensions: "authority" and "expertise." Four of the dimensions of bureaucracy were subsumed under "authority" (hierarchy of authority, rules, procedural

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[46] E.A. Mansfield, Administrative Communication and the Organizational Structure of the School, unpublished doctoral dissertation presented to the [Department of Educational Administration] University of Alberta, 1967, and referred to by Mackay, "Research on Bureaucracy in Schools: The Unfolding of a Strategy," p. 9.

[47] Henry Kolesar, An Empirical Study of Client Alienation in the Bureaucratic Organization, unpublished doctoral dissertation presented to the [Department of Educational Administration] University of Alberta, 1967, xvii-244 p.

specifications, and impersonality) because these were both theoretically and empirically related. For the same reason the dimensions of specialization and technical competence were subsumed under the dimension of "expertise." This two-dimensional framework is more accurate and realistic since, as supported in Kolesar's study, the "authority" and "expertise" scales are negatively correlated.

Using Weber's[48] and Gouldner's[49] terminologies, Kolesar identified four types of bureaucracies in a sample of twenty randomly selected Alberta high schools. The four types were: (1) monocratic (high authority and high expertise), (2) punishment-centered (high authority and low expertise), (3) collegial or representative (low authority and high expertise), and (4) mock bureaucracy (low authority and low expertise).

His data demonstrated that the majority of schools tended to be either punishment-centered or collegial. Pupil powerlessness (one of the dimensions of alienation) and total alienation scale scores were significantly higher in schools which emphasized authority. On the other hand, powerlessness and total alienation scale scores were significantly lower in schools which were characterized by low authority and

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48 Weber, Op. Cit., p. 333-334.

49 Gouldner, Patterns of Industrial Bureaucracy, p. 181-228.

high expertise. This study provided some support for the prediction that student alienation is one of the dysfunctions of a school structure which emphasizes authority.

This is reminiscent of Moeller's[50] study of bureaucracy and teacher's sense of power. He constructed an eight-item questionnaire to measure bureaucratic characteristics selected by Blau,[51] i.e. hierarchical authority, division of labour, rules, impersonality, technical qualifications, and efficiency, and a six-item questionnaire to measure teacher's sense of power. He hypothesized that bureaucracy in school system organizations induces in teachers a sense of powerlessness to affect system policy. Very surprisingly, his data revealed that teachers in more fully bureaucratized school systems were significantly higher in sense of power than were teachers in less bureaucratized systems. He suggested that the element of predictability in bureaucracy provides a favourable milieu for the pursuit of one's profession.

The juxtaposition of Kolesar's and Moeller's findings raises a problem. Why do teachers experience a sense of power in a highly bureaucratized system while students experience powerlessness? So far, this problem has not been investigated.

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50 Gerald H. Moeller, "Bureaucracy and Teachers' Sense of Power," Administrator's Notebook, Vol. 11, No. 3, November 1962.

51 Blau, Bureaucracy in Modern Society, p. 28-33.

To date, the most recent study on the bureaucratic structure of schools is that by Punch.[52] His purpose was twofold: (a) to clarify and refine the concept of bureaucratic structure in the case of schools; (b) to account for interschool variation in bureaucratization, taking administrative style or leader behaviour as the starting point.

His sample consisted of fifty randomly selected elementary schools, stratified on size, from the urban systems in southern Ontario. His instruments were an improved version of the O.I. and the Leader Behaviour Description Questionnaire (L.B.D.Q.) Form XII.[53]

His contribution to the traditional bureaucratic theory is the confirmation of prior observations that the six dimensions do not vary concomitantly, but are divided into two clusters, within each of which there are significant positive correlations. Image analysis yielded one major factor patterned on the major cluster (hierarchical authority, rules, procedural specification, and impersonality). This cluster accounted for eighty-one per cent of the common variance and was labelled "bureaucratization." The second

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52 Punch, Op. Cit., 249 p.

53 Personnel Research Board at the Ohio State University, Leader Behaviour Description Questionnaire, published by the Bureau of Business Research, The Ohio State University, Columbus, Ohio, 1963.

unrelated factor made up of the dimensions of specialization and technical competence (a partial index of professionalization) was small enough to be discounted. On the basis of the above factor analytic findings, Punch concluded that bureaucratic structure in schools is a unidimensional, homogeneous variable, only if restricted to hierarchical authority, rules, procedural specification, and impersonality. If specialization and technical competence are included, then it is a two-factor concept.

Accordingly, he recommended that, in general, it is more appropriate to conceive of bureaucratic structure in a restricted unitary sense for three related reasons:

1) the literature indicates that professionalism and bureaucracy are incompatible;
2) when mapping the organizational structure of schools it is simpler to deal with a factorially homogeneous concept;
3) in terms of factor size, the "bureaucratization" features are far more important than the partial index of "professionalism"; the combination of these factors may obscure differences.

When the LBDQ was factor analysed it yielded two factors which describe a leader's style as more or less bureaucratic, or "system oriented" and "person oriented." These two factors accounted for fifty-seven per cent of

interschool variation in bureaucratization. With the aid of data provided by sub-hypotheses, Punch concluded that largely because of the influence associated with the principalship, leader behaviour style is by far the most important single determinant of the level of school bureaucratization.

He reported that seventy-five per cent of inter-school bureaucratization was accounted for when leader behaviour, school size, system size, and the length of time principals and teachers have been together were used as predictors. Prediction was not significantly improved by seven other variables relating to sex, age, and experience of principal and staff.

Having analysed the relevant studies individually, it is now possible to synthesize their contributions to our understanding of the bureaucratic structure of schools. The first major contribution is the clarification of the concept of bureaucracy through successive refinements of the O.I. This process revealed the advantage of utilizing only four unifactor dimensions rather than six factorially heterogeneous dimensions. The second major contribution is the explanation of the bureaucratic phenomenon in terms of its relationship to certain variables, e.g. size and type of school, teacher age, sex, salary, academic qualification, professionalism,

experience, and personality traits, student alienation, communication, and principal leader behaviour style.

These two major themes served a dual purpose in the present study. Firstly, they indicated that the relationship between school bureaucratic structure and teacher personality needs is an unexplored area. Secondly, they determined the choice of instruments to be employed in this study; namely, (a) the factorially homogeneous form of the O.I. in preference to the heterogeneous form, and (b) a personality test which purports to measure traits more logically related to a predisposition for bureaucratic features than are the traits measured by the Myers-Briggs Type Indicator.[54]

4. The Need to Relate Bureaucracy and Personality.

Thus far the review of the literature has located only one study[55] which relates bureaucracy and teacher personality. This indicates that the two areas of study are dichotomized in the following manner:

a) studies which investigate teacher personality as an entity, rather than as a factor related to school structure;

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54 Briggs and Myers, Op. Cit., 12 p.

55 Mackay, An Empirical Study of Bureaucratic Dimensions and Their Relation to Other Characteristics of School Organizations, xix-217 p.

b) studies which investigate school structure as an entity (or with reference to selected variables) rather than as a factor related to teacher personality.

Obviously, the type of studies needed is that which will bridge the gap between personality and school structure. This is possible through the adoption of an interdisciplinary approach; in this case the socio-psychological approach is required. Sociologists concerned with organizational behaviour and educators concerned with school structure have expressed this need and recommended this approach for decades but so far they have been largely ignored.

In 1952 Merton et al., in assembling selections which state theoretically-derived hypotheses about the effects of the bureaucratic structure on personality, were disappointed with the meager amount of work done in this area and urged that greater attention be devoted to it. They commented:

> So notable is the paucity of reasonably adequate data to test hypotheses of the kind advanced in this section that the relation between bureaucratic structure and personality easily takes its place as one of the chief problems requiring systematic empirical research.[56]

Getzels et al.[57] have also pointed out that it is imperative to know the nature of individuals inhabiting

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56 Merton et al., Op. Cit., p. 353.

57 Getzels et al., Op. Cit., p. 65-66.

roles and their modes of perceiving and reacting to expectations. Selznick[58] shares the opinion of Getzels. He maintains that the formal structure can never succeed in conquering the non-rational dimensions of organizational behaviour because individuals interact as wholes and not simply in terms of formal roles within the system; that "individuals have a propensity to spill over the boundaries of their segmentary roles, to participate as wholes."

As mentioned earlier, only one study is known to have related teacher personality to bureaucracy in schools, i.e. Mackay's study.[59] He found that level of bureaucratization was not related to teacher personality type as measured by the Myers-Briggs Type Indicator. This lack of relationship can probably be accounted for by the fact that personality types, as measured by the above test, are not logically related to a predisposition for certain bureaucratic features. Accordingly, Robinson[60] suggested that relevant personality traits be investigated, using such tests as the Activities

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58 Philip Selznick, "Foundations of the Theory of Organization," American Sociological Review, Vol. 13, No. 1, 1948, p. 25-26.

59 Mackay, An Empirical Study of Bureaucratic Dimensions and Their Relation to Other Characteristics of School Organizations, p. 120-124.

60 Robinson, Op. Cit., p. 207.

Index[61] or the Edwards Personal Preference Schedule.[62]

In summary, this section stressed the dichotomous nature of research on personality and bureaucratic structure and the need to integrate these two aspects. The problem to be investigated in the present study is an attempt to meet this need. The following section contains the statement of the problem and its specific hypotheses.

5. Statement of the Problem.

Getzels'[63] theory states that congruence between role expectations and need-dispositions leads to satisfaction while incongruence leads to dissatisfaction. The aim of this study is to provide a test of the above assumption under specific conditions. Stated in general terms, the problem is to determine whether there is congruence between school bureaucratic characteristics and teacher personality needs and whether such congruence is reflected in satisfaction with the school structure.

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61 George G. Stern, Activities Index, 8 p. described in O.K. Buros (Ed.), Op. Cit., p. 380-381.

62 Allen L. Edwards, Edwards Personal Preference Schedule (revised 1959), New York, The Psychological Corporation, 1954, 4 p.

63 Getzels and Guba, Op. Cit., p. 435.

The three main hypotheses arising from the problem are stated below in the null form:

1. There is no significant difference on personality need scores between female teachers in high bureaucratic schools and female teachers in low bureaucratic schools.

2. There is no significant difference on satisfaction scores between female teachers in high bureaucratic schools and female teachers in low bureaucratic schools.

3. There is no significant interaction effect between the bureaucratic and personality variables when the criterion is satisfaction scores.

CHAPTER II

EXPERIMENTAL DESIGN

This chapter consists of five sections. Sections one, two and three describe the sample, the instruments, and the collection and scoring of responses, respectively. The fourth section contains a description of the data while the fifth presents the plan of the statistical analysis.

1. The Sample.

The sample of schools was selected from the City of Ottawa Public School System. Schools in which principals had been appointed later than September 1968, as well as those in which principals were to be transferred before the end of June 1969, were excluded from the sample. This decision was based on the assumption that the school structure is subject to change and instability for several months following the succession of a principal. Schools which were not typical of the system, for example, those which taught only grades seven and eight, or only slow learners, or only trades, were also excluded. From the remaining forty schools twenty-six were randomly selected. Of these two refused to participate and two were later rejected owing to the low percentage of returns.

The twenty-two schools which participated in the study are located in all parts of the city and represent schools of all sizes. They are also representative of the Ottawa public schools when those which are not typical of the system are excluded. Since the administrative procedures of the present school system cannot be considered radically different from other school systems of similar size in Ontario, all being governed by the regulations of the Ontario Department of Education, tentative generalizations might be made to such similar systems.

The sample of subjects consisted of all full-time female teachers who were appointed in the twenty-two schools not later than September 1968. Itinerant and substitute teachers were thereby excluded because it was assumed that several months of full-time teaching in a school are required before one can give an adequate description of school operations. Male teachers were excluded because they constitute a small proportion of the primary school teaching staff and are probably more representative of prospective principals than of primary school teachers. Moreover, the mean scores of adult men differ significantly from those of adult women on all traits measured by the Edwards Personal Preference Schedule.[1,2]

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1 Allen L. Edwards, Manual, Edwards Personal Preference Schedule (revised 1959), New York, The Psychological Corporation, 1954, p. 10.

2 Henceforth abbreviated as EPPS.

A total of 267 or 88.3 per cent of the sample responded to all items of the O.I. The remaining 11.7 per cent of teachers either failed to respond or omitted more than two items on the questionnaire. Reasons given by some non-respondents were illness, loss of the questionnaire, and inability to describe school operations.

From the sample of 267 teachers, eighty-six were selected for investigation into personality needs. This subsample consisted of all female teachers whose schools scored at the extremes of the bureaucratic continuum.

2. The Instruments.

This section consists of two parts: the first part describes the Organizational Inventory and the Satisfaction Questionnaire; the second part presents a description of the Edwards Personal Preference Schedule.

a) The Organizational Inventory (O.I.) was first constructed in 1961 by Hall[3] in order to delineate and quantify the six major characteristics of the Weberian concept of bureaucracy. He surveyed the literature on bureaucracy and selected those dimensions which were mentioned most often and which seemed to be of greatest

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3 Richard H. Hall, "The Concept of Bureaucracy: An Empirical Study," American Journal of Sociology, Vol. 69, No. 1, July 1963, p. 32-40.

importance. Table I presents the data from which the final selection was made.

The six dimensions selected were:

I. Hierarchical authority

II. Division of labour or specialization

III. Rules

IV. Procedural specification

V. Impersonality

VI. Technical qualifications or competence.

Hall then constructed a sixty-two item questionnaire, the O.I., to measure these six dimensions. Each item solicited a response along a five-point scale. The corrected split-half coefficient of reliability ranged from .80 to .90. After interviewing members and observing procedures of organizations which obtained extreme scores, Hall claimed validity for all scales. The use of respondents' perceptions of the degree of emphasis on bureaucratic characteristics was justified on the basis that the significant structure is not that which appears on the organizational chart, but the actual operational structure resulting from both the official and unofficial structures. His sample consisted of ten organizations which varied according to type, age and size. (Schools were not included.) All levels and departments in the organizations were represented.

Table I.-**
Characteristics of Bureaucracy as Listed by Major Authors.

Dimensions of Bureaucracy	Weber	Fried-rich	Merton	Udy	Heady	Parsons	Berger	Michels	Dimock
Hierarchy of authority	*	*	*	*	*	*	*	*	*
Division of Labor	*	*	*	*	*	*		*	*
Technically competent partici-pants	*	*	*	*		*	*		
Procedural devices for work situations	*	*	*		*		*		*
Rules governing behavior of positional incumbents	*	*	*				*	*	
Limited authority of office	*		*		*	*			
Differential rewards by office	*			*					
Impersonality of personal contact			*						
Administration separate from ownership	*								
Emphasis on written communication	*								
Rational discipline	*								

* Cited by author.

** Richard H. Hall, "The Concept of Bureaucracy: An Empirical Study," American Journal of Sociology, Vol. 69, No. 1, July 1963, p. 34.

In 1964 Mackay made slight changes in the wording of items so that they would represent situations in school organizations. Although the instrument discriminated among schools, further refinement was recommended.[4] Subsequently, in 1966, Robinson[5] substantially refined the O.I. and recommended it as highly discriminating.

In the following year Punch[6] did a considerable amount of work to improve this instrument. He devised new items for the sixth scale, which was weak in comparison with other scales, and reworded other items so that they would measure actual rather than expected modes of school operation. From a total of sixty-eight items he rejected those whose F ratio of discrimination did not reach the .05 level of significance; he also rejected those which were generally weak, ambiguous, or redundant, as well as those which correlated more highly with scales other than their own, or only slightly with their own scale scores.

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4 David Allister Mackay, An Empirical Study of Bureaucratic Dimensions and Their Relation to Other Characteristics of School Organizations, unpublished doctoral thesis presented to the [Department of Educational Administration] University of Alberta, September 1964, p. 48, 170.

5 Norman Robinson, A Study of the Professional Role Orientations of Teachers and Principals and Their Relation to Other Characteristics of School Organizations, unpublished doctoral thesis presented to the [Department of Educational Administration] University of Alberta, Edmonton, 1966, p. 198.

6 Keith Francis Punch, Bureaucratic Structure in Schools and Its Relationship to Leader Behavior: An Empirical Study, unpublished doctoral thesis presented to the [Ontario Institute for Studies in Education] University of Toronto, 1967, p. 91-95.

The remaining forty-eight items selected showed F ratios well beyond the .05 level, indicating high discrimination between schools while clustering within schools. All items but one[7] correlated most highly with their own subscale, thus indicating internal consistency, and to a lesser extent, independence among scales. Scales II and VI have generally weaker F ratios and less favourable correlation patterns. The reliability coefficients shown in Table II were calculated by the Spearman-Brown split-half method.

Punch concluded that for five of the scales reliability seems acceptable, considering that reliability is a function of test length. He suggested that up to thirty per cent of score variance, and perhaps more for Scale II, is due to error. The fact of homogeneity of item and dimension scores within schools, but significant variation between schools, indicates the accuracy of respondents' perceptions; consequently analyses may be performed on school scores for each dimension rather than on teacher scores.

Factor analysis revealed that the O.I. measures two factors. The major factor, labelled "bureaucratization," consists of scales I, III, IV and V, and accounts for eighty-one per cent of common variance. The other factor,

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7 Item number 7 in Appendix 1.

Table II.-

Split-half Reliabilities of Organizational Inventory Scales.*

Scale Number	Reliability Coefficients	No. of Items
I	.83	10
II	.24	7
III	.59	8
IV	.64	8
V	.56	8
VI	.71	7

* Keith Francis Punch, Bureaucratic Structure in Schools and Its Relationship to Leader Behavior: An Empirical Study, unpublished doctoral thesis presented to the [Ontario Institute for Studies in Education] University of Toronto, 1967, p. 96.

consisting of scales II and VI (probably a partial index of "professionalism") was considered small enough to be discounted; these scales are weak in relation to the others.

In the present study "bureaucratization" was considered a one-factor concept, thereby excluding scales II and VI. The test-retest reliability coefficients of the four scales employed were computed by means of the Pearson product-moment correlation method and are as follows: scale I = .77, scale III = .79, scale IV = .77, scale V = .62, combined scales = .83. Forty-three subjects were used for the retest and the interval between testings ranged from six to eight weeks.

To date, the O.I. represents the most systematic attempt to measure the bureaucratization of organizations. Moreover, it has demonstrated its usefulness as a research instrument.

In addition to the thirty-four item form of the O.I., a short questionnaire was employed. It consists of four questions which are intended to measure satisfaction with bureaucratic dimensions along a six-point scale.[8] The test-retest reliability coefficient based on a six to eight week interval was .80.

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8 See Appendix 1.

b) The Edwards Personal Preference Schedule was designed primarily as an instrument for research and counseling purposes. It purports to measure fifteen of Murray's[9] manifest needs, namely, achievement, deference, order, exhibition, autonomy, affiliation, intraception, succorance, dominance, abasement, nurturance, change, endurance, heterosexuality, and aggression.

This personality inventory consists of 225 items. According to the manual each of the items contains two statements measuring different needs but comparable on a social desirability scale. The subject is forced to choose that statement which is more characteristic of him. Each variable is represented by nine statements, eight of which are combined three times with statements describing other needs; the ninth statement is paired four times with statements describing other needs. The pairing procedure is such that each variable is paired twice with every other variable. Fifteen of the 225 items are repeated in identical manner in order to estimate a subject's consistency in responding.

As reported in the manual, the corrected split-half reliabilities of thirteen of the fifteen variables range from .70 to .87 while those of the remaining two variables, deference and exhibition, are .60 and .61 respectively. The

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9 H.A. Murray et al., Explorations in Personality, New York, Oxford University Press, 1938, xiv-761 p.

median value of the internal consistency coefficients for all variables is .78. The stability coefficients, based on a one-week interval, range from .74 to .88, with a median value of .83. These reliability coefficients, although somewhat inflated by the duplication of items, are nevertheless comparable to those of other personality inventories.

The validity data reported in the manual are based on correlations with self-ratings, peer ratings, and standardized personality inventories. Data based on the first and second type of ratings are inconclusive, since subjects found difficulty in rating themselves and others, and also tended to evaluate variables in terms of standards of social desirability. Only two of the EPPS variables (i.e. succorance and endurance) are significantly correlated with scores on the Taylor Manifest Anxiety Scale. However, eleven variables show significant correlation with the "agreeableness" scale of the Guilford-Martin Personnel Inventory. These results are difficult to interpret since coefficients of correlation might have been increased by the common factor of social desirability; at the same time the correlation might have been decreased owing to weaknesses in the criterion measures. The data on intercorrelations of the EPPS variables are more definite and indicate independence among scales.

Thus far the description of the EPPS has been based solely on Edwards' manual. However, a fair evaluation of the instruments must necessarily include reports of test users and reviewers. In The Sixth Mental Measurements Yearbook[10] the two major criticisms of the EPPS are the failure to control the effect of social desirability and the lack of reassuring validating studies. Regarding the first criticism, Corah et al.,[11] in a study of thirty of the 225 pairs of items, suggested that the social desirability of an item differs when the item is responded to singly and when it is paired. The implication of this finding, as explained by Radcliffe,[12] is that social desirability is not as well controlled as was indicated by Edwards. However, Barron[13] notes that one may candidly ascribe to oneself traits which appear undesirable. Moreover, high scores on socially desirable items and low

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10 Oscar Krisen Buros, (Ed.), The Sixth Mental Measurements Yearbook, Highland Park, N.J., The Gryphon Press, 1965, xxxvi-1714 p.

11 M.L. Corah et al., "Social Desirability as a Variable in Edwards Personal Preference Schedule," Journal of Consulting Psychology, Vol. 22, 1958, p. 70-72.

12 Review of the Edwards Personal Preference Schedule, by John A. Radcliffe, in O.K. Buros, (Ed.), The Sixth Mental Measurements Yearbook, p. 195.

13 Review of the Edwards Personal Preference Schedule, by Frank Barron, in O.K. Buros, (Ed.), The Fifth Mental Measurements Yearbook, Highland Park, N.J., The Gryphon Press, 1959, p. 116.

scores on socially undesirable items do not lead to the conclusion that a measure is invalid.

Regarding the second criticism, the EPPS manual does not give sufficient data on validity and the relevant validating studies are contradictory. The low validity coefficients between the EPPS and other personality inventories may be partly explained by the ipsative nature of the EPPS scores. Stricker[14] has explained that "when a set of ipsative scales has equal variances, the correlations of the set with any normative variables sum to zero."

Bearing in mind these criticisms of validity, one can be certain that studies which validate the EPPS against the Thematic Apperception Test (TAT)[15] would be valuable since both tests are based on Murray's theoretical formulation of personality needs. Moreover, a rank order correlation should be performed since the EPPS yields ipsative scores. Based on the reviews contained in The Sixth Mental Measurements Yearbook,[16] the major warning is that while the EPPS is a useful research instrument it should not be used for counseling.

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14 Review of the Edwards Personal Preference Schedule, by Lawrence J. Stricker, in O.K. Buros, (Ed.), The Sixth Mental Measurements Yearbook, p. 201.

15 Reviews of H.A. Murray's Thematic Apperception Test, in O.K. Buros, (Ed.), The Sixth Mental Measurements Yearbook, p. 528-538.

16 O.K. Buros, (Ed.), The Sixth Mental Measurements Yearbook, p. 195-207.

The EPPS was selected as a research instrument in the present study because it measures several personality variables which seem logically related to a predisposition for bureaucratic characteristics. Of the fifteen needs the nine which seem most relevant were selected for analysis, namely, needs for change, aggression, dominance, autonomy, abasement, affiliation, deference, order, and achievement.

Another reason for the selection of the EPPS is the fact that it is theoretically sound, being based on some of Murray's[17] manifest needs. In a purely theoretical study in administration it is important that the same theory of personality be adopted both by the test author and the theorist in administration. In the present study the theory of personality accepted by Getzels[18] coincides with that accepted by Edwards.[19] These were the major factors which favoured the selection of the EPPS in this research study.

3. Collection and Scoring of Responses.

The Organizational Inventory and the Satisfaction Questionnaire were mailed to the school principals who were

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17 Murray et al., Op. Cit., xiv-761 p.

18 Jacob W. Getzels, James M. Lipham, and Roald F. Campbell, Educational Administration as a Social Process, New York, Harper and Row, 1968, p. 68-77.

19 Edwards, Op. Cit., p. 5.

responsible for distribution and collection. Two of the twenty-four schools were rejected because the percentage of respondents was less than seventy-five. Of the remaining schools eight were represented by 100 per cent response, twelve by 80 to 90 per cent, and two by 75 to 78 per cent response.

Twenty-four of the thirty-four items of the O.I. were scored by assigning a value of five points to A, and decreasing this value until E was assigned one point. The remainder of the items stated a de-emphasis of bureaucratic characteristics and were scored in the opposite direction.

The bureaucracy score for a teacher was obtained by summing the numerical values of her responses to the O.I. This computational procedure was justified on the basis that the four scales of the O.I. are factorially homogeneous. The highest score possible was 170, an indication of a highly bureaucratized school structure.

The bureaucracy score for a school was obtained by calculating the mean score of all respondents within the school. The use of the mean score is legitimate because the O.I. has been shown to be an objective measure of bureaucracy. A total of eight schools which scored at the extremes of the bureaucratic continuum were selected for the investigation of personality needs.

These extremely high and low bureaucratic schools employed eighty-six female teachers who responded to the O.I. Of this number, six were absent from school on the day scheduled for the EPPS test, five refused to be tested, and five received low consistency scores. The responses of the remaining seventy teachers, thirty-five in each type of bureaucratic school, were used to test the hypotheses of this study.

4. Description of the Data.

a) Scores on Bureaucracy.- The sample of twenty-two schools revealed a wide range of scores (from 67.0 to 112.9) which were normally distributed. Five schools obtained scores above 96.44 and were described as "high bureaucratic" while three schools obtained scores below 82.43 and were described as "low bureaucratic." Although there were forty-three female respondents in each school classification, the data do not indicate a negative correlation between size of school and degree of bureaucracy.

An examination of bureaucracy scores within schools revealed wide variability, part of which can be accounted for by the less than perfect reliability of the O.I. Part of the variance can also be explained by the fact that some principals exercise greater authority over some of their teachers and less over others; when this situation occurs,

teachers within the same school see different degrees of bureaucracy. In addition, some teachers are less aware of the functioning of their school and therefore give a different picture of its bureaucracy.

Despite the relatively large variance within schools, the variance between high and low bureaucratic schools was found to be homogeneous when Hartley's F_{max} test was performed. The obtained value of $F = 1.768$ was less than 2.07, the value required for significance at the .05 level. A t test, performed on the mean scores of high and low bureaucratic schools also proved to be significant ($t = 6.74$). This result was desirable since it increased the probability that differences on personality needs and satisfaction between high and low bureaucratic schools would manifest themselves if they existed.

In the studies of bureaucracy cited in the literature, the samples consisted either of several types of organizations or of a large number of schools from several school systems. When these samples are compared with that of the present study a new fact comes to light, namely, that bureaucracy is a phenomenon which varies greatly even among a small number of schools chosen from a single administrative school system. It is possible that this fact does not apply to all school systems but only to the system studied. However, since the latter is not peculiar in the amount of authority it delegates

to schools one can expect that the statement applies at least to the public schools in the Province of Ontario.

b) Scores on Personality Needs.- The personality needs of the seventy teachers tested with the EPPS were not compared with those of the general adult female population. Teachers were described as possessing high or low needs only by comparison with other teachers included in the sample. However, before these comparisons were made, the ipsative scores were converted to T scores.

Only nine of the fifteen personality needs were selected for analysis, the other needs being irrelevant to the characteristics of bureaucracy. The means and standard deviations of these nine needs, when high and low bureaucratic schools are combined, are presented in Table III.

It is to be noted that the rank order of needs shown in the table is consistent with Murray's[20] theory that needs for aggression, dominance and autonomy comprise one group of related needs, while needs for deference and order comprise another group. If the former group is designated "independence" needs, and the latter "submission" needs, then, as illustrated in Table III, the present sample of teachers expressed a stronger need for "independence" than for "submission."

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20 Murray et al., Op. Cit., p. 151-152.

Table III.-

Means and Standard Deviations of Personality Need Scores of Female Teachers in Combined High and Low Bureaucratic Schools (N = 70).

Needs	Means	S.D.
Change	53.9	11.5
Aggression	52.8	9.2
Dominance	50.5	10.8
Autonomy	49.9	9.9
Abasement	47.6	9.5
Affiliation	46.5	9.5
Deference	45.2	9.8
Order	42.9	10.7
Achievement	42.7	9.9

c) Scores on Satisfaction.- Satisfaction was measured with reference to four bureaucratic characteristics: i.e. satisfaction with the degree of hierarchical authority, rules, procedural specification, and impersonality. It was observed that dissatisfaction was seldom expressed and that the upper end of the scale (i.e. scale points four to six representing "somewhat satisfied," "very satisfied," and "extremely satisfied") revealed more variability, than the lower end of the scale.

The negatively skewed distribution could have resulted from teachers' fear that their responses might be read by their principals or higher authorities. From remarks written on the questionnaires one might conclude that fear, lack of trust in researchers, and defensiveness, are likely factors responsible for such high scores on satisfaction. If the code numbers on responses could have been omitted, the distribution of satisfaction scores might have been less skewed.

5. Plan of the Statistical Analysis.

The plan of the analysis was as follows:

1. to compute a t test of significant difference between the mean bureaucracy scores of high and low bureaucratic schools; (This test ensures that schools are truly different in degree of bureaucracy.)

2. to use nine separate t tests of significant differences between the means of the nine need scores of female teachers in high bureaucratic schools and female teachers in low bureaucratic schools;
3. to use nine separate 2 x 2 x 4 fixed effects analysis of variance designs with repeated measures on one factor in order to discover bureaucracy-need interactions when the criterion is satisfaction with bureaucratic characteristics.

CHAPTER III

PRESENTATION OF RESULTS

The data collected were analysed statistically according to the plan already described. The results are reported in this chapter and are arranged in five sections. The first three sections present the results of testing the three hypotheses previously stated; the fourth section presents the results of testing a modification of the third hypothesis; the fifth section outlines the main findings.

1. Results of Testing the First Hypothesis.

The first hypothesis stated that there were no significant differences between the personality need scores of female teachers in high bureaucratic schools and female teachers in low bureaucratic schools. This was tested by nine t tests of significant differences between means. The result was the failure to reject the null hypothesis for all of the nine needs at the .05 level of confidence. Table IV gives t values as well as the means and standard deviations used in computing them.

Table IV.-

Comparison of Personality Need Scores of Female Teachers in High and Low Bureaucratic Schools (n = 35).

Personality Needs	HB[a] M	HB[a] SD	LB[b] M	LB[b] SD	Mean Diffs.	t
Change	53.34	10.70	54.51	11.97	1.17	.425
Aggression	53.00	9.73	52.54	8.99	.46	.201
Dominance	49.26	11.09	51.80	10.06	2.54	.990
Autonomy	51.40	8.87	48.46	9.41	2.94	1.330
Abasement	47.86	9.56	47.34	9.33	.52	.225
Affiliation	46.57	9.98	46.43	8.93	.14	.062
Deference	42.91	10.40	47.40	9.04	4.49	1.898
Order	41.97	11.63	43.89	9.35	1.92	.748
Achievement	42.29	9.98	43.20	9.33	.91	.390

$.95t_{34} = 2.03$

a High bureaucratic schools.
b Low bureaucratic schools.

2. Results of Testing the Second Hypothesis.

The second hypothesis stated that there were no significant differences on satisfaction scores between female teachers in high bureaucratic schools and female teachers in low bureaucratic schools. This hypothesis was tested on satisfaction with bureaucratic dimensions, i.e. scales I, III, IV and V, as well as on a combination of all four scales. Five t tests were therefore performed and all resulted in significant t values. The rejection of the null hypothesis at the .01 level of confidence led to the conclusion that teachers in low bureaucratic schools were more satisfied with their school structure than were teachers in high bureaucratic schools. The statistical data are presented in Table V.

3. Results of Testing the Third Hypothesis.

The third hypothesis stated that there were no significant interaction effects between the bureaucratic and personality need variables when the criterion was satisfaction scores. This hypothesis was tested separately for each of the nine needs by means of a 2 x 2 x 4 analysis of variance design with repeated measures on one factor. In the following tables the fixed factors A, B, and C represent bureaucracy, personality needs and satisfaction respectively. Factor C is repeated over all subjects.

Table V.-

Comparison of Satisfaction Scores of Female Teachers in High and Low Bureaucratic Schools (n = 43).

Satisfaction with Bureaucratic Characteristics	HB[a]		LB[b]		Mean Diffs.	t
	M	SD	M	SD		
Scale I: Hierarchical authority	4.47	.95	5.26	.61	.79	4.54*
Scale III: Rules	3.91	1.05	4.72	.76	.81	4.08*
Scale IV: Procedural specifications	4.16	.89	5.19	.75	1.03	5.70*
Scale V: Impersonality	4.09	.83	4.81	.84	.72	3.96*
Combined Scales	16.53	3.12	19.98	2.26	3.45	5.79*

* $p < .01$.
a High bureaucratic schools.
b Low bureaucratic schools.

The main effects of factors A and B were not examined in the following analyses because factor A was previously subjected to the t test and factor B was not a factor of concern. Tables VI - XIV present the analysis of variance data for testing the interaction hypothesis for each of the nine needs.

The results of these tables can be summarized under two main headings: interaction effects, and significant C values. Regarding interactions, it is to be noted that none of the "within subjects" interactions was significant; i.e. satisfaction did not interact with either bureaucracy, or personality needs, or bureaucracy and personality needs combined. Also, of the nine "between subjects" interactions (i.e. bureaucracy-personality needs interactions) only two were significant. Levels of bureaucracy interacted with levels of need for dominance and need for order when the criterion was satisfaction scores (Tables VIII and XIII). In both cases the interactions were ordinal.

Table VI.-

Analysis of Variance for Testing Satisfaction(C) and Interactions among Bureaucracy(A), Need for Change(B) and Satisfaction(C).

Source of Variation	SS	df	MS	F
Between subjects				
AB	1.07	1	1.07	.50
r:AB	77.87	36	2.16	
Within subjects				
C	11.57	3	3.86	9.20*
AC	.82	3	.27	.64
BC	2.32	3	.77	1.83
ABC	3.31	3	1.10	2.62
Cr:AB	45.23	108	.42	

* $p < .01$.

Table VII.-

Analysis of Variance for Testing Satisfaction(C) and Interactions among Bureaucracy(A), Need for Aggression(B) and Satisfaction(C).

Source of Variation	SS	df	MS	F
Between subjects				
AB	1.10	1	1.10	.57
r:AB	68.97	36	1.92	
Within subjects				
C	9.82	3	3.27	7.33*
AC	1.92	3	.64	1.42
BC	.32	3	.11	.24
ABC	1.96	3	.65	1.44
Cr:AB	48.77	108	.45	

* $p < .01$.

Table VIII.-

Analysis of Variance for Testing Satisfaction(C) and Interactions among Bureaucracy(A), Need for Dominance(B) and Satisfaction(C).

Source of Variation	SS	df	MS	F
Between subjects				
AB	6.82	1	6.82	4.61**
r:AB	53.13	36	1.48	
Within subjects				
C	8.76	3	2.92	6.21*
AC	.63	3	.21	.45
BC	.18	3	.06	.13
ABC	2.41	3	.80	1.70
Cr:AB	50.77	108	.47	

** $p < .05$.
* $p < .01$.

Table IX.-

Analysis of Variance for Testing Satisfaction(C) and Interactions among Bureaucracy(A), Need for Autonomy(B) and Satisfaction(C).

Source of Variation	SS	df	MS	F
Between subjects				
AB	.02	1	.02	.01
r:AB	48.62	36	1.35	
Within subjects				
C	9.72	3	3.24	5.89*
AC	.47	3	.16	.29
BC	.72	3	.24	.44
ABC	.36	3	.12	.22
Cr:AB	59.48	108	.55	

* $p < .01$.

Table X.-

Analysis of Variance for Testing Satisfaction(C) and Interactions among Bureaucracy(A), Need for Abasement(B) and Satisfaction(C).

Source of Variation	SS	df	MS	F
Between subjects				
AB	2.02	1	2.02	1.20
r:AB	60.35	36	1.68	
Within subjects				
C	8.15	3	2.72	6.97*
AC	1.92	3	.64	1.64
BC	.55	3	.18	.46
ABC	1.73	3	.58	1.49
Cr:AB	42.65	108	.39	

* $p < .01$.

Table XI.-

Analysis of Variance for Testing Satisfaction(C) and Interactions among Bureaucracy(A), Need for Affiliation(B) and Satisfaction(C).

Source of Variation	SS	df	MS	F
Between subjects				
AB	.01	1	.01	.01
r:AB	59.95	36	1.67	
Within subjects				
C	16.55	3	5.52	24.00*
AC	.62	3	.21	.91
BC	.42	3	.14	.61
ABC	.36	3	.12	.52
Cr:AB	25.05	108	.23	

* $p < .01$.

Table XII.-

Analysis of Variance for Testing Satisfaction(C) and Interactions among Bureaucracy(A), Need for Deference(B) and Satisfaction(C).

Source of Variation	SS	df	MS	F
Between subjects				
AB	.40	1	.40	.25
r:AB	57.95	36	1.61	
Within subjects				
C	12.67	3	4.22	10.82*
AC	1.40	3	.47	1.21
BC	1.88	3	.63	1.62
ABC	2.00	3	.67	1.72
Cr:AB	42.05	108	.39	

* $p < .01$.

Table XIII.-

Analysis of Variance for Testing Satisfaction(C) and Interactions among Bureaucracy(A), Need for Order(B) and Satisfaction(C).

Source of Variation	SS	df	MS	F
Between subjects				
AB	6.82	1	6.82	4.61**
r:AB	53.34	36	1.48	
Within subjects				
C	9.07	3	3.02	8.68*
AC	.47	3	.16	.47
BC	2.12	3	.71	2.09
ABC	.31	3	.10	.29
Cr:AB	36.28	108	.34	

** $p < .05$.
* $p < .01$.

Table XIV.-

Analysis of Variance for Testing Satisfaction(C) and Interactions among Bureaucracy(A), Need for Achievement(B) and Satisfaction (C).

Source of Variation	SS	df	MS	F
Between subjects				
AB	1.60	1	1.60	1.11
r:AB	51.85	36	1.44	
Within subjects				
C	11.22	3	3.74	8.70*
AC	1.25	3	.42	.98
BC	.83	3	.28	.65
ABC	.45	3	.15	.35
Cr:AB	46.75	108	.43	

* $p < .01$.

Figure 2 shows that female teachers with low needs for dominance are only slightly more satisfied in low bureaucratic schools than in high bureaucratic schools. On the other hand, female teachers with high needs for dominance are much more satisfied in low bureaucratic schools than in high bureaucratic schools.

Figure 3 shows that female teachers with high needs for order are only slightly more satisfied in low bureaucratic schools than in high bureaucratic schools. On the other hand, female teachers with low needs for order are much more satisfied in low bureaucratic schools than in high bureaucratic schools.

In Tables VI - XIV it is important to note that the C differences were consistently significant and that C did not interact significantly with any of the other factors. These two observations justified the omission of further separate analyses for each need and determined the method used in locating the differences among satisfaction means.

Two one-way analyses of variance were performed with repeated measures on the satisfaction factor. One analysis employed the satisfaction scores of all teachers in high bureaucratic schools while the other employed the corresponding scores of all teachers in low bureaucratic schools. The results, as shown in Tables XV and XVI, indicate that there

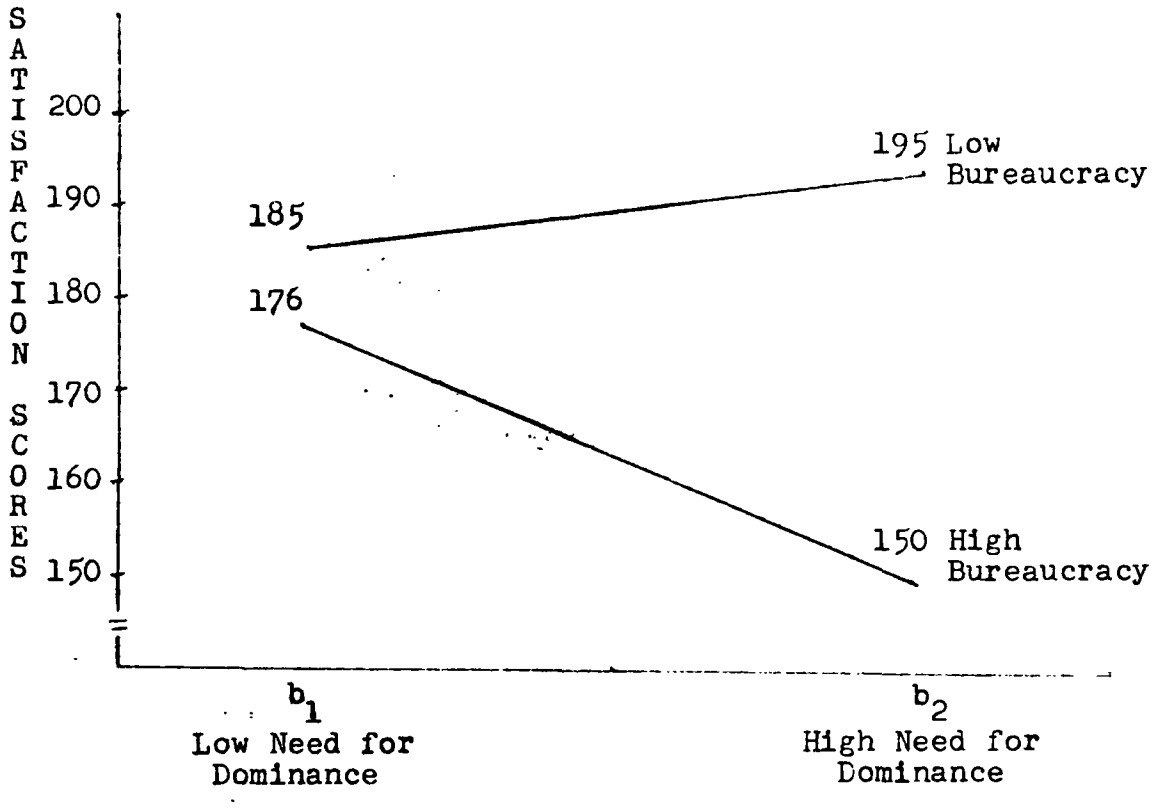

Figure 2.- Interaction Pattern of Bureaucracy and Need for Dominance based on data of Table VIII.

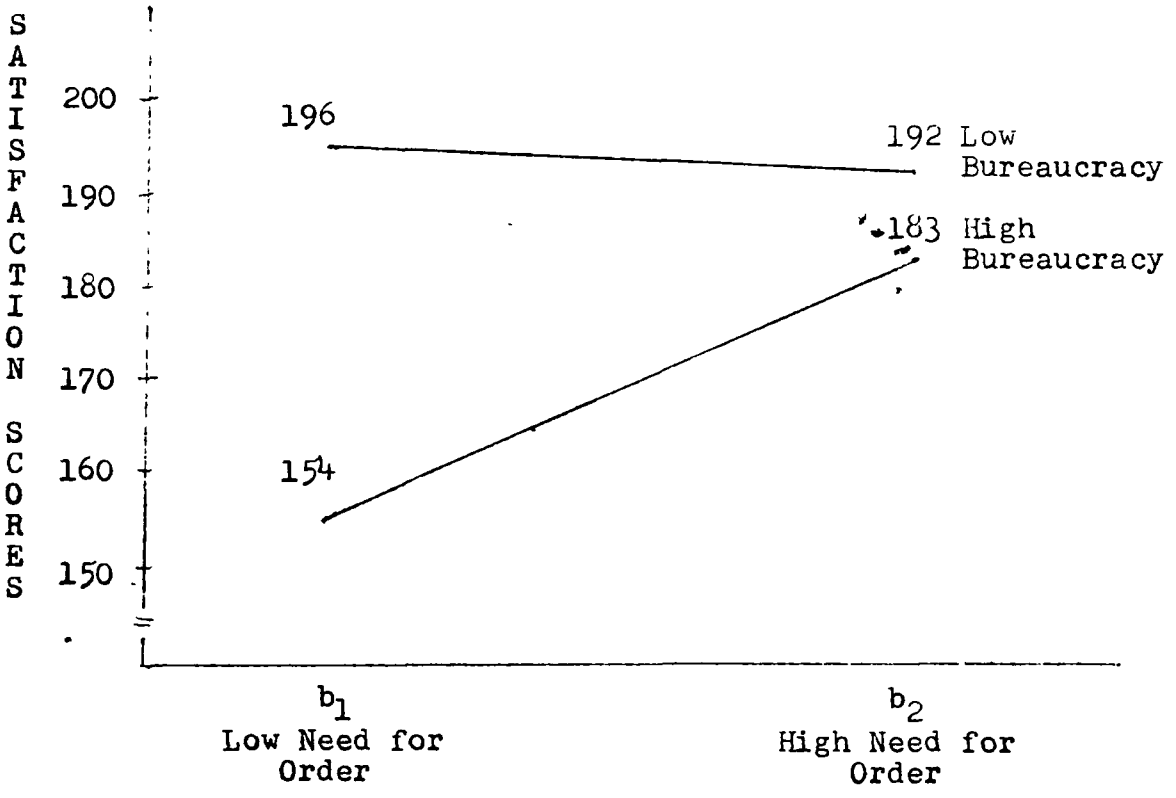

Figure 3.- Interaction Pattern of Bureaucracy and Need for Order based on data of Table XIII.

Table XV.-

Analysis of Variance for Testing Satisfaction(C) in High Bureaucratic Schools (N = 35).

Source of Variation	SS	df	MS	F
Between subjects	65.90	34		
Within subjects	48.50	105		
C	5.66	3	1.89	4.50*
rc	42.84	102	.42	

* $p < .01$.

Table XVI.-

Analysis of Variance for Testing Satisfaction(C) in Low Bureaucratic Schools (N = 35).

Source of Variation	SS	df	MS	F
Between subjects	50.14	34		
Within subjects	53.00	105		
C	11.60	3	3.87	9.44*
rc	41.40	102	.41	

* $p < .01$.

are significant differences among the mean scores on satisfaction with bureaucratic dimensions. These differences were then located by means of Tukey tests.

As shown in Table XVII, the Tukey test revealed two significant differences in high bureaucratic schools. Satisfaction with hierarchical authority was significantly greater than satisfaction with rules and impersonality. Table XVIII shows that in low bureaucratic schools these two differences were also located in addition to a third significant difference, i.e. satisfaction with procedural specifications was greater than satisfaction with rules.

4. Results of Testing a Modification of the Third Hypothesis.

In the second chapter[1] it was noted that the needs for aggression, dominance and autonomy were clustered together; the needs for abasement and deference were also closely ranked. This observation accords with Murray's[2] construct of needs. He stated that the five needs mentioned above can be divided into two groups of related needs. The first three needs form one group and were referred to in this study as "independence" needs; the last two needs form another group and were described as "submission" needs.

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1 See p.57.

2 H.A. Murray et al., Explorations in Personality, New York, Oxford University Press, 1938, p. 151-152.

Table XVII.-

Tukey Test of Significant Differences Among Satisfaction Means of Teachers in High Bureaucratic Schools.[a]

	2	3	4
1	1.82	3.91**	4.73*
2		2.01	2.91
3			.82

** $p < .05$.
* $p < .01$.

a 1 - satisfaction with hierarchical authority
2 - satisfaction with procedural specifications
3 - satisfaction with impersonality
4 - satisfaction with rules

Table XVIII.-

Tukey Test of Significant Differences Among Satisfaction Means of Teachers in Low Bureaucratic Schools.[a]

	2	3	4
1	.73	4.18**	6.45*
2		3.45	5.73*
3			2.27

** $p < .05$.
* $p < .01$.

a 1 - satisfaction with hierarchical authority
2 - satisfaction with procedural specifications
3 - satisfaction with impersonality
4 - satisfaction with rules

On the basis of the above theory, scores on needs for aggression, dominance, and autonomy were combined while scores on needs for abasement and deference were combined. It was decided to use five persons per cell in order that those described as high and low on these needs would be truly different.

Two analyses of variance using the combined need scores were performed and the data are presented in Tables XIX and XX. The results show that the AB interaction occurred for "independence" needs but not for "submission" needs. The AB interaction, which is disordinal, is represented in Figure 4. Female teachers with low "independence" needs are only slightly more satisfied in high bureaucratic schools than in low bureaucratic schools. However, female teachers with high "independence" needs are much more satisfied in low bureaucratic schools than in high bureaucratic schools.

The bureaucracy-personality need interaction shown in Figure 4 is similar to the interactions in Figures 2 and 3. The three interactions reveal that the difference in satisfaction between teachers with high and low needs (i.e. need for dominance, need for order, and need for "independence") is always greater in high bureaucratic schools than in low bureaucratic schools.

Table XIX.-

Analysis of Variance for Testing Satisfaction(C) and Interactions among Bureaucracy(A), Needs for Aggression, Dominance and Autonomy(B) and Satisfaction(C).

Source of Variation	SS	df	MS	F
Between subjects				
AB	9.80	1	9.80	5.94**
r:AB	26.40	16	1.65	
Within subjects				
C	6.05	3	2.02	4.21**
AC	.65	3	.22	.46
BC	.10	3	.03	.06
ABC	3.90	3	1.30	2.71
Cr:AB	22.80	48	.48	

** $p < .05$.

Table XX.-

Analysis of Variance for Testing Satisfaction(C) and Interactions among Bureaucracy(A), Needs for Abasement and Deference(B) and Satisfaction(C).

Source of Variation	SS	df	MS	F
Between subjects				
AB	.61	1	.61	.41
r:AB	24.00	16	1.50	
Within subjects				
C	5.95	3	1.98	4.71*
AC	.34	3	.11	.26
BC	.24	3	.08	.19
ABC	.24	3	.08	.19
Cr:AB	20.00	48	.42	

* $p < .01$.

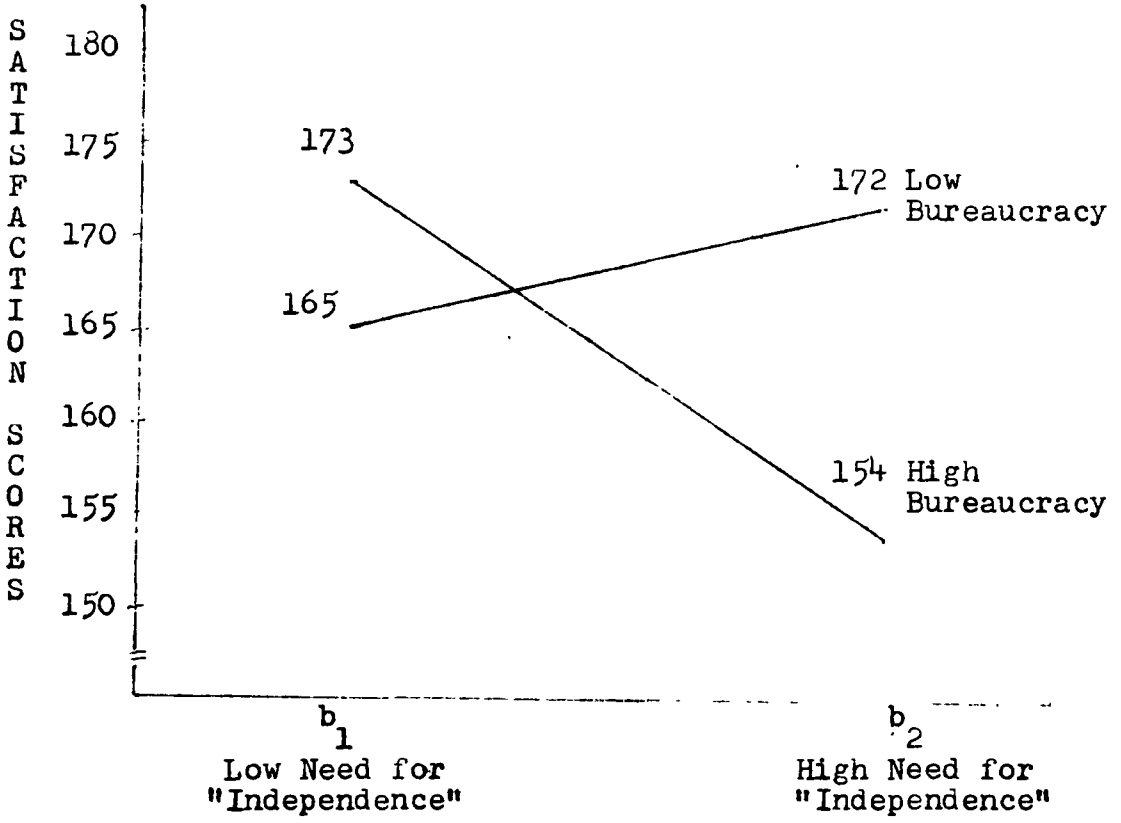

Figure 4.- Interaction Pattern of Bureaucracy and Need for "Independence" (i.e. aggression, dominance, autonomy) based on data of Table XIX.

5. Summary of Results.

The main findings of the analyses of the data obtained in this study are as follows:

1) Female teachers in high bureaucratic schools do not differ significantly on personality needs from female teachers in low bureaucratic schools.

2) Female teachers in high bureaucratic schools express significantly less satisfaction with the bureaucratic structure of their schools than do female teachers in low bureaucratic schools.

3) Bureaucracy-personality needs interactions occurred for the following needs only:

   a) Dominance.- Female teachers with a low need for dominance are only slightly more satisfied in low bureaucratic schools than in high bureaucratic schools. On the other hand, female teachers with a high need for dominance are much more satisfied in low bureaucratic schools than in high bureaucratic schools.

   b) Order.- Female teachers with a high need for order are only slightly more satisfied in low bureaucratic schools than in high bureaucratic schools. However, female teachers with a low need for order are much more satisfied in low bureaucratic schools than in high bureaucratic schools.

   c) Aggression, dominance and autonomy.- Female teachers with low "independence" needs are only slightly more satisfied in high bureaucratic schools than in low bureaucratic schools. On the other hand, female teachers with high "independence" needs are much more satisfied in low bureaucratic schools than in high bureaucratic schools.

The three interactions described above show that the differences in satisfaction between teachers who are characterized by high and low needs for dominance, order,

and "independence" are always greater in high bureaucratic schools than in low bureaucratic schools.

4. In both high and low bureaucratic schools, satisfaction with hierarchical authority was significantly greater than satisfaction with rules and impersonality. However, in low bureaucratic schools a third significant difference was located. It was found that satisfaction with procedural specifications was greater than satisfaction with rules.

These results will be discussed in the following chapter.

CHAPTER IV

DISCUSSION OF RESULTS

The purpose of this study was threefold: to determine (a) whether female teachers in high and low bureaucratic schools differed on personality needs; (b) whether they differed on satisfaction with bureaucractic characteristics; and (c) whether satisfaction was a function of the interaction between levels of bureaucracy and levels of needs. The third purpose was intended to provide a test of a statement made by Getzels in his theory of administration as a social process. He postulated that satisfaction is a function of the congruence between institutional requirements and individual need-dispositions.[1]

The sample, instruments, procedure of obtaining data and the analysis of the data were described in the preceding chapters. It is now necessary to discuss the results of the analyses with reference to the theory which was being tested.

This chapter is divided into four parts. Sections one to three present discussions of the results of the three hypotheses originally stated. Section four discusses the results of a modification of the third hypothesis.

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1 Jacob W. Getzels and Egon G. Guba, "Social Behaviour and the Administrative Process," School Review, Vol. 65, Winter 1957, p. 435.

1. Discussion of the Results of Testing the First Hypothesis.

The first hypothesis, stated in the null form, was that female teachers in high bureaucratic schools did not differ significantly from those in low bureaucratic schools on their personality needs. The underlying rationale was that if a teacher's needs were not satisfied in a high bureaucratic school she would transfer to a low bureaucratic school and vice versa. The results of such transferrals would be that teachers in high bureaucratic schools would differ on personality needs from teachers in low bureaucratic schools. Also, if principals adapted their leadership styles to satisfy the personality needs of their teachers, then schools would differ on degrees of bureaucracy.

If the conditions described above actually occurred, then high bureaucratic schools would be staffed by teachers who are high on needs for abasement, deference, and order, and low on needs for change, aggression, dominance, autonomy, affiliation, and achievement. Low bureaucratic schools would be staffed by teachers who are low on the first group of needs and high on the latter group of needs. This grouping of certain levels of needs and bureaucracy was based on the theory that a highly bureaucratized institution requires blind obedience to authority and rules, standardization of procedures, and impersonal relationships.

Logically, certain levels of needs are viewed here as being either congruent or incongruent with these requirements. If needs and structure were related, then the bureaucratic phenomenon could be explained in terms of its relationship to the personality need variable.

The test of the hypothesis showed that personality needs of teachers in high bureaucratic schools did not differ significantly from those of teachers in low bureaucratic schools. This finding can easily be explained for beginning teachers since they are not assigned to high and low bureaucratic schools on the basis of their personality needs. A teacher may choose a school nearest to her home, or a principal may select a teacher on the basis of her academic and professional qualifications. At the time of recruitment the new teacher is usually unaware of the bureaucratic structure of her future school, and the principal is unaware of her personality needs. However, there is no clear explanation of the fact that some more experienced teachers stay in a school despite the fact that their needs are not satisfied within the structure of the school. One can only suggest the following reasons:

a) Many of the needs examined are satisfied outside of school and are therefore unimportant in determining whether a teacher stays in a school. Transferrals are not based on the failure to satisfy personality needs.

b) There are compensations for unsatisfied personality needs; e.g. proximity of school, friendship with teachers and pupils, loyalty to one's community, numerous school facilities, etc.

Whether principals actually adapt their leadership styles to meet the personality needs of their teachers is not known, although the wide variability of bureaucracy scores within schools lends some support to this possibility. However, over and above this variation, principals do establish their own individual styles. Thus, while teacher personality needs might explain some of the variance of bureaucracy within schools, it fails to explain a significant amount of the variance of bureaucracy among schools.

2. Discussion of the Results of Testing the Second Hypothesis.

In the null form, the second hypothesis stated that there was no significant difference in satisfaction with bureaucratic characteristics between female teachers in high and low bureaucratic schools. The test of the hypothesis revealed that satisfaction of teachers in low bureaucratic schools was significantly higher than that of teachers in high bureaucratic schools. In view of the fact that teachers in both types of schools did not differ on personality needs and in view of Mackay's finding that most teachers desired greater bureaucratization, this result

was unexpected. Two explanations will be offered with reference to: (a) needs; and (b) factors other than needs.

a) Needs.- Although all nine needs were not unequally distributed in high and low bureaucratic schools, levels of bureaucracy interacted with levels of needs for dominance and order. But while the difference on satisfaction scores between high and low "need for dominance" teachers in low bureaucratic schools was only seven score points, the corresponding difference in high bureaucratic schools was twenty-six score points. Similarly, while the difference in satisfaction scores for high and low "need for order" teachers in low bureaucratic schools was only four score points, the corresponding difference in high bureaucratic schools was twenty-nine score points. Thus "high dominant" and "low order" teachers in high bureaucratic schools expressed much less satisfaction that "low dominant" and "high order" teachers in low bureaucratic schools. The mean satisfaction scores in high bureaucratic schools was thereby reduced. It can therefore be concluded that level of need is a more important factor in the determination of satisfaction in high bureaucratic schools than in low bureaucratic schools.

b) Factors Other Than Needs.- Since teachers in high bureaucratic schools were significantly less satisfied than teachers in low bureaucratic schools, and since the two

groups of teachers did not differ on needs, it must be concluded that factors other than needs contribute to satisfaction with bureaucratic dimensions. Three factors are suggested.

i) Attitude of Subjects.- From the written comments of some teachers, it seems that they viewed the O.I. as a questionnaire either on teacher independence or principal authoritarianism. Both interpretations of the O.I. are subject to biased responses. Freedom of the individual is an espoused value in democratic societies and authoritarianism is considered a threat to individual freedom. All teachers, therefore, responded in a socially acceptable way. The result was that they expressed great satisfaction with a low bureaucratic structure and much less satisfaction with a high bureaucratic structure.

ii) Professional Aspirations.- Whether the experimental sample of teachers was professional or not, they were all aware that independence is a goal of the professional teacher. Therefore, as members of the teaching profession they expressed dissatisfaction with high bureaucracy (which they interpreted as lack of independence) and satisfaction with low bureaucracy (i.e. independence), irrespective of their needs.

iii) Dysfunctions of Bureaucracy.- The differences in satisfaction scores between female teachers in high and low bureaucratic schools can be explained in terms of the psychologically dysfunctional aspects of bureaucracy which were referred to in the literature.[2] Regardless of personality needs, teachers in high bureaucratic schools probably suffer from tension and apprehension, feelings easily engendered by an overemphasis on rules and procedural specifications. A weighty hierarchy can also give rise to a feeling of helplessness in a teacher who is at the bottom of the ladder. An emphasis on impersonality may also lead to the suppression of ideas and feelings which result in dissatisfaction.

In summary, an acceptable explanation of the finding that female teachers in high bureaucratic schools are less satisfied than those in low bureaucratic schools is that bureaucracy per se is psychologically dysfunctional, when the nine personality needs examined in this study are considered as a whole.

3. Discussion of the Results of Testing the Third Hypothesis.

The third hypothesis, stated in the null form, was that there were no significant interaction effects between the personality needs of female teachers and levels of bureaucracy in schools. The pre-experimental reasoning was that if the satisfaction of needs was associated with the bureaucratic structure of schools, then teachers with high needs for change, achievement, affiliation, dominance, autonomy and aggression would be more satisfied in low bureaucratic schools than in high bureaucratic schools; also, teachers who were low on these needs would be more satisfied in high bureaucratic schools. The remaining three needs, i.e. deference, abasement and order, if high, would be more satisfied in high bureaucratic schools than in low bureaucratic schools. It was also reasoned that if satisfaction of needs was associated with the level of bureaucracy, then need satisfaction would be reflected in satisfaction with the bureaucratic structure.

The expectation that bureaucracy would be related to needs was based on the theory that a highly bureaucratic structure is characterized by obedience to authority, routinization and standardization through rules and procedures, and impersonal relationships. These characteristics, when emphasized, are logically congruent with high needs for

deference, abasement and order, and low needs for change, achievement, affiliation, dominance, autonomy and aggression. The second expectation that congruence of bureaucratic characteristics and needs would produce satisfaction with the structure was based on Getzels' theory that satisfaction is a function of the congruence between institutional requirements and individual need dispositions.[3]

The results of the analyses showed that this rationale was partly substantiated for two needs, i.e. dominance and order, but not for the remaining seven needs when they were analysed separately. In the case of need for dominance, the prediction that teachers with high needs for dominance would be more satisfied in low bureaucratic schools than in high bureaucratic schools was supported. However, the prediction for teachers with low needs was not realized. It was observed that low dominance needs are almost equally satisfied in any level of bureaucracy. The reason for this occurrence can be that low dominance needs are not incongruent with low bureaucratic requirements. It can be concluded that whereas level of need for dominance is an important factor in determining satisfaction in high bureaucratic schools, it is not important in low bureaucratic schools.

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3 Getzels and Guba, Op. Cit., p. 435.

With reference to Getzels' theory, that satisfaction is a function of the congruence between institutional requirements and individual need dispositions, partial support was provided by the present study. The prediction of the degree of satisfaction was supported for each level of dominance within each level of bureaucracy. However, when both levels of bureaucracy were considered together, the prediction was upheld for female teachers with high needs for dominance but not for those with low needs for dominance.

The interpretation of the results of need for order is similar to the above. Teachers with low needs for order are more satisfied in low bureaucratic schools than in high bureaucratic schools because, according to the theory, low order needs and high bureaucracy are incongruent. However, teachers with high needs for order are almost equally satisfied in high and low bureaucratic schools, because whereas high order need is congruent with high bureaucracy, it is not incongruent with low bureaucracy. In low bureaucratic schools the difference in satisfaction between teachers with high and low order needs is small, thereby implying that level of needs is not important. High order needs can be satisfied in low bureaucratic schools, probably because of a more open climate. Getzels' theory is supported for female teachers with high and low needs for order within each level of

bureaucracy. However, when the bureaucratic levels are considered together the predicted degree of satisfaction is realized for female teachers with low needs for order but not for those with high needs for order.

To conclude the interpretations of significant interactions, it can be stated that when levels of needs for dominance and order and levels of bureaucracy are known, Getzels' theory can predict the degree of satisfaction of female teachers, irrespective of their level of personality needs, within each of the two levels of bureaucracy. The theory can also predict the degree of satisfaction at two levels of bureaucracy but only for female teachers with needs incongruent with the requirements of high bureaucracy (i.e. high need for dominance and low need for order). However, on the basis of the present study, the theory is not capable of predicting at two levels of bureaucracy the satisfaction of female teachers with needs congruent with the requirements of bureaucracy (i.e. low need for dominance and high need for order).

Failure to find significant interactions between bureaucracy and needs for change, achievement, affiliation, deference and abasement can mean that the satisfaction of these needs is not associated with the level of bureaucracy. If high and low levels of these needs were either congruent or incongruent with levels of bureaucracy, the bureaucracy-need

interactions would have been significant. Since these interactions did not occur, the only conclusion is that these five needs are irrelevant to structure and satisfaction.

The needs for change, achievement, and affiliation appear to be important in situations not directly affected by the bureaucratic structure. For example, a teacher with a high need for change will welcome changes in classroom activities more than changes in the administrative structure, because rapid changes in rules and procedures create feelings of insecurity. The need for achievement is also probably more important in the classroom. It was thought that a highly bureaucratic structure would hinder the ambitious teacher from performing her professional duties. It now seems that bureaucracy has no direct bearing on teaching-learning activities, where change and achievement are concerned, but relates to activities outside the classroom. The need for affiliation is irrelevant to satisfaction with bureaucracy because this need is more important among close friends and relatives than among working colleagues.

Needs for deference and abasement also failed to interact with levels of bureaucracy. There is no clear theoretical explanation of this occurrence. Since high levels of these needs are logically congruent with high bureaucracy, interactions were expected. The most plausible explanation lies in the measurement of these needs. Among

the fifteen scales of the EPPS the deference scale showed the lowest split-half reliability of .60, and the abasement scale contained items on guilt feelings and blame-acceptance. These latter traits are irrelevant to levels of bureaucracy.

No bureaucracy-need interactions were found for the needs of aggression and autonomy. However, unlike the needs for change, achievement, affiliation and abasement, these two needs cannot be interpreted as irrelevant because they are theoretically related to the need for dominance which interacted with bureaucracy. It is possible that interactions exist but were not discovered for the reason to be stated. It may be that needs for aggression and autonomy are only two of several variables which contribute to a "need for independence" factor; consequently, when these are measured separately, the result is that significant effects are clouded by inadequate sampling.

In view of this possibility, it was decided to combine the theoretically related needs of dominance, aggression and autonomy since they constitute a better measure of need for "independence." The result of this procedure will be discussed in the next section.

4. Discussion of the Results of Testing a Modification of the Third Hypothesis.

When scores on dominance, aggression and autonomy were combined, the analysis of variance showed significant disordinal interaction between these "independence" needs and levels of bureaucracy. Female teachers with high independence needs were more satisfied in low bureaucratic schools than in high bureaucratic schools; also, female teachers with low independence needs were more satisfied in high bureaucratic schools than in low bureaucratic schools.

This finding is in complete agreement with Getzels' theory that satisfaction is a function of the congruence between need-dispositions and institutional requirements. High satisfaction resulted from the congruence of low needs for independence and high bureaucracy. Low satisfaction resulted from the incongruence of low need for independence and low bureaucracy, and of high need for independence and high bureaucracy. In this interaction, as well as in the previous two interactions, level of need is a more powerful factor in determining satisfaction in high bureaucratic schools than in low bureaucratic schools.

SUMMARY AND CONCLUSIONS

The purpose of this investigation was to test an assumption made by Getzels in his theory of administration as a social process. He postulated that satisfaction is a function of the congruence between institutional requirements and individual need-dispositions. The term "congruence" indicates the lack of discrepancy between the two dimensions. In this project the institutional requirements studied were bureaucratic requirements and the need-dispositions were chosen from the fifteen manifest needs measured by the Edwards Personal Preference Schedule. Satisfaction was measured with reference to bureaucratic characteristics in schools.

The test of the theory stated above involved three specific hypotheses which, stated in the null form, were as follows:

1. There is no significant difference on personality need scores between female teachers in high bureaucratic schools and female teachers in low bureaucratic schools.

2. There is no significant difference on satisfaction scores between female teachers in high bureaucratic schools and female teachers in low bureaucratic schools.

3. There is no significant interaction effect between the bureaucratic and personality variables when the criterion is satisfaction scores.

The conclusions based on the testing of these hypotheses are as follows:

1. Personality Needs.- The personality needs of female teachers in high bureaucratic schools do not differ significantly from those of female teachers in low bureaucratic schools. This implies that the bureaucratic structure of a school is not associated with the personality needs of teachers.

2. Satisfaction.- Satisfaction with the structure of schools is greater in low bureaucratic schools than in high bureaucratic schools. Personality needs of female teachers do not account for this difference.

3. Need for Dominance.- Female teachers with low needs for dominance are only slightly more satisfied in low bureaucratic schools than in high bureaucratic schools. On the other hand, female teachers with high needs for dominance are much more satisfied in low bureaucratic schools than in high bureaucratic schools. When the level of this need is considered Getzels' theory predicts satisfaction within each level of bureaucracy. However, when both levels are compared the theory predicts the satisfaction of female teachers with high needs for dominance but it does not predict the satisfaction of female teachers with low needs for dominance.

4. Need for Order.- Female teachers with high needs for order are only slightly more satisfied in low bureaucratic schools than in high bureaucratic schools. On the other hand, female teachers with low needs for order are much more satisfied in low bureaucratic schools than in high bureaucratic schools. When this need is considered Getzels' theory predicts satisfaction within each level of bureaucracy. However, when both levels are compared the theory predicts satisfaction of female teachers with low needs for order but it does not predict the satisfaction of female teachers with high needs for order.

5. Needs for "Independence".- Female teachers with low "independence" needs (i.e. dominance, aggression and autonomy) are only slightly more satisfied in high bureaucratic schools than in low bureaucratic schools. On the other hand, female teachers with high "independence" needs are much more satisfied in low bureaucratic schools

than in high bureaucratic schools. When this need is considered Getzels' theory predicts the satisfaction of female teachers within each level of bureaucracy considered separately and at both levels of bureaucracy considered together.

6. Level of Need.- This factor is consistently more important in determining satisfaction in high bureaucratic schools than in low bureaucratic schools. This implies that while a high bureaucratic structure satisfies only certain restricted levels of needs, a low bureaucratic structure satisfies all levels of needs almost equally. The former structure requires persons who possess low needs for dominance and "independence" and high needs for order. The latter structure is more satisfying to persons with opposite needs but it is not insistent on these personality traits.

7. Validity of Getzels' Theory.- Since level of personality need is a more important factor in high bureaucratic schools than in low bureaucratic schools the theory is better suited for predicting satisfaction in the former situation than in the latter. Needs incongruent with bureaucracy, i.e. high dominance and low order, are better predictors of satisfaction than congruent needs, i.e. low dominance and high order. While these two needs provide only partial support of Getzels' theory, needs for "independence" provide complete support.

Bearing in mind the specific conditions of this study, the conclusion is that the congruence of institutional requirements and individual need-dispositions determined satisfaction with the structure only when "independence" needs were considered. The incongruence between bureaucratic requirements and certain levels of dominance and order is more important in determining satisfaction than the corresponding congruence. The need-dispositions of change, abasement, affiliation, deference, and achievement do not interact with levels of bureaucracy to produce

satisfaction. In summary, Getzels' postulate is shown to be valid only when need-dispositions are restricted to certain needs.

The conclusions listed above indicate that the specific hypotheses of this study have been answered and that a modest amount of knowledge has been added to one assumption in a theory of administration. It is of the greatest importance that these conclusions be viewed cautiously since they are, strictly speaking, valid only within the specific conditions of this experiment; for example, the particular sample, measuring instruments and procedure of obtaining data. These limitations demand that this project be replicated under a variety of experimental conditions.

In replicative studies, it is suggested that samples of schools be chosen from different administrative systems, educational levels and provinces. Samples of teachers should also embrace males, itinerant and substitute teachers.

The present study indicates that need for "independence" is an important factor which interacts with bureaucracy to produce satisfaction. While the study of other personality traits may provide valuable information, it is more appropriate at this exploratory stage to examine the "independence" variable using Comrey's Dependence Scale. The factorially homogeneous dimensions of this

scale can then be analysed individually in order to determine the extent to which each interacts with bureaucracy. Other useful instruments which can be employed are: Bass' Social Acquiescence Scale, Couch and Keniston's Yeasayers and Naysayers Questionnaire, and Kessler's Passive Dependency Scale.

Another area for investigation was suggested by the variability of bureaucracy scores within schools. The question asks whether, within the same school, some teachers are subjected to more bureaucracy than others. Researchers should attempt to answer whether principals vary their styles in accordance with certain characteristics of the teacher, e.g. academic and professional training, age, sex, years of teaching experience, personality traits, etc.

Other research problems suggested by this study pertain to teacher mobility. Is the failure to satisfy one's personality needs within a school structure a decisive factor in requests for transfer? Also, why do some teachers continue to serve in a school when its structure does not satisfy their personality needs?

There is also a need for studies which compare the behavioural characteristics of satisfied and dissatisfied teachers within the school setting; for example, relationship with principals, colleagues and students, initiative, professional growth, absenteeism, etc.

The present observation that satisfaction was greater in low bureaucratic schools than in high bureaucratic schools is contrary to Mackay's findings that most teachers in his sample required greater bureaucratization. The solution to this problem is a matter for future research. Another recommended study is the investigation of the psychological and pedagogical effects of varying levels of bureaucracy on teachers and students. Future studies can also determine the extent to which satisfaction with the structure affects satisfaction with the teaching profession.

It was also revealed in this study that the level of certain needs was a more important factor in high bureaucratic schools. The interpretation of this finding was that low bureaucratic schools are flexible in their administration and can therefore satisfy any level of need. If this is the case, then researchers should examine the exact processes by which opposing levels of need are satisfied within the same structure.

A suggestion more general than those previously stated is that more research studies should be of an interdisciplinary nature; in particular, the study of educational administration should utilise the knowledge available in psychology and sociology, since institutions cannot exist without persons and social groups.

If the suggested research studies are conducted then some contribution will be made to our present endeavour of theory-building, theory-oriented research, and the utilization of knowledge from the social sciences. Moreover, administrative practices would be based more often on sound theory than on tradition and trial and error. Progress in these directions is not a vision of the distant future but a present reality in accordance with the "new movement."

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This study examines in detail the growth, functioning and consequences of bureaucratic rules within public schools. Rules perform contrasting functions: they not only reduce anxiety by impersonalizing authority but also allow teachers to function in a school without becoming committed to the organizational goals.

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The authors describe in detail the Getzel and Guba theory of administration as a social process. The description includes the original and extended forms of the model as well as empirical investigations based on it.

Gouldner, A.W., Patterns of Industrial Bureaucracy, Glencoe, Illinois, Free Press, 1954, 282 p.

This is the report of a case study conducted in a factory. Its administration was studied along the lines proposed by Max Weber. Three types of bureaucracy were identified: 1) "mock bureaucracy" i.e. failure to enforce and obey rules; 2) "representative bureaucracy i.e. the enforcement of rules by management and obedience by workers; 3) "punishment-centered bureaucracy" i.e. the enforcement of rules by management and resistance by workers.

Hall, Richard H., "The Concept of Bureaucracy: An Empirical Assessment," American Journal of Sociology, Vol. 69, No. 1, July 1963, p. 32-40.

This article is a condensed report of the author's doctoral thesis completed in 1961. He identified the six most common bureaucratic characteristics proposed by Max Weber, then proceeded to quantify and investigate them. His instrument, the Organizational Inventory, has been used extensively in educational administration.

Halpin, Andrew W., (Ed.), Administrative Theory in Education, New York, Macmillan, 1958, xvi-185 p.

Contains eight papers presented at a meeting held in 1957. The authors present several approaches to the study of administration and emphasize the value of theory and theory-oriented research. The ideas are basic to administration and should therefore be analysed by every student of administration. Halpin's paper "The Development of Theory in Educational Administration" and Getzels' paper "Administration as a Social Process" were directly related to this thesis.

Kolesar, Henry, An Empirical Study of Client Alienation in the Bureaucratic Organization, unpublished doctoral thesis presented to the [Faculty of Educational Administration] University of Alberta, 1967, xvii-244 p.

The author related student alienation to the bureaucratic structure of schools. He found that pupil powerlessness and total alienation scores were significantly higher in schools which emphasized hierarchical authority, rules, procedural specifications and impersonality. Student alienation was therefore shown to be one of the dysfunctions of bureaucracy.

Litwak, Eugene, "Models of Bureaucracy which Permit Conflict," American Journal of Sociology, Vol. 67, No. 2, September 1961, p. 177-184.

Three models of bureaucratic organizations are suggested: 1) the Weberian model which is most efficient when dealing with uniform events; 2) the human relations model which is best for non-uniform events and interpersonal relations; 3) the professional model which is ideal for organizations concerned with both uniform and non-uniform events. The discussion of the latter two models serves to point out some of the weaknesses of Weber's model.

Mackay, David Allister, An Empirical Study of Bureaucratic Dimensions and Their Relation to Other Characteristics of School Organizations, unpublished doctoral thesis presented to the [Faculty of Educational Administration] University of Alberta, September 1964, xix-217 p.

The author related the bureaucratic dimensions of schools to teacher characteristics and certain measures of input and output. Some of his main conclusions were: a) that the traditional bureaucratic model was not generally descriptive of the schools studied; b) that technical competency was a non-bureaucratic dimension; c) that the bureaucratic model tended to be dysfunctional in terms of pupil productivity.

Merton, Robert K., "Bureaucratic Structure and Personality," in Robert K. Merton et al., (Eds.), Reader in Bureaucracy, Glencoe, Illinois, Free Press, 1952, p. 361-371.

The author deals with the stresses and strains created by a bureaucratic structure. In particular, he shows how rules create sources of conflict and are conducive to overconformity. Several theoretically significant and practically important questions concerning the interaction between bureaucracy and personality are suggested for research.

Murray, Henry A., et al., Explorations in Personality, New York, Oxford University Press, 1938, xiv-761 p.

Contains a detailed exposition of a theory of personality based on extensive research. Personality is conceived in terms of needs which constitute the theoretical basis of Edwards Personal Preference Schedule.

Punch, Keith Francis, Bureaucratic Structure in Schools and Its Relationship to Leader Behavior: An Empirical Study, unpublished doctoral dissertation presented to the [Ontario Institute for Studies in Education] University of Toronto, 1967, 249 p.

A research study which refined the concept of bureaucracy in school organizations: the bureaucratic dimensions of hierarchical authority, rules, procedural specifications and impersonality were shown to be factorially homogeneous. An important finding was that principals' leader behavior style accounted for more than half the variation in bureaucratization among schools.

Robinson, Norman, A Study of the Professional Role Orientations of Teachers and Principals and their Relationship to other Characteristics of School Organizations, unpublisned doctoral thesis presented to the [Faculty of Educational Administration] University of Alberta, Edmonton, Alberta, 1966, xvi-248 p.

Using the six-dimensional approach, the author found that professionalism of teachers and principals was not

significantly related to degree of bureaucratization in schools. Staff professionalism, principal professionalism and size of school accounted for only eleven per cent of the variance in bureaucratization among schools.

Udy, Stanley H., "'Bureaucracy' and 'Rationality' in Weber's Organization Theory," American Sociological Review, Vol. 24, No. 6, December 1959, p. 791-795.

This study reports that not all bureaucratic characteristics are positively related. Such a relationship was shown to exist only between sets of variables. The implication of this finding is that the concept of "informal" organizations, i.e. those which deviate from the Weberian structure, disappears when ideal types are recast as a system of variables.

Weber, Max, The Theory of Social and Economic Organization, edited by Talcott Parsons, New York, Oxford University Press, 1947, p. 324-423.

This chapter contains an exposition of Weber's theory of types of authority and imperative coördination. Some of his specifications of bureaucratic administration were adopted in this study and in the doctoral research studies cited in the literature. Moreover, the Organizational Inventory was constructed to measure certain characteristics delineated in this chapter.

APPENDIX 1

THE ORGANIZATIONAL INVENTORY AND SATISFACTION QUESTIONNAIRE

APPENDIX 1

ORGANIZATIONAL INVENTORY

On the following pages is a list of items that may be used to describe the way your school operates. The items describe typical conditions that occur within a school. Please indicate to what extent each of these descriptions characterizes YOUR SCHOOL. Please do NOT evaluate the items as "good" or "bad" conditions, but read each item carefully and decide how well the statement describes your school. Although some items may appear similar, they express important differences. Each item should be considered as a separate description. This is not a test of ability or consistency in answering. Its only purpose is to make it possible for you to describe this school, as accurately as possible.

It is important that your answers be "independent," so please do not discuss them with other teachers.

Please be frank in your responses with the assurance that all responses are strictly confidential.

Please respond to EVERY item.

DIRECTIONS:

a. READ each item carefully.
b. THINK about how well the statement describes your school.
c. DECIDE to what extent the condition described is true in your school.
d. DRAW a circle around <u>one</u> of the five letters following the item to show your answer.

A = VERY FREQUENTLY or ALWAYS true
B = OFTEN true
C = OCCASIONALLY true
D = SELDOM true
E = VERY RARELY or NEVER true

1. I get approval for decisions I make.	A	B	C	D	E
2. Rules stating when teachers arrive at and depart from the building are strictly followed.	A	B	C	D	E
3. The time for informal get-togethers during the school day is strictly regulated.	A	B	C	D	E
4. Red tape is a problem in getting a job done in this school.	A	B	C	D	E
5. The organization sponsors staff get-togethers.	A	B	C	D	E
6. Staff members here do almost as they please in classroom work.	A	B	C	D	E
7. Students are treated within the rules of the school, no matter how serious a problem they have.	A	B	C	D	E
8. We follow strict operating procedures at all times.	A	B	C	D	E
9. A person who wants to make his own decisions would quickly become discouraged in this school.	A	B	C	D	E
10. Teachers in this school follow a set of rules and regulations.	A	B	C	D	E
11. Going through the proper channels is important in this school.	A	B	C	D	E
12. Staff meetings proceed in a friendly and informal manner.	A	B	C	D	E
13. Even small matters are referred to someone higher up for a final answer.	A	B	C	D	E
14. Standardized classroom methods and procedures are used by all teachers.	A	B	C	D	E
15. For student behaviour problems, the school has standard punishments for standard offences, regardless of the individual involved.	A	B	C	D	E
16. There can be little action until decisions are approved.	A	B	C	D	E

17. Teachers do not leave their classrooms unless they have permission.	A	B	C	D	E
18. Whenever we have a problem we go to the same person for an answer.	A	B	C	D	E
19. No matter how special a pupil's or parent's problem appears to be, he is treated the same way as anyone else.	A	B	C	D	E
20. Nothing is said if you get to school just before roll call or leave right after dismissal occasionally.	A	B	C	D	E
21. Relationships among staff members are formal and impersonal.	A	B	C	D	E
22. No one can get necessary supplies without permission from the principal or vice-principal.	A	B	C	D	E
23. Written orders from higher up are followed unquestioningly.	A	B	C	D	E
24. We follow standard procedures in dealing with most situations which arise.	A	B	C	D	E
25. People make their own decisions here without checking with anyone else.	A	B	C	D	E
26. Teachers are careful not to violate the rules in this school.	A	B	C	D	E
27. Teachers follow clearly specified procedures for doing the job here.	A	B	C	D	E
28. I ask someone higher up before I do almost anything.	A	B	C	D	E
29. Teachers are aware of rules regarding their behaviour in and around the school.	A	B	C	D	E
30. I feel that I am my own boss in most matters.	A	B	C	D	E
31. Teachers have fun socializing together during school time.	A	B	C	D	E
32. Teachers experiment with procedures for classroom teaching and other school work.	A	B	C	D	E

33. Teachers' closest friends are other staff members at this school. A B C D E

34. How things are done in the classroom is pretty much up to the individual teacher. A B C D E

SATISFACTION QUESTIONNAIRE

On the basis of your previous responses, please rate your overall satisfaction with certain characteristics of this school. There are five possible answers: Extremely Satisfied (ES), Very Satisfied (VS), Somewhat Satisfied (SS), Somewhat Dissatisfied (SD), Very Dissatisfied (VD), and Extremely Dissatisfied (ED). Circle the abbreviation which best describes your feeling.

1. How satisfied are you with the extent to which your school emphasizes differences between principals and teachers insofar as authority and status are concerned? ES VS SS SD VD ED

2. How satisfied are you with the extent to which your school emphasizes a system of general rules? ES VS SS SD VD ED

3. How satisfied are you with the extent to which your school emphasizes standard procedures for classroom teaching and other school work? ES VS SS SD VD ED

4. How satisfied are you with the extent to which your school treats every person in the organization (administrators, teachers, pupils, parents) in exactly the same way? i.e. it does not allow personal feelings to affect working relationships between the various groups. ES VS SS SD VD ED

APPENDIX 2

ABSTRACT OF

An Empirical Study of the Relationships among Bureaucracy, Teacher Personality Needs and Teacher Satisfaction

APPENDIX 2

ABSTRACT OF

An Empirical Study of the Relationships among Bureaucracy, Teacher Personality Needs and Teacher Satisfaction[1]

The purpose of this study was to test Getzels' postulate that satisfaction is a function of the congruence between institutional requirements and individual need-dispositions. The institutional and personal dimensions were examined with reference to bureaucracy and teacher personality needs respectively; satisfaction referred to certain bureaucratic characteristics in schools.

The specific hypotheses were:

1) that the personality needs of female teachers in high bureaucratic schools did not differ significantly from those of female teachers in low bureaucratic schools;

2) that the satisfaction of female teachers in high bureaucratic schools did not differ significantly from that of female teachers in low bureaucratic schools;

3) that there were no significant interaction effects between the bureaucratic and personality variables when the criterion was satisfaction scores.

The sample of schools was chosen randomly from the Ottawa Public Schools. The extremely high and low

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1 Molly Gosine, doctoral thesis presented to the Faculty of Education of the University of Ottawa, Ontario, February 1970, x-116 p.

bureaucratic schools were then employed for the investigation of personality needs of female teachers and their satisfaction with school structure. The measuring instruments included the Organizational Inventory, the EPPS, and a Satisfaction Questionnaire.

The data were analyzed by t tests and analysis of variance techniques. The following conclusions were drawn from the results:

1. The personality needs of female teachers in high bureaucratic schools do not differ significantly from those of female teachers in low bureaucractic schools.

2. Satisfaction with the structure of schools is significantly greater in low bureaucratic schools than in high bureaucratic schools.

3. High needs for dominance are much more satisfied in low bureaucratic schools than in high bureaucratic schools; low needs for dominance are slightly more satisfied in low bureaucratic schools.

4. Low needs for order are much more satisfied in low bureaucratic schools than in high bureaucratic schools; high needs for order are slightly more satisfied in low bureaucratic schools.

5. High needs for "independence" (i.e. aggression, dominance, and autonomy) are much more satisfied in low bureaucratic schools, whereas low needs are only slightly more satisfied in high bureaucratic schools.

6. Level of need is a more important factor in determining satisfaction in high bureaucratic schools than in low bureaucratic schools.

7. Getzels' theory is better suited for predicting satisfaction in high bureaucratic schools than in low bureaucratic schools. Needs which are incongruent with bureaucratic requirements are better predictors of satisfaction than congruent needs. Whereas needs for dominance and order provided only partial support of Getzels' theory, needs for "independence" provided complete support.

Suggestions for further research included:

1) replicative studies;

2) further examination of the "need for independence" variable in relation to bureaucracy;

3) the variation of principals' leadership styles with reference to several teacher characteristics; and

4) the psychological and pedagogical effects of different levels of bureaucracy on teachers and students.