THE RELATIONSHIP OF TEACHER SATISFACTION TO SCHOOL BUREAUCRATIC LEVEL AND TEACHER-PERSONALITY TRAITS

by Ivan St. John

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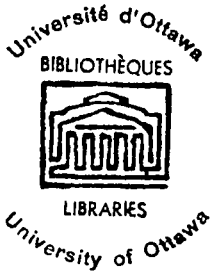

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CURRICULUM STUDIORUM

Ivan St. John was born on March 21, 1943, in Cornwall, Ontario. He obtained his Bachelor of Arts degree in History from the University of Ottawa in 1968. He received the Master of Education degree from the University of Ottawa in 1972.

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INTRODUCTION

Institutions are an integral part of society today. Most people are born in institutions and educated in institutions, employed in institutions, die in institutions and are buried by institutions. It is an indisputable fact that one's life is governed to a large extent by the institutional nature of our society. It stands to reason that if one is concerned with the problems of living in this day and age, it becomes necessary to try to understand both the nature of institutions and the effect that these organizations have upon daily life.

The need for this approach in educational administration is realized through a review of the literature. Schools are institutions with tendencies towards bureaucratic or non-bureaucratic features depending on their organization and administrative characteristics. In these particular institutions, teachers are the employees with varying degrees of individual personality characteristics or traits. These employees also have different degrees of satisfaction with their work, their co-workers, and their supervision. A review of the literature reveals the need to investigate administrative

procedures at the school level as they interact with the psychological characteristics of those persons who are vitally concerned with school operations. In response to this need, this study investigates the relationship between the bureaucratic structure of schools and teacher personality traits in terms of teacher satisfaction.

This study is based on the Getzels and Guba theory of administration as a social process. The idea for this study comes from Gosine's research into bureaucracy and personality needs as they influence teacher satisfaction. Although there are other approaches to bureaucracy, this study is dependent on the theoretical position of Weber in order to link this research more closely with Gosine's study. However, different instruments are used to measure teacher personality and satisfaction.

Getzels and Guba identify two dimensions as basic to an analysis of a social system: the institutional dimension and the personal dimension. The assumption is that when the two dimensions are congruent, the result is satisfaction. This assumption was tested in this study within the limitations of the problem and

its specific experimental conditions.

The contributions of this study are considered as being mainly theoretical in nature. Some extension has been made to the theory which was being tested. Bureaucracy has been explained in terms of its relationship to teacher personality traits in education institutions. These contributions are expected to have practical implications owing to the interaction between theory and practice. Increasing teacher satisfaction can lead to a better milieu for all in the educational setting. Increased awareness of the conditions which accompany teacher satisfaction can be useful in the selection and placement of teachers as well as for the promotion of morale. The practical value of this study is assured if teacher satisfaction is one of the requirements of an improved educational system.

The research report is arranged in three chapters. Chapter I has the theoretical background necessary for this study. There is a description of the theory, the relevant literature on bureaucracy and personality traits and their relationship, the rationale for this particular study, a statement of the problem, and the specific

hypotheses. Chapter II is a description of the experimental design. Chapter III is a presentation and discussion of the results obtained in the study. Also included in this report are an annotated bibliography, appendices of material used in gathering data and an abstract of this thesis.

CHAPTER 1

REVIEW OF THE LITERATURE

The theoretical background that is necessary for the understanding of the proposed research project is presented in this chapter. A description of the Getzels, Lipham and Campbell[1] theory of administration as a social process is included in the first section of the chapter. In this theory there are two dimensions, namely the nomothetic or institutional dimension and the idiographic or individual dimension. In the second section of this chapter, bureaucracy, which is an integral part of the institutional dimension, is discussed. Personality, a major component of the individual dimension, is examined in the third section. The relationship between bureaucracy and personality traits is discussed in the fourth section. The rationale for this particular study is presented in the fifth part. Finally, the problem and hypotheses of this study are stated in the sixth section of the chapter.

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1. 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.

REVIEW OF THE LITERATURE

1. The Theoretical Framework

A theory can be defined as "a set of assumptions from which can be derived by purely logico-mathematical procedures, a larger set of empirical laws."[2] Such a theory is the one developed by Getzels and Guba in 1957.[3] Stressing issues of conflict these theorists assume that social relationship is vital in the administrative process because administration always functions within a network of interpersonal relationships. They are concerned primarily with the socio-psychological aspects of human nature which are immediately relevant to the internal dynamics of an organization.

The general model for the Getzels and Guba theory is illustrated in Figure 1. The nomothetic dimension consists of the institution, its role, and role expectations. The idiographic dimension consists of the individual, his personality, and need-dispositions. Each component or term in the model has been defined by Getzels, Lipham, and Campbell.[4]

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2 Herbert Feigh, "Principles and Problems of Theory Construction in Psychology," in Current Trends in Psychological Theory, Pittsburgh, University of Pittsburgh Press, 1951, p. 181.

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

4 Getzels et al., Op. Cit., p. 57-77.

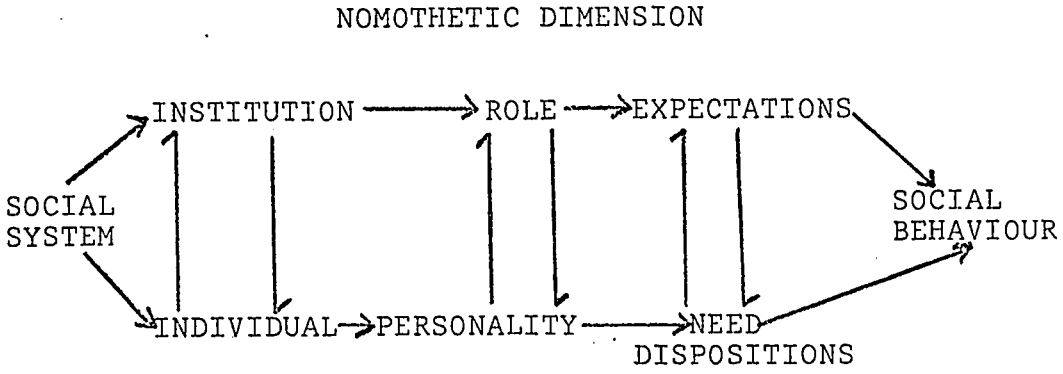

Figure 1.- General model showing the nomothetic and the idiographic dimensions of social behaviour.*

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

Institutions are agencies in social systems that carry out certain imperative functions. They generally have five basic properties.[5] They have a purpose for existing; they are staffed with people; they are organized in a definite manner or structure; they have rules or regulations to follow; and they have penalties or imposed sanctions if the rules are not followed.

Role has many possible definitions, but the choice of Getzels, Lipham, and Campbell as the most useful for the analysis of administrative behaviour is that roles may be thought of as the structural or normative elements that make up the behaviour expected of role incumbents or the mutual rights and obligations of the role incumbents.[6]

The definition of expectations by the theorists is that they are those privileges and duties that describe what a person should and should not do under various circumstances as the incumbent of a particular role in a social system.[7] It should be noted here that each concept in the nomothetic dimension serves as the

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5 Ibid., p. 57-59.

6 Ibid., p. 60.

7 Ibid., p. 64.

analytic unit for the concept immediately preceding it. A social system may be described by the component institutions, the institutions by the component roles, the roles by the component expectations.

For each element in the nomothetic dimension there is a parallel element in the idiographic dimension, and each again serves as the analytic element for the one preceding it. In the nomothetic or normative dimension, role incumbents are programmed by institutional expectations as if all were exactly alike. But social systems are inhabited by individuals who are living people with hates and loves, fears and aspirations. These people occupy the roles, although no two of them are quite the same in many respects, including need dispositions.[8]

To reach a definition for need dispositions, Getzels, Lipham, and Campbell refer to Murray who describes a need as a coordinating force in the personality which impels the individual to attend to or acquire some particular object.[9] Realizing that need-dispositions vary in specificity and are patterned, they also refer to

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8 Ibid., p. 64.

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

Maslow's hierarchy of needs[10] in describing need-dispositions as patterned, goal-oriented forces within the individual that vary in specificity and are determinants of various forms of behaviour.[11]

Personality, the middle term in the idiographic dimension, has had a variety of meanings over the years. Allport[12] has reported finding some fifty different definitions of it. The definition used by Getzels, Lipham and Campbell is that personality is the dynamic organization within the individual of those need dispositions and capacities that determine his unique interaction with the environment.[13] Specific personality traits will be examined in detail in the third section of this chapter.

In the Getzels and Guba model of a social system, the relationship of the idiographic dimension to the nomothetic dimension determines the social behaviour of each incumbent in the system. Therefore, the social behaviour of the individual is determined by the way that individual interacts with the institution in a social

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10 A.H. Maslow, Motivation and Personality, New York, Harper and Row, 1954, p. 70.

11 Getzels, Lipham, and Campbell, Op. Cit., p. 73.

12 Gordon W. Allport, Personality, New York, Holt, Rinehart and Winston, 1937, p. 50.

13 Getzels, Lipham, and Campbell, Op. Cit., p. 69.

system. Getzels and Guba assert that, in terms of the model, satisfaction is a function of the congruence of institutional expectations with individual personalities.[14] This assertion has been subjected to empirical testing on several occasions.

In this section, the theoretical framework for this study has been described. In order to examine the relationship in more detail, the two dimensions of the model must be studied individually. Each of these will be investigated in the following sections. The idiographic dimension involving the individual and his personality will be examined in the third section. The bureaucratic structure of organizations which corresponds to the nomothetic dimension will be examined in the second section. In this second section, the concept of bureaucracy will be defined, followed by a discussion of some empirical studies of bureaucracy in schools.

2. The Concept of Bureaucracy

Bureaucracy is an important part of the institutional dimension of the Getzels and Guba framework. Bureaucracy is defined in many ways by organizational

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

theorists. A central theme in Weber's[15] general sociological theory is that of authority, which he classifies in three distinct types: legal, traditional, and charismatic. The first type of authority is the only one which Weber considers relevant to his definition of bureaucracy. For Weber, neither traditional nor charismatic authority is the predominant type of authority in society. He believes in the central importance of relationality based on rules. His definition of legal authority based on rational grounds rests on the belief in the legality of patterns of normative rules and the right of those elevated to authority under such rules to issue commands.[16]

An institution representing the Weberian concept of bureaucracy would possess certain fundamental characteristics. It would be governed by a set of rules. These rules, as well as all administrative acts and decisions, would be recorded in writing. The organization of offices would follow the principle of hierarchy: that is, each lower office would be under the control and supervision of a higher one. Specialized training would assist the individual in such an institution to perform in accordance to specified procedures with a maximum

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

16 Ibid., p. 328.

level of competence. Members of the administrative staff would be completely separated from ownership in the institution.[17]

Weber's concept of bureaucracy is definitely important in the study of organizations and can be applied to the nomothetic dimension of the Getzels, Lipham, and Campbell theory. An institution with the bureaucratic characteristics described by Weber would put emphasis on hierarchial authority, rules, specified procedures, impersonality, (in that the organization is more important than the individuals in it), division of labour or specialization, and technical qualifications or competence. Therefore, these characteristics which are basic to Weber's concept of bureaucracy, have proven to be vital components in much empirical research on bureaucracy in organizations and have been used by many theorists.

It must be noted that Weber's type of bureaucratic organization is an "ideal type" which is both abstract and general. Therefore, since it is not based on empirical reality, actual organizations can only be compared to the ideal to see how closely they

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17 Ibid.

approximate a truly bureaucratic form.[18] Miller and Fry have examined the elements of Weber's concept and found close relationships among authority, control, formal training and legitimacy in various organizations.

Hall[19] constructed an instrument called the Organizational Inventory or O.I. to measure the degree of bureaucracy in organizations using the Weberian characteristics. He investigated ten organizations of different sizes, ages, and types. He found that bureaucratic characteristics did not exist as bureaucratic or non-bureaucratic solely, but ranged along a continuum. He also found that the bureaucratic characteristics in these organizations existed independently of each other.

In another study Hall found that organizational departments that specialized in non-uniform tasks were less bureaucratic on the characteristics of hierarchial authority, division of labour and procedural specification than departments that specialized in uniform tasks. In the same study, he also found that hierarchial levels, such as the executive levels, that specialized in non-uniform tasks were less bureaucratic in terms of

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18 Jon P. Miller and Lincoln J. Fry, "Social Relations in Organizations: Further Evidence for the Weberian Model", Social Forces, Vol. 51, No. 3, 1973, p. 305-319.

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

hierarchial authority, division of labour, procedural specification and impersonality than levels specializing in uniform tasks.

This second study indicated that the type of task performed was an important factor in determining the level of bureaucracy and also showed the existence of both horizontal and vertical intra-organizational structural variation.

Although Hall's instrument is for use in any organization, it has been adapted by MacKay and others to the Canadian educational setting and has been used extensively by researchers in educational administration.

MacKay[20] used the Weberian characteristics of bureaucracy in the O.I. in a study designed to determine the applicability of Weber's model to school organizations. He found that schools differed significantly in the extent that they displayed the characteristics of hierarchial authority, specialization, rules and impersonality. In addition, MacKay found that teachers' perceptions of bureaucracy were not affected greatly by various individual characteristics examined in his

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20 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-217p.

study such as position, sex, age, salary, or teaching experience. He also found that schools were neither completely bureaucratic nor completely non-bureaucratic, but rather ranged along a continuum, thus supporting Hall's research.

Kolesar[21] regrouped the characteristics used by MacKay into two major groups to study client alienation in the bureaucratic organization of schools. One of these was authority (including hierarchy of authority, rules, procedural specifications, and impersonality) and the other was expertise (including specialization and technical competence). In this study, the authority and expertise scales were negatively correlated.

Punch[22] attempted to clarify and refine the concept of bureaucratic structure in the O.I. as it applied to schools and to account for variation in the degree of bureaucratization from school to school. On the basis of his findings, he concluded that bureaucratic

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21 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-244p.

22 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, 249p.

structure in schools was a one dimensional variable which included the characteristics of hierarchial authority, rules, procedural specification, and impersonality. He found that the other grouping used by Kolesar involving specialization and technical competence could be discarded in that it was a better indicator of professionalism than bureaucracy. Punch's one dimensional approach, which is the most recent, and his revision of the O.I. was used in the Gosine[23] study and will be used in this study.

In summary, Weber has formulated the characteristics of bureaucracy. When an organization employs a source of authority based on rational and legal grounds with a set of rules and an administrative staff, it is referred to as a bureaucratic organization. A number of studies have provided support for Weber's theory. In addition several researchers have found his concepts to be useful in describing the administration of schools. Certain adaptations have been useful in describing schools. It has been found that bureaucratic schools can be described as having hierarchial authority, rules,

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23 Molly Gosine, An Empirical Study of the Relationships among Bureaucracy, Teacher Personality Needs and Teacher Satisfaction, unpublished doctoral thesis presented to the Faculty of Education of the University of Ottawa, February 1970, x-116p.

procedural specifications and a greater degree of impersonality. This section has introduced the concept of bureaucracy. In the next section, the concept of personality will be examined, keeping in mind that it is an integral component in the idiographic dimension of the Getzels, Lipham, and Campbell theory.

3. Personality

The idiographic dimension focuses on the individual and personality determines the character of the individual. Cattell,[24] in his study of personality, has identified a number of primary source traits or characteristics through factor analysis of many commonly used personality test items. In addition, further analysis was used to identify second order factors which are useful in examining human behaviour. In examining both the second order factors and the primary traits which load on these factors, four personality traits were identified which would seem to interact with bureaucracy in influencing teacher satisfaction. It was therefore decided to use Cattell's personality variables in this study.

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24 Raymond B. Cattell, The Scientific Analysis of Personality, Baltimore, Maryland, Penguin Books Inc., 1967, p. 25-98.

Cattell views personality as a complex and differentiated structure of traits. This led to the development of the Sixteen Personality Factor Questionnaire or 16PF Test, designed to make available in a practical testing time, information about an individual's standing on the majority of primary personality factors.

In addition to the sixteen primary factors, eight second order factors covering a broader range have been identified. The four second order factors deemed most important by Cattell with capsule descriptions, adapted from the Manual for the 16PF[25] are discussed below.

The first second order factor is entitled Introversion versus Extraversion. The person who scores low on this factor tends to be shy, self-sufficient, and inhibited in interpersonal contacts. This can be either a favourable or unfavourable finding, depending upon the particular situation in which the person is expected to function. The person who scores high on this factor is a socially outgoing, uninhibited person, good at making and maintaining interpersonal contacts.

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25 Raymond B. Cattell, Manual for the 16PF, Champaign, Illinois, Institute for Personality and Ability Testing, 1972, p. 17-22.

This can be very favourable in situations that call for this type of temperament such as salesmanship.

The second factor measures Low Anxiety versus High Anxiety. The person who scores low on this factor tends to be one whose life is generally satisfying and one who is able to achieve those things that seem to him to be important. However, an extremely low score can mean lack of motivation for difficult tasks. On the other hand, the person who scores high on this factor is high on anxiety as it is commonly understood. He need not be neurotic, since anxiety could be situational, but it is probable that he has some maladjustment, i.e., he is dissatisfied with the degree to which he is able to meet the demands of life and to achieve what he desires. Very high anxiety is generally disruptive of performance, and productive of physical disturbances.

Tenderminded Emotionality versus Tough Poise is the title of the third second order factor. The person who scores low on this factor is likely to be troubled by pervasive emotionality, and may be of a discouraged, frustrated type. He is, however, sensitive to the

subtleties of life, likely to be artistic and rather gentle. If he has problems, they often involve too much thought and consideration before action is taken. In contrast, the person who scores high on this factor could tend to be an enterprising, decisive, and resilient person. However, he is likely to miss the subtle relationships of life, and to orient his behaviour too much toward the obvious. If he has difficulties, they are likely to involve rapid action with insufficient consideration and thought.

The fourth second order factor concerns Subduedness versus Independence. The person who scores low on this factor is a group-dependent, chastened, passive person. He is likely to desire and need support from other persons, and likely to orient his behaviour toward persons who give such support. The person who scores high on this factor tends to be an aggressive, independent, daring, incisive person. He will seek those situations where such behaviour is at least tolerated and possibly rewarded, and is likely to exhibit considerable initiative.

Each of the 16 primary traits load on one or more of the second order factors. To avoid duplication and to help ensure that separate and distinct traits were being measured for each second order factor, one primary trait was selected as being representative of it.

The primary traits selected were those which had the best representative loadings on the specific second order factor with small loadings on the other second order factors. In addition, the primary traits selected are those which seemed to have the greatest relevance to a high or low bureaucratic school environment.

In summary, Cattell and his Sixteen Personality Factor Questionnaire, which will be used to measure the four selected primary traits, have been introduced in this section. The four primary traits selected will be described in the next section as well as their relationship to bureaucracy, which is the other independent variable in this study.

4. The Relationship Between Cattell's Primary Traits and Bureaucracy

The primary trait selected to represent the first second order factor, Introversion versus Extraversion, is Cattell's primary factor F: Desurgency

versus Surgency. The person who scores low on Factor F tends to be sober, prudent, and serious. He is sometimes dour, pessimistic, unduly deliberate, and considered smug and primly correct by observers. The person who scores high on this trait tends to be cheerful, active, talkative, frank, expressive, effervescent, carefree. He is sometimes happy-go-lucky, impulsively lively and enthusiastic and is frequently chosen as an elected leader.[26]

The primary factor F has loadings on the first second order factor of .66 for females and .84 for males. That is a substantial difference from its next highest loadings of -.31 and -.19 on a different second order factor.[27] In addition, this primary trait can be related to bureaucracy. Impersonality is one of the characteristics of a bureaucratic organization. While a high measure of impersonality might be satisfying for an individual with the desurgent characteristics of being dour and smug, it would seem that a person with the surgent characteristics of being talkative, expressive, and effervescent would be more satisfied in a school

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26 Cattell, Manual for the 16PF, Op. Cit., p. 19.

27 Raymond B. Cattell, Herbert W. Eber, and Maurice M. Tatsuoka, Handbook for the Sixteen Personality Factor Questionnaire (16PF), Champaign, Illinois, Institute for Personality and Ability Testing, 1970, p. 121.

with a lower level of bureaucracy. The individual with the characteristic of surgency probably would be happier with fewer rules and specified procedures to cause him worry or concern. Hierarchial authority could also bother an individual with an effervescent personality.

The primary trait chosen to typify the next second order factor, Low Anxiety versus High Anxiety, is primary factor Q_4 which measures low ergic tension as opposed to high ergic tension. The primary factor has loadings on that particular second order factor of .82 for females and .93 for males while its next highest loadings are only -.12 and -.13.[28] The person who scores low on this trait tends to be relaxed, tranquil, and unfrustrated. In contrast, the person who scores high on Factor Q_4 tends to be tense, excitable, restless, fretful, impatient. In groups he often takes a poor view of the degree of unity, orderliness, and leadership. His frustration represents an excess of stimulated, but undischarged, drive.[29]

In relating this primary trait to bureaucracy, the fundamental bureaucratic characteristics of hierarchial

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28 Ibid.

29 Cattell, Manual for the 16PF, Op. Cit., p. 22.

authority and procedural specifications could be used. An individual who often takes a poor view of the degree of leadership and orderliness would probably be more satisfied in a low bureaucratic school with less emphasis on hierarchial authority and specified procedures. He would also probably be more satisfied with few rules to cause him to fret or be tense. A low bureaucratic school with more friendly personal contacts might relieve some of his anxiety. The individual with low anxiety would probably not be tense in either a high or low bureaucratic setting. In a highly bureaucratic setting, the individual who is relaxed, tranquil and unfrustrated would be able to cope better with rules and specified procedures than an individual with the opposite characteristics.

The third second order factor, Tenderminded Emotionality versus Tough Poise, is represented by primary factor I which has the technical title of Harria versus Premsia. Primary trait I has loadings on the third second order factor of -.73 for females and -.60 for males. The next highest loadings on any of the first four

second order factors are -.06 and -.05.[30] It should be noted that higher loadings occur on the sixth second order factor, but only the first four second order factors are used in this study. A person who scores low on Factor I tends to be tough-minded, self-reliant, and realistic while a person who scores high tends to be tender-minded, dependent, and overprotected.[31] The latter individual would probably be more satisfied in a higher bureaucratic setting where the characteristics of rules, procedural specifications, and hierarchial authority would give him his dependence and protection. On the other hand, a tough-minded, self-reliant individual might be more satisfied without rules, procedural specifications, and hierarchial authority to cause him concern and therefore, might be most satisfied in a lower bureaucratic school.

Primary factor Q_1, entitled Conservation versus Radicalism represents the fourth second order factor: Subduedness versus Independence. It has loadings of .74 for females and .61 for males on the fourth second order factor with the next highest loadings being -.16 and -.12.[32]

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30 Cattell et al., Handbook, Op. Cit., p. 121.

31 Cattell, Manual for the 16PF, Op. Cit., p. 20.

32 Cattell, et al., Handbook, Op. Cit., p. 121.

The person who scores low on this primary trait tends to be conservative, respecting established ideas, and tolerant of traditional difficulties. The person who scores high on this trait tends to be more experimenting, critical, liberal, analytical and free-thinking.[33] The latter individual would probably be less restricted in a low bureaucratic school where there were fewer rules and procedural specifications to worry about. The former individual might be more satisfied in a higher bureaucratic school where his conservative tendencies might be reinforced by established rules and procedures.

Getzels, Lipham, and Campbell look at the personal and institutional dimensions and the resulting social behaviour in terms of satisfaction. In the Getzels, Lipham, and Campbell theory, satisfaction is experienced when there is harmony between the institutional dimension and the personal dimension. It would appear that teachers with the primary personality traits of surgency, tenseness, self-reliance and radicalism would be more satisfied in schools with a lower level of bureaucracy. There would probably be more concern for personal reactions; there

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33 Cattell, Manual for the 16PF, Op. Cit., p. 21.

would tend to be fewer rules and specific procedures to follow. Conversely, teachers with personality traits of desurgency, low ergic tension, premsia or tender-minded dependence, and conservatism would probably be more satisfied in a moderately bureaucratic school where they could be more impersonal, more dependent on the organization, and follow specified procedures.

In summary, the purpose of this section has been to show the interaction between the selected personality traits and bureaucracy as characterized by rules, hierarchial authority, procedural specification, and impersonality, with this interaction reflected in terms of satisfaction. The following section contains the rationale for this particular study.

5. The Rationale for This Study

Getzels, Lipham and Campbell have indicated some major issues which may be analysed with the aid of their theoretical framework. These include conflict, staff effectiveness, efficiency, satisfaction, the nature of various leadership-followship styles, and the problem of morale. One of the types of conflict discussed at length is that arising between role expectations and personality dispositions.

It was this type of relationship that was the basis of Gosine's[34] study. Using the Edwards Personal Preference Schedule, she tested for differences in personality need scores between elementary female teachers in high bureaucratic schools and elementary female teachers in low bureaucratic schools. Bureaucracy was measured by Punch's[35] revision of the Organizational Inventory. Gosine tested for differences in satisfaction scores between elementary female teachers in high bureaucratic schools and elementary female teachers in low bureaucratic schools. Satisfaction was measured by a scale developed by Gosine. Finally she tested for interaction between the bureaucratic and personality variables when the criterion was satisfaction.

From her results Gosine concluded that the personality needs of female teachers in high bureaucratic schools do not differ significantly from those of female teachers in low bureaucratic schools. She also concluded that satisfaction with the structure of schools is

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34 Molly Gosine, An Empirical Study of the Relationships among Bureaucracy, Teacher Personality Needs and Teacher Satisfaction, unpublished doctoral thesis presented to the Faculty of Education of the University of Ottawa, February 1970, x-116p.

35 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, 249p.

significantly greater in low bureaucratic schools than in high bureaucratic schools. Of nine possible interactions between personality needs and bureaucracy only two were significant. These personality needs that interacted with bureaucracy were dominance and order.

The purpose of this study is to replicate Gosine's work by studying the relationship between bureaucracy and personality in terms of satisfaction. It could be an extension of her work as well, as three different aspects of satisfaction, instead of just one, will be examined. In addition, a different instrument to measure personality will be used to test the interaction with bureaucracy. The statement of the problem is next in the final section of the chapter.

6. Statement of the Problem

Although the level of bureaucracy is not high in elementary schools today, the bureaucracy level ranges from low bureaucratic to moderately bureaucratic. Getzels, Lipham, and Campbell maintain that congruence between role expectations and personality traits leads

to satisfaction. It is proposed to test their assumption under specific conditions. In specific terms, the primary personality traits of surgency, tenseness, self-reliance, and radicalism should interact with the level of bureaucracy in terms of teacher satisfaction. Teachers with these personality traits will be more satisfied in low bureaucratic schools. Conversely, teachers with opposite personality traits will be more satisfied in high bureaucratic schools. This study should offer an interesting parallel with the earlier work of Gosine.

The four research hypotheses rising from the problem are as follows:

1. There will be interaction between the level of bureaucracy in a school and the level of teacher surgency with the dependent variable being teacher satisfaction.

2. There will be interaction between the level of bureaucracy in a school and the level of teacher tenseness with the dependent variable being teacher satisfaction.

3. There will be interaction between the level of bureaucracy in a school and the level of teacher self-reliance with the dependent variable being teacher satisfaction.

4. There will be interaction between the level of bureaucracy in a school and the level of teacher radicalism with the dependent variable being teacher satisfaction.

CHAPTER II

EXPERIMENTAL DESIGN

Sections one and two of this chapter are descriptions of the sample and the measuring instruments respectively. The experimental procedure for the collection and scoring of data is outlined in the third section and the plan of the statistical analysis is presented in the final section.

1. The Sample

The sample of schools was selected from the public schools of the Stormont, Dundas, and Glengarry County Board of Education. The principals of all forty-one elementary schools were introduced to the proposed study at a regularly scheduled principals' meeting. They were all invited to participate and thereby have their teachers who taught full-time in their school complete and return the Organizational Inventory. The confidentiality of the information provided was assured as one teacher in each school acted as delegate in distributing, collecting, and returning the questionnaires without inspection by anyone in an administrative role. Forms were not returned from eight schools.

The thirty-three schools which participated in the study are located in all parts of the three counties. They

represent urban schools and rural schools. The student population in these schools varies from fifty to four hundred pupils. Most of these schools have kindergarten to grade six or kindergarten to grade eight. All of these schools are under the administrative guidelines of the Board of Education as well as the acts and regulations of the Ministry of Education of Ontario.

The sample of subjects consisted of all the teachers in those thirty-three schools who taught full-time in any one school. Itinerant and part-time teaching personnel were not included. Anyone connected with administration such as principals, vice-principals, consultants, and co-ordinators, was also excluded.

From thirty-three schools with teachers responding to the O.I., the top third and the bottom third on school bureaucratic scores were selected as representatives of different bureaucratic levels and were included in the follow-up investigation into personality traits. All one hundred and forty-one full-time teachers in those twenty-two schools were asked to complete and return the Sixteen Personality Factor Questionnaire and the Job Description Index. Individual identities were protected by code names

selected by the respondents. One hundred and twenty-nine teachers completed and returned both questionnaires. This represented a 91.5 per cent return.

2. The Instruments

For this study three measuring instruments will be used: the Organizational Inventory, the Job-Description Index, and the 16 Personality Factor Questionnaire. A short description of these instruments follows:

a) The Organizational Inventory (O.I.) was first constructed in 1961 by Hall[1] as a means of measuring the major characteristics of the Weberian concept of bureaucracy. His survey of the literature revealed six characteristics that were mentioned most frequently and deemed most important by theorists.

The six scales selected were:

I. Hierarchial authority

II. Division of labour or specialization

III. Rules

IV. Procedural specification

V. Impersonality

VI. Technical qualifications or competence

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

To measure these six dimensions, Hall created his own questionnaire of sixty-two items and called it the O.I. Each item was to be answered along a five-point scale, ranging from non-bureaucratic to bureaucratic. Hall visited organizations that obtained extreme scores to interview personnel and observe procedures in those organizations. He verified the climate and structure in those institutions by these actual visits. He then claimed the instrument had some predictive validity. The use of respondents' perceptions of the degree of emphasis on bureaucratic characteristics was justified. His basis for this was that the significant structure was not that which appeared on the organizational chart, but the actual operational structure resulting from both the official and unofficial structures. All levels and departments in his sample of organizations were represented. While his sample consisted of ten organizations differing in type, age, and size, it should be noted that though his sample was small, it helped establish trends in the measurements of bureaucratic characteristics.

To adapt the O.I. to school organizations, MacKay,[2] in 1964, altered slightly the wording of some items so that they would represent situations in educational institutions. His version of the O.I. produced an instrument which discriminated among schools, but further refinement was needed. Subsequently, in 1966, Robinson[3] did refine the O.I. substantially and recommended it as highly discriminating.

Punch[4] did a more thorough investigation to improve the O.I. He created new items and reworked other items so that they would measure actual rather than expected modes of school operation. Starting with the six subscales and a total of sixty-eight items, he rejected those items which were ambiguous after factor analysis. He also rejected items which correlated more

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2 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.

3 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.

4 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, p. 91-95.

highly with items from scales other than their own rather than with items from the same scale. Also rejected were those items which correlated only slightly with items within the same scale. This led to the rejection of twenty items.

The remaining forty-eight items selected, indicated high discrimination between schools. All items but one[5] correlated higher with their own sub-scale scores than with the other sub-scales. This indicates internal consistency, and to a lesser extent, independence among scales. The reliability coefficients shown in Table I were calculated by the Spearman-Brown split-half method and show that for five of the scales, reliability seems acceptable.

From the homogeneity of item and scale scores within schools coupled with significant variation between schools Punch concluded that the respondents' perceptions were accurate and that analyses could be performed on school scores for each scale rather than on teacher scores.

He further factor analyzed the items, revealing that the Organizational Inventory measured two factors. The major factor, labelled "bureaucratization", consists of scales I, III, IV, and V, and accounts for eighty-one

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5 Item number 7 in Appendix 1.

TABLE I.

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.

per cent of common variance. The other factor, probably a partial index of "professionalism" consists of scales II and VI and was considered small enough to be discarded.

Gosine[6] followed this direction and considered "bureaucratization" as a one-factor concept by discarding scales II and VI. Her test-retest reliability coefficients of the four scales employed were computed by means of the Pearson product-moment correlation method and were 0.77, 0.79, 0.77, 0.62 and 0.83 for the scales I, III, IV, V and the combined scales respectively.

For this study, as in Gosine, the one-factor concept of "bureaucratization" was adopted. The answers for the O.I. were scored in terms of intensity of bureaucratic characteristics. Five answers were possible for each item. In twenty-four of the thirty-four items, the first answer A was assigned a value of five points, indicating high bureaucracy. B was assigned four points, C three points, D two points and E one point. The remaining ten 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 his responses to the

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6 Gosine, Molly, "An Empirical Study of the Relationships Among Bureaucracy. Teacher Personality Needs, and Teacher Satisfaction." Unpublished doctoral dissertation, University of Ottawa, 1970, x-116p.

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

b) The Job Description Index (JDI) was chosen as a measure of satisfaction as this instrument is more comprehensive than the one used by Gosine in her study. Her instrument included only four items and measured general overall satisfaction rather than several aspects of satisfaction. In addition there is considerably more information on the validity and reliability of the JDI.

The JDI was developed in the 1960's by Smith, Kendall, and Hulin.[7] The validation of the instrument was based on the results of four studies involving 988 subjects and a later study involving 2,622 subjects. Five dimensions of job satisfaction were distinguished: work, pay, opportunities for promotions, supervision, and co-workers.

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7 Patricia Smith, Lorne Kendall, and Charles Hulin, The Measurement of Satisfaction in Work and Retirement, Chicago, Rand McNally, 1969, xiii-186p.

These dimensions of the job were chosen because of their consistency with findings of factor-analytic studies of job satisfaction.

The instrument consists of a total of seventy-two items, each represented by a word or word phrase. The dimension work, supervision and co-workers are each measured by 18 items while 9 items are used to measure the pay as well as the promotions dimension. Each item is to be answered in one of three different ways: "yes", "no", or with a "?" if a decision cannot be made.

The responses are to be scored on the basis of positive or negative replies to positive or negative items. For example, a "yes" reply to a positive item receives a score of 3; similarly, a "no" reply to a negative item receives a score of 3. On the other hand, a "yes" to a negative item receives a score of 0, as does a "no" response to a positive item. Finally, a "?" to any item receives a score of 1. Other scoring methods have been tried, but this method yields the highest estimates of convergent and discriminant validity.[8]

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8 A more detailed description is given in Charles Hulin and Patricia Smith, "Sex Differences in Job Satisfaction", in Journal of Applied Psychology, Vol. 48, No. 2, 1964, p. 88-92.

Smith, et al., reported consistent convergent and discriminant validity based on an extensive validation program.[9] Calling both types of validities "acceptable", Vroom referred to the JDI as "the most carefully constructed measure of job satisfaction in existence today".[10]

The five scales have split-half reliabilities ranging from .80 to .88 corrected by the Spearman-Brown formula.[11] They have relatively low intercorrelations (.30 to .50). The authors did not advocate combining the five dimension totals into an overall job satisfaction score.

In this study the three dimensions of the instrument most appropriate to the school situation will be used. These are work, supervision, and co-workers. The other two dimensions on pay and promotions are not as appropriate in relating bureaucracy and personality traits to satisfaction. This is because of set salary schedules and the fact that promotion decisions are not made by the immediate superior. The total number of items was thus reduced from seventy-two to fifty-four. With low intercorrelations between the dimensions, the validity

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9 Ten studies were quoted during the time period 1961-63 alone; Ibid., p. 89.

10 Victor Vroom, Work and Motivation, New York, John Wiley & Sons, 1964, p. 100.

11 Hulin and Smith, Op. Cit., p. 89.

and reliability should not be adversely affected.

c) The Sixteen Personality Factor Questionnaire or 16PF was first commercially published in 1949 after nearly ten years of empirical, factor-analytic research by its principal author, Cattell. It was revised and modified in 1956, 1962, and 1967. The most recent edition is described as "an objectively scorable test devised by basic research in psychology to give the most complete coverage of personality possible in a brief time."[12]

As reported in The Seventh Mental Measurements Yearbook,[13] the sixteen primary factor scores are labelled:

A: reserved vs. outgoing
B: less intelligent vs. more intelligent
C: affected by feeling vs. emotionally stable
E: humble vs. assertive
F: sober vs. happy-go-lucky or enthusiastic (surgency)
G: expedient vs. conscientious
H: shy vs. venturesome
I: tough-minded and self-reliant vs. tenderminded and overprotected
L: trusting vs. suspicious
M: practical vs. imaginative
N: forthright vs. shrewd
O: self-assured vs. apprehensive
Q_1: conservative vs. experimenting and radicalism
Q_2: group-dependent vs. self-sufficient
Q_3: undisciplined self-conflict vs. controlled
Q_4: relaxed vs. tense

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12 Raymond B. Cattell, Herbert W. Eber, and Maurice M. Tatsuoka, Manual for the 16PF, Champaign, Illinois, Institute for Personality and Ability Testing, 1972, p. 5.

13 O.K. Buros, The Seventh Mental Measurements Yearbook.

The four major second order factor scores are titled as follows: introversion vs. extraversion, low anxiety vs. high anxiety, tenderminded emotionality vs. tough poise, and subduedness vs. independence.

There are six forms of the test. All were designed for use with individuals aged sixteen and above. Two forms have been designed for individuals with marked educational and reading deficits. Two other forms have a reading level slightly below Form A and Form B, and they have only six to eight items for each scale. Ten to thirteen items are provided for each scale in Form A and Form B which are alternate forms. For this experiment, Form A was used. There are 187 items in Form A with three possible responses for each. Subjects are encouraged not to use the middle option which is neutral.

Each answer in the 16PF was scored 0, 1, or 2 points, except the Factor B (intelligence) answers which were scored 0 for incorrect or 1 for correct. A high score was a tendency toward one particular trait while a low score was a tendency towards its contrasting trait. The score of each item contributed to only one factor total.

Reliability coefficients have been divided into two categories: (a) dependability coefficients, i.e., short-term test-retest correlations, and (b) stability coefficients, i.e., retest after a longer interval. With retesting done within one week after the first administration, the dependability coefficients for the primary traits in Form A ranged from .72 to .95 with a median value of .82. In the second category, with a time interval of two months, the stability coefficients for the primary traits in Form A and Form B combined, ranged from .63 to .88, with a median value of .78.

The experimental procedure for the use of these three instruments is outlined in the next section.

3. Experimental Procedure

Full time teachers from thirty-three schools participated in the first phase of this study by completing and returning the O.I. One full time teacher in each school was selected as a designate, responsible for distribution, collection, and return of the questionnaire.

The bureaucracy score for a school was obtained by calculating the mean score of all respondents within

the school. The eleven schools with the highest scores and the eleven schools with the lowest scores were selected for the investigation of personality traits and job satisfaction.

The sample of thirty-three schools had a range of scores from 79 to 111. The eleven schools in the high bureaucratic range had scores from 99 to 111. The eleven schools in the low bureaucratic range had scores from 79 to 89.

An examination of bureaucracy scores within schools revealed wide differences, 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.

All one hundred and forty-one full-time teachers in the twenty-two selected schools were asked to complete and return the 16PF and the JDI. School designates were again used to facilitate the distribution and collection

of the questionnaire. The respondents were motivated by the promise of a confidential personality profile as revealed by the 16PF. One hundred and twenty-nine teachers sent back completed questionnaires for the 91.5 per cent return.

Hand scoring of each questionnaire was accomplished by two cardboard stencil scoring keys. Many respondents requested and received a profile of their results along with capsule descriptions of the sixteen primary personality factors. Only the scores for primary factors F, I, Q_1, and Q_4 were used for this study.

The means for these four traits in this study were as follows: F: 11.721; I: 12.791: Q_1: 6.217; and Q_4: 13.822. Those research subjects who scored above the mean in any trait were classified in the high group for that trait. Similarly, those scoring below the mean in any trait would be considered in the low group for that particular trait. It is to be noted here that the means for all four traits for the chosen research subjects differed substantially from the mean scores of the general population. This will be discussed more fully in the next chapter.

The JDI was distributed, collected, and returned along with the 16PF. It was entitled the Job Satisfaction Questionnaire to better justify its use within this study. The questionnaires were hand scored. The scores for each of the three dimensions of work, supervision, and co-workers were summed individually. Maximum possible score for each dimension with 18 items would be 54.

This section has outlined the experimental procedure; the final section is a plan of the statistical analysis.

4. Plan of the Statistical Analysis

Four multi-variate analyses of variance were used. Each analysis had bureaucracy and a personality trait as an independent variable and three measures of teacher satisfaction as dependent variables. The personality traits were surgency (F), tenseness (I), self-reliance (Q_1), and radicalism (Q_4). The level of significance was set at .05.

CHAPTER III

PRESENTATION AND DISCUSSION OF RESULTS

This chapter has been divided into three sections. The first section includes descriptive data necessary for clarification and understanding. The second section is a report on the testing of the main hypotheses and related hypotheses. The third section is a discussion of the results.

1. Descriptive Data

For each of the four multi-variate analyses of variance, the 62 research subjects from bureaucratic schools and the 67 research subjects from low bureaucratic schools were divided into two groups. Those two groups represented those scoring high and low on each of the four personality traits. The number of research subjects in each cell is reported in Table II. It is noted that for each of the personality traits, except Q_1, a greater proportion of the non bureaucratic group scored in the low group on that trait.

For each of the analyses, the means and standard deviations of the three dependent variables, work, supervision, and co-workers are shown in Table III, IV, V, and VI. The overall means for those scoring high

TABLE II

Number of Research Subjects in Each Cell According to Degree of Bureaucracy of the School and Level of Scores on Personality Traits.

	Personality Trait			
Bureaucratic Group	High		Low	
	F:	36	F:	26
	I:	38	I:	24
	Q_1:	23	Q_1:	39
	Q_4:	33	Q_4:	29
Non-Bureaucratic Group	High		Low	
	F:	30	F:	37
	I:	35	I:	32
	Q_1:	29	Q_1:	38
	Q_4:	31	Q_4:	36

TABLE III

Means and Standard Deviations for the Three Dependent Variables of Work, Supervision, and Co-workers for Those Teachers Scoring High or Low on Personality Trait F: Surgency.

BUREAUCRATIC GROUP

	TRAIT F			
Dep. Var.	High		Low	
	Mean	S.D.	Mean	S.D.
Work	35.167	9.524	34.308	8.366
Supervision	38.111	14.089	41.962	11.428
Co-workers	41.444	14.306	41.615	11.913

NON-BUREAUCRATIC GROUP

Dep. Var.	High		Low	
Work	35.367	7.228	37.378	7.166
Supervision	45.767	6.836	45.108	6.506
Co-workers	42.100	11.235	46.054	8.246

TABLE IV

Means and Standard Deviations for the Three Dependent Variables of Work, Supervision, and Co-workers for Those Teachers Scoring High or Low on Trait I: Self-reliance.

BUREAUCRATIC GROUP

	TRAIT I			
Dep. Var.	High		Low	
	Mean	S.D.	Mean	S.D.
Work	36.237	8.976	32.542	8.733
Supervision	41.526	11.684	36.042	15.941
Co-workers	42.263	12.911	40.125	14.766

NON-BUREAUCRATIC GROUP

Dep. Var.	High		Low	
Work	36.229	7.401	36.750	7.103
Supervision	45.143	6.647	45.375	6.647
Co-workers	41.657	10.432	47.125	8.431

TABLE V

Means and Standard Deviations for the Three Dependent Variables of Work, Supervision, and Co-workers for Those Teachers Scoring High or Low on Trait Q_1: Radicalism.

BUREAUCRATIC GROUP

	TRAIT Q_1			
Dep. Var.	High		Low	
	Mean	S.D.	Mean	S.D.
Work	33.967	9.018	35.308	9.062
Supervision	35.652	12.250	42.128	13.107
Co-workers	38.348	13.310	43.385	13.026

NON-BUREAUCRATIC GROUP

Dep. Var.	High		Low	
Work	34.172	8.324	38.263	5.731
Supervision	44.310	7.286	46.237	6.015
Co-workers	41.138	10.911	46.658	8.332

TABLE VI

Means and Standard Deviations for the Three Dependent Variables of Work, Supervision, and Co-workers for Those Teachers Scoring High or Low on Trait Q4: Tenseness.

BUREAUCRATIC GROUP

	TRAIT Q4			
Dep. Var.	High		Low	
	Mean	S.D.	Mean	S.D.
Work	33.303	9.275	36.517	8.501
Supervision	40.636	13.409	38.690	12.851
Co-workers	39.970	14.434	43.276	11.765

NON-BUREAUCRATIC GROUP

Dep. Var.	High		Low	
Work	36.581	7.628	37.250	6.843
Supervision	43.839	6.089	46.750	6.830
Co-workers	42.452	11.144	45.833	8.430

TABLE VII

Overall Means for the Three Dependent Variables of Work, Supervision, and Co-workers for Each of the Personality Traits and Bureaucracy Groupings.

GROUP	WORK	SUPERVISION	CO-WORKERS
High F	35.258	41.591	41.742
Low F	36.111	43.810	44.222
High I	36.233	43.260	41.972
Low I	34.947	41.375	44.125
High Q_1	34.077	40.481	39.904
Low Q_1	36.766	44.156	45.002
High Q_4	34.406	42.187	41.172
Low Q_4	36.923	43.154	44.692
Bureaucratic	34.807	39.726	41.516
Non-Bureaucratic	36.478	45.403	44.269

and low on each of the four personality traits as well as the overall means for the bureaucratic and non-bureaucratic groups are shown in Table VII.

For the most part, the relationships amongst the means were not as expected. To examine possible interaction, the means of the bureaucratic group with high scores on a particular personality trait were combined with the means of the non-bureaucratic group with low scores on the same trait. The average of these means were compared to the average of the means from the other two cells involving low scores on the personality trait in the bureaucratic group combined with high scores on the trait in the non-bureaucratic group.

Teachers who scored high in Trait I (self-reliance) in bureaucratic schools coupled with teachers who scored low in the same trait in non-bureaucratic schools were more satisfied in all three areas of work, supervision, and co-workers than were teachers with high scores from non-bureaucratic schools and low scores from bureaucratic ones.

Teachers who scored high in Trait F (surgency) in bureaucratic schools coupled with teachers who scored low in the same trait in non-bureaucratic schools had higher satisfaction scores in the areas of work and co-workers, but a lower satisfaction score in supervision.

This same pattern held true for Trait Q_1 (radicalism). Finally, teachers who scored high in Trait Q_4 (tenseness) in bureaucratic schools coupled with teachers who scored low in the same trait in non-bureaucratic schools had higher satisfaction scores for supervision and co-workers, but a lower score in work satisfaction.

The research subjects with low ergic tension (low Q_4) scores) were more satisfied with their work, supervision, and co-workers than were the research subjects with high ergic tension or high Q_4 scores. In a similar manner, those research subjects with a conservative temperament (low Q_1 scores) were also more satisfied with their work, supervision, and co-workers than were the research subjects with a radical temperament (high Q_1 scores).

It was interesting to find that the research subjects with high F scores depicting surgency, enthusiasm, and cheer were less satisfied in all three areas than those with low scores reflecting desurgency, sobriety, and seriousness. The only trait which was not consistent in all areas was I. The research subjects with high scores reflecting tendencies toward tendermindedness,

sensitivity, and dependence were more satisfied with their work and supervision than their tough-minded counterparts. The latter group, on the other hand, were more satisfied with their co-workers.

It is to be noted that teachers in the non-bureaucratic group were more satisfied with their work, supervision, and co-workers than those in the bureaucratic group and that the greatest difference occurred in the area of supervision with the research subjects in the non-bureaucratic group being much more satisfied.

2. Testing of the Main Hypotheses and Related Hypotheses

The hypotheses were tested using a separate multi-variate analysis of variance for each of the four personality traits.

The results of these analyses using satisfaction with work, supervision, and co-workers as dependent variables are shown in Table VIII. In the testing of the main hypotheses for interaction between bureaucracy and the personality variables, none of the results were significant. Possible reasons for these results will be discussed in the next section.

TABLE VIII

Results of Multivariate Analysis of Variance for Interaction between Bureaucracy and Personality Variables and for Main Effect of Personality Variables Using Work, Supervision, and Co-workers as Dependent Variables.

Interaction between Bureaucracy and Personality Variables

Indep. Variable	Degrees of Freedom	Approximate F	Probability
F	3, 123	2.108	.1026
I	3, 123	1.331	.2674
Q_1	3, 123	1.486	.2216
Q_4	3, 123	1.206	.3106

Related Hypotheses: Test of Main Effect of Personality Variables

Indep. Variable	Degrees of Freedom	Approximate F	Probability
F	3, 123	0.403	.7508
I	3, 123	2.149	.0974
Q_1	3, 123	2.760	.0451
Q_4	3, 123	1.613	.1899

Related Hypotheses: Test of Main Effect of Bureaucracy

Indep. Variable	Degrees of Freedom	Approximate F	Probability
F	3, 123	2.928	.0364
I	3, 123	3.954	.0099
Q_1	3, 123	4.161	.0076
Q_4	3, 123	3.256	.0240

The related hypotheses were concerned with the test of main effects of personality variables and of bureaucracy. Only for trait Q_1 were the differences for teachers high and low in a personality trait significant. Those teachers who were more radical, that is, less conservative, were less satisfied with work, supervision, and co-workers when compared to those teachers who were less radical and more conservative. In addition, significant differences were found between teachers from high and low bureaucratic schools. Those teachers in bureaucratic schools were less satisfied than those teachers in less bureaucratic schools with work, supervision, and co-workers. Because the cell sizes varied when the results on each of the four personality traits were tested for significance, four tests of difference in level of bureaucracy are reported. In each case the differences were significant. In order to determine which of the three dependent variables contributed to these results, .95 Scheffé confidence intervals are reported in tables IX and X. It is noted that in every instance the confidence interval included zero. Therefore, it is concluded that none of the variables contributed sufficiently to serve as a sole discriminator between groups.

TABLE IX

Contrast Estimates, Standard Errors of Contrasts, and .95 Scheffé Confidence Intervals for Difference, Between High and Low Q_1 Personality Trait Groups.

Variable	Contrast Estimate	Standard Error of Contrast	Confidence Interval Lower Limit	Upper Limit
Work	2.689	1.4417	-4.0565	+ 9.4345
Supervision	3.675	1.806	-4.7748	+12.1248
Co-workers	5.098	2.0463	-4.4761	+14.6721

TABLE X

Contrast Estimates, Standard Errors of Contrasts, and .95 Scheffé Confidence Intervals Between Bureaucratic and Non-Bureaucratic Groups.

Variable	Contrast Estimate	Standard Error of Contrast	Confidence Level Lower Limit	Confidence Level Upper Limit
Work	1.671	1.4155	-4.9518	+ 8.2938
Supervision	5.677	1.7731	-2.6189	+13.9729
Co-workers	2.753	2.0090	-6.6466	+12.1526

3. Discussion of the Results

There are several possible reasons for the non-significant results when testing for interaction. One reason, which has already been alluded to is the uniqueness of the educational institution. It is likely that elementary school principals tend to be non-bureaucratic. Of the thirty-three schools studied, the highest score obtained was 111 out of a possible 170. The distribution of scores would indicate that the elementary schools in this study tended to be non-bureaucratic. Gosine had similar results in her study. Of 22 schools, the highest score was 113. If in fact, the schools tended to be non-bureaucratic, the possibility of an interaction effect would be lessened considerably.

However, since significant differences on satisfaction variables were found between teachers from bureaucratic and non-bureaucratic schools, there is support for the fact that schools did vary considerably as to degree of bureaucracy.

A second possible explanation for non-significant interaction could be that teachers differ from the general

population in their scores on personality traits. A post hoc analysis of the mean scores for the personality traits showed significant differences between the mean scores of teachers and the general population of males and females with an average age of 30. The Z values for each of the traits were as follows: F: 5.7724; I: 4.543; Q_1: 8.59; and Q_4: 4.6367.

The mean score for teachers for trait F was significantly lower indicating a lower level of surgency or enthusiasm than for the general population. It was predicted that teachers with a lower level of surgency would be happier in a non-bureaucratic school. Teachers were divided into high and low groups by taking those above the mean for the high group and those below the mean (research subjects in this study) for the low group. A contributing factor to these results would seem to be that some of the teachers in the high group were below the mean score for the general population for trait F and thus could have affected the overall result.

When examining the mean scores for the teachers for the other three traits one finds similar patterns.

Teachers are significantly more tender-minded and dependent (Trait I), more conservative (Trait Q_1) and were less tense (Trait Q_4) than the general population. These differences could account for the lack of significant interaction.

It seemed possible that teachers in the two types of schools may have varied in their personality traits. Through use of a t-test the means of the two groups were compared on each of the four personality variables. No significant differences were found. This finding is consistent with that reported by Gosine.

Another possible consideration is school size. None of the schools in this study could be classified as large. In no instance were there more than twenty teachers in a school. Thus the situation allowed for more personal contact amongst teachers, and between teachers and principal. If the schools were larger, perhaps the tendency would be greater for bureaucratic principals to exert a greater influence on restriction of teacher behaviour. It could also be considered possible that because the schools were so small that non-bureaucratic principals extended greater influence on the behaviour of all teachers.

PRESENTATION AND DISCUSSION OF RESULTS

Isherwood and Hoy[1] studied bureaucracy in a secondary school setting. The six characteristics identified by Weber were used. These were measured by use of the School Organizational Inventory. Scores on these six variables were factor analyzed. The best solution was a two factor solution which identified the four variables used in this study as one factor and specialization and technical competence as a second factor. If these two factors had been used in this study it is possible that the results may have differed somewhat. However it is likely that the second factor would be of little importance when applied to small elementary schools.

There is much more use made of specialization and technical competence at the secondary level with the emphasis shifting from general classroom instruction to specific subjects taught by teachers with expertise in those particular subjects. It is possible that these two factors would provide for a more comprehensive analysis of bureaucracy at the secondary school level.

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1 Geoffrey B. Isherwood and Wayne K. Hoy, "Bureaucratic Structure Reconsidered", in The Journal of Experimental Education, Volume 41, Number 1, Fall 1972, p. 47-50.

In larger elementary schools, there would be more of a tendency for more specialization to occur. Music, physical education, French, and remedial teachers are prominent in these larger schools. It is therefore possible that a two factor approach to bureaucracy would be of use in studying these larger schools.

Recently Hoy and Miskel[2] have expanded the Getzels and Guba model (see Figure 2) to include the effects of informal groups. They suggest that in organizations such as schools, informal groups form and exert influence which has an effect on behaviour. These groups serve as a balance between institutional expectations and individual needs. Perhaps a study of these informal groups as a third variable influencing behaviour would have altered the results in this study. In future research the effect of these informal groups should be considered.

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2. Wayne K. Hoy and Cecil G. Miskel, Educational Administration: Theory, Research, and Practice, New York, Random House Inc., 1978, p. 36-46.

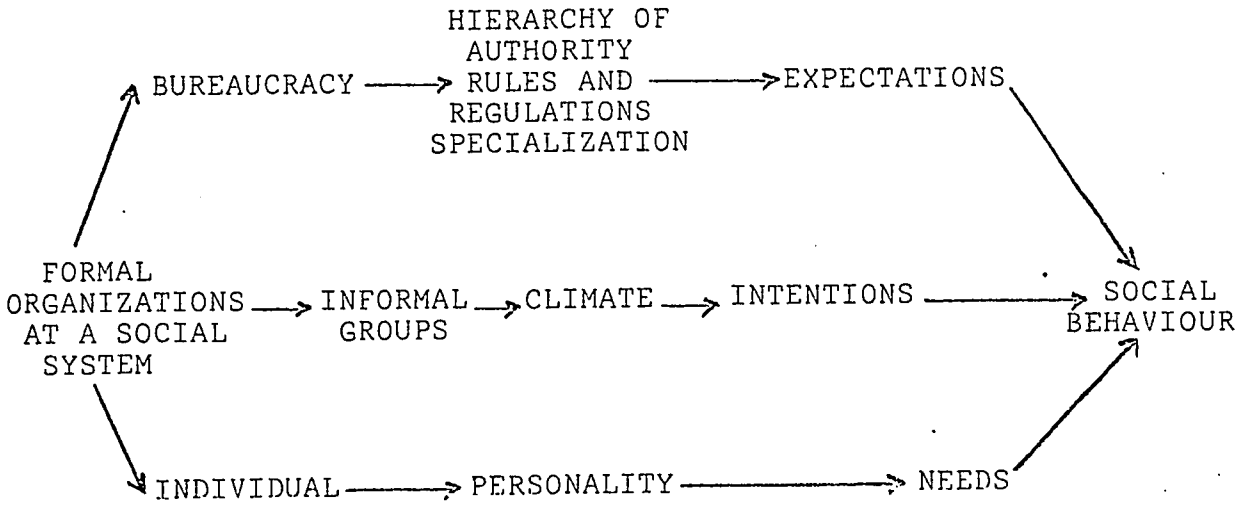

Figure 2.- Reformulated elements showing a social systems model of schools.*

* Wayne K. Hoy and Cecil G. Miskel, Educational Administration: Theory, Research, and Practice, New York, Random House Inc., 1978, p. 44.

The significant differences between teachers from bureaucratic and non-bureaucratic schools were not unexpected. It seems reasonable that teachers in non-bureaucratic settings should generally be more satisfied with work, supervision and co-workers. It is to be noted that in the Gosine study, that satisfaction with the strucure of schools was also significantly greater in low bureaucratic schools than in high bureaucratic schools.

The differences found between radical versus more conservative teachers (trait Q1) again are not too surprising. While schools tended to be non-bureaucratic, traditions and community pressures limit the extent to which one can depart from the norm.

In summary, while the results were not as hypothesized, the results can be explained. The tendency for few principals to be bureaucratic limited the possibility for interaction to occur. In addition teachers differed from the general population for each of the four personality traits.

Future research in this area might involve

secondary schools. These educational institutions employ larger numbers of teachers than do elementary schools. This might contribute to a greater degree of bureaucracy. The hierarchial tendencies in the secondary schools with department heads and vice-principals might also contribute to a more bureaucratic institution. If this idea were to be examined at the elementary level, schools from larger population centres would have to be chosen. It might even be advisable to select several large elementary schools governed by different boards of education to see if there would be any significant difference in that respect.

Another possible research study might include only those teachers who score extremely high or extremely low on a specific personality trait. This would give a greater possibility for interaction to occur.

Still another possible research study could involve the informal groupings of the enlarged Getzels and Guba model. Their importance in the interaction process between the individual and the institution could be studied in a variety of school settings.

BIBLIOGRAPHY

Cattell, Raymond B., The Scientific Analysis of Personality, Baltimore, Maryland, Penguin Books Inc., 1967, 400 p.

Following a discussion on the formation of personality by environment and heredity, the structure of personality and various traits are described. Further chapters on the techniques of objective testing, the motivation of personality, and the development of personality lead to a final survey of the wider social implications of personality measurement.

Cattell, Raymond B., Herbert W. Eber, and Maurice M. Tatsuoka, Handbook for the Sixteen Personality Factor Questionnaire (16PF) Champaign, Illinois, Institute for Personality and Ability Testing, 1970, xxv-388 p.

Describes the design and construction of the 16PF. Discusses the psychometric properties of the scales. Describes the standardization of scores. Conducts an extensive survey of the psychological meaning of each primary and second-stratum trait measured by the test and discusses the relationships between the factors and the various criteria.

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

Description of a theory of administration as a social process and illustration of its application to four major issues. These are issues of institutional and individual conflict; staff effectiveness, efficiency and satisfaction; the nature of various leadership-followship styles; and the problem of morale. This article provided the theoretical framework of the present research project.

Getzels, Jacob W., James M. Lipham, and Roald F. Campbell, Educational Administration as a Social Process, New York, Harper and Row, 1968, xx-420 p.

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.

Gosine, Molly, "An Empirical Study of the Relationships Among Bureaucracy. Teacher Personality Needs, and Teacher Satisfaction." Unpublished doctoral thesis, University of Ottawa, 1970, x-116p.

The author studied the Getzels and Guba theory of administration as a social process using the Organizational Inventory as developed by Hall to measure the level of bureaucracy in the sample school and the Edwards Personal Preference Schedule to measure the personality needs of the teachers. While the needs did not differ significantly in high or low bureaucratic schools, satisfaction with the structure was significantly greater in low bureaucratic schools.

Hall, Richard H., "The Concept of Bureaucracy: An Empirical Study", 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.

Hoy, Wayne K., and Cecil G. Miskel, Educational Administration: Theory, Research, and Practice, New York, Random House Inc., 1978, p. 39-93.

The authors describe conceptual perspectives for analysis including the Getzels and Guba model of a social system. They reformulate the elements for a social systems model of schools before devoting one chapter to bureaucracy and the school and another to the professional in the school bureaucracy.

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

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 hierarchial authority, rules, procedural specifications and impersonality. Student alienation was therefore shown to be one of the dysfunctions of bureaucracy.

MacKay, David Allister, 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-217p.

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.

Miller, Jon P., Lincoln J. Fry, "Social Relations in Organizations: Further Evidence for the Weberian Model", Social Forces, Vol. 51, No. 3, 1973, p. 305-319.

The authors studied the elements of Weber's concept of bureaucracy and found close relationships among authority, control, formal training and legitimacy in various organizations.

Mouzelis, Nicos, P., Organization and Bureaucracy: An Analysis of Modern Theories, London, Routledge & Kegan Paul, 1975, vii-75p.

The author examines the classical approach to the study of bureaucracy as developed by Weber, analyses the conceptual framework and comments on the characteristics of bureaucracy.

Punch, Keith Francis, 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.

A research study which refined the concept of bureaucracy in school organizations: the bureaucratic dimensions of hierarchial authority, rules, procedural specifications and impersonality were shown to be factorially homogeneous. An important finding was that principals' leader behaviour 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 Relation to Other Characteristics of School Organizations, unpublished doctoral thesis presented to the (Department of Educational Administration) University of Alberta, Edmonton, 1966, xvi-248p.

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 elevent per cent of the variance in bureaucratization among schools.

Smith, Patricia, Lorne Kendall, and Charles Hulin, The Measurement of Satisfaction in Work and Retirement, Chicago, Rand McNally, 1969, xiii-186 p.

The authors developed the Job Description Index to measure five dimensions of job satisfaction: work, pay, opportunities for promotions, supervision, and co-workers. These dimensions were chosen because of their consistency with findings of factor-analytic studies of job satisfaction. The validation of the instrument was based on the results of five studies involving close to three thousand subjects.

Weber, Max, The Theory of Social and Economic Organization, ed. 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 coordination. 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

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
55.	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

APPENDIX 2

JOB SATISFACTION QUESTIONNAIRE

Think of your present work. What is it like most of the time? For each item, select one of the following answers and record it on the separate answer sheet:

2 for "YES" if it describes your work

1 for "NO" if it does not describe it

0 if you cannot decide

WORK

(1) Fascinating
(2) Routine
(3) Satisfying
(4) Boring
(5) Good
(6) Creative
(7) Respected
(8) Hot
(9) Pleasant
(10) Useful
(11) Tiresome
(12) Healthful
(13) Challenging
(14) On your feet
(15) Frustrating
(16) Simple
(17) Endless
(18) Gives a sense of accomplishment

SUPERVISION

(19) Asks my advice
(20) Hard to please
(21) Impolite
(22) Praises good work
(23) Tactful
(24) Influential
(25) Up-to-date
(26) Doesn't supervise enough
(27) Quick tempered
(28) Tells me where I stand
(29) Annoying
(30) Stubborn
(31) Knows job well
(32) Bad
(33) Intelligent
(34) Leaves me on my own
(35) Lazy
(36) Around when needed

CO-WORKERS

(37) Stimulating
(38) Boring
(39) Slow
(40) Ambitious
(41) Stupid
(42) Responsible
(43) Fast
(44) Intelligent
(45) Easy to make enemies
(46) Talk too much
(47) Smart
(48) Lazy
(49) Unpleasant
(50) No privacy
(51) Active
(52) Narrow interests
(53) Loyal
(54) Hard to meet

APPENDIX 2

JOB SATISFACTION QUESTIONNAIRE

Answer Sheet

WORK

(1)	2	1	0
(2)	2	1	0
(3)	2	1	0
(4)	2	1	0
(5)	2	1	0
(6)	2	1	0
(7)	2	1	0
(8)	2	1	0
(9)	2	1	0
(10)	2	1	0
(11)	2	1	0
(12)	2	1	0
(13)	2	1	0
(14)	2	1	0
(15)	2	1	0
(16)	2	1	0
(17)	2	1	0
(18)	2	1	0

SUPERVISION

(19)	2	1	0
(20)	2	1	0
(21)	2	1	0
(22)	2	1	0
(23)	2	1	0
(24)	2	1	0
(25)	2	1	0
(26)	2	1	0
(27)	2	1	0
(28)	2	1	0
(29)	2	1	0
(30)	2	1	0
(31)	2	1	0
(32)	2	1	0
(33)	2	1	0
(34)	2	1	0
(35)	2	1	0
(36)	2	1	0

CO-WORKERS

(37)	2	1	0
(38)	2	1	0
(39)	2	1	0
(40)	2	1	0
(41)	2	1	0
(42)	2	1	0
(43)	2	1	0
(44)	2	1	0
(45)	2	1	0
(46)	2	1	0
(47)	2	1	0
(48)	2	1	0
(49)	2	1	0
(50)	2	1	0
(51)	2	1	0
(52)	2	1	0
(53)	2	1	0
(54)	2	1	0

APPENDIX 3

1. PERSONALITY AND SATISFACTION SCORES OF TEACHERS IN BUREAUCRATIC SCHOOLS

TEACHER NUMBER	PERSONALITY TRAIT SCORES				SATISFACTION SCORES		
	F	I	Q_1	Q_4	WORK	SUPERVISION	CO-WORKER
1	5	13	7	19	38	42	43
2	18	14	3	9	39	30	54
3	5	10	2	25	36	45	45
4	12	15	3	17	40	52	54
5	2	10	4	17	33	42	42
6	20	9	10	17	36	48	51
7	9	11	4	19	43	53	47
8	10	13	5	19	42	41	18
9	16	14	4	15	36	45	54
10	14	10	8	14	42	21	21
11	11	10	6	18	33	54	11
12	13	17	4	14	43	51	50
13	17	13	4	10	51	48	44
14	10	16	5	15	45	51	51
15	12	13	5	17	32	54	50
16	9	16	6	13	40	48	22
17	12	10	3	2	40	38	54
18	0	13	5	21	41	47	37
19	13	14	7	13	44	46	52
20	13	15	7	15	37	45	50
21	12	17	8	15	41	49	54
22	16	16	4	9	35	51	51
23	7	17	9	14	51	33	43
24	11	12	3	13	33	48	54
25	13	13	7	10	34	48	51
26	9	7	4	17	30	54	54
27	13	16	3	13	46	49	50
28	12	12	6	14	30	54	51
29	10	13	7	14	37	47	54
30	11	12	6	11	32	44	50

1. PERSONALITY AND SATISFACTION SCORES OF TEACHERS IN BUREAUCRATIC SCHOOLS

TEACHER NUMBER	PERSONALITY TRAIT SCORES				SATISFACTION SCORES		
	F	I	Q1	Q4	WORK	SUPERVISION	CO-WORKER
31	7	16	5	19	36	32	42
32	9	16	6	10	40	49	52
33	13	16	4	17	35	50	52
34	17	14	8	8	40	50	13
35	18	11	11	7	43	29	46
36	16	16	3	5	47	44	52
37	19	10	4	13	40	11	54
38	10	12	6	13	37	28	48
39	19	15	8	11	41	54	52
40	7	19	4	9	34	51	52
41	13	14	5	10	43	46	43
42	12	12	6	9	45	54	54
43	7	16	3	16	38	49	54
44	8	13	5	11	39	51	54
45	14	10	10	21	30	48	51
46	6	4	6	16	27	54	44
47	12	15	11	10	31	30	36
48	12	12	8	11	43	25	35
49	13	16	4	15	5	11	10
50	21	13	2	15	24	9	23
51	9	16	5	14	22	34	34
52	14	16	6	10	28	28	24
53	10	18	8	17	27	37	38
54	14	12	13	23	27	27	7
55	13	10	8	12	29	32	30
56	6	18	8	9	24	20	30
57	11	7	7	13	12	9	33
58	10	7	6	13	22	28	30
59	20	11	11	22	23	24	29
60	17	12	5	15	15	15	27
61	12	15	8	10	27	33	35
62	12	16	7	19	24	23	28

APPENDIX 3

2. PERSONALITY AND SATISFACTION SCORES OF TEACHERS IN NON-BUREAUCRATIC SCHOOLS

TEACHER NUMBER	PERSONALITY TRAIT SCORES				SATISFACTION SCORES		
	F	I	Q_1	Q_4	WORK	SUPERVISION	CO-WORKER
63	11	10	5	10	37	51	54
64	16	8	5	3	40	51	33
65	17	7	8	4	18	43	41
66	13	15	10	9	34	34	21
67	4	15	9	19	42	42	30
68	2	9	5	19	37	32	52
69	4	18	10	13	35	50	42
70	12	15	10	13	37	51	43
71	6	17	2	13	43	51	54
72	4	10	5	12	27	51	48
73	17	14	9	11	29	27	32
74	20	8	9	12	36	48	51
75	10	17	9	17	28	39	42
76	16	13	7	19	15	35	15
77	8	16	4	18	39	45	25
78	14	14	3	13	39	47	52
79	9	10	9	20	35	48	40
80	11	18	1	11	36	45	43
81	9	18	7	6	44	49	45
82	13	16	5	8	39	49	26
83	15	20	5	20	37	41	51
84	6	12	5	13	43	39	49
85	9	14	6	10	45	50	49
86	11	8	9	5	36	54	54
87	11	10	10	16	45	43	52
88	7	6	10	12	35	46	49
89	13	13	8	15	29	49	34
90	19	13	4	14	39	52	50
91	7	14	4	22	33	51	54
92	16	15	3	11	36	54	43

2. PERSONALITY AND SATISFACTION SCORES OF TEACHERS IN NON-BUREAUCRATIC SCHOOLS

TEACHER NUMBER	PERSONALITY TRAIT SCORES				SATISFACTION SCORES		
	F	I	Q_1	Q_4	WORK	SUPERVISION	CO-WORKERS
93	10	15	5	20	35	49	49
94	8	19	4	18	45	42	51
95	9	8	3	19	41	34	52
96	8	13	6	17	19	43	25
97	7	10	6	6	46	52	48
98	8	15	7	19	46	47	45
99	15	12	3	19	30	45	42
100	11	16	10	16	40	51	37
101	13	9	7	12	45	41	54
102	15	13	10	18	36	45	39
103	12	5	4	9	42	38	54
104	14	7	8	17	28	39	26
105	12	8	3	23	43	49	51
106	9	5	3	17	39	40	46
107	16	9	3	8	40	54	54
108	18	8	12	6	22	48	51
109	11	12	3	19	36	49	54
110	13	17	3	12	38	47	38
111	11	15	5	11	49	52	54
112	19	6	6	11	37	48	51
113	7	11	6	11	31	51	54
114	15	9	6	13	38	52	52
115	16	12	6	13	43	54	48
116	10	12	4	13	45	46	49
117	9	17	12	15	33	48	51
118	14	10	16	19	41	52	49
119	20	16	2	5	36	45	43
120	10	13	7	13	36	36	42
121	10	15	6	16	38	34	33
122	8	12	5	18	45	43	52
123	10	18	8	19	42	54	54
124	9	10	9	10	24	30	32
125	20	7	14	17	34	36	21
126	17	15	9	7	43	54	52
127	9	14	7	18	22	46	49
128	13	10	6	11	37	45	45
129	10	15	2	18	31	36	45

APPENDIX 4

ABSTRACT OF

The Relationship of Teacher Satisfaction to School Bureaucratic Level and Teacher Personality Traits[1]

The purpose of this study was to test the assumption of Getzels and Guba that satisfaction occurs when there is congruence between the institutional and individual dimensions in a social system of administration. Both dimensions were examined with reference to bureaucracy and teacher personality traits; satisfaction referred to the job, co-workers, and supervision. This study is an extension of Gosine's research with the same three variables. However different instruments were used to measure personality and satisfaction

The specific hypotheses of this study were:

1) there would be interaction between the level of bureaucracy in a school and the level of teacher surgency (F) with the dependent variable being teacher satisfaction;
2) there would be interaction between the level of bureaucracy in a school and the level of teacher tenseness (Q_4) with the dependent variable being teacher satisfaction;
3) there would be interaction between the level of bureaucracy in a school and the level of teacher self-reliance (I) with the dependent variable being teacher satisfaction;
4) there would be interaction between the level of bureaucracy in a school and the level of teacher radicalism (Q_1) with the dependent variable being teacher satisfaction.

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1 Ivan St. John, master's thesis presented to the School of Graduate Studies of the University of Ottawa, 1978.

The sample of schools consisted of thirty-three of the forty-one public schools of the Stormont, Dundas, and Glengarry County Board of Education. These schools were tested for bureaucratic level with the middle third eliminated for the follow-up investigation of personality traits of teachers and their satisfaction. The measuring instruments included the Organizational Index, Form A of the 16PF, and a modified form of the Job Description Index.

Four multi-variate analyses of variance were used. Each analysis had bureaucracy and a personality trait as an independent variable and three measures of teacher satisfaction as dependent variables. The level of significance was set at .05. In the testing of the main hypotheses for interaction, none of the results proved significant.

The related hypotheses were concerned with the test of main effects of personality variables and of bureaucracy. Only for trait Q_1 were the differences for teachers high and low in a personality trait significant. In addition, significant differences were found between

teachers from high and low bureaucratic schools. However, when .95 Scheffé confidence intervals were constructed, it was concluded that none of the variables contributed sufficiently to serve as a sole discriminator between groups. The lack of support for the interaction hypotheses was explained because of two things. School principals tend to be non-bureaucratic. School teachers differed significantly from the general population on each of the four personality traits.