THE RELATIONSHIP BETWEEN SCHOOL CLIMATE AND EDWARDS' MANIFEST NEEDS OF THE ELEMENTARY SCHOOL TEACHER

Thesis for the Degree of Ph. D.

MICHIGAN STATE UNIVERSITY

E. LARRY EBERLEIN

1967

This is to certify that the

thesis entitled

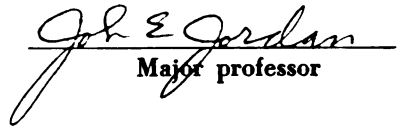
THE RELATIONSHIP BETWEEN SCHOOL CLIMATE AND EDWARDS' MANIFEST NEEDS OF THE ELEMENTARY SCHOOL TEACHER

presented by

E. Larry Eberlein

has been accepted towards fulfillment of the requirements for

Ph.D. **degree in** Counseling & Personnel Services


Major professor

Date June 9th, 1967

ABSTRACT

THE RELATIONSHIP BETWEEN SCHOOL CLIMATE AND EDWARDS' MANIFEST NEEDS OF THE ELEMENTARY SCHOOL TEACHER

by E. Larry Eberlein

The purpose of this study was to investigate and analyze the relationships that exist between the climate of different elementary schools and the teachers who teach within those schools. Basic information was gathered and analyzed using three instruments: The Edwards' Personal Preference Schedule (EPPS), Halpin and Croft's Organizational Climate Description Questionnaire (OCDQ), and basic biographical and vocational data.

Twenty-four Michigan schools of diverse characteristics were asked to participate in the study and 359 teachers and principals from these schools provided at least part of the information requested. For that part of the study relating only to female elementary school teachers, 295 teachers provided all the information mentioned above.

Hypotheses were formulated relating the EPPS manifest need structure of female elementary school teachers to the OCDQ. For this purpose the OCDQ was divided into three factors: Factor I on openness, Factor II on satisfaction of task goals and social needs, and Factor III on freedom of

the group to take leadership positions. Needs that did appear to have some relationship to climate included Achievement, Abasement, Conformity (a combination of EPPS sub-tests), Exhibition, and Deference. The elimination of novice teachers and teachers new to the building offered little additional information in this area.

A strong age-experience interaction was found using the EPPS. Teachers in the present sample ranged from 20 to almost 70 years of age and their EPPS scores reflected this age variance. The need for Deference, Order, Abasement and Endurance showed an increase with age; the need for Exhibition and Heterosexuality, a decrease with age. Affiliation, Succorance and Change had the least clearcut patterns, but were "affected by age." The differences in EPPS needs when the present sample was compared with women in general tended to replicate other studies.

When compared on five vocational Scale Questions, teachers who saw their school as being closed or inauthentic tended to have a higher need for Achievement, Autonomy and Heterosexuality, and a lesser need for Deference, Order, and Abasement. Much of this difference, however, could be accounted for by age and experience. Teachers whose social needs were not being met tended to be younger, have less experience, score higher on Achievement, Aggression, and Heterosexuality, but lower on Deference, Conformity, Order, Exhibition, and Abasement. The least happy teachers were also younger, less experienced and tended to score higher on

Aggression, Exhibition and Change. They scored lower on Conformity, Intraception and Deference. Teachers who did not feel a freedom to accept leadership positions showed a lower need for Nurturance and a higher need for Succorance.

Hypotheses were also formulated relating the OCDQ Factor scores to a series of five vocational Scale Questions. When compared with older teachers, the younger and novice teachers perceived their environment as being more closed, were less satisfied with the way their task goals and social needs were being met, were more unhappy in their teaching situation and did not feel free to take a leadership position in the school. Almost all of the teachers who perceived the behavior of teachers at their school as being inauthentic or superficial had been in the building three years or less. Teachers new to the building also felt less achievement with their task and social goals, were more unhappy and felt the least freedom to take a leadership role.

When teachers from open climate schools were compared with teachers from closed climate schools, the former perceived their climate as being more open, were more satisfied with the way their social needs were being met, and, overall, were more happy working in such a school. The attainment of task or job satisfaction was independent of climate openness and the feeling of freedom to take a leadership position was found to be more related to factors other than openness. The thrust of the principal and the intimacy of the group were the two most important variables here.

When teachers from schools in which a high degree of social and task satisfaction was present were compared with teachers from other schools, the former saw behavior at their school as being more open and authentic than the latter. They were happier and felt a greater freedom to take leadership positions.

When teachers from schools where the principal was seen as being considerate and non-aloof were compared with other teachers, the former saw their environment as being more open, were more satisfied with the way their social needs were being met, were more happy working in such a school and felt more freedom to take a leadership role in their school. There was no significant difference between the groups of teachers when compared on their responses to the question of attainment of task goals.

A combination of high need for Deference on the part of the individual teacher, high esprit on the part of the group and a high degree of thrust and consideration on the part of the principal combine to form the most satisfying relationship for the teacher in her overall vocational happiness.

THE RELATIONSHIP BETWEEN SCHOOL CLIMATE AND EDWARDS' MANIFEST NEEDS OF THE ELEMENTARY SCHOOL TEACHER

By

E. Larry Eberlein

A THESIS

Submitted to
Michigan State University
in partial fulfillment of the requirements
for the degree of

DOCTOR OF PHILOSOPHY

Department of Counseling, Personnel Services
and Educational Psychology

College of Education

1967

ACKNOWLEDGMENTS

The writer wishes to express grateful and sincere appreciation to all who have contributed to the development and completion of this study, but especially to:

The principals and teachers of the 24 schools and the officials of the school systems without whose help this study could not have been completed;

Dr. John E. Jordan, my guidance committee chairman, for his encouragement and help throughout, and his careful consideration of each step in the various phases of this study;

Dr. Norman R. Stewart, Dr. Leroy A. Olson, and Dr. Norman Abeles, the remaining members of my guidance committee, for their help and encouragement of this study;

Dr. Lee S. Shulman, under whose guidance I learned a great deal about the practical matters involved in educational research, and who provided the genesis of this study;

my wife, Ellen, whose many hours of assistance and frequent expressions of love and encouragement were essential to the completion of this study;

my four children, John, Susan, Robert and David, whose assistance in many of the manual chores associated with the project and whose understanding of time pressures will always be remembered.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

CHAPTER I

INTRODUCTION

The Problem

In spite of fifty years of research, little is known about teacher personality, its nature, measurement, and relation to teacher effectiveness. Education, selection, and placement of teachers has been done largely on an intuitive basis. The quantitative data about a specific teacher and job has consisted of the personnel file for the placement office, and a tour, "handbook" or "advertising brochure" for the teacher.

In 1966 the Board of Examiners of the New York City Board of Education, under a study sponsored by the United States Office of Education, concluded that teacher selection was "inadequate and unsophisticated" (Phi Delta Kappan, 1966). In a sample of 320 of the nation's largest school systems, only 13% gave an examination as part of the selection process and less than 1% used any kind of personality measure. The typical system used a 20-30 minute interview and rated a candidate on a dozen characteristics. Personality factors are usually considered only in the broadest sense, and yet Getzels and Jackson (1963) point out that the personality of the teacher is a significant variable, if not the most significant variable, controlling what happens in the

classroom. That placement efforts can be so minimal and arbitrary for the largest single employer in many communities is especially tragic when compared with the well developed personnel offices that exist in industry.

Literally thousands of studies have been done touching on one or another aspect of this problem. After surveying 800 studies reported between 1950 and 1963, Getzels and Jackson concluded:

> Despite the critical importance of the problem and a half-century of prodigious research effort, very little is known for certain about the nature and measurement of teacher personality, or about the relation between teacher personality and teaching effectiveness. The regrettable fact is that many of the studies so far have not produced significant results. Many others have produced only pedestrian findings (p. 574).

Over the years one major obstacle to effective placement has been the identification of adequate criteria for teacher evaluation. Barr (1961) as early as 1920 studied supervisors, administrators, and educators observing the same teacher at the same time under identical conditions. He found that their perceptions would vary so much that this particular teacher could be rated both the best and worst ever observed. Even in 1967, a seminar at the American Educational Research Association meeting in New York devoted to this problem convinced this writer that we still have a long way to go just in the area of criteria.

The September 1961 issue of the Journal of Experimental Education was devoted to the "Wisconsin Studies of the Measure and Prediction of Teacher Effectiveness." It

reflected Barr's work over a 40 year period and detailed over 75 doctoral studies conducted at Wisconsin during this period. Barr discussed the "Nature of the Problem" beginning with this statement:

> To select, recruit, educate and assign teachers to particular teaching positions in an acceptable manner, one must have more precise information about the many meanings associated with teaching, in general, and in particular, situations; and how to identify the personal, academic and professional prerequisites to effectiveness (p. 5).

Missing from this statement and often overlooked in the literature and studies are crucial situational factors which are in part beyond the control of the individual teacher. These are factors of which the teacher needs to be aware before accepting a position, and include the interpersonal relationships and climate of the individual school chosen. This is all the more important when we consider Hunt's (1965) conclusion that most of the variance identified in findings from personality studies can be attributed to factors in the situaiton and interactions with the situation, rather than just in the people studied. Hunt found in one study that the main source of variance came from the modes of response and the second principal source came from the situation.

Among the many factors involved in successful teaching are those related to happiness and job satisfaction. These are crucial to the elementary teacher who will serve as a model to children who are just beginning to solidify previously formed attitudes toward teachers, teaching, and education itself.

A survey of the literature does not provide a single pattern of what a successful teacher should be like. There are some characteristics that seem more helpful than others, but no teacher or type of teacher is "ideal." Good teaching can take many forms and many teachers with varying personality patterns can be "good teachers." One teacher can be "good" for some children and "bad" for others. He can be good on one day and bad on another, or good in one subject area and bad in another, or good in one school and less effective in another. When you add these variables to the personality of the school itself you come up with a difficult assessment situation. Forehand and Gilmer comment:

> . . . there have been few attempts to develop multivariate definitions of environment, and fewer still to study behavior as a function of the simultaneous variation of personal and situational factors (1964, p. 361).

In teaching, the ability, need, and personality structure of the teacher are related to both the job expectations held by the teacher and those held by the school. Often these expectations are neither clearly delineated nor the same in all parts of the school system. One man or group may do the interviewing, selection and placement independent of the building principal. There may be frequent unstated clashes in philosophy in employment situations. The prospective teacher is often at a loss to discover just what kind of role she is expected to play. If her guess about what is expected is correct, and her behavior matches, she should be happy and fit in quite well.

What are some of the factors which characterize teacher behavior? There are endless individual studies but the most complete and extensive study of teacher characteristics to date has been the Ryans study (1960). The specific needs which prompted the Ryans study were:

> 1. The need for the accumulation of evidence permitting extension of understanding of the personal, social, and intellectual attributes of persons who teach in the schools, and perhaps contributing to the development of teacher behavior theory and to the improvement of teacher education.
>
> 2. The need for procedures for appraising certain characteristics of prospective teachers before or during pre-service training and at the time of employment by school systems to help improve teacher selection and assignment (p. 9).

The ultimate purpose of the Ryans study was two-fold:

> The Teacher Characteristics Study was conducted with two possible uses of the results in mind: first, by school systems as an aid in identifying teachers who, at the time of selection for employment or perhaps in connection with promotion, have characteristics similar to those deemed important and desirable by the particular school system and the culture it represents; and, second, by teacher education institutions as an aid to a better understanding of teacher characteristics and associated conditions, which would contribute to improved procedures for selecting teacher candidates and to the improvement of professional courses and curricula (p. 11).

Ryans observed that educators cannot agree as to the specifics contributing to effective teaching. Some believe it is the result of the teachers' training in certain college or university courses. Some believe it is related to diverse aspects implied in personality definitions. Some are convinced it is related to classroom discipline. Much of the confusion in this area comes from the inability to

test the validity of various assumptions because of the lack of adequate descriptions or measures which characterize teachers.

Ryans classified teacher traits into two major categories: first, those which involve the teacher's mental abilities and skills, his understanding of psychological and educational principles, and his knowledge of general and special subject matter to be taught, and second, those qualities which stem from the teacher's personality, his interests, attitudes, beliefs, and his behavior in working relationships with pupils and other individuals. Ryans then observed that the intellectual characteristics can be measured with considerable success, but that little information is available about the second group of characteristics--the personality of the teacher. Reliable and valid methods for identifying and measuring behavior variables in this area are scarce. Some of Ryans' findings will be presented in the next chapter.

Purpose of this Study

The dearth of significant findings in the field of teacher personality is discouraging; yet to give up would suggest that new instrumentation or new approaches would contribute nothing of value to this area. A great deal of research still needs to be done on the nature and measurement of teacher personality and its relationships with other factors. The many conflicts in the literature suggest the

presence of variables and interactions which are confounding results. The purpose of this study is to concentrate on a small portion of the inter-personal relationship variables which previously have not been thus combined and to analyze these few in some depth. The two basic instruments utilized are the Edwards Personal Preference Schedule (EPPS) and the Organizational Climate Description Questionnaire (OCDQ), along with some biographical data, vocational data, and five Scale Questions (see Appendix A).

The present study is concerned with two similar but divergent themes. First, the research plan calls for a look at elementary teachers, their manifest needs (as measured by the EPPS), and the relationships that these have to the climate of the school (as measured by the OCDQ). This will be done on the basis of the EPPS sub-scores and three OCDQ factor scores. The climate factor scores offer a group consensus about the school and reflect the responses of the principal and all teachers within the school to the OCDQ. The eight OCDQ sub-scores can be combined into these three factor scores:

I. Authenticity of group behavior or openness
II. Satisfaction of task and social needs
III. Freedom to initiate leadership acts

Using this information, teachers will be assigned to groups based upon similarity of the environment within which they teach. For example, the main hypotheses relate to "openness," and teachers who work in an "open"

environment will be grouped together for purposes of comparison with teachers who teach in a "less open" environment.

The related theme is an analysis of demographic data and its relation to the teacher. What are the relationships that make a teacher happy or unhappy? Teachers are known to be happy in some schools and unhappy in others. Why? Is there something about the individual or about the school that makes this so? This portion of the study is intended to be more exploratory in nature.

Scope and Limitations

The study uses data collected during February, March, and April of 1967 from over 300 teachers in 24 schools and eight school districts in Michigan. The schools represent a variety of locations within a 150 mile radius of Lansing, Michigan. They include rural areas, suburban areas, and industrial areas; rapid growth and stable areas. Sometimes all elementary schools in a district were represented; sometimes only a few. The schools include young teachers in their first year of teaching, women who see teaching as a temporary job, career teachers, experienced teachers new to the building, and teachers with over 40 years experience, much in the same school. The sample includes teachers in new school buildings, old school buildings, one, two, and three story buildings. It includes schools where the principal is new and schools where the same principal has been there for many years. The more detailed description of the

sample in Chapter IV will indicate the heterogeneity of the sample used. In addition to this diversity, one of the criteria for selecting schools was to get representation of the extremes of school climate in an attempt to maximize the variance due to the climate itself. One of our first considerations will be to see what effect this heterogeneity had on the EPPS scores.

Elementary schools were selected because one of the two principal instruments (OCDQ) was originally developed in this setting. Information about the manifest needs of elementary teachers is also available from other studies that have used the Edwards Personal Preference Schedule, the other major instrument (see Table B-1).

The study was limited to those schools and teachers who agreed to participate. On the whole, cooperation was excellent. Although no teacher was required to participate, few returned the questionnaires without responding. No school that was personally contacted refused to participate after an explanation of the nature of the study was given to the teachers (see Appendix A for standard information provided to each school and each teacher). Anonymity was insured as teachers were designated only by number, the main purpose of which was to keep the two parts of the instrumentation together.

One of the limitations to the study is the generalizability of results as they relate to schools. No attempt

at complete randomization was made. It was the plan to get many contrasting and differing schools within the total sample. While anticipating that the teachers are representative of Michigan and midwest teachers, the schools will not be. Thus, some statements, such as the following, cannot be made as a result of this study: "Most schools in Michigan have a Paternal Climate" or "Most schools in Michigan have teachers with a high need for Achievement."

CHAPTER II

REVIEW OF RESEARCH

The number of studies that relate to the personality and characteristics of teachers are numerous, but fortunately many have been reviewed by others. A brief summary of selected portions of these reviews has been abstracted. These will reflect information and concerns pertinent to the present study. In addition, a major portion of this chapter will be devoted to consideration of the theoretical foundations underlying the major instruments, the Edwards Personal Preference Schedule and the Organizational Climate Description Questionnaire. Studies involving these instruments and teacher personality will also be considered.

The Domas and Tiedeman and Barr Surveys

Domas and Tiedeman in 1950 reviewed the literature and offered an annotated bibliography as one of a series of reports from a study of teacher competence. It listed over one thousand annotations and described the major ideas about and investigations of teacher competence to that date. Although older, six of these studies are mentioned here because they bear on the problem under study.

Peck (1936) gave 100 women teachers, 52 women students, and 26 male students and actual teachers the Thurstone

Personality Schedule and the Otis Test of Mental Ability. Personal and adjustment data were obtained by questioning the individuals. It was found that woman teachers were less-well-adjusted than women students (using the Thurstone); women as a whole were not so well adjusted as men; and one-third of women teachers were maladjusted while one-sixth needed psychiatric care.

In another study by Blum (1947) it was reported that the correlation between the MMPI personality scores and the Strong Vocational Interest Blank "were slight" in a study of 25 male students in each of five professional schools at the University of Wisconsin, including education. A survey of the literature by Archer (1946) revealed a trend toward the use of personality as a criterion for teaching success. It was reported that there is a growing recognition that no one clear pattern for a successful teacher exists. A review of studies of teaching success by Durflinger (1948) showed no single criterion wholly satisfactory and no one without its merits. Also no personality test yet applied had been a valid measure of the personality traits of the successful teacher. Cattell (1948) suggested that selection of teachers should be carried out through estimation by tests for each individual of a number of independent personality factors.

Symonds (1947) urged that teacher selection be by competent psychologists similar to those in the assessment Office of Strategic Services. The devices which such a

group might use are:

1. personal-history blank
2. ratings
3. interviews
4. situation testing
5. discussion
6. shared tasks
7. instruction
8. stress situation
9. role-playing-psychodrama
10. projective techniques
11. sociometric techniques

Barr in 1948 surveyed over 150 studies and concluded in part that teaching efficiency had been characterized in five ways:

1. in terms of qualities of the person
2. in terms of expected competencies
3. in terms of desired pupil outcomes
4. in terms of behavior controls; knowledge, generalized skills, interests, attitudes, and ideals
5. in terms of a miscellaneous collection of background data and personal data

Certain observations were made about the data of the various studies:

1. A very large number of data-gathering devices are available.

2. The reliabilities of these various devices seem to be relatively high; their validities relatively unknown.

3. The data are many times inconsistent (probably due to non-comparability of conditions).

4. The reliability of examiners is not usually known.

5. The need is for evaluation of data as well as measurement alone.

In terms of prediction of teaching efficiency, Barr concluded in part that the accuracy of prediction seems to have improved as more and better measures have been employed

and as the criterion of efficiency has been refined. Multiple correlations in the 70's and 80's were not uncommon in carefully designed studies.

The best prediction seems to be from combinations of subjective and objective measures. While subjective measures are in general more unreliable than objective measures, they appear to provide data in some areas as yet inadequately covered by objective measures.

In 1961 Barr summarized the major findings of studies reviewed in the Wisconsin Studies and pointed to the development of an abbreviated list of terms and categories that may prove useful in discussing personality traits that are prerequisite to effective teaching. The 25 traits suggested by Charters and others (1929) were reduced to the following 15 qualities:

1. Bouyancy - Surgency, optimism, enthusiasm, cheerfulness, gregariousness, unsuspiciousness and uninhibitedness, talkativeness, sense of humor, pleasantness, carefreeness, vivaciousness, alertness, wittiness.

2. Considerateness - Concern for the feelings and well-being of others, tolerance, sympathy, understanding, unselfishness, patience, helpfulness, friendliness, easy-goingness, geniality, generousness, warm-heartedness, thoughtfulness, kindliness.

3. Cooperativeness - Proneness toward joint action, willingness to share responsibility, readiness to work with others, respect for others, helpfulness when things need to be done, agreeable to working with others, a good team worker.

4. Dependability - Reliability, loyalty, honesty, punctuality, responsibility, conscientiousness, accuracy, painstakingness, trustworthiness, sincerity.

5. Emotional Stability - Realism in facing life's problems, freedom from emotional tensions, not easily upset, poised, self-controlled, relaxed, steady, unhurried, consistant.

6. Ethicalness - Good taste, modest, morality, conventionality, cultural polish, refinement.

7. Expressiveness - Skill in communication, responsiveness, verbal fluency, articulateness, agreeableness of voice, good inflection, audibility.

8. Flexibility - Capacity for approching things in a novel manner, imaginativeness, adaptability, inventiveness, initiativeness, originality, creativeness, enterprisingness, resourcefulness.

9. Forcefulness - Ascendance, dominance, confidence, independence, self-sufficiency, self-reliance, persistence, purposefulness, intending to accomplish, persuasiveness, commanding respect, aggressiveness.

10. Mental Alertness - Brightness, intelligency, academic aptitude, capacity for thinking, power to comprehend.

11. Judgment - Wisdom in the selection of appropriate courses of action, discretion in dealing with others, foresight, common sense, clearheadedness.

12. Objectivity - Fairness, impartiality, openmindedness, freedom from prejudice, use of factual evidence in making criticisms and decisions.

13. Personal Magnetism - Attractively dressed, good physique, absence of distracting physical defects, absence of distracting mannerisms, cleanliness, posture, personal charm, appearance.

14. Physical Energy and Drive - Readiness for action, drive, physical vigor and energy, determination, desire to get things done, vitality, endurance.

15. Scholarliness - Scholastic aptitude, thorough knowledge of subject, being well informed on many subjects, high verbal aptitude, widely read, literateness (p. 136).

Barr concludes that the range of interest in personality aspects of teacher effectiveness needs to be broadened.

Concerns should be extended to include source traits as well as surface traits, and unique teacher occupational characteristics. Teacher behavior should also be related to principles of learning.

The Getzels and Jackson Review

The major review of the literature of the previous dozen years was made in 1963 by Getzels and Jackson. They attempted several classification schemes and finally organized some 800 references according to a number of current psychological concepts relevant to the dynamic definition of personality, such as attitudes, values, adjustments, etc. Some investigations were separated because of the use of radically different instruments and an account of teacher cognitive ability research was added. From this mass of information a summary of the more important studies relating to our particular interest area has been made. These have been supplemented by more recent studies. References prior to 1962 will be found in the Getzels and Jackson reference list.

Attitudes, Values, and Interests

Many research studies have been reported using the Minnesota Teacher Attitude Inventory (MTAI). The validity of this instrument was determined on an empirical basis similar to that of the Strong Vocational Interest Blank. Patterns which discriminated "superior" from "inferior" teachers were utilized. One hundred teachers in each

category were nominated by 70 elementary and secondary principals in Pennsylvania and Ohio on the basis of their ability to win the affection of pupils; fondness for, and understanding of children; and ability to maintain a desirable form of discipline. Later validity studies indicate only a moderate validity (.43 to .59).

A recent study by Sister Mary Misaela Zacharewicz (1963) used the MTAI in conjunction with the Guilford-Zimmerman Temperament Survey to assess teacher-pupil attitudes vs. real and ideal self. Elementary teachers tended to be higher on MTAI scores, but secondary teachers on Restraint and Thoughtfulness on the Guilford. Pivetz (1963) found no significant relationship between teachers' MTAI scores and students' gains in academic achievement or social acceptance by peers, teacher, or school.

A number of other studies using the MTAI show very contradictory results which throw doubt on its usefulness as a research or hiring device. Gage (1957) points out one of the main problems is the empirical scoring procedures which raise a question about the "psychological sense of such scoring weights." He concluded that the reliability and validity were raised when scored with a logical key.

This test has been widely used for the study of teacher attitudes and selection of teachers and yet it is subject to evasiveness and response set on the part of the testee. The test can also be faked, although there is some dispute about this among those making the studies.

Callis (1950) suggests the test is only slightly susceptible to faking "good." Although Stein and Hardy (1957) found considerable faking, they explained it in terms of the test's ability to reveal biased attitudes toward children from the extremes, a rather weak explanation. These studies strongly suggest that the instrument can be faked if an applicant is so motivated and should be used only with this restriction in mind.

The Allport-Vernon-Lindzey Study of Values is designed to measure the relative prominence of six basic interests or motives in personality and is based upon Edward Spranger's work on values and evaluative attitudes. The test consists of a number of forced-choice questions to which two or four alternative answers are provided. There are considerable sex differences on this text. The six variables and their theoretical bases are:

1. Theoretical (discovery of truth)
2. Economic (interest in what is useful)
3. Aesthetic (value in form and harmony)
4. Social (love of people)
5. Political (interest in power)
6. Religious (value in mystical unity)

The manual presents information on 68 male graduate students in education who appear to be higher on aesthetic and social values and lower on religious and economic values than the general sample. MacLean, Gowan, and Gowan (1955) present a more comprehensive view of 1700 teaching candidates at UCLA. The differences among teaching areas are large enough to indicate some interest for further work using this instrument.

In an older study, Seagoe (1946) correlated scores on the Study of Values (along with other scales) with student-teaching scale ratings and "field success" scores. She found a r = -.33 between Economic and a student effectiveness scale and a r = +.26 between Aesthetic and field success rank. Interestingly, none of the six variables related highly to both criterion measures of teaching success. Most of them were at or close to zero on one criterion or the other.

The California F Scale has been used in a few studies. A few small correlations were found by Remmers (1954). Sheldon, Coale, and Copple (1950) used the WAIS, Study of Values, TAT, EPPS as well as the F Scale and found that the "warm teachers" were substantially lower in "authoritarianism." Both the F Scale and similar authoritarianism measures have been under heavy suspicion of late, however, because of response set factors. McGee (1955) in a major study in this area concluded that: there is a positive relationship between a measure of anti-democratic potential and a measure of teachers' overt authoritarian behavior in the classroom; teachers as a group are less authoritarian than other adults of similar status; and men were lower than women on the F scale and an observation measure of authoritarianism.

The Strong Vocational Interest Blank (SVIB) is based on a pattern of likes and dislikes in a vocational area. The

older norms for women teachers were based on the patterns of 238 teachers rated superior by school superintendents in four mid-west states. New norms for men are anticipated after some experience with the new version (Campbell, 1966). Interest patterns suggest the elementary teacher was characterized by conservative moralistic values and did not tend toward intellectual pursuits. Quite a different pattern existed for the secondary teacher--and within this group, the kind of subject taught became a significant factor. Schulz and Ohlsen (1955) attempted to use the Strong as a predictive device but got only chance success. They did find the "best" students were interested in working with people.

Personality Inventories

The Minnesota Multiphasic Personality Inventory (MMPI) has been used in over 100 studies a year and has become one of the most popular personality inventories. It has not, however, been too useful in trying to discriminate between teachers and non-teachers and among interest areas of teachers.

The original MMPI key provided scores on nine scales shown empirically to discriminate between "normal" subjects and various types of psychiatric patients. The scales are:

1. Hs - Hypochondriasis
2. D - Depression
3. Hy - Hysteria
4. Pd - Psychopathic Deviate
5. Mf - Masculinity--Femininity

6. Pa - Paranoia
7. Pt - Psychasthenia
8. Sc - Schizophrenia
9. Ma - Hypomania

In addition, correction or control keys are used to identify people who are considered evasive or careless or who seem to deliberately fake the test.

In 1946 Lough reported on education students preparing to be music teachers and those preparing to be elementary school teachers. In 1947 she reported on nursing students and those in a general liberal arts program. She found no significant differences in any of her studies and concluded that the MMPI has "little or no value in educational selection; it is not a useful instrument for differentiating between those who are more suited for one occupation than another." A study by Blum (1947) showed education students had few deviations worthy of comment.

MacKean, Gowan, and Gowan (1955) found that entering education students at UCLA were slightly high on the Hysteria, Psychopathic Deviate, Schizophrenia, and Hypomania scales. The researchers comment that "perhaps this is a reflection of the teacher's self-control, absence of social fear, scholarly withdrawal, or idealism and energy." Since this study offered general norms for more than 1700 students on a number of different tests, it may have some value for the study of teacher personality, at least at the undergraduate level.

Hedlund (1953) reports a cooperative study involving 840 education students from 18 colleges in New York State

beginning in 1949 which attempted to develop a predictive index to indentify applicants who might fail in the training program or become ineffective teachers. A low Paranoia score was the only MMPI score that differentiated good teachers from poor teachers and also from those who failed to complete the program. In addition, the students who became good teachers received lower L(lie) scores.

A number of studies have found that the more recently developed K control score is an important scale. The score was an effort to correct for the tendency of respondents to be defensive and obtain plus scores. Gowan (1955) reviewed a number of studies using the K scale and concluded:

> It seems evident that K represents much more than a validating key, and that high scores on it have intrinsic significance for positive personality integration in general and for teacher prognosis in particular, over the test-set factor. . . .
>
> These facts argue for a picture of the high K individual as tending to be responsible, conscientious, conforming, controlled and friendly, with a strong ego and good performance in interpersonal relations. He thinks well of others, as he tends to see the best in everyone, himself included. Rather than pointing to an absence of basic problems, this delineation indicates some degree of social anxiety overlaid with a reaction formation in which emphasis is directed towards control of self and adaptation to the needs and demands of others (Getzels and Jackson, 1963, p. 541).

A number of attempts have been made to develop scales of specific items shown to discriminate between groups of effective and ineffective teachers or student teachers. Gowan's Teacher Prognosis Scale was made up of 98 items which were found to discriminate between very effective

teachers and those who are "normally successful." Follow-up studies of the UCLA group give some but not unqualified, support for the use of the scale. Other research suggests that "the success of empirically derived scales is far from assured."

The majority of MMPI studies used personality variables to predict teacher effectiveness. Two studies were carried to the point of testing the accuracy of classification that could be used with predictor variables. These used a variety of multivariate techniques and in general found insignificant results.

LaForge (1962) has reported a factor correlation study between the MMPI and the Catell test which has been used to a limited extent to study teachers. This Catell Sixteen Personality Factor Questionnaire (16 P.F. Test) purports to measure all the main dimensions of personality revealed by factor analysis. Ten to thirteen items for each factor are included in the 187 item test. Burdick (1963) used this test with 86 elementary student teachers and found five traits where the sample scored above the normal elementary teacher group. She suggested that diagnostic use to predict problem areas would provide the most profitable use of this test. Issacson, McKeachie, and Milholland (1963) used the 16 P. F. Test to study teaching fellows at the University of Michigan and related them to student rating of teacher effectiveness. Only tentative results were reported.

Conclusion

Getzels and Jackson also review the Ryans study and several studies on the Edwards Personal Preference Schedule, but since these are considered later in this chapter, they are for the present omitted.

After extensive review, Getzels and Jackson (1963) concluded that many of these studies produced non-significant results. They went on to say:

> Many others have produced only pedestrian findings. For example, it is said after the usual inventory tabulation that good teachers are friendly, cheerful, sympathetic, and morally virtuous rather than cruel, depressed, unsympathetic, and morally depraved. But when this has been said, not very much that is especially useful has been revealed. For what conceivable human interaction--and teaching implies first and foremost a human interaction--is not the better if the people involved are friendly, cheerful, sympathetic, and virtuous rather than the opposite? What is needed is not research leading to the reiteration of the self-evident but to the discovery of specific and distinctive features of teacher personality and of the effective teacher (Getzels, 1955).
>
> But this desideratum is more easily asserted than achieved, for a number of obstacles face the research worker in this area. To mention only three, there is first, the problem of definition; second, the problem of instrumentation; third, the problem of the criterion.
>
> . . . . . .
>
> In addition to these general conceptual limitations, there are a number of specific experimental limitations. For example, there is the limitation of treating teachers--male and female, young and old, primary grade and intermediate grade, teachers of English and of science--as a single group. Often this is done even though differences within the teaching profession may obscure the very differences that need to be revealed. Or, to mention just one other obvious but serious limitation, there is the problem of varied teaching situations. Variations in the teaching situation from one school to another may exist in such factors as educational viewpoints, nature of the student body, conditions in

> the community related to teacher status, and so on, but little provision is made for taking into account the effect of such situational variables on the experimental results.
>
> . . . . . .
>
> The application of theory to research on teacher personality . . . has several distinct advantages over the empiricism currently typical of the field (Guba and Getzels, 1955). . . . A theory is not only taxonomic; it is relational. It attempts not only to describe but to explain. And precisely because it contains such relational elements, theory leads to hypotheses, and ultimately the findings resulting from tests of these hypotheses serve not only a descriptive function but also, and more vitally, an explanatory function.
>
> Finally, theory provides a framework for interpreting observations already made and data already collected. . . . (pp. 574-576).

The Ryans Study

Probably the most comprehensive report on the background, characteristics, and environmental variables of teachers alone was the Ryans report in 1960, published by the American Council on Education. It involved 6000 teachers in 1700 schools and 450 school systems. Observers went into the classrooms to watch the inter-action patterns within a learning environment. A large portion of the report related the efforts of the staff as they tried to find psychometric concomitants to these patterns and to develop instruments to measure them. A very basic problem of concern was the assessment of teacher behavior. To achieve this the study used exploratory observations, previous investigations, and the critical-incidents procedure. The classroom observation form developed over a one-and-a-half year period had four dimensions of pupil classroom

behavior and 18 dimensions of teacher behavior. Inter-rater reliability was between .50 and .60 on separate dimensions and between .70 and .80 on the total instrument. Three behavior patterns found through factor analysis and seven characteristics were isolated. They were:

TCS pattern X - warm, understanding, friendly vs. aloof, egocentric, restricted teacher classroom behavior.

TCS pattern Y - responsible, businesslike, systematic vs. evading, unplanned, slipshod teacher classroom behavior.

TCS pattern Z - stimulating, imaginative vs. dull, routine teacher classroom behavior.

TCS characteristic R - favorable vs. unfavorable opinions of pupils.

TCS characteristic R_1 - favorable vs. unfavorable opinions of democratic classroom procedures.

TCS characteristic Q - favorable vs. unfavorable opinions of administrative and other school personnel.

TCS characteristic B - learning centered ("traditional" or "directive") vs. child-centered ("permissive" or "indirective") educational viewpoints.

TCS characteristic I - superior verbal understanding (comprehension) vs. poor verbal understanding.

TCS characteristic S - emotional stability (adjustment) vs. instability.

TCS characteristic V - validity of response vs. invalidity of response.

Comparisons were made of gorups of variously classified teachers. It was found that teachers who did not participate in school-related play in childhood or adolescence (activities

such as playing school, taking charge of a class for a teacher, etc.) differed significantly on these factors: Patterns X, Y, Z and Characteristics R, R_1, Q and B.

Age differences were significant. Teachers above age 55 were at a disadvantage when compared with young teachers, except on Pattern Y (systematic and businesslike classroom behavior) and Characteristic B (learning centered, traditional educational viewpoints). Part of the explanation offered here lies in the fact that teacher preparation today is vastly different from that of previous generations.

Men and women teachers in elementary school differed only on four personal social characteristics with the men being significantly lower on Pattern Y. At the secondary level, sex differences were fairly general. Women here were higher in Patterns X, Y, and Z, and Characteristics R, R_1, B, and I. Men were high on factor S (emotional adjustment).

Size of school seemed to affect Patterns X and Z and Characteristics Q, I, and S, with teachers in large schools scoring higher than those from small schools.

Teachers who were assessed uniformly high (on Patterns X, Y, and Z) did differ significantly from those assessed low on these Characteristics: R, R_1, Q, B (child-centered), I, and S.

One would assume that there is a relationship between teacher characteristics and pupil behavior in the classroom, and such is the case in elementary school. Pupil behavior there is closely related to teacher behavior. In the

secondary school, however, it seems almost "unrelated" to teacher behavior in the classroom. Only "stimulating-imaginative teacher behavior" seems to be a major factor at the secondary level.

The Kirk Study

In the fall of 1963 Kirk surveyed 73 elementary schools in Michigan using the Organizational Climate Description Questionnaire and the Opinion Survey (which included the Rokeach Dogmatism Scale). She arranged schools and teachers on an open-closed continuum based on an "openness factor." In May of 1964, new teachers in these same buildings were asked to answer a Situation Survey to find specific incidents where they sensed a problem, their level of concern about the problem, and where they sought help in resolving the situation.

Kirk's selection of new teachers for her final analysis was made using 18 teachers in each of four groups: open schools-open teachers; open schools-closed teachers; closed schools-open teachers; and closed schools-closed teachers. In every one of these four groups Kirk found discipline to be the major concern and thus unrelated to school climate. Indeed, for no problem area were differences related to climate or to school size. In some 19 areas of satisfaction, on the other hand, five were significantly related to climate of the school and seven were related to school size. Those satisfactions that differed according to the climate of the

school (significant at the .05 level) included: adequacy of supplies, interest shown by students, teaching load, helpfulness of supervision and fairness with which duties are distributed. The following satisfactions differed according to the size of school (significant at the .05 level): salary compared to other jobs, discipline, school building, working conditions, interest shown by students, relations with students, and relations with other teachers. Frequency of contact with teachers of the same grade and in the same building did show a significant difference among the groups for the school climate (as well as for dogmatism). She summarized the comments of new teachers:

> The number one problem for teachers new in a building was the unwritten rules. Next in order of importance was the item of building procedures and school policies, followed next by discipline. Regular teachers advised and helped new teachers in this order: building procedures and school policies, getting materials and supplies, discipline. Neglected were expectations in daily routine outside the classroom but in the school.
>
> Old teachers and their unwillingness to learn new ways or change their ways were the major gripes about other teachers.
>
> The major difficulty about principals seems to be their lack of time to talk to new teachers about problems. This was also borne out in the two-way analysis of variance conducted earlier in the study.
>
> However, for new teachers, perhaps this one answer summed it up very succinctly: "All offered to help, and it was all different" (pp. 167-170).

This writer was able to obtain the original data from Miss Kirk with respect to the school climates of the 73 elementary schools and half of the present sample is composed

of schools that were in the earlier study. Kirk touched on a number of areas important to the present study in her review of the literature. They are summarized here.

Many writers had suggested that there should be a systematic study of a school before teachers are placed. Professors from Central Michigan University reported that there were some schools where first year teachers should not be placed. One commented: "Much of the success of the first year teacher depends upon the right location of the teacher. An understanding principal can be of great help to the teacher. The college needs to know the schools well--to help the students with the right locations. The college might also be of help to the schools in analyzing their supervisory program."

Assumptions arising from the earlier perceptions of schools as social organizations included one that the existing climate in a school had important effects on the performance of the school and that no two schools had exactly the same climate. It was recognized that teachers behave differently when faced with different cliamtes and that this has an effect on learning.

The NEA publication of Who's A Good Teacher (Kirk, 1965, p. 28) recognized school climate and its variations. It concluded that the teacher function varied from school to school. The function could be rigidly specified or vague and broad. Teacher role studies also partially recognized school climate since the behavior would have to fit

into the pattern of role expectation and also self-concept, i.e., what teachers expected of themselves.

The book, Professional Problems of Teachers (Stinnett and Huggett, 1963, p. 96) offered the following summary:

> Most of our happiness and much of our success depends upon human factors. We can have the finest physical surroundings for work and play and still be unhappy and poorly adjusted. On the other hand, we can enjoy ourselves and be at least moderately successful in rather unpleasant surroundings if we are associating with those whom we enjoy. A teacher's associates are those with whom he works, eats lunch, and visits back and forth. They are the ones with whom he exchanges views on education, talks over trying experiences, and secures assistance in instructional procedures.
>
> Many a good beginning teacher has been handicapped and discouraged by having undesirable associates. A young teacher, for example, may be placed with a group of traditional older teachers who deride all modern methods. They make fun of his efforts to decorate the classroom and laugh at dramatizations and choral reading. They tell him to stop worrying about individual differences and social maladjustments. 'You'll soon learn', they will say, 'that it doesn't pay to do all those extra things because nobody appreciates them. All the people here want is for you to keep the kids quiet and teach them the 3 R's.' Usually the young teacher in such an environment eventually loses all his drive toward doing things differently. Soon he is a routine teacher. It is unfortunate when beginning teachers find themselves so boxed in. Almost inevitably, they will be unhappy and unsuccessful.

A report by Watson describing social patterns in schools in New Zealand found the following not to be significant factors: building, type of community, age and experience of teaching staff, number of years the school had been established, intellectual calibre of pupils, scholastic standards as measured by tests, size of enrollment, presence or absence of organizational features as clubs, P.T.A.'s, and school councils.

The same report indicated that the following twelve factors could be ranked quantitatively and could thus help classify the climate of the school:

1. Extent of knowledge the teachers have of the pupils they teach.
2. Frequency of teacher-parent contacts.
3. Frequency of school's cooperative actions with other schools and educational institutions.
4. Number of pupils to whom identifiable responsibilities are extended.
5. Number of teachers to whom responsibilites are delegated.
6. Degree of delegation of corporate responsibilities to teachers and pupils.
7. Incidence of cooperative actions among staff members.
8. Number of teachers undertaking pedagogical inquiries, research, experimentation, community or professional leadership.
9. Extent of library services: size, circulation, method of operation.
10. Provisions for maintaining continuity in scholastic work: e.g., one class level to the next, from one year to the next, among teachers, teachers and parents, etc.
11. Quantitative assessments of the degree of balance achieved in attention given to all subjects of the curriculum.
12. Degree of parent and community involvement in the school's programs and organization.

Watson's conclusion was that different kinds of schools create different conditions for learning that are significant in judging the quality of education provided for children. Four types of schools are:

1. Schools of the first type called innovative were distinguished by a uniformly high level of achievement, both individual and corporate, by good fellowship and team spirit, and by common agreement upon objectives that the school was pursuing. Each of them placed a strong emphasis upon high and broad scholastic standards, and there was very little divergence between aims and daily practice. Their headmasters all firmly believed that the responsibility for administering, organizing, and improving their schools should be delegated as widely as possible . . .

2. All schools in the next group, called congenial, were pleasant, frank, modest, and good-humoured. Nearly every one of them was doing very fine work in some sphere, but all of them for one reason or other, showed some unevenness in their scholastic work, or allocation of corporate responsibilities, in the sense of purpose of their teachers, or their knowledge of their pupils, or in their relationships with parents, other schools, and so on. In these schools teachers worked more as individuals than as members of a well knit team; they tended to adopt their objectives from official sources and put them into practice somewhat unevenly. . . .

3. In some ways this group of schools, called apathetic, showed a similar unevenness to that of the previous group, but in every case to a very much greater degree. This was not their most striking characteristic, however. At all points, for all associated with them (teachers, pupils, and parents) there was evidence of bewilderment, apathy, and confusion about what they ought to be doing with their communities, other schools, the inspectorate, ex-teachers, or administrators . . .

4. In contrast, the aims and objectives of the fourth group of schools, called autocratic, were very clear indeed. The distinguishing feature in both the primary and intermediate schools of this type was that these aims were laid down rigidly by the headmaster, and that teachers or other interested parties played very little part in reviewing them or in examining their meaning cooperatively. These schools also placed a high value on scholastic standards, but limited their concern in this respect rather narrowly to the basic subject . . . . (Watson, 1964, pp. 251-257).

Edwards Personal Preference Schedule (EPPS)

A widely used personality test is the schedule published by A. L. Edwards in 1954. It was designed for and has found considerable use as an instrument for research and counseling. Its purpose is to provide a measure of 15 relatively independent normal personality variables which originated in the manifest needs developed by H. A. Murray. This test was developed with normal people in mind and the manual data reflect this philosophy. The needs measured are:

1. Achievement (ach)
2. Deference (def)
3. Order (ord)
4. Exhibition (exh)
5. Autonomy (aut)
6. Affiliation (aff)
7. Intraception (int)
8. Succorance (suc)
9. Dominance (dom)
10. Abasement (aba)
11. Nurturance (nur)
12. Change (chg)
13. Endurance (end)
14. Heterosexuality (het)
15. Aggression (agg)

The test is composed of 135 statements, each of which reflects one of these needs. Each need (as represented by a statement) is then paired with each other need. The author tried to choose pairs of statements which were equated for social desirability. This process of pairing was repeated a second time for a total of 210 pairs of items. The scores for each of the above 15 needs is thus a measure (from 00 to 28) of the strength of that need in relation to the other needs represented in the test. It is possible to scale the needs on the basis of their relative rank and strength. Low need scores are the most difficult to interpret because a low score can reflect the fact that some particular need is present but already being adequately met by a person's

environment as well as the possibility that such need is not present within a testee's personality.

In addition to the 15 needs, the EPPS provides a measure of test consistency. Of the total 225 items in the test, 15 are duplicated and the consistency score is simply the number of times the duplicate items are answered the same way.

Edwards own work with the EPPS indicates definite sex differences in the scores. In the general adult sample, as reflected in the manual, the means for men are significantly larger (at the .01 level) on Achievement, Exhibition, Autonomy, Dominance, Endurance, Heterosexuality, and Aggression. The means for women are significantly larger on Deference, Order, Affiliation, Intraception, Succorance, Nurturance, Change, and on the consistency score. The Norms for Adult Women are given in Table B-1. For the EPPS sub-tests, the coefficients of internal consistency (based on split-half analysis) range from .60 to .87. The test-retest reliability (or coefficients of stability) range from .74 to .88. A description of the manifest needs associated with each of the 15 EPPS variables is given in Figure 1, page 36.

Based on his original sample, Edwards found that on the consistency score, 95% obtained a score of 9 or more and 87% obtained a score of 10 or more. He suggested that a score of 10 be used as a logical cutting point. The probability of obtaining such a score by chance alone is about .15.

1. **ach Achievement**: To do one's best, to be successful, to accomplish tasks requiring skill and effort, to be a recognized authority, to accomplish something of great significance, to do a difficult job well, to solve difficult problems and puzzles, to be able to do things better than others, to write a great novel or play.

2. **def Deference**: To get suggestions from others, to find out what others think, to follow instructions and do what is expected, to praise others, to tell others that they have done a good job, to accept the leadership of others, to read about great men, to conform to custom and avoid the unconventional, to let others make decisions.

3. **ord Order**: To have written work neat and organized, to make plans before starting on a difficult task, to have things organized, to keep things neat and orderly, to make advance plans when taking a trip, to organize details of work, to keep letters and files according to some system, to have meals organized and a definite time for eating, to have things arranged so that they run smoothly without change.

4. **exh Exhibition**: To say witty and clever things, to tell amusing jokes and stories, to talk about personal adventures and experiences, to have others notice and comment upon one's appearance, to say things just to see what effect it will have on others, to talk about personal achievements, to be the center of attention, to use words that others do not know the meaning of, to ask questions others cannot answer.

5. **aut Autonomy**: To be able to come and go as desired, to say what one thinks about things, to be independent of others in making decisions, to feel free to do what one wants, to do things that are unconventional, to avoid situations where one is expected to conform, to do things without regard to what others may think, to criticize those in positions of authority, to avoid responsibilities and obligations.

6. **aff Affiliation**: To be loyal to friends, to participate in friendly groups, to do things for friends, to form new friendships, to make as many friends as possible, to share things with friends, to do things with friends rather than alone, to form strong attachments, to write letters to friends.

7. **int Intraception**: To analyze one's motives and feelings, to observe others, to understand how others feel about problems, to put one's self in another's place, to judge people by why they do things rather than by what they do, to analyze the behavior of others, to analyze the motives of others, to predict how others will act.

8. **suc Succorance**: To have others provide help when in trouble, to seek encouragement from others, to have others be kindly, to have others be sympathetic and understanding about personal problems, to receive a great deal of affection from others, to have others do favors cheerfully, to be helped by others when depressed, to have others feel sorry when one is sick, to have a fuss made over one when hurt.

9. **dom Dominance**: To argue for one's point of view, to be a leader in groups to which one belongs, to be regarded by others as a leader, to be elected or appointed chairman of committees, to make group decisions, to settle arguments and disputes between others, to persuade and influence others to do what one wants, to supervise and direct the actions of others, to tell others how to do their jobs.

10. **aba Abasement**: To feel guilty when one does something wrong, to accept blame when things do not go right, to feel that personal pain and misery suffered does more good than harm, to feel the need for punishment for wrong doing, to feel better when giving in and avoiding a fight than when having one's own way, to feel the need for confession of errors, to feel depressed by inability to handle situations, to feel timid in the presence of superiors, to feel inferior to others in most respects.

11. **nur Nurturance**: To help friends when they are in trouble, to assist others less fortunate, to treat others with kindness and sympathy, to forgive others, to do small favors for others, to be generous with others, to sympathize with others who are hurt or sick, to show a great deal of affection toward others, to have others confide in one about personal problems.

12. **chg Change**: To do new and different things, to travel, to meet new people, to experience novelty and change in daily routine, to experiment and try new things, to eat in new and different places, to try new and different jobs, to move about the country and live in different places, to participate in new fads and fashions.

13. **end Endurance**: To keep at a job until it is finished, to complete any job undertaken, to work hard at a task, to keep at a puzzle or problem until it is solved, to work at a single job before taking on others, to stay up late working in order to get a job done, to put in long hours of work without distraction, to stick at a problem even though it may seem as if no progress is being made, to avoid being interrupted while at work.

14. **het Heterosexuality**: To go out with members of the opposite sex, to engage in social activities with the opposite sex, to be in love with someone of the opposite sex, to kiss those of the opposite sex, to be regarded as physically attractive by those of the opposite sex, to participate in discussions about sex, to read books and plays involving sex, to listen to or to tell jokes involving sex, to become sexually excited.

15. **agg Aggression**: To attack contrary points of view, to tell others what one thinks about them, to criticize others publicly, to make fun of others, to tell others off when disagreeing with them, to get revenge for insults, to become angry, to blame others when things go wrong, to read newspaper accounts of violence.

Figure 1.--A conceptualization of the 15 manifest needs measured by the EPPS, reproduced from the manual for the test (Edwards, 1959).

Many studies have been made using the EPPS and many criticisms made. Sarason (1966), for example, suggests that one can criticize this use of the forced choice format in personality assessment on the ground that conflict and annoyance are built up in individuals who are forced to choose between two strongly undesirable attributes. He gives as an extreme illustration not found in the EPPS a pair of statements a subject would have trouble deciding between:

(A) I like to beat my wife.

(B) I like to be humiliated by others.

In an attempt to meet this criticism, Lanyon (1966) developed a free-choice version of the EPPS in which he gave a check list of the 135 different items in a random order with instructions to check the 67 items that best applied to the subject. He concluded that "taken in conjunction with previous studies, the results suggest that little, if anything, is to be gained by using the forced-choice technique in presenting the EPPS items." This version has not as yet been widely used and is in a much more primitive stage than the published form of the EPPS.

The EPPS was administered by Koons and Birch (1964) to 100 male and 200 female college students. The norms obtained differed significantly from published norms on eight of the 15 variables. The authors suggested the development of local norms. Spangler and Thomas (1962) found that the scores on the Affiliation, Deference, and Succorance scales

tended to increase with advancing age. Conversely, they found that responses to the items on the Heterosexuality scale declined with age.

Gauron gave the EPPS to psychiatric patients upon their admission to a psychiatric hospital (1965). The means and standard deviations for 163 female patients of all ages is provided in Table B-1. He found that eight of the needs showed a relationship to age which was similar to that reported in the MMPI literature. He suggested that one factor underlying discrepancies in need patterns between psychiatric patients and those of normal people may be in the patient's inability to fulfill his male or female role, or perhaps the rejection of that role altogether.

Gauron and Adams (1966) found that high scores for both male and female subjects on Succorance, Abasement, and Achievement and low scores for females on Affiliation and Nurturance were indicative of psychological disturbance. Merrill and Heather (1956) found that Abasement and Succorance are the "sickest" needs. They also suggested that a high score on Heterosexuality was probably related to lack of adjustment.

Shortly after publication of the EPPS, Jackson and Guba (1965) used it to study 366 Midwest public school teachers. Part of the difficulty in interpreting this study was that it compared its sample with the only then-existing norms, which were based upon a college-age sample. Since 1957 Edwards has provided new, adult norms. When

compared with college-educated adults, teachers no longer differed so dramatically. Jackson and Guba's conclusions thus need to be modified somewhat. Both their results for elementary teachers and the Edwards adult women norms are presented in Table B-1.

For a second phase of their study, Jackson and Guba divided their sample into groups on the basis of teaching experience. These results are reflected in Table B-2. One of the most interesting comparisons related to the relative similarity of the need profile between the "novice" teachers (0-3 years) and the "veteran" teachers (10 or more years). Although six of the fifteen needs yielded differences significant at the .05 level, there was still an overall rank-order correlation between novice and veteran profiles of .712 for the 196 female teachers (all grades). For female teachers, increasing experience (and thus also age increases) brought major decreases on scores for Heterosexuality, Exhibition and Change. Major increases occur in Endurance, Order and Deference.

Two years later, Guba, Jackson, and Bidwell (1959) compared female education students in a state university with those in a private teachers' college and a Southern Negro university. The results from this study showed that education students in a teachers' college showed personality configurations like those of practicing professional teachers far more than education students in a large university. This was explained thus:

> It seems probable then that for those students who choose to enter teachers' colleges, the choice of a teaching institution is secondary to the decision to become a teacher. Those who want the most "direct" route to the public-school classroom have the opportunity in a teachers' college of becoming acquainted early with professional problems and techniques;. . . . Since such persons seem to be more "profession oriented" than are those who enter multi-purpose institutions, there is a strong possibility that in many respects they closely resemble practicing professionals. Indeed the resemblance between their personality structure and their perception of the teaching task may have been a major factor in their original decision to teach (p. 5).

Shelden, Coale, and Coople (1959) concluded from their study of the EPPS that friendly teachers have a high need for Affiliation and a lower need for Aggression, Succorance, and Abasement than unfriendly teachers. Lang (1960) found that elementary teachers emphasize mothering roles and score higher on Nurturance while secondary teachers emphasize "direction of learning" and score higher on Achievement.

Gray (1964) did find significant differences in need structure between teachers, engineers, and accountants. Affiliation, Intraception, and Nurturance seem important for the teacher group made up of those teaching in humanities at the high school level. Morris (1963) concluded that patterns of expressed needs could be discovered in science teachers that distinguished them from a general college population.

Onas Scandrette (1962) studied the "Differential need patterns of women elementary and secondary level student teachers." She cited Super, Roe, and Hoppock to support her assumption that need structure is an important part of

vocational choice. Included in the study were 73 student teachers preparing to teach on the elementary level and 89 students preparing to teach at the secondary level. Scandrette found statistically significant differences between the mean scores of elementary and secondary student teachers on Autonomy, Affiliation, Dominance, and Aggression. The secondary level student teachers were closer to liberal arts norms than those of the elementary teachers. She concluded that the differences in need patterns of student teachers and in-service teachers could probably be accounted for by differences in age, experience, and selective attrition. Appendix Table B-1 gives the means from her study for the 73 Elementary Student Teachers.

Garrison and Scott (1962) explored the relationship between personal characteristics and the needs of education students. They found that 14 of the 15 needs varied accordint to one or more personal characteristics of the subject. Affiliation was unrelated to any of the 12 personal characteristics. There also was a difference on six needs for married students (vs. single ones), and on four needs depending on age and years planning to teach. They concluded that the trends noted might have been more marked if a more valid measure of needs were available and used.

Hogan (1963) administered the Edwards to sixty undergraduate elementary education preference women, thirty novice elementary women teachers, and fifty experienced elementary women teachers in an attempt to find stereotypes

of the elementary teacher personality structure as held by the teachers in his example. To achieve this, the instructions for the EPPS were altered so that students were asked to react to the items not as they would answer, but as the typical teacher at the grade level at which they expect to teach would respond. The profile of responses for the novice and experienced teachers will be found in Table B-2.

Hogan's study established that one common distinguishing stereotype of the total study group was low scores in Abasement. Other needs on which there were differences between the groups responding and the test norms included Deference, Order, Exhibition, Autonomy, Endurance, Dominance, Intraception, Heterosexuality, and Achievement. In comparison with Jackson and Guba's study, Hogan found only Deference as a trait upon which there was agreement between these studies. Elementary teachers, he commented, do not share Jackson and Guba's proposed stereotypic model of teachers as "sexually impotent, obsequious, eternally patient, painstakingly demanding, and socially inept."

Cobb, Kline, and Wrigley (1966) completed a factoral classification of a number of measures given to Peace Corps trainees. Included in the analysis were 1000 profiles on the EPPS. Because for each subject the total score over all needs must equal 210, a higher than average score on some need means a lower than average score must be found on another need. For this reason many negative correlations

between EPPS variables will be found and not all of them can be loaded on the same factor.

In checking the correlation matrix from the EPPS Manual, Cobb, et al., hypothesized three factors and found two. The two they found were the Sociability factor (which they hypothesized would include Affiliation, Succorance, Nurturance, and Abasement) and the Conformity factor (including Deference, Order, Endurance, and Abasement). Women score more highly than men on Sociability and Adults more than college students on Conformity. These two factors with their EPPS loadings are:

Factor X: Conformity		Factor XI: Sociability	
Order	.70	Nurturance	.73
Deference	.62	Affiliation	.69
Endurance	.55	Achievement	-.48
Abasement	.49	Autonomy	-.41
Heterosexuality	-.46	Succorance	.41
Autonomy	-.41	Dominance	-.33
Aggression	-.37		

The authors define the person high on Conformity as:

> orderly and deferential, and willing to work persistently at any task. He feels guilt and is willing to accept the blame when things go wrong. He is intolerant and demanding in his moral standards.
>
> The person low in the factor displays a very different personality. He likes to do things in his own way. He puts less store on conformity and he is more permissive and flexible in his standards. He likes the opposite sex and falling in love. He can also be quite aggressive toward others (p. 43).

The authors define the person high on Sociability as:

> warm and outgoing, who likes having friends and receiving a great deal of affection from them, and doing favors and giving help to them. . . .

> Persons low on the factor value their independence more and their friendship less. They set high store on accomplishment, and are willing to take the lead to achieve this (p. 44).

Getzels and Jackson conclude their review of the Edwards with this comment:

> Published studies using the EPPS with teachers are as yet too few to justify any conclusions concerning the ultimate usefulness of the instrument in studying teacher personality. One obvious advantage of the instrument is that it was derived from a well-known conceptual formulation (Murray's need system) to which the empirical findings may readily be related (p. 574).

Organizational Climate Description Questionnaire (OCDQ)

Halpin and Croft in an effort to go beyond the "feel" of schools sought to map the domain of organizational climate, to identify and measure in a dependable way the dimensions of that climate. The major impetus for their research came from their observations that:

> Anyone who visits more than a few schools notes quickly how schools differ from each other in their "feel." In one school the teachers and the principal are zestful and exude confidence in what they are doing. They find pleasure in working with each other; this pleasure is transmitted to the students, who thus are given at least a fighting chance to discover that school can be a happy experience. In a second school the brooding discontent of the teachers is palpable; the principal tries to hide his incompetence and his lack of a sense of direction behind a cloak of authority, and yet he wears this cloak poorly because the attitude he displays to others vacillates randomly between the obsequious and the officious. And the psychological sickness of such a faculty spills over on the students who, in their own frustration, feed back to the teachers a mood of despair. A third school is marked by neither joy nor despair, but by hollow ritual. Here one gets the feeling of watching an elaborate charade in which teachers, principal, and students alike are acting out parts. The acting is smooth, even glib, but it appears

> to have little meaning for the participants; in a strange way the show just doesn't seem to be "for real." And so, too, as one moves to other schools, one finds that each appears to have a "personality" of its own. It is this "personality" that we describe here as the "Organizational Climate" of the school. Analogously, personality is to the individual what Organizational Climate is to the organization (Halpin, 1966, p. 131).

To measure the Climate, Halpin and Croft constructed the Organizational Climate Description Questionnaire (OCDQ) and reported their results in monograph form in 1962. The essence of this monograph was reprinted as Chapter 4 in Halpin's book (1966). My personal correspondence and discussions have been with Croft, who has continued the research with this instrument at the University of New Mexico and agreed to score the results of the present study. In the following pages, references to Halpin will reflect reliance on the information provided in the monograph. References to Croft will be to our personal correspondence and conversation.

The OCDQ is composed of 64 Likert-type items which teachers and principals use to describe the climate of their school. It is given in a group situation and can be completed in 15-20 minutes.

Halpin analyzed the climate of 71 elementary schools and 1151 respondents chosen from six different regions of the United States. The 64 items were assigned to eight sub-tests on the basis of factor analysis. Four of these relate to characteristics of the group and four to characteristics of the principal. The eight sub-tests were then

used to construct a profile to depict the school's climate. The details of this procedure are set forth in Chapter III below.

The items in this questionnaire describe typical behaviors or conditions that occur within an elementary-school organization. Each person given this instrument is asked to indicate to what extent each of the descriptions characterize the particular school. Items are not evaluated but marked on a descriptive scale as in this example:

Teachers call each other by their first names.

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

The three major school factors in the instrument were identified as:

I. Authenticity:
The "authenticity," or "openness," of the leader's and the group members' behavior.

II. Satisfaction:
The group members' attainment of conjoint satisfaction in respect to task accomplishment and social needs.

III. Leadership Initiation:
The latitude within which the group members, as well as the leader, can initiate leadership acts.

The group's characteristics are scored on the basis of Disengagement (which loads -.86 on Factor I), Hindrance (+.50 on Factor II), Esprit (+.79 on Factor I), and Intimacy (-.85 on Factor II). The Leader's characteristics are scored on the basis of Aloofness (+.80 on Factor III), Production

Emphasis (+.76 on Factor II), Thrust (+.64 on Factor I), and Consideration (-.85 on Factor III). The subtests are:

1. DISENGAGEMENT refers to the teachers' tendency to be "not with it." This dimension describes a group which is "going through the motions," a group that is "not in gear" with respect to the task at hand.

2. HINDRANCE refers to the teachers' feeling that the principal burdens them with routine duties, committee demands, and other requirements which the teachers construe as unnecessary busy-work. The teachers perceive that the principal is hindering rather than facilitating their work.

3. ESPRIT refers to "morale." The teachers feel that their social needs are being satisfied, and that they are, at the same time, enjoying a sense of accomplishment in their job.

4. INTIMACY refers to the teachers' enjoyment of friendly social relations with each other. This dimension describes a social-needs satisfaction which is not necessarily associated with task-accomplishment.

5. ALOOFNESS refers to behavior by the principal which is characterized as formal and impersonal. He "goes by the book" and prefers to be guided by rules and policies rather than to deal with the teachers in an informal, face-to-face situation.

6. PRODUCTION EMPHASIS refers to behavior by the principal which is characterized by close supervision of the staff. He is highly directive, and plays the role of

a "straw boss." His communication tends to go in only one direction, and he is not sensitive to feedback from the staff.

7. THRUST refers to behavior by the principal which is characterized by his evident effort in trying to "move the organization." "Thrust" behavior is marked not by close supervision, but by the principal's attempt to motivate the teachers through the example which he personally sets.

8. CONSIDERATION refers to behavior by the principal which is characterized by an inclination to treat the teachers "humanly," to try to do a little something extra for them in human terms.

Based upon these patterns, and a factor analysis, six "climates" were identified. The "Ideal Climates" are OPEN, positive loading on Factor I; AUTONOMOUS, positive loading on Factor III; CONTROLLED, negative loading on Factor II; FAMILIAR, positive loading on Factor II; PATERNAL, negative loading on Factor III; and CLOSED, negative loading on Factor I. A brief description of the six climates follows:

> The Open Climate depicts a situation in which the members enjoy extremely high Esprit and the teachers work well together without bickering and griping. They are not burdened by mountains of busy work or by routine reports; the principal's policies facilitate the teachers' accomplishment of their tasks. On the whole, the group members enjoy friendly relations with each other, but they apparently feel no need for an extremely high degree of intimacy. The teachers obtain considerable job satisfaction, and are sufficiently motivated to overcome difficulties and frustrations. The behavior of the principal represents an appropriate integration between his own personality and the role he is required to play as principal. In this respect his behavior can be

viewed as "genuine." Not only does he set an example by working hard himself but, depending upon the situation, he can either criticize the actions of teachers or can, on the other hand, go out of his way to help a teacher. He is in full control of the situation and he clearly provides leadership for the staff.

The Autonomous Climate. The distinguishing feature of this Organizational Climate is the almost complete freedom that the principal gives to teachers to provide their own structures-for-interaction as well as to find ways within the group for satisfying their social needs. When the teachers are together in a task-oriented situation they are "engaged"; they achieve their goals easily and quickly. The essential point is that the teachers do work well together and do accomplish the tasks of the organization. The teachers are not hindered by administrative paper work, and they do not gripe about the reports that they are required to submit. The principal has set up procedures and regulations to facilitate the teachers' task. The morale of the teachers is high, but not as high as in the Open Climate. The high morale probably stems largely from the social-needs satisfaction which the teachers receive. The principal remains aloof from the teachers, for he runs the organization in a businesslike and a rather impersonal manner. He appears satisfied to let the teachers work at their own speed; he monitors their activities very little. He is genuine and flexible, but his range of administrative behavior, as compared to that of the principal in the Open Climate, is somewhat restricted.

The Controlled Climate is marked, above everything else, by a press for achievement at the expense of social-needs satisfaction. Everyone "works hard" and there is little time for friendly relations with others or for deviation from established controls and directives. This climate is over-weighted toward task-achievement and away from social-needs satisfaction. Nonetheless, since morale is high, this climate can be classified as more "Opened" than "Closed." Teachers do not bicker, gripe or differ with the principal's directives. They are there to get the job done, and they expect to be told personally just how to do it. There is an excessive amount of paper work, routine reports, and busy work. Teachers ordinarily work by themselves and are impersonal with each other. The principal is described as dominating and directive; he allows little flexibility within the organization and he insists that everything be done "his" way. He cares little about how people "feel"; the important thing is to get the job done, and in his way.

The Familiar Climate. The main feature of this climate is the conspicuously friendly manner of both the principal and the teachers. Social-needs satisfaction is extremely high, while, contariwise, little is done to control or direct the group's activities toward goal achievement. There are too many people trying to tell others how things should be done. The principal does not burden the teachers with routine reports; in fact, he makes it as easy as possible for them to work. The behavioral theme of the principal is essentially, "let's all be a nice happy family"; he evidently is reluctant to be anything other than considerate, lest he may, in his estimation, injure the "happy family" feeling. Little is done either by direct or by indirect means to evaluate or direct the activities of the teachers.

The Paternal Climate is characterized by the "ineffective" attempts of the principal to control the teachers as well as to satisfy their social needs. The teachers do not work well together; they are split into factions. The principal does a great deal of the busy work himself. The teachers do not enjoy friendly relationships with each other. Essentially, the teachers have given up trying; they let the principal take care of things as best he can. The principal is everywhere at once, scurrying here and there, checking, monitoring and telling people how to do things. He must know everything that is going on. He is always emphasizing all the things that should be done, but somehow nothing does get done. His view is that "Daddy knows best."

The Closed Climate marks a situation in which the group members obtain little satisfaction in respect to either task-achievement or social-needs. In short, the principal is ineffective in directing the activities of the teachers, and at the same time, he is not inclined to look out for their personal welfare. The climate is the most closed and the least "genuine" climate that we have identified. The major outlet for the teachers is to complete a variety of reports and to attend to a host of "housekeeping" duties. The salient bright spot that appears to keep the teachers in the school is that they do obtain satisfaction from their friendly relations with other teachers. The principal is highly aloof and impersonal in controlling and directing the activities of the teachers. He emphasizes production and frequently says that "We should work harder." He sets up rules and regulations about how things should be done, and these rules are usually arbitrary. Essentially, what he says and what he does are two different things.

A number of studies have been completed using the OCDQ. One was a replication of the original study conducted by Brown in 81 elementary schools in Minneapolis and St. Paul (1965). The results verified the pattern of factor weights in the original analysis of the OCDQ items. He concluded that types of organizational climate can be identified through this instrument. He found that principals tended to view the school climate in a more favorable light than teachers; that there was no clear-cut pattern of perceptual differences between males and females; that younger teachers tended to feel stronger social ties with other staff members than did the older teachers, but the older ones had a generally more favorable perception of morale.

Gentry and Kenney studies 111 elementary schools in an urban school district of a Southeastern state to see whether 2321 Negro and white faculty members differed in their perception of schools where they were employed (1965). Forty-five of the sample schools were Negro, 66 were white. A large majority of Negro faculties perceived their schools as closed (40.0%) or paternal (28.9%), while white faculties saw their schools as mostly open (40.9%) or paternalistic (31.8%). Only 13.3% of the Negro schools were seen as open and only 6.1% of the white schools were seen as closed. There were significant differences on the Disengagement, Esprit, and Production Emphasis sub-tests even in a comparison of the white (N=27) vs. the Negro (N=6) open climate schools.

Using the OCDQ, Anderson (1965) divided schools into three groups (most open, middle, most closed), and found significant differences on five of the 22 variables on the 16 PF Questionnaire and the Study of Values.

Principals in closed climate schools were more evasive, and more submissive than principals of the other two groups. Principals in open climate schools were more confident, more resourceful, and more successful in productive organizational activities than were principals in the other schools.

Andrews (1965) had the principals and teachers of 165 schools in Alberta reply to the OCDQ and three rating scales:

1. How satisfied are you with all aspects of your teaching situation?
2. How effective do you consider your principal to be in performing all the various functions which he should perform?
3. Compared with other schools known to you, how good a job do you judge your school does in educating the students who come to it?

Using the sub-test scores as well as climate similarity scores he found four significant variables: median grade level of school, number of teachers, years of training, and percentage of males. Years of teaching experience and age did not appear to have strong relationships to climate and there was a negative relationship between years in the present schools and the sub-test score on Esprit. There was a significant relationship between closed climate and large

schools and a strong positive relationship between teacher satisfaction and a more open climate, especially to the Esprit score. Teachers' rating of School Effectiveness also correlated highly with climate and the Esprit sub-test. Since this instrument was used in all types of schools, the results suggested the validity of the OCDQ for secondary as well as elementary schools.

Collins (1966) investigated whether relationships existed between teachers' personality patterns and their level of job satisfaction in open and closed organizational climates. The focus was upon the teachers' perception of climate and satisfaction as individuals rather than as group members.

Two hundred unselected teachers from 21 schools in 12 school districts in Contra Costa County, California, completed "test kits" composed of the OCDQ, the Meyer-Briggs Type Indicator, and a high-low teacher satisfaction scale.

He found that Intuitives favored the open climate and had a lower satisfaction with closed climates. Sensing types appeared to be more adjustable. Intuitive-introverts more strongly favored the open and rejected closed climates, while sensing-thinking types reported more teachers as highly satisfied with closed climates than with open. Collins concluded that individual personality did have an impact upon a teacher's perception of climate, and on job satisfaction level.

Using an urban population of 1145 female elementary teachers, Kenney, Gentry, and White (1967) identified two groups of teachers from their scores on the OCDQ. One group of 26 teachers who perceived the climate of their school as open (and were in a school system classified as open) was compared with 35 teachers who perceived the climate of their school as closed (and were in a school classified as having a closed climate). Personality factors using the 16 P. F. Questionnaire were assessed for teachers in both groups. The results indicated that teachers in closed climates were significantly more anxious and extroverted than were teachers in open climates.

Koplyay and Mathis (1967) investigated the relationships between teacher morale and organizational climate using the Chadler-Mathis Attitude Inventory and the OCDQ. Involved were 17 schools and 299 elementary school teachers. Subtests on the attitude scales were compared to the climates and to the type of salary schedule. The authors concluded that the morale level of the school is significantly related to the organizational climate of the school. The morale level appeared to have a greater relationship to organizational climate than to the type of salary schedule (merit, non-merit). Schools with an open climate did not differ significantly on any of the attitudinal areas measured by the Inventory. Schools with a closed climate did differ on four of the five subtests (School, Policy, Community, and

Administration), the differences being greatest for merit-salary schools.

CHAPTER III

METHODS AND PROCEDURES

The purpose of this study is to investigate and analyze the relationships between the climate of different elementary schools and the teachers who teach within those schools. All persons within a school are involved in inter-personal relationships. This includes the principal, secretary, custodian, as well as the teachers. For the purposes of this study the investigation is limited to the needs manifested by female elementary school teachers as measured by the Edwards Personal Preference Schedule (EPPS). The principal hypotheses involving the EPPS do not relate to the male elementary teachers (of which there are few) nor to principals, regardless of sex. These people are very important, however, when it comes to the use of the Organizational Climate Description Questionnaire (OCDQ) since this instrument measures both individual perceptions of the school climate and the consensus of the group as to how a school climate or environment within which the teachers work should be classified. The male teacher and particularly the principal are an important part of that climate. Four of the OCDQ sub-scores, for example, directly reflect the staff's attitude toward and perception of the principal.

Population

There are two populations to be considered in this study. The most important population to be sampled is that of all teachers in Michigan. The other is the population of schools in Michigan. This latter was limited to schools upon which some data was available and whose staff would be interested and willing to participate in this study. It was recognized that such staff participation is becoming more of a problem in light of recent changes in the collective bargaining activities permitted teacher groups. At the time of this study Michigan is still in the midst of "learning to live with" this new education bargaining situation. Twelve schools were selected from the schools surveyed by Kirk (1965) and an equal number were added to meet the varied requirements of heterogeneity already mentioned in Chapter I. As was mentioned there, the schools in the present sample are not to be considered a random selection of all schools in Michigan.

Instrumentation and Procedure

The major instruments used in this study have been reviewed in some detail in Chapter II. These include the Edwards Personal Preference Schedule (EPPS) and the Organizational Climate Description Questionnaire (OCDQ). To these two instruments was added material necessary for vocational and biographical information and the five Scale Questions. The standard EPPS booklets and score sheets were

obtained from the Psychological Corporation and used as published. The other information was worked into one nine-page booklet with 81 questions. The general directions given to all teachers who took the instruments, together with the General Information schedule (including the OCDQ), is included as Appendix A.

The directions asked each teacher to first complete the General Information part of the study. The questions here were short, varied and of inherent interest to teachers because they related to their present vocational environment. The EPPS was completed second. It took longer, was more repetitious, and likely appeared to be unrelated to the school setting. Partial completion of the material and missing data are taken into account in the analysis.

When completed, each teacher's data becomes a single observation and is recorded on IBM cards in accordance with the coding system in the Code Book (see Appendix C). The EPPS sheets were scored by hand using the scoring keys provided by the author. That and all other data were recorded on data sheets for key punching. All IBM cards were "listed" and proofread using the original data.

There are IBM cards for each subject based upon this original data. The set of cards containing the individiual responses to the OCDQ were sent to Dr. Don B. Croft, co-author of the OCDQ, who agreed to score that portion of the data at the University of New Mexico. The other card contained the basic vocational and biographical

information, the scores from the EPPS, and the summary of OCDQ factor scores and individual perception of climate as scored by Croft.

Scoring of the OCDQ

How does one use the OCDQ to determine the climate of a school? The step by step approach used by Halpin is:

Step 1 - Each participating teacher and principal answers the 64 item questionnaire (see Appendix A).

Step 2 - These questionnaires are scored on the basis of the eight sub-tests, each item in a particular sub-test contributing from six to nine points to the score for that sub-test.

Step 3 - These raw scores are then normatively standardized for the school as a whole by equating each sub-test to the longest (10 item) sub-tests, and using the mean and standard deviation values of a larger, nation-wide sample. The resultant sub-test values can then be compared to the larger sample which has a mean of 50 and a standard deviation of 10.

Step 4 - These normalized scores are then ipsatively standardized to obtain the sub-test profile for the school which is then compared with the ideal climate profiles described by Halpin (1966, p. 174). These ideal climates are based on the original factor analysis of 71 schools and 1151 teachers and are rarely duplicated in practice. How close the profile of sub-test scores for each school comes

to each of the six ideal climates is measured by the sum of the absolute differences in the profile measurements. Where the resultant scores are tied or close to being tied, a sub-test by sub-test analysis is sometimes needed to place the school into the best classification. Croft suggests that the smallest climate similarity score be selected to identify the climate of the school. The largest similarity score indicates which climates the school is not like. Croft comments:

> If the climate similarity score is greater than approximately 45, the climate of the organization is not clearly one type or another. If an organization obtains low similarity scores for two types of climates, the organization possesses characteristics of both climates. For example, the organization may have the attributes of both an open and autonomous climate.

Step 5 - The double standardization process, this time on an individual by individual basis, is then repeated for each respondent. In addition to the raw scores, the "T" scores for each sub-test and profile similarity scores for each climate are computed subject by subject.

These five steps provide two kinds of data. One describes the school climate as perceived by all teachers taken together; the other provides a measure of the individual perception of each participant.

Hypotheses About the Sample

The Edwards Personal Preference Schedule

One hypothesis, although not directly critical to the results of this study, affects the degree to which the

results can be generalized. This hypothesis reflects how the EPPS results from this study compare with those of other studies involving the EPPS and elementary school teachers. The results of the Jackson and Guba Study (1957) are reproduced in Table B-1. These results were compared with the data from the present study to answer the question of whether the present sample was drawn from and is representative of all elementary school teachers in Michigan and the mid-west. It was not anticipated that the sample would reflect the adult women's norms also found in Table B-1, but it was hypothesized that the results would be close or substantially close to the data from the Jackson and Guba study involving elementary school teachers. A significant departure (.01 level) was deemed sufficient to cast doubt on the wisdom of generalizing data involving the EPPS.

The Organizational Climate Description Questionnaire

Several alternative ways are available for looking at OCDQ results. The 64 items of the OCDQ are combined into the eight sub-tests, which in turn can be reduced to three factors. There is a different set of factors when talking about the group consensus sub-test scores than there is in talking about individual teacher perceptions. These differences will be discussed in Chapter IV. The eight sub-test scores also provide the school or individual pattern which yields the "climate similarity scores." (See Step 4, above, in the scoring process of the OCDQ.) The schools upon which

the ideal climates were based, however, were selected because they essentially loaded (either positively or negatively) on only one of the three factors. The ideal open and closed climates respectively loaded positively and negatively on Factor I; Familiar and Controlled Climates on Factor II; Autonomous and Paternal Climates on Factor III (Halpin, 1966, pp. 186-192).

Using the factor analysis one can look at school climate from a different viewpoint. The specified climate can be conceived as being described by a single point in eight dimensional space, i.e., the one point closest to the eight points (one in each of the eight dimensions) provided by the eight sub-tests. The eight dimensional solution assumes that all eight sub-tests are independent and no one of them is a linear combination of any of the others. This is not entirely true as the Esprit sub-test correlated .60 with Thrust, .42 with Consideration, and -.36 with Disengagement in the original analysis. Thrust correlated .49 with Consideration. Other correlations ranged from -.32 to +.31 (Halpin, 1966, p. 155).

Because of the factor analytic studies using the OCDQ (Halpin, 1966, p. 190) one can also alternatively picture climate in three dimensional space. This means that each of the eight sub-tests is placed into one of the three factor scores which represents a single dimension. They can be weighted but this essentially only complicates the handling and interpretation of data.

Halpin tries to push the OCDQ results to the point where he can explain "climate" in a single dimension. He admits that the six climates cannot be "ranked on this continuum," only that they can be "arrayed in respect to it" (1966, p. 134). To find a more accurate dimension of "openness" or "authenticity," however, Halpin turns to Factor I. He describes a school high on this openness factor as being high on the Esprit and Thrust sub-tests while low on Disengagement:

> These scores describe an energetic, lively organization which is moving toward its goals, but which is also providing satisfaction for the individuals' social needs. Leadership acts emerge easily and appropriately as they are required. The group is not preoccupied exclusively with either task-achievement or social-needs satisfaction; satisfaction on both counts seems to be obtained easily and almost effortlessly. Contrariwise, the Closed Climate is marked by low scores on Esprit and Thrust, and by a high score on Disengagement. There seems to be nothing going on in this organization. Although some attempts are beingmade to move the organization, they are met with apathy; they are not taken seriously by the group members. In short, morale is low, and the organization seems to be stagnant (pp. 189-190).

While useful for comparing teachers who come from a "Paternal Climate" (or some other climate) with those who come from a "Familiar Climate," the climate itself is merely a category variable, non-continuous in nature. Climate for a given school comes from the sum total of all teachers' responses to all questions on the OCDQ and is often an arbitrary decision. Climate alone, then, is not enough.

There are two choices. The data can be analyzed on the basis of individual perceptions of climate. This has

some of the same limitations of the group consensus method, but will be useful. An even more useful approach is to visualize the climate in its three major dimensions and to compare teachers who come from schools ranking high or low on a given dimension. This factor approach was adopted because it is based upon the original OCDQ study, because each of the factors seems to represent a single continuum, and because the climate is only a single distillation of the information represented on these three factors.

EPPS and OCDQ

One of the prime questions of concern in this study was the relationship between the EPPS and the school climate as pictured by the various factors. Although the principal concern was with the "openness" of the school as measured by Factor I, the same considerations that led to the conclusion that there may be a relationship between EPPS needs and Factor I also led to the conclusion that there may be relationships with the other two factors. Theoretically the three factors are essentially unrelated. The extent of relationship in the present sample will be explored in Chapter IV.

The plan was to divide the total number of teachers into two or three groups on the basis of climate "openness," the measure used by Kirk (1965) and which is Factor I in the present data. It was agreed that at least 290 teachers would

be tested and no less than 75 would be placed in a group for this phase of the analysis.

After the data is collected, the 75 teachers from the most open and the 75 teachers from the least open schools will be selected. Since all teachers at a given school will be assigned the same Factor I score, something more than 75 may have to be included in the top and bottom groups to account for tied scores. The third or middle group will be retained to make sure the direction or trend of a given result is consistent with the hypotheses. It is possible, for example, to find a significant difference between high and low groups without the mean of the middle group being between the other two means. In such a case the result is suspect and either a chance factor may be affecting the results or an inappropriate grouping has been made.

EPPS and OCDQ Hypotheses.--It was hypothesized that teachers from open climate schools (those with high scores on Factor I) would score higher on the EPPS needs in List "A" than teachers from less open climate schools. It was also hypothesized that teachers from less open climate schools (those with low scores on Factor I) would score higher on the EPPS needs in list "B" than teachers from the more open climate schools.

List "A"	List "B"
1. Achievement	1. Deference
2. Exhibition	2. Order
3. Autonomy	3. Dominance
4. Affiliation	4. Abasement
5. Intraception	5. Endurance
6. Succorance	6. Aggression
7. Nurturance	7. EPPS Factor Conformity
8. Change	
9. Heterosexuality	
10. EPPS Factor Sociablity	

It was further hypothesized that teachers from schools with a high task and social needs satisfaction (low scores on Factor II) would score higher on the EPPS needs in List "A" than teachers from schools with high needs dissatisfaction (high scores on Factor II). This latter group would, it was hypothesized, score higher on List "B".

It was also hypothesized that teachers from schools with a high degree of non-aloofness and much consideration from the principal (low scores on Factor III) would score higher on the EPPS needs in List "A" than teachers from schools where there is more aloofness and less consideration. It was hypothesized that this latter group would score higher on the needs in List "B".

In all cases the hypotheses related to List "A" might be statistically represented thus:

$$H_0: \mu_1 \leq \mu_2 \leq \mu_3$$

$$H_1: \mu_1 > \mu_2 > \mu_3$$

where μ_1 is the mean for teachers from schools that are

"most open," "most satisfied," or "most non-aloof and considerate," and μ_3 is the mean for teachers from schools that are "most closed," "most dissatisfied," or "most aloof and non-considerate." In an analysis of variance routine, if the direction of the differences in the means is appropriate and consistent, large values of the "F" statistic will lead to the rejection of the null hypothesis. A significance level of .05 was deemed acceptable.

In all cases the hypotheses related to List "B" might be statistically represented thus:

$$H_0: \quad \mu_1 \geq \mu_2 \geq \mu_3$$

$$H_1: \quad \mu_1 < \mu_2 < \mu_3$$

where μ_1 is the mean for teachers from schools that are "most open," "most satisfied," or "most non-aloof and considerate," and μ_3 is the mean for teachers from schools that are "most closed," "most dissatisfied," or "most aloof and non-considerate." If the direction in the means is appropriate and consistent, large values of the "F" statistic will again lead to the rejection of the null hypothesis. A significance level of .05 was deemed acceptable.

Scale Questions and OCDQ.--Although the five Scale Questions were developed for separate presentation to the teacher sample, four of the five were based upon the conclusions drawn by Halpin in his factor analysis of the OCDQ. The reason for this is two-fold. Were Halpin's factors

measuring what he claimed they were measuring? Can a teacher scale directly that which a group of sub-tests scale indirectly?

SQ1 asks for the teacher's perception of the group's behavior in terms of openness: "How real, authentic or open is the principal or teacher behavior at this school?" Respondents are asked to circle a number from 1 to 7 where 7 is labeled "Very much so," 4 is labeled "Moderately so," and 1 is labeled "Not at all." The other numbers are unlabeled. This question came from Halpin's comments about the meaning of Factor I (1966, pp. 190-192).

The other Scale Questions ask teachers about themselves. SQ2 asks "How satisfied (happy) are you with your attainment of task or job goals?" SQ3 asks "How satisfied (happy) are you with the degree to which your social and interpersonal needs are being met at this school?" Both are scaled on the same basis as SQ1. Both are inversely related to Halpin's Factor II which includes task accomplishment and social needs satisfaction. High scores on Factor II would result from a great deal of Production Emphasis by the principal and a high degree of Hindrance with very little intimacy among the group members. Thus, low scores on Factor II would tend to indicate satisfaction; high scores, dissatisfaction.

The question of happiness (SQ4) had no specific basis in the OCDQ but was designed to let the teachers rate just how happy they felt in their present teaching situation.

While a teacher could intentionally or unintentionally fake a high score by convincing herself that she really felt happy, it is doubtful that low scores would be so faked. The question asks, "Overall, how happy are you working in this job in this school this year?" It is thus limited to the present environmental situation and the current year.

The last Scale Question (SQ5) asks "How free do you feel to take a position of leadership in the school on some issue that concerns you?" This again was related to Halpin's analysis, this time to Factor III on Leadership Initiation by group members. High scores on Factor III come from a high degree of aloofness by the principal together with a small amount of consideration. Accordingly one would expect that high scores on Factor III would not be conducive to a feeling of freedom to take a leadership role in the school. Since the major concern is with the openness of the schools, hypotheses were formulated that teachers in more open schools would respond to these questions with high scores. Because of the importance of the other two factor scores, hypotheses were also formulated to test relationships between the factors and these Scale Questions.

Hypotheses concerning Scale Questions.--The following three sets of hypotheses reflect the theoretical manner in which each of the five Scale Questions should be answered by teachers from schools high and low on each of the three factors.

A1. Teachers from the most open schools will perceive their school environment as being more open or authentic than those from the least open schools.

A2. Teachers from the most open schools will feel a greater satisfaction with attainment of task goals than those from the least open schools.

A3. Teachers from the most open schools will feel a greater satisfaction with attainment of social and inter-personal needs than those from the least open schools.

A4. Teachers from the most open schools will feel a greater overall sense of happiness than those from the least open schools.

A5. Teachers from the most open schools will feel more freedom to take a leadership role than those from the least open schools.

In all cases the direction of these hypotheses is the same and statistically might be represented thus:

$$H_0: \mu_1 \leq \mu_2 \leq \mu_3$$

$$H_1: \mu_1 > \mu_2 > \mu_3$$

where μ_1 is the mean for teachers from the most open schools and μ_3 is the mean for teachers from the least open schools. An analysis of variance routine is appropriate to test these hypotheses and if the direction of differences in the means is appropriate and consistent, large values of the "F"

statistic will lead to the rejection of the null hypothesis. A significance level of .05 was deemed acceptable.

B1. Teachers from schools with a high degree of dissatisfaction (high scores on Factor II) will perceive their school environment as being less open than those from an environment where greater satisfaction is felt by the staff.

B2. Teachers from schools with a high degree of dissatisfaction will feel less satisfaction with attainment of task goals than those from an environment where greater satisfaction is felt by the staff.

B3. Teachers from schools with a high degree of dissatisfaction will feel less satisfaction with attainment of social and interpersonal needs than those from an environment where greater satisfaction is felt by the staff.

B4. Teachers from schools with a high degree of dissatisfaction will feel less of an overall sense of happiness than those from an environment where greater satisfaction is felt by the staff.

B5. Teachers from schools with a high degree of dissatisfaction will feel less freedom to take a leadership role than will teachers from an environment where greater satisfaction is felt by the staff.

In all cases the direction of these hypotheses is the same and statistically might be represented thus:

$$H_0: \quad \mu_1 \geq \mu_2 \geq \mu_3$$

$$H_1: \quad \mu_1 < \mu_2 < \mu_3$$

where μ_1 is the mean for teachers from the schools with most dissatisfaction (high scores on Factor II) and μ_3 is the mean for teachers from schools where teachers are the most satisfied. If the direction of differences in the means is appropriate and consistent, large values of the "F" statistic will lead to the rejection of the null hypothesis. A significance level of .05 was deemed acceptable.

C1. Teachers from schools with a high degree of aloofness and little consideration from the principal (high schools on Factor III) will perceive their environment as being less open than those from an environment where the principal is considerate and not aloof.

C2. Teachers from schools with a high degree of aloofness and little consideration from the principal will feel less satisfaction with attainment of task goals than those from an environment where the principal is considerate and not aloof.

C3. Teachers from schools with a high degree of aloofness and little consideration from the

principal will feel less satisfaction with attainment of social and interpersonal needs than those from an environment where the principal is considerate and not aloof.

C4. Teachers from schools with a high degree of aloofness and little consideration from the principal will feel less of an overall sense of happiness than those from an environment where the principal is considerate and aloof.

C5. Teachers from schools with a high degree of aloofness and little consideration from the principal will feel less freedom to take a leadership role than those from an environment where the principal is considerate and not aloof.

In all cases the direction of these hypotheses is the same and statistically might be represented thus:

$$H_0: \mu_1 \geq \mu_2 \geq \mu_3$$

$$H_1: \mu_1 < \mu_2 < \mu_3$$

where μ_1 is the mean for teachers from schools high on Factor III and μ_3 is the mean for teachers from schools low on Factor III. If the direction of differences in the means is appropriate and consistent, large values of the "F" statistic will lead to the rejection of the null hypothesis. A significance level of .05 was deemed acceptable.

Summary

In this chapter the purpose of the study has been discussed, along with the population to be used, the instrumentation, hypotheses, and the research procedures.

The bases for the research hypotheses were then presented and discussed in some detail as they relate to the EPPS and the OCDQ and the factor analysis of the OCDQ. The procedures for relating the data, the research hypotheses, and the statistical hypotheses were also specified. The relationship between the OCDQ and the Scale Questions was discussed, research hypotheses presented, and statistical hypotheses specified.

CHAPTER IV

PRESENTATION OF FINDINGS

This chapter is divided into six main sections. In the first portion of the chapter the sample will be described in terms of averages for the entire group that participated. An analysis of the Edwards Personal Preference Schedule (EPPS) will follow, considering the female elementary school teacher separately from the men and all principals, and relating this data to the findings of other studies and to norms for adults in general. Of particular importance is the age-experience inter-relationship. The next portion will analyze the Organizational Climate Description Questionnaire (OCDQ) findings for the whole sample, the factor scores used in testing the hypotheses of the study, and the individual perceptions of climate.

An analysis of the 51 hypotheses relating the OCDQ school climate factor findings to the EPPS data, and an interpretation of this data, will be followed by a similar analysis of the 15 hypotheses related to the five Scale Questions and the climate of the school. The relationship between the EPPS and Scale Questions will also be considered. The chapter will conclude with a section on other

findings not directly related to the hypotheses from this study but which provide information of importance for further research in this area.

Description of Sample

Twenty-four Michigan schools and 420 teachers and principals were asked to participate in the study. All schools did participate and 359 (or 86%) of the teachers and principals provided at least part of the information requested. Of the 61 teachers who did not respond, 31 were from the two schools where the investigator was not permitted direct contact with the staff. In only two other schools did the response drop as low as 67% and half the schools provided 100% participation. All of those who responded completed the OCDQ, the biographical data and the five Scale Questions (see Appendix A). In only a few cases were any items omitted.

Of the 359 subjects who participated, 37 were male and were excluded from parts of the study. An additional five women were principals and thus excluded from the portion relating to teachers. Of the remaining 317, 22 teachers failed to complete all or a substantial portion of the EPPS and were dropped from that part of the analysis. All of these remaining 295 subjects omitted less than 15 items on the EPPS. In most cases where the schedule was not complete, one or two items were missing; in a few cases whole groups of five were missed, probably because of inadvertent

skipping on the answer sheet. The breaking point was between 10-13, and past this point large numbers were usually skipped. One person "gave up" after completing 150 of the 225 items. One did not finish, and several started and quit after doing only a dozen items. The criterion for elimination from the sample was 15 or more items missed. In accordance with the EPPS Manual, a coin was flipped on all missing items to provide a total score consistent with all other respondents. Each test was then double checked to be sure that the sum of all responses added to 210, the number required by the forced choice format. The final sample for analysis of the EPPS contained 295 subjects (all female) or more than 90% of the total.

Some of the information gathered from the sample can be analyzed in more general terms. The average age of those participating in the study was 40.45 years with a standard deviation of 14.76. There was a distinct difference between schools on this factor. Some schools had as many as two-thirds or more of their teachers under age 30 while others had 80% or more over age 30 or age 40. The average age in a school ranged from a low of about 25 to over 50. Table 1 shows, by 10 year groupings, the distribution in the sample.

The average number of years of experience in education was 12.42 years with a standard deviation of 10.86. Again this was distributed unevenly among the schools as

TABLE 1.--Age, years experience in education and years experience in building for 359 subjects in total study.

Age		Years Experience in Education		Years Experience in Building	
20-29	N = 130	0 - 3	N = 102	0 - 3	N = 211
30-39	46	4 - 9	83	4 - 9	104
40-49	54	10 - 19	80	10 - 19	37
50-59	88	20 - 29	60	20+	7
60-69	41	30+	34		

one might expect considering the varied age distribution. (See the next section for comments on this age-experience interaction.) The distribution by groupings is shown in Table 1.

The years in a building category provided a mean of 4.44 and a standard deviation of 4.81. This figure must be considered carefully, however, because some buildings were relatively new and thus restricted the length of time a teacher could have been active within the building. A number of teachers had been in their present teaching location since the building was constructed, having transferred from a consolidated district or an older building. This distribution is also shown in Table 1.

Educational background varied among the schools. Of the total sample, 15 teachers did not have their BA degree and 27 teachers and principals had work beyond the Master's level. Between these extremes, 108 had only the Bachelor's degree, 178 had work beyond this level, and 31 had completed the Master's degree. Both extremes were distributed

well across the sample with only one school having as many as three non-degree teachers. Seventeen schools had personnel with work beyond the Master's degree but only three schools had as many as three such people.

The vast majority of the sample were married with only 42 single teachers, 14 who were separated or divorced, and 21 who were widows.

In terms of vocational aspirations the following pattern emerged:

4 saw teaching as only a temporary job.
3 planned to teach only until marriage.
37 had plans to teach until they had children.
45 saw themselves teaching less than five years now but coming back to education later.
26 were planning for a non-classroom position in education.
91 were planning to teach for the forseeable future.
142 planned to teach until retirement.

One question in the general schedule asked why the teacher chose a particular school. The answers here are subject to qualifications since categories and assignment of respondents to categories was done after the answers had been received. Many times subjective judgment placed the subject in one or another of the categories. In a rough sort of way, then, these are a distillation of the reasons given for choosing a school[1] and how many were assigned to each reason:

---

[1]See Page 120 for a discussion of the differences between teachers who chose to be in a school and teachers who were present because of situational factors.

93 location (close to graduate school, close to home, etc.)
40 husband working in area
6 size of school or system
26 administrative reasons (such as closing a school or transfers)
31 only job available that met teacher's situation
58 school philosophy, atmosphere or facilities (as choosing a new building)
20 personal contact (as in student teaching)
55 placement by administrative office with little or no choice possible by the teacher

The questions relating to job success did not achieve the goal since the mean for the whole sample was 8.16 (on a scale of 3 to 9) with a standard deviation of only 1.14. Two hundred six rated the maximum 9 and only two went as low as 4. These questions did not differentiate the teachers as well as was desired and in retrospect it would appear that another Scale Question would have achieved better results. In coding the answer sheets a number of the respondents seemed to have misunderstood the intent of the questions, for their answers were not always consistent with other data available. It is also interesting to note that this group of questions relating to job success did not correlate with anything else. They were excluded from further consideration.

The five Scale Questions did distribute themselves much more normally and slightly above the mid-point (4) of the scales. The means and standard deviations are given in Table 2.

More detailed information regarding all of these variables are given in subsequent sections as the details

TABLE 2.--Means and standard deviations for the five Scale Questions, N = 359.

Scale Question	Mean	Standard Deviation
SQ1 - Perception of Openness	5.18	1.41
SQ2 - Task Satisfaction	5.20	1.19
SQ3 - Social Needs Satisfaction	5.30	1.49
SQ4 - Overall Happiness	5.46	1.53
SQ5 - Freedom to Lead	5.20	1.59

are important to a discussion and analysis of the topic then under consideration.

Analysis of the Edwards Personal Preference Schedule

One of the two major instruments in this study is the Edwards Personal Preference Schedule (EPPS). Several questions of concern will be discussed in this section. One concerns the nature of the EPPS data gathered and the extent to which it is representative of all women and/or teachers generally. Another relates to the relationships between the EPPS variables and the age-experience interaction in teachers. Other questions relate to the EPPS factors of sociability and conformity, the consistency score and the findings relating to male elementary school teachers and all principals.

The Inter-correlation Matrix of the EPPS

A master inter-correlation matrix of the EPPS sub-scores for the female teacher group was formed and is reproduced in Table B-3. Only three of the 210 correlations

were .40 or higher. This tends to support Edwards' contention that the variables being measured by the EPPS are relatively independent. When compared with Edwards' intercorrelations (1959, p. 20) there were no noteworthy departures. The direction was the same in every case and the magnitude approximately the same, and certainly within chance fluctuation. Edwards' largest correlations were .46 and -.36; the present study found the largest correlations to be .44 and -.44. Considering that Edwards used 1509 subjects and all college students, while this sample consisted of 295 elementary school teachers who were all female and varied in age from about 20 to almost 70, the findings suggest that the EPPS inter-correlations tend to hold up regardless of age or population. It also tends to support the conclusion that this volunteer sample is not biased.

Representativeness of Sample

The question was raised in Chapter III as to how representative was the present sample of the population from which the sample was taken. No effort was made to randomly select schools for this study, but rather to select schools of varying characteristics. To gain some idea of the representativeness of the present sample, it was compared with both the Edwards' norms for adult women and the Jackson and Guba 1957 data on 196 female elementary school teachers. The second portion of Table 3 shows the results of this

TABLE 3.--Edwards Personal Preference Schedule Means and Standard Deviations for various sub-samples from total study and differences in means from other studies using the Edwards Schedules.[a]

Need Variable	Males and All Principals N=38	Female Elem. Teachers Con ≥ 10 N=251	Female Elem. Teachers N=293	Differences in Means and Significance Level (Stud't) Edwards Adult Women's Norms N=4932		Jackson and Guba Fem. El. Teach. N=196	
Achievement:							
Mean	14.66	13.62	13.38	-.20	NS	+.15	NS
Standard Deviation	3.79	4.01	4.00				
Deference:							
Mean	14.08	14.73	14.71	-.01	NS	-.39	NS
Standard Deviation	3.79	3.67	3.59				
Order:							
Mean	11.55	13.16	13.19	-2.40	.01	+.04	NS
Standard Deviation	5.38	4.99	4.92				
Exhibition:							
Mean	13.76	13.04	12.98	+1.50	.01	-.27	NS
Standard Deviation	3.34	3.96	3.78				
Autonomy:							
Mean	13.29	12.94	12.87	+.77	.01	+1.18	.01
Standard Deviation	4.31	3.86	3.91				
Affiliation:							
Mean	15.66	17.09	17.19	-.57	NS	-.45	NS
Standard Deviation	4.23	3.99	3.93				
Intraception:							
Mean	16.61	17.25	16.95	+1.67	.01	+.14	NS
Standard Deviation	5.53	4.11	4.11				
Succerance:							
Mean	10.24	11.77	11.03	-.93	.01	-.99	NS
Standard Deviation	4.59	3.96	3.93				
Dominance:							
Mean	16.74	11.33	11.25	+1.01	.01	-.54	NS
Standard Deviation	5.38	4.73	4.62				
Abasement:							
Mean	12.21	15.00	15.06	-1.83	.01	+.53	NS
Standard Deviation	4.42	5.16	5.02				
Nartarance:							
Mean	14.53	15.90	15.84	-2.54	.01	-.85	NS
Standard Deviation	4.35	4.26	4.21				
Change							
Mean	17.03	17.37	17.52	+1.53	.01	+.83	NS
Standard Deviation	4.48	4.76	4.71				
Endurance:							
Mean	13.74	15.32	15.28	-1.22	.01	+.33	NS
Standard Deviation	5.28	4.62	4.52				
Heteresexuality:							
Mean	12.76	10.94	11.18	+3.06	.01	-.17	NS
Standard Deviation	7.17	6.85	6.80				
Aggression:							
Mean	12.26	10.49	10.52	+.36	NS	+.37	NS
Standard Deviation	3.43	4.38	4.24				
Consistency:							
Mean	10.66	11.83	11.32	-.27	NS		
Standard Deviation	1.76	1.77	1.33*				

[a]The elimination of 42 subjects with consistency score below 10 reduced the standard deviation to a point where the variance (compared to the Edwards Norms) is significantly different at the .01 level.

comparison (the data from which comparisons were made is presented in Table B-1). There were significant differences on 11 needs when compared with adult women in general, but only on one need when compared with Jackson and Guba findings--a different, random sample of female elementary school teachers. Variances on each need were compared using the "F statistic" and in no case was the assumption of equal variances brought into question. On the one need of Autonomy the present sample could be slightly higher than average for women teachers, Jackson and Guba's mean could be lower, or both could be true. The teachers in the present sample seem to be slightly lower on the need for Succorance than other data would indicate might be ture. The interaction of these two could account for the difference. The other possibility is that the present data is more reflective of reality than is Jackson and Guba's. From this analysis it was concluded first, that this was a representative sample, with respect to EPPS need scores, of all female elementary school teachers in the Midwest, and, second, that female elementary school teachers, as a group, differ significantly from other adult women.

When compared with women in general (Edwards' data) women elementary school teachers in the present sample were found to be significantly higher than other women on these sub-test scores: Exhibition, Autonomy, Intraception, Dominance, Change, and Heterosexuality. They were significantly lower than other women on these sub-test scores: Order,

Succorance, Abasement, Nurturance, and Endurance. Jackson and Guba's 1957 sample of teachers were high on Exhibition, Intraception, Dominance, Change, and Heterosexuality. Their sample was lower on Order, Abasement, Nurturance, and Endurance. The only difference in these two lists is the addition of Autonomy and Succorance by the present study to the Jackson and Guba list. Jackson and Guba found their sample of elementary school teachers to have less need for Autonomy than Edwards' norms suggest for women in general. The present study showed the reverse and this is the one need score where there is a significant difference between this study and the Jackson and Guba data. An examination of the data and correlation matrix suggests that the present sample is more "true to life" in this respect than Jackson and Guba data. Both Table B-3 and the Edwards' inter-correlation matrix show negative correlations between the Succorance and Nurturance sub-tests when compared with the Autonomy sub-test. Since, in the present sample, both the Succorance and Nurturance scores are lower for female teachers than for women in general, it is not unexpected to find Autonomy higher. Since there seems to be less need manifested for teachers to depend on others (or to be depended upon by others), it is reasonable to expect that they would also show a desire to be more autonomous.

The study by Guba, Jackson and Bidwell (1959) found the needs characteristic of veteran teachers (10 years or more) to be high Deference, Order, and Endurance with low

Heterosexuality, Dominance, and Exhibition and called this "representative of an emergent occupational pattern." They also noted the absence of high Achievement, Intraception and Nurturance.

Recognizing that the present sample consists only of elementary teachers, and that the earlier study was completed before the advent of adult norms, only Deference, in the present sample, maintains a high position relative to other women. Order and Endurance are both lower. On the other side, the coin shows the needs for Heterosexuality, Dominance and Exhibition are all higher, not lower, than for women in general. As for the "missing needs," Intraception is significantly present, but neither the need for Achievement nor Nurturance is abundantly represented in the present sample. The age-experience interaction was also not adequately taken into consideration in the earlier study. This will be discussed in the next section.

With these differences in mind the following conclusions are drawn from the present data: When compared with women in general, women who teach in an elementary school are more apt to desire to be the center of attention and their own bosses. They are more apt to desire to analyze their own and other's motives and behavior, and do new and different things. They have a need to dominate, persuade and influence others to do as they desire. They have a higher need to engage in activities with men.

On the other hand, female elementary school teachers have less of a need to keep things in order, well organized and to plan in advance. They manifest less need to have others provide help and encouragement and also have less need to help their friends when in trouble (and thus to be more independent and autonomous). They have less need to feel guilty, accept blame when things do not go right and to stick with a job until it is finished. This is in contrast with the stereotype of the teachers as "sexually impotent, obsequious, eternally patient, painstakingly demanding, and socially inept" (Jackson and Guba, 1957, p. 189).

The Inter-relationship of Age and Experience with EPPS Scores

One of the most interesting and difficult problems that kept arising in the analysis of the data from this study related to the effect of age upon EPPS scores. Jackson and Guba (1957), for example, had found that novice teachers showed less of a need on Deference, Order, Endurance, and Aggression than did veteran teachers. They also found that veteran teachers had less need in the areas of Exhibition and Heterosexuality. Except for Aggression, the findings of the present study can clearly explain every one of the Jackson and Guba findings in terms of age or an age-experience interaction. The nature of these inter-actions are set forth in Table 4. The ramifications of these inter-actions should be apparent for they must enter into every attempt to

TABLE 4.--The inter-relationships of age, years experience in education, years experience in building and EPPS variables.[a]

EPPS Need For:	Nature of the EPPS Variable Relationship With		
	Age	Years Exp. Ed.	Years Ex. Bldg.
Deference	Older people have greater n-deference	More experienced have greater n-deference	0-3 years in building have less n-deference
Exhibition	Older people have less n-exhibition	More experienced have less n-exhibition	n-exhibition decreases with years in building
Heterosexuality	Older people have less n-heterosexuality, but stable between ages 30-50	More experienced have less n-heterosexuality	n-heterosexuality decreases with years in building
Order	At about age 40, older people have more n-order	More experienced have more n-order	0-3 years in building have less n-order
Affiliation	Sharp increase at age 60 in n-affiliation	None	None
Succorance	Decreases to age 45 and then increases	None	None
Abasement	Sharp increase after age 50 in n-abasement	More experienced have more n-abasement	0-3 years in building have less n-abasement
Endurance	Sharp increase at age 40 in n-endurance	More experiended have more n-endurance	n-endurance increases with years in building
Change	None	More experienced have less n-change	0-3 years experience in building have most n-change; 4-9 have least

	Age		Experience in Ed.	Exper. in Bldg.
Frequency Distributions	20-29	114	0-3	0-3
	30-39	33	4-9	4-9
	40-49	39	10+	10+
	50-59	74		
	60-69	32		

[a]The following EPPS variables were unrelated to any of the other variables: Achievement, Autonomy, Intraception, Dominance, Nurturance and Aggression.

interpret findings where there are differences in the Edwards which might stem from other causes. If there were a significant difference between two groups of teachers on an EPPS need--say the need for Deference--it would be essential that age and experience be controlled before a meaningful distinction could be made.

As an example, there were nine teachers in the present sample who had a substantial number of items omitted but for whom scores were computed (by tossing a coin for the missing items). These were all older teachers and the results of the EPPS showed them to have scored higher on the following needs: Deference, Order, Affiliation, Succorance, and Endurance. They scored lower than the main sample on Exhibition, Dominance, Change, and Heterosexuality. With the single exception of Dominance (which showed a curvilinear relationship), all of these other differences could be explained in terms of age.

In Table 4, material has been abstracted from Tables in Appendix B which reproduce analysis of variance details. In many ways, the information in these tables has proved to be of more significance than the hypotheses in this study which attempted to relate the EPPS to school climate. The three age-experience tables (B-4, B-5, B-6) provide important data for consideration when using the EPPS in research on teachers.

Spangler and Thomas (1962) sampled 20 men and women at 10 year intervals between ages 40 and 79. They found a sharp increase in the EPPS need for Affiliation at age 60. Deference showed a steady increase to age 60 and then leveled off. Succorance showed a sharp increase into the 50's but then the rate of increase began to slow down. The finding for Deference is definitely affirmed by the present data as is the need for Affiliation. There is a sharp increase in this need among teachers when they approach the retirement age. It is suggested that this increase in later years is related to the sense of loneliness which often comes with age and with the death of close friends and associates. The Succorance finding by Spangler and Thomas was not replicated. Rather, in the present study, a curvilinear relationship was found with the need decreasing to age 45 and then increasing. It would seem that in the earlier years the decrease could be accounted for by the striving for independence and the movement away from dependence on others. As middle age approaches there may be an awareness that friends are needed and that more help and encouragement from others is also needed. Spangler and Thomas also found that scores on Heterosexuality declined with age, a fact very clearly delineated in the present study.

Gauron (1965) explored 322 EPPS records of routinely admitted psychiatric hospital patients. Of this number 163 were females ranging from age 15 to age 59. He reported results for 34 females ages 15-19 and 37 females ages 40-59

with the following patterns (groupings between the extremes also showed appropriate placement and direction): Deference, Order and Endurance showed a pattern of increases with age. These findings are replicated in the present study and seem to be independent of the population being sampled. Exhibition, Abasement, Change, Heterosexuality, and Aggression showed decreases in need scores with increases in age in the Gauron sample, although the difference in Change was minor. Exhibition and Heterosexuality are replicated in the present study, but Abasement and Aggression are not. The only significant difference is in Abasement and it is possible that this pattern is related to the teaching profession since teachers have less need for Abasement expressed (as a group), and the most notable increase in teachers is in the later years.

Another manner of checking this data is to look at correlations on a particular EPPS need and the corresponding age or experience variable. Table 5 gives the correlations between the different EPPS needs and these other three variables. Note also that age is most directly related to experience in education (.84) and less so to experience in a given building (.55). The reason for this can be found in Table 6 where there is presented a frequency distribution of these three variables. There are built-in limitations here. For example, if the teacher had been teaching for less than three years, he could not have been in the present building for more than three years. By the same

TABLE 5.--Correlations between EPPS needs and age, experience in education and experience in building.

EPPS Need	Age	Exp. Educ.	Exp. Bldg.
Achievement	-.06	-.09	-.04
Deference	.42	.44	.28
Order	.21	.23	.12
Exhibition	-.28	-.32	-.22
Autonomy	-.03	-.05	-.01
Affiliation	.12	.13	.09
Intraception	-.05	-.07	-.00
Succorance	-.08	-.02	-.08
Dominance	-.07	-.14	-.07
Abasement	.22	.28	.15
Nurturance	.12	.12	.14
Change	-.16	-.16	-.09
Endurance	.32	.31	.19
Heterosexuality	-.39	-.38	-.27
Aggression	-.10	-.11	-.07
Age	1.00	.84	.55
Experience Educ.		1.00	.65
Experience Bldg.			1.00

argument, if the teacher had spent over ten years teaching in a single building, he would also have had to have been in teaching for more than ten years and obviously would have been at least above age 30. This high degree of interrelationship is noticeable in all the age groupings. Most of the teachers in the age 20-29 group are in their first three years of teaching. Most of the teachers in their fifties have taught for more than ten years.

Returning to the analysis of variance reflected in Table 4, Affiliation, Succorance and Change have the least clear-cut patterns in terms of direct relationships. The

TABLE 6.--Frequency count by classification of three inter-related variables of age, years experience in education, and years experience in building for 293 elementary teachers.

Age	0-3 Years in Present Building			4-9 Years in Present Building		10+ Years in Building	Totals
	0-3 Yr. Exp.	4-9 Yr. Exp.	10+ Yr. Exp.	4-9 Yr. Exp.	10+ Yr. Exp.	10+ Yr. Exp.	
20-29	84	19	7	4	0	0	114
30-39	3	14	5	6	5	0	33
40-49	3	5	5	6	17	4	40
50-59	0	3	18	3	28	22	74
60-69	0	0	6	0	19	7	32
Totals	90	41	41	19	69	33	293

needs for Affiliation and Succorance do not show a direct relationship to age, but rather "are affected by age." Succorance shows a curvilinear relationship; Affiliation is about stable until age 60. Change, on the other hand, is a little more related to experience than to age. It is interesting to note that those in their first three years in a building manifest the most need to change; next come teachers who have been over 10 years in a building; finally are those who have the least need to change--these in their 4th to 9th year in a building. Is there present here merely a statistical artifact? Or is there a certain settling down process after three years which then culminates in the "ten year itch" to move to another building?

By and large, the findings here speak for themselves and are basically consistent with other published findings. Whether the differences that do exist stem from some peculiarity of the teaching profession or are representative of adult women generally cannot at this point be said.

Consistency in the EPPS

One problem in using the Edwards is the degree of boredom which enters into the test situation. That this affects the reliability of responses is indicated by one respondent in the present study who said: "I'm not sure how good the results will be. I was a different person on each page of the test." The consistency measure is an effort to get at this problem and the score indicates the degree of care and

consistency that entered into the recording of responses. To check out this variable, statistics were computed by eliminating 42 females who had a consistency score below ten. These results are reported in Table 3. In comparing the two sub-sets of data from the sample, the means of seven need scores were raised with the increases ranging from .02 to .30 of a point. Eight of the means were lowered by a value of between .03 and .24 of a point. The mean of the consistency variable itself was not substantially raised (from 11.32 to 11.83) and the variance (of course) was decreased. This decrease in variance, however, was enough to make the variance of this sub-sample substantially different (significance .01) when compared with the Edwards' women norms. The difference in the total sample of 293 females, when compared with the norms, was not significantly different either in mean or in variance. In addition, limiting the sample to teachers with a consistency score of 10 or above led to larger variances, precisely what one would expect from a decrease in sample size. Since in every case the smaller variance of the total female sample did not differ significantly from either the Edwards or the Jackson and Guba data, it was concluded that further analysis would properly be made by using the total sample of female elementary school teachers.

EPPS Factors of Sociability and Conformity

The previous factor work using the Edwards had suggested that some sub-scores could be combined into two factors.

Accordingly, the computer was programmed to create these two factors by the process of adding or subtracting the sub-tests that were assigned to each of the factors. Table B-7 indicates the sub-tests which were used to create these two factors and the correlations that existed with each of the sub-tests. The sub-tests themselves were used in several of the analyses and it is important to note that they were the simple combination of a group of scores without any attempt at weighting and without any attempt in the present study to see whether the same factors would have developed in a factoral analysis of this data. That the highest correlations in each factor in Table B-7 are those for sub-tests which were used in the creation of the factor merely indicates that the computer correctly interpreted the instructions.

Male Teachers and All Principals

In accordance with Jackson and Guba's suggestion (1959), 19 male elementary school teachers were grouped with all principals (14 male, 5 female) in search of an "administrative" pattern on the EPPS. Again, age was considered a crucial variable and an analysis was made using five ten-year categories between age 20 and 69.

The resultant analysis of variance tended to agree with the findings for the pattern of female teachers. Because of the small sample size in this group (N = 38), findings were not always significant and must be interpreted with caution. Showing increases with age were Deference (.05), Order (.05),

and Succorance (.05). On the other hand, Exhibition (N.S.), Autonomy (.05), and Heterosexuality (.05) showed a pattern of decrease with age.

Affiliation (N.S.) showed a sharp increase at age 30, but then leveled off. Endurance (.01) was stable until age 50 and then sharply increased. Dominance (N.S.) increased to the middle 40's and then decreased.

In this particular sample there was frequently a sharp dichotomy at age 30. Again, because of the small sample size (N = 9 vs. N = 29) and the fact that all nine subjects ages 20-29 were male teachers, this suggests that these differences must be interpreted with care. Still, the differences are sufficiently large to suggest that age plays an important part. These results are tabulated in Table 7.

TABLE 7.--Selected means on groups of male teachers and all principals for scores on EPPS variables.

EPPS Variable	Male Teachers Age 20-29 N = 9	10 Male Teachers 14 Male Principals 5 Female Principals Age 30-69
Deference	11.56	16.03
Order	8.67	12.48
Exhibition	15.44	13.24
Autonomy	16.22	12.38
Affiliation	12.67	16.59
Succorance	6.56	11.38
Change	19.00	16.41
Heterosexuality	16.22	11.69
Aggression	14.44	11.62

In comparing this data with Edwards' norms for adult men, five scores stand out as being sufficiently different to warrant further study with a larger sample. Men elementary school teachers in this study, together with all principals as a group, score lower on Order, Abasement, and Endurance, but higher on Intraception and Change.

If this "Administrator" grouping is legitimate, and if the sample is representative of all school administrators, when compared with the average college educated man, the pattern suggests that the elementary school administrator has less need to plan well and to keep things neat and well organized, less need to feel timid or guilty about mistakes, and less need to stay with a job until it is done. On the other hand, he has a greater need to observe and analyze feelings and motives and do new and different things than most other men. This would be an interesting idea to check out with a larger sample, including substantial numbers of male elementary teachers, male elementary principals, and female elementary principals. Another interesting subject that might be explored further is represented by the six male "career" teachers in elementary school who were over age 40.

Analysis of the Organizational Climate Description Questionnaire

In this section the inter-correlation matrix from all sub-scores on the Organizational Climate Description

Questionnaire (OCDQ) will be compared with information provided by Halpin. Also to be reviewed is how the OCDQ is scored and the climate and factors for the school designated. The final topic to be considered will be individual teacher factors and perceptions and how these differ from group consensus factors.

The OCDQ Inter-correlation Matrix

The first matrix presented in Table B-8 presents a bit of problem in interpretation. As far as can be determined, this matrix was formed in the same manner as that reported by Halpin (1966, p. 155) from standardized scores, and yet there are numerous and substantial differences between the two sets of correlations. The first matrix was composed of 316 sets of scores (all from females) for 24 schools; Halpin used 1151 respondents from 71 schools. Eleven of 28 comparisons of the correlations were quite different as to both direction and magnitude. Many of the other correlations differed by lesser amounts. Where were the most outstanding differences and why was Halpin's earlier matrix not replicated?

In the present study, Disengagement showed a -.15 correlation with Aloofness (Halpin = .18), and a -.36 correlation with Consideration (Halpin = .04).

The Hindrance sub-test was correlated -.31 with Aloofness (Halpin = .15).

Four Esprit correlations were substantially different. A .03 relationship with Intimacy was found (Halpin = .31), a -.33 correlation with Production Emphasis (Halpin = .12), a .32 correlation with Thrust (Halpin = .60) and a .05 correlation with Consideration (Halpin = .42).

Intimacy was found to have a -.22 correlation with Thrust (Halpin = .18) and a -.17 correlation with Consideration (Halpin = .31).

Production Emphasis was correlated -.41 with Thrust (Halpin = .17) and -.29 with Consideration (Halpin = .19).

Because of these discrepancies, new correlations were computed using all 359 respondents including men and principals. The second matrix in Table B-8 is based upon the raw scores from the OCDQ and the third matrix is based upon these same scores after the double standardization procedure. The first and third matrices are very similar (the difference being only 33 additional sets of scores). Differences, some fairly substantial, between the second and third matrices will be noted giving some idea of the effect of standardizing data before forming the correlation matrix. In this situation it was usually the magnitude and not the direction of the correlation that changed.

These results raise a question about the similarity of the schools upon which the OCDQ was standardized and the present sample. The differences suggest a higher degree

of relationship in the present sample between some sub-tests than Halpin had indicated from his sample, a lesser degree on others, and a complete reversal of the nature of the relationship on still others. A factor analysis using these inter-correlations would thus produce different loadings than in the original study.

As will be seen in the next section, the present sample of schools is not like the original sample upon which the OCDQ statistical information was based. There is over-representation of closed school climates and under-representation of other climates. While differences in the two sets of schools are apparent and can account for these correlation differences, this does not mean that the teachers themselves differ as a group. The OCDQ directions call for individuals to set forth facts (individual perceptions) about their school environment and, in this case, about the 24 school principals. For this reason the present limited sample is subject to fluctuation. This is especially true because the behavior of 24 principals accounts for half of the sub-test scores. These differences point up the value of normalizing data, as will be described next, and using the OCDQ as a "map" of the domain of the organizational climate.

Scoring of the OCDQ

The five steps for scoring OCDQ responses were reported in detail in Chapter III. The eight sub-scores for each subject and the group consensus scores for each school were

computed by Croft at the University of New Mexico. These scores were then compared with the ideal climate profiles and the "climate similarity scores," computed both for the schools as a whole and for each individual teacher. The profile of each of the 24 schools in the present study is related to its most appropriate ideal climate in Table 8 and this Table, in effect, describes the group consensus for each school.

The results showed that two schools could be classified as open, seven as autonomous, two in each of the controlled and familiar categories, and 11 in the closed climate category. Because of the large number placed in the closed category and the small number placed in the open category, it was concluded that this was not a representative sample of schools from Michigan, a fact that had been suggested by the inter-correlation matrix. Kirk (1964) found a majority of schools that she included in her study were of the open climate type. Since her total was a broader sample of 73 schools, it would seem that the open climate school is not adequately represented in this study.

Halpin has indicated that there is a certain stability about school climate and that an open climate school will tend to remain open or become more open and that a closed climate school will remain closed or become more closed. This would, of course, cause a great deal of difficulty if a conscientious effort were ever desired to change the

TABLE 8.--The sample of 24 school profiles grouped in respect to the five organizational climates represented.

School Number	Sub-test Scores								
	Disen-gagement	Hin-drance	Esprit	Inti-macy	Aloof-ness	Prod Emph	Thrust	Consider-ation	Similarity Score
					Open Climate				
20	40	40	61	46	55	40	63	51	31
5	47	50	63	56	49	30	51	51	50
IDEAL	43	43	63	50	42	43	61	55	PROTOTYPE
					Autonomous Climate				
15	37	41	56	61	55	40	46	59	27
11	41	46	52	56	68	38	47	48	30
10	41	43	48	61	61	42	41	59	37
17	37	52	56	58	64	42	47	41	40
12	43	41	51	54	69	40	44	52	39
24	50	40	47	45	66	38	52	57	49
9	50	29	45	56	60	50	53	54	52
IDEAL	40	41	55	62	61	39	53	50	PROTOTYPE
					Controlled Climate				
1	36	65	50	45	53	45	44	59	60
3	54	64	49	43	60	41	47	37	69
IDEAL	38	57	54	40	55	63	51	45	PROTOTYPE
					Familiar Climate				
23	58	41	45	52	61	33	55	52	43
4	59	60	37	46	53	36	49	57	56
IDEAL	60	42	50	58	44	37	52	59	PROTOTYPE
					Closed Climate				
22	61	53	40	54	58	53	35	43	13
18	62	55	37	56	57	46	38	45	19
21	62	48	43	55	57	55	41	34	26
2	60	64	36	46	55	47	41	47	34
19	59	63	41	57	49	46	36	46	38
8	48	53	40	58	67	47	41	42	41
16	50	50	42	54	65	53	32	50	42
13	56	53	45	60	59	45	32	45	42
14	50	55	44	60	62	41	35	49	57
6	51	58	43	49	66	41	37	51	61
7	54	67	40	50	49	37	46	52	64
IDEAL	62	53	38	54	55	54	41	44	PROTOTYPE

climate at a given school. Table 9 matches and compares the 12 schools duplicated in this study and Kirk's study. The climate similarity scores are also presented. It is interesting to note that half of these schools did retain the same climate over a three and one-half year period. This would tend to support Halpin's position. Of more interest are the schools where there were changes. While a more detailed, school by school case study could be made of these schools, a few observations would seem appropriate from this writer's own knowledge of these particular schools.

School B had a new principal and a moderate turn-over in staff. The major change here was the sharp increase in the degree of engagement of the staff in school activities and the greater thrust on the part of the principal. While the esprit was about the same, the staff this year tended to be more involved in their task. The earlier classification of the school as closed was not a certain classification. Now the classification of the school in an autonomous climate seems to be quite justified.

School E also had a new principal and a fair turn-over in staff. This school, however, has made a sharp shift from a clearly open climate school to one that is probably autonomous. Disengagement has increased and hindrance has decreased. The new principal is seen as more aloof and production oriented. The most notable change is the sharp decrease in esprit.

TABLE 9.--Comparison of 12 schools surveyed by Kirk (1963) and Eberlein (1967) on their respective OCDQ sub-test and climate patterns.

School		Group Consensus Sub-test Scores								Climate Similarity Scores					
		Dis	Hin	Esp	Int	Alo	Pro	Thr	Con	Opn	Aut	Cnt	Fam	Pat	Cls
A.	(1963)	54	50	43	55	67	49	36	43	110	81	91	88	86	38*
	(1967)	59	63	41	57	49	46	36	46	110	99	95	75	81	38*
B.	(1963)	54	49	48	50	65	43	35	43	82	70	85	89	97	62*
	(1967)	37	52	56	58	64	42	47	41	79	40*	63	87	114	77
C.	(1963)	57	63	39	44	55	56	38	45	123	115	64	106	73	32*
	(1967)	62	55	37	56	57	46	38	45	115	91	91	80	78	19*
D.	(1963)	39	49	34	60	56	55	46	57	93	67	75	83	80	58*
	(1967)	48	53	40	58	67	47	41	42	109	73	85	94	100	41*
E.	(1963)	41	47	70	50	42	42	53	50	27*	57	81	67	79	104
	(1967)	50	29	45	56	60	50	53	54	78	52*	94	64	72	76
F.	(1963)	55	64	42	44	54	54	34	50	115	110	71	102	70	45*
	(1967)	50	55	44	60	62	41	35	49	102	58	92	80	98	57*
G.	(1963)	43	44	61	50	37	44	53	64	27*	67	93	58	67	113
	(1967)	50	50	42	54	65	53	32	50	107	80	86	95	81	42*
H.	(1963)	36	41	63	56	41	50	54	55	30*	55	83	60	75	107
	(1967)	37	41	56	61	55	40	46	59	59	27*	81	54	99	95
I.	(1963)	49	54	40	60	58	49	32	55	101	77	94	84	87	50*
	(1967)	41	46	52	56	68	38	47	48	73	30*	76	69	99	83
J.	(1963)	59	51	39	58	61	47	35	47	112	76	100	74	81	32*
	(1967)	62	48	43	55	57	55	41	34	117	94	87	84	65	26*
K.	(1963)	41	34	64	48	46	51	58	54	29*	68	80	77	75	108
	(1967)	40	40	61	46	55	40	63	51	31*	41	74	77	94	108
L.	(1963)	56	48	50	36	65	55	38	50	107	88	69	93	70	60*
	(1967)	41	43	48	61	61	42	41	59	73	37*	94	60	95	81

Sub-test Scores are: Dis - Disengagement; Hin - Hindrance; Esp - Esprit; Int - Intimacy; Alo - Aloofness; Pro - Production Emphasis; Thr - Thrust; Con - Consideration.

Climate Similarity Scores are: Opn - Open; Aut - Autonomous; Cnt - Controlled; Fam - Familiar; Pat - Paternal; Cls - Closed.

School G has the same principal and much of the same staff. Yet the school is the extreme opposite of what it was three years ago. In 1963 it had most of the characteristics of the ideal open climate and was most unlike the behaviors which characterize the closed climate. In 1967 it was just the reverse. The same principal was seen as more aloof and production oriented while at the same time he had lost some of his thrust and consideration. Meanwhile the teachers had become more disengaged and hindering and, as a whole, the esprit sharply dropped. While a case study might enlighten us as to what happened, in this situation the stability of climate over as short a period as three years was not evident in the same building and with the same principal and much of the same staff.

School H also had the same principal and much of the staff, but changed from an open climate school to an autonomous one, similar to the shift of School E. Again the principal changed over time (at least as perceived by the staff). He became more aloof, less production oriented and presented less of a picture of trying to move the group by his own example. The staff did not change; their view of the principal did; the school climate changed.

Schools I and L shifted from a probable classification of closed to a classification of an autonomous climate. In one case the principal was the same; in the other there was a change in administration. Where the principal remained, he showed a tendency toward less production emphasis and

more consideration. This school was also marked by a sharp reduction in disengagement and much more of an intimate atmosphere.

How can these comparisons be adequately summarized? There is a certain individuality about a school which a change of administrators alone does not disturb. However, teachers move or change behavior; so do administrators. New faces come to take their places. They grow older; their health and outlook on life change. All of this apparently does affect the climate of the school and all of this suggests that climate is more dynamic than Halpin envisioned. There are many interactions at work and slight changes in several of them will have as much effect as gross changes in a few. Given a relatively stable community, the same principal and a moderate turnover in staff, one could predict that the school climate would remain the same over time. Where there is a more fluid community, a larger turnover in staff, a new principal or one whose behavior itself changes (because of sickness, old age, marital situation, or other), one cannot predict with certainty the nature of the school climate three years hence.

Individual Perception of Climate

Individual teachers did not always perceive the climate of their school in the same way as did the majority of the staff. Slightly over half of the principals also differed on how they felt about the climate when compared

to the group consensus. In some schools the climate was very obvious. Every member of the group saw the climate in the same way; that was the way it was! In other schools the individual perceptions of climate were much more scattered and thus there often was not a clear cut group consensus. Individual perception of climate might be as significant as the group consensus. Working from the assumption that perception of environment has a greater influence on behavior than environmental reality, computations for each of the 295 female teachers in the sample provided information about the climate into which she would properly be categorized. Seven were rejected because of tied profile rankings. Of the other 288, 29 perceived their climate as Open, 67 as Autonomous, 27 as Controlled, 26 as Familiar, 20 as Paternal, and 119 as Closed.

Although the overall pattern was not too different from the group consensus classification, individual differences were present. A separate set of analysis of variance tables were prepared using the Edwards and other data in comparing teachers with different climate perceptions. The results of this comparison are presented later in this chapter.

In addition, three individual factors were created by the process of adding and subtracting certain of the OCDQ individual sub-test scores. These factors were based upon the three-factor varimax rotational solution for the total teacher sample reported by Halpin (1966, p. 160). This

showed that individual social needs loaded on Factor I, group esprit loaded on Factor II and social control by the principal became Factor III. The first is an individual factor, the second a group factor and the third a leadership factor. The correlations of these newly created variables with the sub-tests from which they were created are given in Table B-9. Although this is a self-serving table (the data are dependent) it offers information as to the relationships with sub-tests not placed on a given factor.

There is a distinct difference between these individual factors and the school factors discussed earlier. The school factors are group consensus factors and are assigned to an individual merely because he is part of the group. It is the group that has "voted" to place its school at such and such a point on each of the three school factors. The school factors described in more detail in Chapter III were taken from the information provided by the three factor varimax rotational solution for sub-test scores by schools (Halpin, 1966, p. 190). A comparison of these individual and school factors is presented in Table B-10 where the three School Factors are labeled Authenticity (which should be most closely tied to Individual Factor II), Satisfaction, and Leadership Initiation (neither of which are of necessity related to the other individual factors). Individual Factors I and III seem to be fairly independent of the group

consensus factors; Individual Factor II (Group Esprit) is related to Group Factors I and II, but not to the leadership initiation factor.

The individual factors, again, represent individual perceptions or a summarization of a set of individual perceptions. Each individual factor represents one person's view about the school environment as he sees it and it may or may not have the consensus of the group behind it.

Analysis of the Relationship Between the EPPS and OCDQ

It was hoped in this section to discuss the significant findings which related manifest needs of individual teachers to the climate in which these teachers taught. What will be discussed, however, is the lack of significant findings in this area. The major hypotheses will be considered first, followed by a similar analysis eliminating, in turn, novice teachers and teachers new to the building. The section will be concluded with some findings relative to the EPPS and individual perception of climate.

The Hypotheses

The hypotheses in Chapter III called for some 51 comparisons to be made which are reported in full in Table B-11 (Appendix B). Of these 51 comparisons, only nine even approached the significance level previously set (.05) and these are reproduced in Table 10. An additional criterion had been established that the trend of the results be

TABLE 10.--Selected means from EPPS needs grouped by high, middle and low factor scores on three OCDQ factors.[a]

EPPS Need	Factor I[b]	Factor II[c]	Factor III[d]
List "A"			
Achievement	$\bar{x}_1$ = 12.72 $\bar{x}_2$ = 13.35 $\bar{x}_3$ = 14.24	$\bar{x}_1$ = 12.32 $\bar{x}_2$ = 14.02 $\bar{x}_3$ = 13.56	
F value	F = 2.96	F = 4.47	
Significance level	.05	.01	
Exhibition		$\bar{x}_1$ = 13.77 $\bar{x}_2$ = 12.92 $\bar{x}_3$ = 12.42	
F value		F = 2.88	
Significance level		.06	
Nurturance			$\bar{x}_1$ = 15.30 $\bar{x}_2$ = 16.82 $\bar{x}_3$ = 15.27
F value			F = 4.91
Significance level			.01
Change	$\bar{x}_1$ = 18.63 $\bar{x}_2$ = 16.59 $\bar{x}_3$ = 17.87		
F value	F = 5.28		
Significance level	.01		
List "B"			
Deference		$\bar{x}_1$ = 15.46 $\bar{x}_2$ = 14.61 $\bar{x}_3$ = 14.24	
F value		F = 2.61	
Significance level		.07	
Abasement	$\bar{x}_1$ = 15.44 $\bar{x}_2$ = 15.66 $\bar{x}_3$ = 13.53	$\bar{x}_1$ = 16.06 $\bar{x}_2$ = 14.31 $\bar{x}_3$ = 15.09	
F value	F = 4.99	F = 2.95	
Significance level	.01	.05	
Conformity	$\bar{x}_1$ = 110.32 $\bar{x}_2$ = 107.90 $\bar{x}_3$ = 104.38		
F value	F = 1.91		
Significance level	.15		

[a]This information abstracted from Table B-11, Appendix B.

[b]$\bar{x}_1$ = mean for teachers from most open schools; $\bar{x}_3$ = mean for teachers from least open schools.

[c]$\bar{x}_1$ = mean for teachers from most satisfied schools; $\bar{x}_3$ = mean for teachers from least satisfied schools.

[d]$\bar{x}_1$ = mean for teachers from schools where principal is non-aloof and considerate; $\bar{x}_3$ = mean for teachers from schools where principal is aloof and non-considerate.

essentially consistent. The average score of the middle group had to fall substantially between the averages of the two extreme groups. Four of the nine analysis of variance results clearly did not meet this criterion and can be accounted for as chance fluctuations. The null hypotheses must be accepted. This leaves only five comparisons worthy of further discussion.

Factor I was the key factor in the present study as it tended to place schools on an open-closed continuum. Teachers from the most open schools (N = 81) were compared with teachers from the least open schools (N = 78) and the middle group (N = 136) was retained for purposes of trend comparison. It was hypothesized that teachers from open schools would have a higher need for Achievement. The analysis of variance results showed a significant difference (.05) with a consistent trend, but in the opposite direction from that hypothesized. It was evident in the less open schools that there was more need for achievement manifested, which is the null hypothesis. The stated procedure requires the acceptance of this null hypothesis. In reconsidering this proposition, the result could be explained this way: Achievement is a task oriented need and it is possible that teachers turn to satisfactions or need satisfactions from their job when they are placed in a climate not conducive to a friendly social atmosphere where the whole group is moving forward as one unit. At the other extreme, the need to do one's best, to be

successful and to accomplish many goals does not have to be manifested in an open school environment simply because such an environment is not heavily task oriented and does not push its teachers to achievement. Achievement here is a natural outgrowth of the environment and not something artificial that must be pulled out of the teachers. It is interesting to note that a similar pattern emerges when achievement is compared on Factor II. The basis of this second factor is the comparison of teachers from the most satisfied schools with all other teachers. Where there is satisfaction, there is low need for achievement manifested, again contrary to the expectation but consistent with the above explanation.

From List "B" in Chapter III there were two of the hypotheses that need to be considered in relation to Factor I. One is Abasement and the other Conformity, a combination of EPPS sub-scores. In both cases it had been predicted that teachers in the less open schools would score higher and in both cases the pattern of results was the reverse of the expected direction. The differences revealed in the analysis of variance of the Abasement subscore indicated that teachers from schools that are more closed have less manifest need for Abasement than all other teachers combined. In trying to answer why, it appears that this could be a chance factor at work. Another possible explanation is that in a closed environment any need to feel guilty or responsible is probably being met

by the principal and by the environment. Thus, the manifesting of this need becomes much less important. For example, the person who would "rather switch than fight" will be at home in a closed environment. Since he must consistently give in, this need could be adequately met.

The need to conform is a bit of a puzzle. This variable is composed of high scores on Order, Deference, Endurance and Abasement, and low scores on Heterosexuality, Autonomy and Aggression. The analysis of variance was not significant since it only reached the .15 level. What is puzzling is the trend that the results took. From the correlation matrix there is a small, positive correlation between Factor I and Conformity (.12, significant at the .05 level). It is clear that in the present sample there is a tendency for teachers from the more open schools to be more conforming. This is difficult to explain because the conforming teacher was expected to be found in the closed environment. Does the fact that teachers conform help keep peace in an open environment? This person is orderly and deferential, and willing to work persistently at any task. He feels guilt and is willing to accept the blame when things go wrong. He is intolerant and demanding in his moral standards (Cobb et al., 1966, p. 43).

On Factor II there was finally a comparison that was in the direction that had been predicted in Chapter III. Teachers from the schools with the greatest degree of satisfaction also had the greatest degree of need for

Exhibition. However, the significance level was only .06 and thus fell a hair away from the previously set level. Even on this comparison must the null hypothesis of no difference be accepted. The evidence is not strong enough.

The other need on Factor II that came close was Deference. Here again, the result was in reverse of the direction predicted. The schools where there was the most satisfaction provided teachers who had more need for Deference. Perhaps the answer here lies in the fact that where there is more social satisfaction in the school, this satisfaction is aided by people who can take suggestions from others, praise others, conform to custom and avoid the unconventional. Perhaps this need to conform (also reflected in part on the Conformity variable) is what keeps the intimacy of the group together.

Analysis Eliminating Novice Teachers and Teachers New to the Building

The question could logically be asked, is this same lack of pattern true of teachers who are happy with the climate of the school in which they teach? If a teacher stays in the same building for four years or more, one might suppose that he was at least moderately happy there. To find the answer to this question the sample of teachers was regrouped by first eliminating the 91 teachers in their first three years of teaching. These will be called "novice teachers." There were an additional 83 teachers (174 in

all) who had been working less than four years in their present location. These were eliminated next and will be called "teachers new to the building." These deletions reduced the sample size to 204 and 121 respectively, but eliminated about equally from each of the three analysis of variance comparison categories. (See Table B-12 for a Factor I breakdown by age, experience in education, and experience in building.) These categories were not changed and thus teachers who were retained in the new analysis remained in the same openness category (measured on Factor I) in which they had been placed for the original analysis.

The results of these added comparisons produced no surprises and only tended to confirm the lack of relationships found in testing the major hypotheses. Five sets of comparisons are included in Table 11, and these are essentially the same needs that were discussed above. The need for Achievement maintained the same pattern but provided some added information. It is the novice teachers and the teachers new to the building that manifest the most need for Achievement. While achievement was not found to be significantly related to age or experience in education, there appears to be a sufficient relationship to affect the stability of scores when this younger group is eliminated. It is clear that there is more need for achievement, regardless of age or experience, in the closed climate school and the explanation offered above will still suffice.

TABLE 11.--Statistical comparisons of the means on selected EPPS variables when broken down by groups of teachers and compared with high, middle and low groupings on Factor I[d].

Variable	Means, All Teachers N=295[a]	Means, Teachers with 4+ yrs. exp. in ed. N=204[b]	Means, Teachers with 4+ yrs. exp. in bldg. N=121[c]
EPPS Need Achievement	$\bar{x}_1$ = 12.72 $\bar{x}_2$ = 13.35 $\bar{x}_3$ = 14.24	$\bar{x}_1$ = 12.05 $\bar{x}_2$ = 13.29 $\bar{x}_3$ = 13.79	$\bar{x}_1$ = 12.36 $\bar{x}_2$ = 12.87 $\bar{x}_3$ = 14.17
F Value Significance Level	F = 2.96 .05	F = 3.36 .04	F = 2.16 .12
EPPS Need Deference	$\bar{x}_1$ = 15.11 $\bar{x}_2$ = 14.85 $\bar{x}_3$ = 14.06	$\bar{x}_1$ = 16.14 $\bar{x}_2$ = 15.87 $\bar{x}_3$ = 14.52	$\bar{x}_1$ = 16.62 $\bar{x}_2$ = 16.58 $\bar{x}_3$ = 14.73
F Value Significance level	F = 1.90 .15	F = 4.00 .02	F = 3.51 .03
EPPS Need Abasement	$\bar{x}_1$ = 15.44 $\bar{x}_2$ = 15.66 $\bar{x}_3$ = 13.53	$\bar{x}_1$ = 16.18 $\bar{x}_2$ = 15.98 $\bar{x}_3$ = 14.10	$\bar{x}_1$ = 16.23 $\bar{x}_2$ = 16.88 $\bar{x}_3$ = 14.63
F Value Significance level	F = 4.99 .01	F = 3.32 .04	F = 1.86 .16
EPPS Need Change	$\bar{x}_1$ = 18.63 $\bar{x}_2$ = 16.59 $\bar{x}_3$ = 17.87	$\bar{x}_1$ = 18.38 $\bar{x}_2$ = 15.94 $\bar{x}_3$ = 18.05	$\bar{x}_1$ = 17.82 $\bar{x}_2$ = 14.56 $\bar{x}_3$ = 18.10
F Value Significance level	F = 5.28 .01	F = 6.07 .01	F = 8.56 .01
EPPS Need Conformity	$\bar{x}_1$ = 110.32 $\bar{x}_2$ = 107.90 $\bar{x}_3$ = 104.38	$\bar{x}_1$ = 116.16 $\bar{x}_2$ = 112.55 $\bar{x}_3$ = 107.74	$\bar{x}_1$ = 116.95 $\bar{x}_2$ = 116.79 $\bar{x}_3$ = 111.23
F Value Significance level	F = 1.91 .15	F = 3.19 .04	F = 1.15 .32

[a]Frequency for most open = 81; middle group = 136; least open = 78.

[b]Frequency for most open = 56; middle group = 87; least open = 61.

[c]Frequency for most open = 39; middle group = 52; least open = 30.

[d]$\bar{x}_1$ is always the mean for teachers from the most open schools; $\bar{x}_2$ the middle group; $\bar{x}_3$ the least open.

The need for Deference did now show up as being significant on Factor I when the entire sample was compared. There was strong evidence of its significance, however, when novice teachers were eliminated from the sample and again when teachers new to the building were eliminated. In both cases the direction of the findings is the reverse of that predicted, as was also found to be true of this need when compared on Factor II. The most closed schools in the present sample have within them the teachers with the least need for Deference. The high degree of significance level seems to come about because of the elimination of teachers with a low need for Deference from all of the groupings. This makes the distinction more apparent, and significance is reached. This pattern of change, however, can be accounted for on the basis of the age-experience interaction with the need for Deference. It would appear that the most open school, like the most satisfied school, will contain the people with the higher needs for Deference. Perhaps this need is helpful in maintaining the esprit and involvement that characterizes the open climate type of school. Deference is highly related to the EPPS Conformity score and in the present sample conformity is also highly valued, even in an open climate setting.

In Abasement, the significance tends to disappear as the novice teachers and teachers new to the building are

eliminated, particularly the teachers new to the building. The group eliminated lowers the average for the rest of the sample, again evidence of the age-experience interaction at work. Even so, it is the closed school environment where the least need for Abasement is manifested. Again, the only explanation that is readily apparent is that the need for Abasement is being met in the closed environment and teachers need not (or cannot) express the need.

The findings with respect to the need for Change are consistent with those already reported. It appears that the significance here is a statistical artifact of the groupings and there is no explanation for the differences based upon the theory of the present study.

The grouping of EPPS needs into a Conformity variable shows a sharp distinction when the novice teachers are eliminated. The average score on this variable increases for all groupings, reflecting the fact that newer teachers as a group have less need to conform than more experienced teachers (the age-experience interaction effect). However, the differences are greater for teachers from the open climate schools than for teachers from closed climate schools. The resultant comparison is significant at the .04 level. The pattern does not hold when further elimination is made of teachers new to the building. The puzzlement mentioned before concerning this variable has not been resolved. The only explanation that makes sense is still the idea that

conformity among teachers in an open environment is conducive to harmony. In a closed environment each of the teachers can go his separate way and thus does not have to manifest a need for conformity.

Analysis Comparing Teachers Who Chose School Location with Teachers Present Because of Situational Variables

Another question that arises in considering the EPPS in relation to school environment is the degree to which an individual teacher's choice of location is involved. If a teacher has the freedom to choose his teaching location and chooses an open environment school or a closed environment school, one would think that he chose the environment which he felt would meet his needs. For purposes of analysis, teachers who had chosen their present location because of the school philosophy, atmosphere or facilities (N = 47) were compared with those who had chosen their school because of personal contact (N = 18) and with those who had chosen their location for all other reasons (N = 230). In an analysis of variance comparing these three groups on each of the 15 EPPS needs and two EPPS factors there was no finding of any significant difference on any comparison. Since the coding of this variable in this study was only a "rough approximation," results should not be generalized. Within the study, however, there was no apparent difference in manifest need structure among teachers who chose the school location for various reasons.

By way of summary, of the 51 hypotheses presented in Chapter III, the null hypothesis in each case was accepted and the alternative hypotheses that had been projected were therefore largely discarded. The analysis made by eliminating novice teachers and teachers new to the building did not answer the problems raised in the analysis of the main hypotheses. There appears to be limited support for the theory underlying the hypotheses and it is clear that there must be a reformulation of the hypotheses if this area of concern is to be explored further.

The EPPS and Individual Perception of Climate

As was explained earlier, consideration was also given as to whether the perception of climate would make a difference. It is apparent from the previous discussion that climate reality makes little or no difference. Accordingly groups who perceived their school climates in the same way were formed and compared. The choice of comparison was dictated by Halpin's explanation of how the ideal climates were chosen. The Open and Closed climates were therefore compared because these were the ones which loaded at the two extremes on Factor I. The Autonomous and Paternal were compared because these loaded at the extremes on Factor II. The Controlled and Familiar (loading on Factor III) were also compared but nothing of significance was found and they are not discussed further.

Seven comparisons of interest were found and they are reproduced in Table 12. One limiting factor, of course, is the low numbers falling into one category, particularly the 29 subjects in Category 1 (Open Climate) and 20 subjects in Category 5 (Paternal Climate).

It was found that teachers who perceive their climate as being open have less need for Exhibition manifested but more of a need for Deference and Conformity, the latter two being consistent with the findings in Table 10. What this says in effect is that teachers who perceive their climate as being open (as opposed to closed) perceive themselves as being more deferent, more of a conformist, and less of an exhibitionist. The pattern is consistent within itself. Perhaps what it suggests is that the teachers and principal work well together because there is no disrupting influence. Each teacher is considerate of the others, all are willing to conform to the group norms and not show off. If this is true, the open climate does not necessarily mean a productive climate or a climate within which individual differences are readily accepted by others. To this extent it would not be an authentic climate.

It was also found that teachers who perceive themselves as being from an Autonomous climate perceive that they also have a higher need for Deference and Conformity, as well as Sociability, but that they have less of a need for Autonomy. Such a teacher does not want to be able to

TABLE 12.--Comparison of individual perception of school climate with selected EPPS sub-scores.

EPPS Need	Climate (1) Open vs. Climate (2) Closed Means	Climate (2) Autonomous vs. Climate (5) Paternal Means
Deference	(1) 16.00	(2) 15.40
	(6) 14.37	(5) 13.20
F Value	F = 5.35	F = 5.35
Significance Level	.02	.02
Exhibition	(1) 11.66	
	(6) 13.09	
F Value	F = 3.29	
Significance Level	.08	
Autonomous		(2) 11.87
		(5) 15.25
F Value		F = 11.38
Significance Level		.01
Conformity	(1) 112.31	(2) 112.03
	(6) 105.78	(5) 103.20
F Value	F = 2.84	F = 2.88
Significance Level	.09	.09
Socialibility		(2) 108.45
		(5) 102.00
F Value		F = 3.28
Significance Level		.09

Note: N for (1) = 29; (6) = 119; (2) = 67; (5) = 20.

come and go as desired, he does want to conform and take suggestions from others and wants to be sociable. The distinguishing feature of the Autonomous climate is that the principal gives almost complete freedom to the teachers to provide their own structures so that the group itself can satisfy their own social needs. What this combination suggests is that the teachers who are free of much administrative control form their own set of controls and standards. Although the group can be autonomous, the individual teacher cannot be. It is the group that sets the standards and the individual teachers who have a need to conform. This suggests that women who have a tendency to conform and go along with the group, rather than rebel and act on their own, would fit in quite well in this type of teacher-oriented school building.

Analysis of the Five Scale Questions and Hypotheses

In this section the hypotheses formed in Chapter III relating the Scale Questions to the climate factor scores will be considered first. Next, the relationships between the Scale Questions and the Edwards' data will be investigated. A series of contingency tables involving the Scale Questions and the age, educational experience and building experience of the respondents will then be presented, and the section will conclude with an analysis of those teachers having low scores on the Scale Questions. Before beginning, it would be well to review the five

questions asked, remembering that each respondent was asked to scale his response on a seven-point Likert-type scale.

SQ1 - How real, authentic or open is the principal or teacher behavior at this school?

SQ2 - How satisfied (happy) are you with your attainment of task or job goals?

SQ3 - How satisfied (happy) are you with the degree to which your social and interpersonal needs are being met at this school?

SQ4 - Overall, how happy are you working in this job in this school this year?

SQ5 - How free do you feel to take a position of leadership in the school on some issue that concerns you?

Difficulty in the use of Scale Question 1, although minor, was significant. A few teachers asked the examiner to explain the phrase "real, authentic or open." This suggests that some teachers have no semantic framework within which to answer this question. The other problem arose in only a few schools where some of the teachers perceived a difference in the openness of behavior exhibited by the principal and by the other teachers and did not want to answer in terms of the overall behavior at the school. None of the other Scale Questions seemed to pose any problem.

The Relationship of Scale Questions to OCDQ Climate Factor Scores

Fifteen hypotheses were formulated in Chapter III relating the answers of these five Scale Questions to the

three factor scores found as a result of the OCDQ analysis. It was proposed that consistent and significant differences would exist between the means of population groups responding to each of the five Scale Questions. The results of the statistical analysis of variance procedures are given in Table 13 for all 15 hypotheses. The table is divided into three parts, presenting the hypotheses from series A (Factor I), series B (Factor II), and series C (Factor III). The respective means of the sample groups ($\bar{x}_1$, $\bar{x}_2$, $\bar{x}_3$) are the best estimates of the population parameters. In 12 of the 15 hypotheses the estimates of the population parameters were consistently contrary to the direction proposed by the null hypotheses and the null hypotheses were accordingly rejected. In two cases (A2 and A5) the direction of the difference was contrary to the null hypothesis in each case but the "F" statistic value was not sufficiently large to meet the .05 significance criterion that had been set. The null hypothesis of no difference was accordingly accepted. In the other case (C2) the means from the sample groups were almost identical, the "F" value was not significant, and the null hypothesis of no difference was accepted.

One could summarize the results of comparing teachers from schools which have a more open climate with teachers from schools that are less open this way: Teachers from open climate schools will perceive their climate as being more open, will be more satisfied with the way their social needs are being met, and will, overall, be more happy

TABLE 13.--Statistical comparisons of the means of the five Scale Questions when compared with high, middle and low groupings on Factors I, II and III.[a]

Variable	Means, Factor I	Means, Factor II	Means, Factor III
Scale Question 1 Hypotheses	A1. $\bar{x}_1$ = 5.41 $\bar{x}_2$ = 5.31 $\bar{x}_3$ = 4.38	B1. $\bar{x}_1$ = 5.62 $\bar{x}_2$ = 5.08 $\bar{x}_3$ = 4.67	C1. $\bar{x}_1$ = 5.73 $\bar{x}_2$ = 4.99 $\bar{x}_3$ = 4.70
F values Significance Value	F = 11.27 .01	F = 8.10 .01	F = 9.68 .01
Scale Question 2 Hypotheses	A2. $\bar{x}_1$ = 5.33 $\bar{x}_2$ = 5.20 $\bar{x}_3$ = 5.00	B2. $\bar{x}_1$ = 5.51 $\bar{x}_2$ = 5.20 $\bar{x}_3$ = 4.90	C2. $\bar{x}_1$ = 5.19 $\bar{x}_2$ = 5.18 $\bar{x}_3$ = 5.18
F values Significance Value	F = 1.54 .22	F = 5.74 .01	F = .01 .98
Scale Question 3 Hypotheses	A3. $\bar{x}_1$ = 5.70 $\bar{x}_2$ = 5.36 $\bar{x}_3$ = 4.83	B3. $\bar{x}_1$ = 5.70 $\bar{x}_2$ = 5.23 $\bar{x}_3$ = 5.11	C3. $\bar{x}_1$ = 5.66 $\bar{x}_2$ = 5.29 $\bar{x}_3$ = 5.07
F values Significance Value	F = 7.02 .01	F = 3.67 .03	F = 3.36 .04
Scale Question 4 Hypotheses	A4. $\bar{x}_1$ = 6.01 $\bar{x}_2$ = 5.51 $\bar{x}_3$ = 4.82	B4. $\bar{x}_1$ = 6.16 $\bar{x}_2$ = 5.45 $\bar{x}_3$ = 4.93	C4. $\bar{x}_1$ = 5.88 $\bar{x}_2$ = 5.45 $\bar{x}_3$ = 5.16
F values Significance value	F = 12.68 .01	F = 15.10 .01	F = 4.78 .01
Scale Question 5 Hypotheses	A5. $\bar{x}_1$ = 5.46 $\bar{x}_2$ = 5.05 $\bar{x}_3$ = 5.03	B5. $\bar{x}_1$ = 5.73 $\bar{x}_2$ = 5.23 $\bar{x}_3$ = 4.60	C5. $\bar{x}_1$ = 5.34 $\bar{x}_2$ = 5.[illegible] $\bar{x}_3$ = 4.80
F values Significance value	F = 1.91 .15	F = 11.43 .01	F = 3.39 .04

[a] $\bar{x}_1$ is always the mean for teachers from the "most open," "most satisfied" or "most non-aloof and considerate" schools. $\bar{x}_3$ is always the mean for teachers from schools that are "most closed," "most dissatisfied" or "most aloof and non-considerate."

working in such a school. It does not follow that just because a climate is open, the task goals of a given teacher will be more adequately met. This is to say that the attainment of job satisfactions can be independent of climate, or perhaps even in spite of the environment that surrounds a given teacher. Likewise, it is not clear that just because a school has an open climate, that teachers in such a school will feel free to take positions of leadership. Freedom to take a leadership position apparently comes from other factors, such as the individual make-up of the person, the length of time he has been in the school building, and the social interaction within the building. At best, it seems appropriate to say that open schools may be more conducive to taking a leadership position, but it is not this climate environment which will really determine to what extent leadership will be exercised.

Factor II from the OCDQ attempted to summarize a teacher's attainment of satisfaction with respect to both task and social needs. Teachers from schools that permitted a high degree of these types of satisfaction also saw the behavior at their schools as being more open and authentic than that at the other types of schools. Task goals and social needs were also better provided for in more cases, although the differences were not as wide-spread as one would have expected. Since these two Scale Questions were designed to be highly related to Factor II, it was surprising that a much more pronounced difference was not

apparent. Where a person can teach in an environment that permits satisfaction of both job goals and social needs, this study supports the conclusion that he will be decidedly more happy than in other situations. There is also a freedom in this type of environment that permits an individual to feel that he can take a position of leadership more easily than in the environments described by Factors I and III. The freedom is not felt just because a school is open (Factor I) or because the principal permits it (Factor III). When compared with Factor III, which purports to measure the latitude within which group members can initiate leadership acts, the social acceptance factor becomes even more striking. The desirable environment pictured by high scores on Factor III would be a principal that is seen as being considerate and non-aloof. Given such a situation, there is indeed a feeling of freedom to take a position of leadership, but it is not nearly as apparent as in the Factor II environment which was intimate, non-hindering and had little emphasis to produce. This would suggest that the group plays as much or more important part in the freedom that an individual teacher feels to express himself through a leadership role. The principal helps, but the other teachers make it possible. The freedom comes from the type of social interaction which results in a satisfaction in the group and probably the social acceptance of the group.

It is quite apparent from the data that whether the principal is aloof and whether he is considerate has little bearing on the satisfaction that the teacher obtains from the job itself. It is very clearly related, however, to the teacher's overall happiness in the school, the extent to which his social needs are being met, and his perception of the openness of the behavior of others within the school setting.

The one point which stands out in this set of hypotheses as they relate to the female elementary school teacher is that the individual teacher can find a certain degree of satisfaction in doing her job even in the midst of a fairly unhappy social and inter-personal environment. This suggests that when a teacher has made an unhappy decision in her choice of a teaching location, she can still turn to the job of teaching and find satisfaction there. There remain, however, unanswered questions about the effect that this has upon the students in the classroom. This can be compared to the mother who, when frustrated in her relationships with her husband, turns to the children for gratification of her needs. There can easily arise an unhealthy dependence upon and abuse of the children.

Analysis Eliminating Novice Teachers and Teachers New to the Building

Since there was the possibility that new teachers were responsible for some of these differences, a series

of analysis of variance comparisons were made after eliminating first, each teacher who was not at least in her fourth year of teaching, and second, all teachers who had been in their present building less than four years. The comparative results are shown in Table 14. The categories were not changed and thus teachers who were retained in the new analysis remained in the same openness category (as measured on Factor I) in which they had been placed for the original comparison.

This did make a difference! As seen earlier, the teachers from the most open schools saw their schools as being the most open. By eliminating 17 novice teachers from the closed schools, the average response of other teachers was raised substantially and the remainder of the group saw their schools as being much more open. There was still a significant difference in comparison with teachers from other climate schools but the degree of significance was sharply reduced. The additional elimination of 48 teachers from closed schools (leaving an N = 30) raised the average responses on the Scale Question perception of openness (SQ1) to the point where the differences were no longer significant when compared with responses from teachers at the other climate schools. There was no similar pattern of change in the other openness groupings; this was unique to the closed school.

The natural conclusion must be that it is the novice teachers and teachers new to the building who perceived

TABLE 14.--Statistical comparisons of the means of the five Scale Questions when broken down by groups of teachers and compared with high, middle, and low groupings on Factor I.[d]

Variable	Means, All Teachers N=295[a]	Means, Teachers With 4+ Years Experience in Education N=204[b]	Means, Teachers With 4+ Years Experience in Building N=121[c]
Scale Question 1	$\bar{x}_1 = 5.41$ $\bar{x}_2 = 5.31$ $\bar{x}_3 = 4.38$	$\bar{x}_1 = 5.46$ $\bar{x}_2 = 5.32$ $\bar{x}_3 = 4.67$	$\bar{x}_1 = 5.49$ $\bar{x}_2 = 5.44$ $\bar{x}_3 = 5.07$
F value	F = 11.27	F = 5.01	F = .95
Significance level	.01	.01	.39
Scale Question 2	$\bar{x}_1 = 5.33$ $\bar{x}_2 = 5.20$ $\bar{x}_3 = 5.00$	$\bar{x}_1 = 5.43$ $\bar{x}_2 = 5.26$ $\bar{x}_3 = 5.01$	$\bar{x}_1 = 5.62$ $\bar{x}_2 = 5.62$ $\bar{x}_3 = 5.00$
F value	F = 1.54	F = 1.70	F = 3.20
Significance level	.22	.18	.04
Scale Question 3	$\bar{x}_1 = 5.70$ $\bar{x}_2 = 5.36$ $\bar{x}_3 = 4.83$	$\bar{x}_1 = 5.79$ $\bar{x}_2 = 5.47$ $\bar{x}_3 = 4.79$	$\bar{x}_1 = 5.87$ $\bar{x}_2 = 5.79$ $\bar{x}_3 = 4.77$
F value	F = 7.02	F = 7.49	F = 7.33
Significance level	.01	.01	.01
Scale Question 4	$\bar{x}_1 = 6.01$ $\bar{x}_2 = 5.51$ $\bar{x}_3 = 4.82$	$\bar{x}_1 = 6.21$ $\bar{x}_2 = 5.53$ $\bar{x}_3 = 4.90$	$\bar{x}_1 = 6.46$ $\bar{x}_2 = 5.90$ $\bar{x}_3 = 4.83$
F value	F = 12.68	F = 12.02	F = 17.66
Significance level	.01	.01	.01
Scale Question 5	$\bar{x}_1 = 5.46$ $\bar{x}_2 = 5.05$ $\bar{x}_3 = 5.03$	$\bar{x}_1 = 5.61$ $\bar{x}_2 = 5.16$ $\bar{x}_3 = 4.98$	$\bar{x}_1 = 5.82$ $\bar{x}_2 = 5.60$ $\bar{x}_3 = 5.33$
F value	F = 1.91	F = 2.36	F = 1.48
Significance level	.15	.09	.23

[a]Frequency for most open = 81; middle group = 136; least open = 78.

[b]Frequency for most open = 56; middle group = 87; least open = 61.

[c]Frequency for most open = 39; middle group = 52; least open = 30.

[d]$\bar{x}_1$ is always the mean for teachers from the most open schools; $\bar{x}_2$ the middle group; $\bar{x}_3$ the least open.

their school climate as closed when other data also indicated that it was closed. This could be accounted for if the older teachers in a building began to lose their perspective about the climate of the building. Perhaps they become so deeply involved in it that they do not see their peer behavior as being closed or inauthentic. It is the new teacher coming from a different generation and a different perspective that is able to perceive these differences and report them directly. The same is not true of the open (or even middle climate schools), only of the closed climate schools.

Something different happens with the question as to satisfaction with task needs. When all teachers were compared on the basis of openness, no difference was found. By eliminating novice teachers, only a little change was noticed. By eliminating all teachers new to the building, however, a large enough change was made to bring the result within the .05 significance level. Here the closed teachers from closed schools remain consistent; it is the teachers from open and middle climate schools that change. This could be explained on the basis that all teachers in a closed school enjoy about the same, moderate degree of task satisfaction. Teachers from other climate schools gain in the degree of which their task goals are being met as they stay in the same school. There is something about the environment of a non-closed school that helps teachers find more enjoyment with their achievement level as they gain

experience in the school. This "something" is missing from the closed school environment. This "something" would seem to be related to the lack of spirit in the closed school and lack of involvement by either the principal or teachers in the task of education. It seems that there is no excitement in learning and the achievement within the closed school sufficient for the teachers to find a high level of satisfaction in attainment of their task oriented goals.

The question relating to social needs (SQ3) is not related to novice teachers or teachers new to the building. The differences remain fairly constant and significant as various sub-groups are eliminated. The same is essentially true of overall happiness of the teachers (SQ4). There is an interesting increase in happiness level, however, when teachers new to a building are eliminated. This is true among teachers from non-closed climate schools and suggests that length of stay in a building is related to happiness as long as the climate is not closed. The teachers who have been in this kind of building four years or more are more happy than the newcomers to the building. This is suggestive of two things happening. First, the teachers that are not happy during the first three years in a building will leave. Second, as the newcomer begins to become more a part of the group, he will be more happy in the building. It would be interesting to do a longitudinal study from this perspective and see just what happens to teachers who are unhappy their first year or two in a building. The same mechanism does

not seem to be at work in the closed environment. The teachers are at the same, relatively unhappy point, regardless of their experience or length of stay in the building.

Freedom to assume leadership positions increases when novice teachers and teachers new to a building are eliminated among both the teachers from the open climate schools and those from the middle group. This does not seem to be true in the closed environment. The tendency is maintained throughout the comparisons that teachers from the more open schools are those who feel more free to take leadership positions, but in no case were the differences of such magnitude as to reach the desired significance level. This finding is unclear and only suggestive.

The Relationship Between the EPPS and Scale Questions

To look at some of the relationships that existed between the Edwards' data and the Scale Questions, the latter were divided into three groups. The first group included those that marked a given Scale Question three or less, i.e., those that perceived the behavior at their school as being not at all open, those who were not at all satisfied with the way their task goals or social needs were being met, those who were essentially unhappy in the setting (during the current year) and those who did not feel free to take a leadership position. The other two groups were teachers who marked either a 4-5 or a 6-7.

The data for each of the Scale Questions is presented in Tables 15 through 19 showing selected EPPS scores where an analysis of variance reached a significance level of about .15 or less.

Scale Question SQ1--Perception of Openness.--Some interesting comparisons can be made between those teachers that perceive the behavior at their school as being open and authentic and those that perceive the behavior to be closed or superficial. For one thing the teachers that see their school as superficial tend to have the higher need for Achievement, Autonomy, and Heterosexuality. By contrast they have less need to be deferent, orderly or guilty about their mistakes and feel little need to conform. These teachers are indeed younger (by an average of eight years) and their needs reflect this. They have been in education only an average of six years and in the building an average of only two and one-half years, both of which are about half the average experience of the rest of the teachers. They are often, but not always, unhappy about the way their teaching experience has been going. It is not difficult to gather a picture of a young elementary school teacher, shortly after graduation, who really wants to do a job. She wants to be left alone to do what needs to be done in a way that she knows to be right, but keeps hearing criticisms from other teachers that she is not maintaining sufficient discipline, is making too many mistakes and just is not teaching the 3rd grade the way it should be taught.

TABLE 15.--Analysis of variance results when Scale Question 1 (Perception of Openness) is compared with selected EPPS variables.

EPPS Variable	Answer to SQ1 (Scaled 1-7) 1-3 N=33	4-5 N=120	6-7 N=133	F Value	Significance
Achievement	14.45	13.50	12.93	2.02	.13
Deference	13.12	14.47	15.22	4.69	.01
Order	11.03	13.29	13.50	3.44	.03
Autonomy	14.18	12.68	12.63	2.19	.11
Affiliation	17.70	16.61	17.53	2.05	.13
Abasement	12.61	15.31	15.31	4.24	.02
Heterosexuality	13.21	11.08	10.75	1.75	.17
Conformity	97.33	107.81	109.77	5.66	.01

TABLE 16.--Analysis of variance results when Scale Question 2 (Task Satisfaction) is compared with selected EPPS variables.

EPPS Variable	Answer to SQ2 (Scaled 1-7) 1-3 N=16	4-5 N=163	6-7 N=116	F Value	Significance
Intraception	15.19	16.82	17.22	1.68	.19
Dominance	10.19	10.78	11.96	2.60	.07
Abasement	17.06	15.06	14.66	1.60	.20
Heterosexuality	13.69	11.49	10.37	2.08	.12

TABLE 17.--Analysis of variance results when Scale Question 3 (Social Needs Satisfaction) is compared with EPPS Variables.

EPPS Variable	Answer to SQ3 (Scaled 1-7) 1-3 N=30	4-5 N=113	6-7 N=152	F Value	Significance
Achievement	14.03	13.97	12.76	3.41	.03
Deference	12.90	14.79	14.91	3.92	.02
Order	11.53	13.19	13.40	1.80	.17
Exhibition	13.10	12.34	13.36	2.33	.10
Abasement	14.30	14.47	15.55	1.79	.17
Nurturance	15.87	15.12	16.44	3.08	.05
Endurance	14.07	15.73	15.03	1.74	.17
Heterosexuality	13.50	10.83	10.96	1.97	.14
Aggression	12.37	10.72	9.93	4.47	.01
Conformity	97.73	107.79	109.26	4.57	.01

TABLE 18.--Analysis of variance results when Scale Question 4 (Overall Happiness) is compared with EPPS Variables.

EPPS Variable	Answer to SQ4 (Scaled 1-7) 1-3 N=34	4-5 N=95	6-7 N=166	F Value	Significance
Deference	12.71	14.18	15.33	8.81	.01
Exhibition	14.00	12.46	12.99	2.05	.13
Intraception	15.71	17.26	16.92	1.72	.18
Abasement	14.65	14.20	15.54	2.22	.11
Change	18.71	17.55	17.12	1.57	.21
Aggression	12.32	10.20	10.26	3.65	.03
Conformity	99.71	106.41	109.76	4.12	.02

TABLE 19.--Analysis of Variance results when Scale Question 5 (Freedom to Lead) is compared with EPPS variables.

EPPS Variable	Answer to SQ5 (Scaled 1-7) 1-3 N=38	4-5 N=115	6-7 N=142	F Value	Significance
Deference	12.87	14.57	15.21	6.35	.01
Succorance	13.03	12.14	11.44	2.66	.07
Dominance	11.39	10.51	11.73	2.21	.11
Nurturance	14.76	15.97	16.11	1.51	.22
Heterosexuality	14.61	10.23	11.01	6.15	.01
Conformity	100.63	109.10	108.08	2.89	.06

Scale Question SQ2--Task Satisfaction.--There were no really significant relationships found here. Only 16 teachers felt that their task goals were not being achieved. This non-achievement could be related to the teachers' inability to take charge of their classrooms and their feeling that they must accept responsibility for all the mistakes that take place in their classrooms. These teachers are less likely to be the type that think through why children act the way they do. Surprisingly, there did not appear to be any relationship here with a need for achievement among these teachers.

Scale Question SQ3--Social Needs Satisfaction.--A number of significant trends are apparent for the 30 teachers who did not feel that their social needs were being adequately met in their present school environment. Such a

teacher could be characterized as being a high achiever, more aggressive, with a high need for relationships with the opposite sex. Such a teacher is also likely to be less deferent, less a conformist and have less need for order, exhibition or abasement. Again, these teachers were younger, with about half of the average experience or average years in the present building when compared with the rest of the teachers. The chances are also that this teacher will be teaching in the lower elementary grades. This type is about the same described under the first Scale Question.

Scale Question SQ4--Overall Happiness.--Some 34 teachers marked themselves as being essentially unhappy in their school this year. To get some notion of the relationship with other Scale Questions, 15 of these teachers also marked SQ1 in the lowest group. This provided some, but far from complete overlap in respondents to these two questions. Those who felt most unhappy tended to be more aggressive, have more need for exhibition and more need for change. On the other hand they were non-conformists, non-intraceptive and had strongly non-deferent personalities. As a whole, this group, like the others, was younger and less experienced.

Scale Question SQ5--Freedom to Lead.--Thirty-eight teachers did not feel free to accept leadership positions. Age differences could account for the lack of need for Deference here and the high need for Heterosexuality, the

most significant differences in Table 19. More interesting, however, is the lower need for Nurturance and high need for Succorance. The picture one gets of this teacher is a person who does not want to give herself to others and would rather depend upon others. She wants to be led and does not see herself as a leader. She wants to be a non-conformist but can't quite do it. She is a teacher who holds her needs in, accepts suggestions from others merely because she does not feel strong enough to move out on her own.

Summary of Scale Questions and EPPS Needs.--Although there was some overlap among teachers included in the bottom 10% of responses to the Scale Questions, the overlap was a shifting one with slightly different personalities being regrouped on each comparison. Most of the teachers were younger and had less experience. Also these teachers were more apt to teach in the lower elementary grades (K-3) than would otherwise be expected. (The correlation matrix showed no relationship between upper or lower elementary and either age or experience.) Is there something inherently less satisfying about teaching in the early grades? Or is this just a quirk of the statistics?

More of an understanding of the age-experience interaction here might be possible by looking at a series of Tables relating the age-experience factor to the Scale Questions already discussed.

Analysis of Contingency Tables Relating the Scale Questions to Age and Experience

A series of contingency tables were prepared with the assistance of the Michigan State University computer ACT program (Sim, Widmayer and Lesgold, 1966). A more complete breakdown was made by the computer and then cells were collapsed to present the series of Tables 20-22. Presented with each of the age variable tables is a three-way analysis of age (20-20; 30-49; and 50-69) and a two-way analysis of the Scale Questions (1-3 and 4-7). The other tables have a similar 3x2 structure. These tables were prepared from the entire sample, including men and principals. The Chi Square (χ^2), degrees of freedom and significance level were recomputed after collapsing the cells to obtain a more probable distribution of at least 8-10 in a cell. As part of each table the correlation for teachers only is included as computed in the master correlation matrix and the significance level of that correlation.

The tables give a strong indication of the importance of age and experience in responding to the Scale Questions. As might be expected from the previous discussion, it was the younger teachers (ages 20-29) who perceived their environment as more closed, whose task goals were not being met (sig = .10), whose social needs were not being met, who were essentially unhappy in their teaching situation and did not feel a freedom to take a leadership role in their school. Quite the contrary was true of teachers over

TABLE 20.--Analysis of contingency tables involving age and five Scale Questions.[a]

Age	1-3	4-7	Total	
		Scale Question 1 Responses		
20-29	19	107	126	X^2 with 2 df = 14.26
30-49	12	86	98	Sig = .01
50-69	2	124	126	r = .16
Totals	33	317	350	Sig = .01
		Scale Question 2 Responses		
20-29	11	117	128	X^2 with 2 df = 4.87
30-49	7	92	99	Sig = .10
50-69	3	126	129	r = .15
Totals	21	335	356	Sig = .01
		Scale Question 3 Responses		
20-29	21	109	130	X^2 with 2 df = 8.87
30-49	12	87	99	Sig = .02
50-69	6	122	128	r = .17
Totals	39	318	357	Sig = .01
		Scale Question 4 Responses		
20-29	22	108	130	X^2 with 2 df = 9.78
30-49	11	88	99	Sig = .01
50-69	6	121	127	r = .21
Totals	39	317	356	Sig = .01
		Scale Question 5 Responses		
20-29	28	102	130	X^2 with 2 df = 19.22
30-49	8	91	99	Sig = .01
50-69	6	121	127	r = .12
Totals	42	314	356	Sig = .04

[a]Correlations and related significance figures from master correlation matrix.

TABLE 21.--Analysis of contingency tables involving educational experience and five Scale Questions.[a]

Educational Experience	1-3	4-7	Total	
Scale Question 1 Responses				
0-3 years	15	84	99	X^2 with 2 df = 16.45
4-9 years	13	68	81	Sig = .01
10+ years	5	166	171	r = .15
Totals	33	318	351	Sig = .01
Scale Question 2 Responses				
0-3 years	9	92	101	X^2 with 2 df = 7.91
4-9 years	8	74	82	Sig = .02
10+ years	4	170	174	r = .15
Totals	21	336	357	Sig = .01
Scale Question 3 Responses				
0-3 years	11	91	102	X^2 with 2 df = 14.65
4-9 years	18	65	83	Sig = .01
10+ years	10	163	173	r = .13
Totals	39	319	358	Sig = .02
Scale Question 4 Responses				
0-3 years	17	85	102	X^2 with 2 df = 11.07
4-9 years	13	70	83	Sig = .01
10+ years	9	163	172	r = .17
Totals	39	318	357	Sig = .01
Scale Question 5 Responses				
0-3 years	18	84	102	X^2 with 2 df = 16.40
4-9 years	17	66	83	Sig = .01
10+ years	7	165	172	r = .12
Totals	42	315	357	Sig = .04

[a]Correlations and significance figures from master correlation matrix.

TABLE 22.--Analysis of contingency tables involving experience in building and five Scale Questions.[a]

Building Experience	1-3	4-7	Total	
Scale Question 1 Responses				
0-3 years	31	176	207	X^2 with 2 df = 18.44
4-9 years	1	100	101	Sig = .01
10+ years	1	42	43	r = .13
Totals	33	318	351	Sig = .03
Scale Question 2 Responses				
0-3 years	17	192	209	X^2 with 2 df = 4.62
4-9 years	3	101	104	Sig = .10
10+ years	1	43	44	r = .15
Totals	21	336	357	Sig = .01
Scale Question 3 Responses				
0-3 years	30	180	210	X^2 with 2 df - 6.14
4-9 years	7	97	104	Sig = .05
10+ years	2	42	44	r = .13
Totals	39	319	358	Sig = .02
Scale Question 4 Responses				
0-3 years	32	177	209	X^2 with 2 df = 10.34
4-9 years	6	98	104	Sig = .01
10+ years	1	43	44	r = .13
Totals	39	318	357	Sig = .03
Scale Question 5 Responses				
0-3 years	39	171	210	X^2 with 2 df = 23.01
4-9 years	3	100	103	Sig = .01
10+ years	0	44	44	r = .18
Totals	42	315	357	Sig = .01

[a]Correlations and significance figures from master correlation matrix.

age 50. Very few of them (and theoretically there should have been just as many as there were under age 30) saw their peer behavior as inauthentic, had doubts about their task achievement or social needs, felt unhappy or unable to take a leadership role. The differences came from the novice and veteran groups. These same relationships show up, but in a less significant way, when comparing the Scale Questions and experience in education generally.

As was indicated in the discussion of novice teachers, the most natural explanation for this would seem to be that the unhappy teachers have already been weeded out of the teaching profession by the time they reach 50. This means that some teachers try education and become so frustrated with it by the time they are 30 that they begin to leave. A few stay on during their 30's and 40's but by the time they are 50 they have either dropped out, or learned that you don't talk about or admit your dissatisfactions. This does not really answer the question, though, just why these newer teachers are dissatisfied. It only tells us that if you are in your twenties, you are more apt to be unhappy with several phases of teaching than if you are older.

The contingency tables relating experience in present school building to the Scale Questions (Table 22) are in the same direction as Tables 20 and 21 but are much more dramatic. For example, almost all of the teachers who perceived the behavior of teachers at their school as being inauthentic or closed or superficial had been in the building less than

three years. This would strongly confirm earlier suggestions that as teachers stay in the same building for any length of time they lose their sense of perspective and begin to think what they see each day is authentic behavior. One can almost sense a cover-up here and a feeling of a role playing which has become real. It is almost like saying, "What I see on the surface is all there really is to know about you." Another explanation is possible, and that is that teachers in their early years in a building have not gotten to know the rest of the staff, do not feel free with them and neither do the senior staff members feel free to reveal much about themselves to the newcomers. Such freedom may develop in time, but there must be enough time to really get to know the other staff members and this means time for social interaction within the school.

One would expect this same pattern to be repeated with SQ3, the question relating to social needs satisfaction, but not to SQ2 relating to task achievement. Even here, however, there is strong evidence that teachers new to a building do not achieve satisfaction of their job goals. Can this be because they are so new that they just are not sure what is expected of them? Perhaps their goals have to be set by the principal or others rather than by anything that comes from inside of themselves and their understanding of their profession. The happiness (SQ4) of the teachers follows in the same pattern as does the question relating to the freedom a teacher feels to take leadership positions.

This latter is not unexpected because it would take time in a new situation to sense the unspoken rules, the hidden agenda, and the various roles each of the staff is expected to play.

Other Findings

Chapter IV concludes with some brief comments about other relationships found in the present study which were not directly related to the hypotheses already considered. A discussion of the OCDQ individual factors will be followed by comments on a multiple regression analysis of the Scale Questions. This section will be concluded with a look at career teachers including teachers who have remained in a closed climate school for four or more years.

OCDQ Individual Factors

The individual factors on the OCDQ do not follow the same pattern as the group consensus factors mentioned earlier. They are formed from the OCDQ sub-scores for each subject. A correlation of individual factors with the Scale Questions and EPPS variables for all subjects is given in Table 23.

Individual Factor I tends to reflect the social needs of the individual teacher. This factor was positively and significantly related to all of the Scale Questions except SQ2 (reflecting task needs satisfaction). This suggests that the more an individual teacher perceived fellow teachers as being friendly and the principal as being

TABLE 23.--Correlation and significant probabilities between computer created individual factors from individual OCDQ sub-scores and the Scale Questions and selected EPPS variables.

	Individual Factors on the OCDQ		
	I Social Needs[a]	II General Esprit[b]	III Social Control by Principal[c]
Scale Questions			
SQ1 - Authenticity	.25 (.01)	.45 (.01)	-.25 (.01)
SQ2 - Task needs	.06 (.29)	.24 (.01)	-.09 (.10)
SQ3 - Social needs	.20 (.01)	.39 (.01)	-.10 (.09)
SQ4 - Happiness	.19 (.01)	.42 (.01)	-.16 (.01)
SQ5 - Freedom to Lead	.25 (.01)	.31 (.01)	-.11 (.06)
EPPS Variables			
Achievement		-.13 (.03)	
Deference		.15 (.01)	
Order	-.14 (.01)		
Autonomy		-.15 (.01)	
Intraception	.11 (.06)		
Change			.14 (.02)

Note: Significance probabilities of the F values for the simple Least Squares B given in parenthesis.

[a]Individual Factor I was created by the summation of the following OCDQ individual sub-test scores: Intimacy + Consideration.

[b]Individual Factor II was created by the summation of the following OCDQ individual sub-test scores: Thrust + Esprit - Disengagement - Hindrance.

[c]Individual Factor III was created by the summation of the following OCDQ individual sub-test scores: Aloofness + Production Emphasis.

considerate, the more he will perceive the school as being open, the more he will feel his social needs are being met, the happier he will be, and the more feeling of freedom to take a leadership role will be felt. There is a negative relationship between the EPPS need for Order and this Individual Factor I.

Individual Factor II is a general esprit factor combining high scores on the principal's Thrust and the group's Esprit with low scores on Hindrance and Disengagement, both teacher-related sub-tests. Here there was a strong, positive relationship on all the Scale Questions. There was also a positive relationship to Deference and a negative relationship with Achievement and Autonomy on the EPPS variables. This suggests that a low need for Achievement and Autonomy together with a high need for Deference, on the part of an individual teacher, are all wrapped together with the general esprit of the school (as perceived by an individual teacher) and his general satisfaction and happiness within the school. It is not at all clear which causes which; it is only clear that they are all very closely tied together.

Social control by the principal (Individual Factor III) was not as related to the Scale Questions or the EPPS scores as were the other factors. This factor is composed of the teacher's perception of the aloofness of the principal and how much he emphasizes production. It shows a negative relationship to the teacher's perception of authenticity

within the school and his overall happiness. It is positively related to the teacher's need for change. Again, it is difficult to say whether the teacher's need for change colors the view of the principal or whether the principal's actions bring forth the need for change within the teacher. This would be an interesting area for further exploration.

Multiple Correlation of the Scale Questions

An attempt was made through a multiple regression technique to find a group of two or more variables that would significantly predict each of the five Scale Question responses. On Scale Question 1 (relating to a teacher's perception of openness in the building) Thrust, Consideration and Esprit, all OCDQ sub-tests, were the most important predictors and when combined yielded a multiple correlation of .49. On Scale Question 2, (relating to task satisfaction) only the OCDQ Hindrance sub-test (negatively weighted) and the number of years in the building were good predictors, and these provided a multiple correlation of only .28. OCDQ Disengagement (negative), OCDQ Esprit, EPPS Exhibition, EPPS Achievement (negative) and years in the building provided the best predictors for Scale Question 3 (relating to social needs satisfaction). Here a .45 multiple correlation was attained. On overall happiness in the school (SQ4), OCDQ sub-tests on Esprit, Thrust and Consideration when added to EPPS Deference scores provided

a .48 multiple correlation. Finally, Scale Question 5 (relating to a feeling of freedom to lead) was significantly related to seven other variables which together combined to form a multiple correlation of .51. The two most important variables here were Thrust and Intimacy, both OCDQ sub-scores. EPPS Succorance (negative), OCDQ Consideration, EPPS Deference and years experience in the building were also significant predictors.

None of the above multiple correlations was extremely high and only about 25% of the variance on any of the Scale Questions was accounted for by the variables indicated. This suggests that a lot of the differences and reasons, for example, why teachers are unhappy were not taken into account in this study. The climate of the school is definitely involved in the teacher's happiness. Also involved is his own need for Deference, which, if high, will give him a greater chance for happiness. Many other variables, however, remain unspecified.

Career Teachers

In an effort to look at career teachers, the 76 teachers who planned to teach for the foreseeable future and the 113 teachers who planned to teach until retirement were combined into one group and all other teachers were combined into a second group. The correlations with the Scale Questions, EPPS Needs and OCDQ sub-tests provided a number of significant correlations which are reproduced in Table 24, along

TABLE 24.--Correlations of selected variables with career and non-career teachers.[1]

Variable	Correlation	Significance of F Value for Simple Least Squares B
SQ1 - Perception of openness	.15	.01
SQ2 - Task satisfaction	.12	.04
SQ3 - Social needs satisfaction	.13	.02
SQ4 - Overall happiness	.15	.01
SQ5 - Freedom to lead	.10	.09
EPPS Deference	.29	.01
EPPS Order	.19	.01
EPPS Exhibition	-.23	.01
EPPS Abasement	.20	.01
EPPS Change	-.18	.01
EPPS Endurance	.33	.01
EPPS Heterosexuality	-.29	.01
EPPS Dominance	-.09	.01
EPPS Factor Conformity	.35	.01
OCDQ Sub-test Esprit	.25	.01
OCDQ Sub-test Production Emphasis	-.17	.01

[1]Positive correlations indicate a direct relationship with career teachers.

with the corresponding significance values. In interpreting this table it is well to keep in mind the age-experience interaction in the EPPS Scores since, as a group, these career teachers were older. The 50-59 age group was the largest single group with 69 teachers. All other ten year groupings had about 30 career teachers in the group.

An analysis of variance suggests that non-career teachers have a slightly higher need to Dominate (sig. = .09) than do career teachers. They also have more need for Change (.01) but less need for Endurance (.01). This last was very striking since a high need for Endurance seems to be a characteristic of career elementary school teachers and the difference cannot be accounted for by age alone. In Table 24, Endurance and Conformity stand out as the two highest correlations with career teaching.

An interesting set of differences appeared between career teachers who had completed work beyond the Master's level and all other teachers in the sample. No principals were included in this analysis. The results of the more significant comparisons can be found in Table 25. As one would expect, this group was slightly older, had slightly more experience in education and in their own building than did the other teachers in the study. These age-experience differences were not sufficiently large, however, to account for all the variance. Twelve of these 16 women taught regular classes from kindergarten to sixth grade; the other four were special education teachers. Even with the small number for comparison, striking differences were found on the Affiliation, Dominance and Sociability variables. In looking at Table 25, a person derives a picture of an achievement oriented woman who likes to take charge of things and avoid either friendly or dependent relationships with others in her own peer group. She does not have to sell

TABLE 25.--Comparisons on selected EPPS scores for 279 female elementary teachers holding an MA degree or less and 16 teachers having work beyond the MA degree.

EPPS Need	Mean for 279 Teachers	Mean for 16 Teachers	F Value	Significance
Achievement	13.33	14.81	2.08	.15
Order	13.26	11.81	1.32	.25
Affiliation	17.34	14.88	6.10	.01
Succorance	12.06	10.44	1.57	.11
Dominance	11.06	14.44	8.30	.01
Abasement	15.12	13.63	1.34	.25
Conformity	107.95	102.25	1.32	.25
Sociability	106.14	95.44	4.25	.01

TABLE 26.--EPPS profile of 35 teachers who had remained in a closed climate school for four or more years compared with the profile for the total sample.

EPPS Need	Mean for 35 Teachers	Mean for 295 Teachers
Achievement	13.57	13.38
Deference	15.06	14.71
Order	15.74	13.19
Exhibition	11.60	12.98
Autonomy	12.63	12.86
Affiliation	16.63	17.19
Intraception	16.26	16.95
Succorance	11.40	11.93
Dominance	10.89	11.25
Abasement	15.03	15.06
Nurturance	16.57	15.94
Change	16.77	17.52
Endurance	17.20	15.28
Heterosexuality	10.18	11.18
Aggression	10.73	10.52

herself short or conform to the norms set by other teachers. In effect, she is a loner within the school building unless there is another teacher that shares the same pattern of interests. As a whole, however, she is just as happy as the average teacher.

The Career Teacher in the Closed School

Finally, five schools were selected that had been classified as closed climate schools in 1963 by Kirk and again in 1967 by the present study. Of the 71 teachers in these schools in 1967, 39 had been teaching during the time both studies were being completed. It was assumed that these teachers were somewhat content with their school climate. These teachers were somewhat older than the sample as a whole, had spent over 19 years in education, and had been in the building almost 9 years. As a group, these teachers perceived the teacher and principal behavior at their school as being more open than the average for the sample as a whole, a pattern consistent with other findings in this study. They also felt more freedom to lead, probably because of their long building experience. On the other hand, they were not as well satisfied as the average teacher with the way their task or social needs were being met, and were slightly less happy than other teachers. When compared with the total group on the Edwards (see Table 26), they were noticeably higher on the need for

Order and Endurance. They were lower on Exhibition, Change and Heterosexuality. All of these differences can be accounted for by the age-experience interaction.

From this information one concludes that personality differences in manifest needs (as measured by the EPPS) are not the differences which will account for these 39 teachers staying in the closed environment. This brings into question the assumption that there is an EPPS personality pattern unique to a teacher who stays in the same climate school over a period of time.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

Summary

The purpose of this study, as stated in Chapter III, was to investigate and analyze the relationships that exist between the climate of different elementary schools and the teachers who teach within those schools. Basic information was gathered and analyzed using three instruments. First, the strength of 15 manifest needs was measured using the Edwards' Personal Preference Schedule (EPPS). These were the needs, described by Edwards (1959), of Achievement, Deference, Order, Exhibition, Autonomy, Affiliation, Intraception, Succorance, Dominance, Abasement, Nurturance, Change, Endurance, Heterosexuality, and Aggression. Second, the group consensus and individual perception of climate for each school was measured by the Organizational Climate Description Questionnaire (OCDQ). The eight sub-tests of this instrument provided a climate profile and information about the school as to its relative position on three factors. For the schools as a whole, Factor I was a measurement of the openness of the school climate, Factor II was a measurement of the task and social needs satisfaction within the

school, and Factor III was a measure of the aloofness and consideration by the principal which Halpin saw as a measure of the freedom within the group to initiate leadership acts. The third instrument, along with general data, measured the responses of each teacher to five Scale Questions. These questions attempted to Scale directly the teachers' perception of the openness or authenticity of the school climate, their satisfaction with vocational task achievement, their satisfaction with the school social situation, their overall happiness during the current year, and the freedom they individually felt to take a leadership position in the school.

Twenty-four Michigan schools of diverse characteristics were asked to participate in the study and 359 teachers and principals from these schools provided at least part of the information requested. The final sample for that part of the study relating to female elementary school teachers was composed of 295 teachers who provided all the information mentioned above.

Seventeen hypotheses were proposed in Chapter III in an attempt to relate the manifest needs of the female elementary school teacher (as measured by the EPPS) to the degree of openness of the school, measured by Factor I of the OCDQ. A similar number of hypotheses were also formulated in relation to Factor II, and again in relation to Factor III. In no case was a proposed hypothesis accepted,

although some statistical significance was found. Needs that did appear to have some relationship to climate included Achievement, Abasement, Conformity (a combination of EPPS sub-tests), Exhibition, and Deference. The elimination of novice teachers and teachers new to the building offered very little additional information in this area.

Five hypotheses were also formulated in Chapter III relating the answers on the five Scale Questions to the OCDQ Factor I score on openness of climate. Additional hypotheses were formulated with respect to Factor II and Factor III. Twelve of these 15 hypotheses were found to be supported by the evidence. The Scale Question relating to satisfaction of task goals was related only to OCDQ Factor II on task and social satisfactions; the Scale Question relating to freedom to initiate leadership acts was related to Factors II and III, but not to Factor I on openness. The elimination of novice teachers and teachers new to the building in this case did make a difference by eliminating subjects who were accounting for the variance in responses to some of the Scale Questions.

When compared with older teachers, the younger and novice teachers perceived their environment as being more closed, did not feel their task goals or social needs were being as well met in the school, were more apt to be unhappy in their teaching situation and did not feel a freedom to take a leadership position in the school.

A similar pattern also developed for teachers new to the building. Almost all of the teachers who perceived the behavior of teachers at their school as being superficial had been in the building three years or less. Teachers new to the building also felt less achievement with their task and social goals, were more apt to be unhappy and felt the least feeedom to take a leadership role.

A strong age-experience interaction was found using the EPPS. Teachers in the present sample ranged from 20 to almost 70 years of age and their EPPS scores reflected this age variance. The need for Deference, Order, Abasement and Endurance showed an increase with age; the need for Exhibition and Heterosexuality, a decrease with age. Affiliation, Succorance and Change had the least clear-cut patterns, but were "affected by age."

When compared on the Scale Questions, teachers who saw their school as being closed or inauthentic tended to have a higher need for Achievement, Autonomy and Heterosexuality, and a lesser need for Deference, Order, and Abasement. Much of this difference, however, could be accounted for by age and experience. Teachers whose social needs were not being met tended to be younger, have less experience, score higher on Achievement, Aggression and Heterosexuality, but lower on Deference, Conformity, Order, Exhibition and Abasement. The least happy teachers were also younger, less experienced and tended to score higher on Aggression, Exhibition and Change.

They scored lower on Conformity, Intraception and Deference. Teachers who did not feel a freedom to accept leadership positions showed a lower need for Nurturance and a higher need for Succorance.

Analysis was also made of the individual female elementary school teacher's perception of her climate (through use of the OCDQ sub-test scores) and the EPPS. Here it was found that teachers who see themselves as being from open schools have less of a need for Exhibition, but more of a need for Deference and Conformity. Teachers whose perception of climate places them in an autonomous climate also perceive that they have a higher need for Deference and Conformity. They also have a higher need for Sociability, but less of a need for Autonomy.

Conclusions

The sample for the present study was not selected randomly and the evidence supports a conclusion that the schools selected were not representative of all schools in Michigan. There appeared to be an over-representation of closed climate schools and an under-representation of other types. This same characterization did not appear to hold for teachers. The manifest need structure of the teachers represented by this sample tended to be the same as a previous sample taken in the mid-west. The differences between the present sample and women in general tended to replicate similar differences reported in other studies.

When compared with women in general, women who teach in an elementary school are more apt to desire to be the center of attention and their own boss. They desire to analyze their own and other's motives and behavior and do new and different things. They have a need to dominate, persuade and influence others to do as they desire. They also have a higher need to engage in activities with men. Again, when compared with women in general, female elementary school teachers have less need to keep things in order, to be well organized, and to plan in advance. They manifest less need to help their own friends when in trouble. They are thus more independent and autonomous. They have less need to feel guilty, accept blame when things do not go right or to stick with a job until it is finished. This picture of the female elementary school teacher is based upon the total sample. A further comparison, not made with the present data, would be between the way needs for women in general change with age and the tendency of female elementary school teachers to change in their own need structure as they grow older and gain more experience. In the present study, patterns of change in nine of the 15 needs were apparent when related to age and experience.

The sample of male elementary teachers and all principals was small and thus only a tentative picture of the male teacher and potential elementary school administrator can be drawn. When compared to the average college educated man, the male teacher-administrator tended to have

less need to plan well and to keep things neat and organized, less need to feel timid or guilty about mistakes, and less need to stay with a job until it is done. On the other hand, he showed a greater need to observe and analyze feelings and motives and do new and different things than most other men.

The question of stability of school climate was not answered adequately. The measurement of climate at 12 schools was compared with a similar measurement of these same schools taken three and one-half years earlier. Six schools maintained essentially the same profile of sub-test scores; the climate of the others changed in varying degrees. It appeared that climate is more of a dynamic concept than Halpin had envisioned. Where there is instability in the community, turnover in personnel or change in principal behavior, the resultant change in school climate can be quite extensive. The interaction of these differences can have a dramatic effect on the school environmental climate.

The conclusions with respect to relationship between climate and the personality need structure of female elementary school teachers can only be suggestive for further research since the actual hypotheses were not supported in the present study. Some differences did appear and tentative conclusions were drawn. There was more need for Achievement manifested in the closed type of school and in schools where there was the least satisfaction with task and social needs. Here the novice teachers and teachers new to the building manifested the most need for Achievement.

It would seem that since Achievement is task oriented, teachers need satisfaction from their job when the climate itself is not open or socially satisfying.

The need for Abasement was found to be weakest among teachers in closed schools, perhaps because the environment was meeting this need. This finding was consistent with the need for Conformity, a combination of EPPS subscores, where the most need to conform was manifested in open schools. Newer teachers had less need to conform than did experienced teachers, but were also more unhappy. Conformity among teachers in an open environment would seem to be conducive to harmony. In a closed environment there did not seem to be such an inter-dependence upon others and thus the non-conformist could get along better.

Teachers from schools where there was a substantial degree of task and social needs satisfaction tend to have the higher need for Exhibition, but at the same time they also had the higher need for Deference. Where there was social satisfaction present, it was aided by people who could take suggestions from others, praise others, conform to custom and avoid the unconventional. When novice teachers and when teachers new to a building were eliminated from the analysis, a higher need for Deference also appeared in open climate schools, perhaps for the same reason.

When teachers coming from high Factor I (or open climate schools) were compared with teachers from closed climate schools, the former perceived their climate as

being more open, were more satisfied with the way their social needs were being met, and were overall more happy working in such a school. The attainment of task or job satisfactions was independent of climate openness and the feeling of freedom to take a leadership position was found to be more related to factors other than openness. The thrust of the principal and the intimacy of the group were the two most important factors in sensing a freedom to lead.

When teachers from schools in which a high degree of social and task satisfactions were present were compared with teachers from other schools, the former saw behavior at their school as being more open and authentic than the latter. Their task goals and social needs were, of course, better provided for and they were more happy than teachers from schools where there was more dissatisfaction with the degree to which task and social needs were being met. In the more satisfied schools, there was also felt a greater freedom to take leadership positions.

When teachers from schools where the principal was seen as being considerate and non-aloof were compared with other teachers, the former saw their environment as being more open, were more satisfied with the way their social needs were being met, were more happy working in such a school and felt more freedom to take a leadership role in their school. There was no significant difference between the groups of teachers when compared on their responses to the question on attainment of task goals.

The extent of job satisfaction or attainment of task goals was most closely related to only two factors, the lack of hindrance by the principal and the number of years within the school building. This job satisfaction appears to be something inside the female elementary school teacher. If she is left alone to do her job, the individual teacher can find a degree of satisfaction in doing the job regardless of the nature of the social and interpersonal environment. Of concern here is the question raised in Chapter IV, relating to the effect that such a teacher has upon students in her classroom. This question was not answered in the present study.

One of the questions of greatest concern in vocational planning is the overall happiness of a teacher in her work. Here a combination of high need for Deference on the part of the individual teacher, high esprit on the part of the group and a high degree of thrust and consideration on the part of the principal combine to form the most satisfying relationship for the teacher in her overall vocational happiness.

Two problems were raised with respect to the Scale Questions. One was whether Halpin's factors were actually measuring what he claimed they were measuring. The other problem questioned whether a teacher could scale directly that which the OCDQ measured indirectly. From the findings of the present study, it was concluded that Factor I is an

openness factor as claimed by Halpin. It is not as clear that openness as measured here should be as highly valued as Halpin indicated. Openness does not necessarily mean that teacher differences and disruptive influences will be tolerated in such an environment. There was a sense in which conformity and deference were highly valued in the open climate school. The openness seems related to professional attributes, not personality traits. But can these two be so clearly separated? One can sense an ambivalence here that might be present in administrators as well as teachers. "I am receptive to new ideas about education. I am not receptive to individual or unique styles of dress or behavior within this school." Even in the open school the reminiscense of the "good old days" comes to awareness: The teacher is king in the classroom, but the school board is the keeper of morals at all other times. The problem is still the same. The conforming behavior by the teacher in the classroom and around the school building speaks more loudly to the children than the words spoken during science and social studies. Can we inquire and experiment when we must always conform?

The openness factor cannot be scaled directly by all teachers. Some do not possess an understanding of the concept of openness or authentic behavior. They have no basis for judging openness. As one young teacher asked: "Isn't all behavior authentic?" Again the evidence strongly suggests that teachers, particularly in closed environments,

lose their ability over time to directly perceive their climate as being closed. It seems that direct scaling must be done on a comparative basis and veteran teachers lose the basis for comparison.

For the majority of teachers in a non-closed school, their perception of authenticity can be scaled directly. Experience gained during the study suggests, however, that teacher behavior as a group be separated from the principal's behavior. These do not of necessity coincide and the differences present can be masked by grouping both together.

Factor II is a task and social satisfaction factor, but not as clearly as Halpin would suggest. For one thing there was a difference here between satisfaction of task needs and social needs that cannot be taken into account when placing both on the same factor. The two do not completely overlap. Here the asking of scale questions would seem to offer a better measure of the degree to which these needs or goals are being met.

Factor III is a measure of the aloofness and consideration of the principal. It purports to measure the freedom within which the group members as well as the principal can lead. Scale Question 5 was not directly related to this factor because it asked how free an individual felt to take a leadership position. Factor III relates to the group as a whole. The individual feeling of freedom recorded on SQ5 is more dependent on other factors than upon the principal's relations in the school.

If this is true of individuals as individuals, why is this not true of individuals as a group. The findings of this study suggest some other definition of this factor might be helpful. Factor III is largely a principal-oriented factor. Considering the sub-tests reflected on this factor, it would seem better viewed as representing a measure of lack of personal involvement in the lives of the teaching staff. The aloofness reflects emotional distance. Thrust reflects emotional example as well as vocational example. Consideration reflects the humanness of the principal in relating to his teachers. Factor III seems to measure something more important than just freedom of the group to initiate leadership acts.

Implications and Recommendations

Implication for Teaching and Administration

Although a few questions were answered by the present study, other questions were left unanswered because of inconclusive results. Many additional questions were raised by the data from the study. Overall, it is clear from this study that the personality manifest need structure of most people in the elementary school teaching profession differs from other adults. This can be helpful in counseling future elementary teachers and in interpreting their EPPS profile. A limiting factor, however, is the age-experience interaction. Since need patterns change with

age, a projection of a student's need ten years in the future may be difficult. The importance of earlier studies involving teachers and the EPPS needs can now be more carefully evaluated in light of the norms and the age and experience factors.

The major assumption, upon which the hypotheses were based, was not strongly supported. This assumption was essentially that certain types of school climates attracted teachers with certain needs, and that teachers who remained in a certain school did so because they found an environment that was meeting these needs. There was only limited support here, but enough to suggest the value of pursuing the study of teachers and climate using other personality variables. Case studies and longitudinal studies should both be considered as possible ways to explore these relationships further. One example would be a plan to isolate separate groups of teachers who are very happy in their setting or who are very unhappy. After matching age and experience, comparisons on a number of variables could be made. A case study or interview approach and a longitudinal study would also provide a great deal of vocational information.

The administrative pattern found in the present study is interesting but not conclusive. Further exploration of male teachers and principals should prove rewarding.

Implications for Placement

The present study also has implications for teacher education and placement. It would make sense to try to identify young teachers who are unhappy and frustrated with their task, social or other needs in a school. It would be helpful to provide counseling help under conditions of a confidential, non-employer-employee relationship. School authorities could provide trained assistance for teachers similar to the counseling psychologists now available on many university campuses. This counseling relationship could actually be started earlier. For example, group or individual counseling could begin during the practice teaching experience. Here a qualified counselor-educator or educational psychologist could work with teachers during their actual classroom experience, but in a non-evaluative function. Interpersonal as well as academic problems often arise with both the classroom supervisor and the university coordinator and are not worked through during the practice teaching period.

Since the OCDQ can map the climate of the school, and the sub-tests and factors can give information about teacher and principal behavior at the school, this interesting question is posed: Should the climate of the school be interpreted to new teachers before they accept positions. A strong case can be made for psychological evaluation of teachers by a trained psychologist and placement officer.

A similar case can be made for providing new teachers with information about the environment within which they will be working. This two-way evaluation would provide stronger teacher placement and help avoid some personality clashes between administrators and teachers.

To some extent this approach can be generalized beyond teaching to almost any job placement where an organization is involved. For example, it would be interesting to map the climate of all the local Methodist Churches in Michigan and then attempt to match ministerial appointments by the resident Bishop to situations where the climate called for a certain type of placement.

Implications for Research

The wisdom of using the OCDQ to map the school climate was indicated by the experience of this study. Contrasting types of schools were chosen on the basis of opinion and secondary knowledge. In several cases the actual climate measured was different from that perceived by outside observers. The way teachers perceive their own environment does not always coincide with the way outsiders perceive the same environment. An interesting study could be made of these differences. Also teachers and/or principals could be looked at more carefully when the significantly depart from the group consensus of their school climate.

The OCDQ is a short, factual instrument upon which a body of research is being developed. Even so, consideration

could be given to more precise scoring which could be achieved by expanding the scale from 1-4 to 1-7 range and dropping questions that do not strongly relate to one of the sub-scales.

The EPPS is a long, tedious instrument which requires a great deal of time. For future studies, when there is a basis for discarding some scales, it is recommended that a shortened form be used. For example, the need for Heterosexuality was not of much use in this study and was also strongly related to age. It aroused a great deal of resentment among some of the subjects. About six minutes of subject time can be saved by the elimination of this one subscore. A different approach is also possible. It might be considered preferable to select certain scales and then use only these scales, similar to what has been done in research involving the MMPI.

Implications for the Future

With continued research it is possible to envision a battery of personality, aptitude and interest tests which can be given every candidate for a teaching degree. Likewise a battery of tests could provide information about the schools where jobs are available and about the specific jobs which are available. It is not hard to conceive of a computer program which will match schools and teachers and print out a list of likely jobs meeting the teacher's needs and a list of likely candidates meeting the school

system's requirements. Such a plan involving a variety of different job opportunities has already been started on a nationwide basis. The only limitation is the degree of sophistication in the number and type of variables usable in the program.

REFERENCES

REFERENCES

AES STAT Series Description 6. Calculation of basic statistics when missing data is involved. Michigan State University Computer Laboratory.

AES STAT Series Description 8. Stepwise deletion of variables from a least squares equation. Michigan State University Computer Laboratory.

AES STAT Series Description 13. One-way analysis of variance with unequal number of replications permitted. (UNEQ1 Routine) Michigan State University Computer Laboratory.

American Association of School Administrators. Department of classroom teachers of the NEA, National School Boards Administration. Who's a good teacher? Edited by William J. Ellena, Margaret Stevenson, Harold V. Webb. Washington, D. C.: National Education Association, 1961.

Anderson, D. P. Relationships between organizational climate of elementary schools and personal variables of principals. Paper read before the meeting of the American Educational Research Association, Chicago, Illinois, Feb. 10, 1965.

Andrews, J. H. M. Some validity studies of the OCDQ. Paper read before the meeting of the American Educational Research Association, Chicago, Illinois, February 10, 1965.

Allport, G. W., Vernon, P. E., and Lindzey, G. Study of values: a scale for measuring the dominant interest in personality. Rev. 1951. New York: Houghton Mifflin.

Barr, A. S. The measurement and prediction of teaching efficiency: a summary of investigations. Journal of Experimental Education, 1948, 16, 203-283.

Barr, A. S. The nature of the problem. Journal of Experimental Education, 1961, 30, 5-29.

Barr, A. S. Wisconsin studies on the measure and prediction of teacher effectiveness. Journal of Experimental Education, 1961, 30, 1-136.

Brown, R. J. Identifying and classifying organizational climates in Twin Cities area elementary schools. Paper read before the meeting of the American Educational Research Association, Chicago, Illinois, February 10, 1965.

Burdick, Lois A. Analysis of Sixteen Personality Factor Questionnaire and elementary student teachers at Indiana State College. Teachers College Journal, 1963, 35, 57-59.

Campbell, D. P. The 1966 revision of the Strong Vocational Interest Blank. Personnel and Guidance Journal, 1966, 44, 744-749.

Cobb, J., Kline, D., Wrigley, C. A factoral classification of Peace Corps training measures. Research Report 10. Computer Institute for Social Science Research, Michigan State University, 1966.

Collins, J. A. Individual personality and organizational climate. Dissertation Abstracts, 1966, 27, 3A, 623A-624A.

Domas, S. J., and Tiedeman, D. V. Teacher competence: an annotated bibliography. Journal of Experimental Education, 1950, 19, 101-218.

Edwards, A. L. Edwards personal preference schedule: manual. Rev. 1959. New York: Psychological Corporation, 1959.

Forehand, G. A. and Gilmer, B. H. Environmental variation in studies of organizational behavior. Psychological Bulletin, 1964, 62, 361-382.

Gage, N. L. (Ed.) Handbook of research on teaching. Chicago: Rand McNally, 1963.

Garrison, K. C. and Scott, Mary H. The relationship of selected personal characteristics to the needs of college students preparing to teach. Educational and Psychological Measurement, 1962, 22, 753-758.

Gauron, E. F. Changes in Edwards Personal Preference Schedule needs with age and psychiatric status. Journal of Clinical Psychology, 1965, 21, 194-196.

Gauron, E. F. and Adams, J. The relationship of the Edwards Personal Preference Schedule to the MMPI in a patient population. Journal of Clinical Psychology, 1966, 22, 206-209.

Gentry, H. W. and Kenney, J. B. A comparison of the organizational climates of Negro and white elementary schools. Journal of Psychology, 1965, 60, 171-179.

Getzels, J. W. and Jackson, P. W. The teacher's personality and characteristics. In N. L. Gage (Ed), Handbook of Research on Teaching. Chicago: Rand McNally, 1963.

Gray, J. T. Manifest needs in secondary teachers, accountants and mechanical engineers: an exploratory study. Dissertation Abstracts, 1964, 25, 2606.

Guba, E. G., Jackson, P. W., and Bidwell, C. E. Occupational choice and the teaching career. Educational Research Bulletin, 1959, 38, 1-13 and 27.

Halpin, A. W. Theory and research in administration. New York: Macmillan Company, 1966.

Halpin, A. W. and Croft, D. B. The organizational climate of schools. Monograph report on research performed pursuant to contract with U. S. O. E., 1962.

Hogan, E. E. A study of differences in the perception of elementary teacher personality structure. Unpublished doctoral dissertation, Michigan State University, 1963.

Hunt, J. McV. Traditional personality theory in the light of recent evidence. American Scientist, 1965, 53, 80-96.

Isaacson, R. L., McKeachie, W. J., and Milholland, J. E. Correlation of teacher personality variables and student ratings. Journal of Educational Psychology, 1963, 54, 110-117.

Jackson, P. W. and Guba, E. G. The need structure of in-service teachers: an occupational analysis. School Review, 1957, 65, 176-192.

Johnson, G. H. An instrument for the measurement of job satisfaction. Personnel Psychology, 1955, 8, 27-37.

Keeping abreast in research. Phi Delta Kappan, 1966, 47, 580.

Kenney, J. B. A comparison of the organizational climates of Negro and white elementary schools with concomitant implications for school administrators. Paper read before the meeting of the American Educational Research Association, Chicago, Illinois, February 16, 1966.

Kenney, J. B., Gentry, H. W., and White, W. F. A factor analytic study of personality characteristics of teachers in open and closed educational organizations. Paper read before the meeting of the American Educational Research Association, New York, New York, February 16, 1967.

Kirk, Treva B. Behaviors of teachers new to a building in relation to the climate of the school and the dogmatism of the teacher. Unpublished doctoral dissertation, Michigan State University, 1965.

Koons, P. B. and Birch, R. W. Reevaluation of the EPPS norms. Psychological Reports, 1964, 14, 905-906.

Koplyay, J. B. and Mathis, B. C. The relationship between teacher morale and organizational climate. Paper read before the meeting of the American Educational Research Association, New York, New York, February 16, 1967.

LaForge, R. A correlational study of two personality tests. Journal of Consulting Psychology, 1962, 26, 402-411.

Lang, G. Motive in selecting elementary and secondary school teaching. Journal of Experimental Education, 1960, 29, 101-104.

Merrill, R. M. and Heather, L. B. The relation of the MMPI to the Edwards Personal Preference Schedule on a college counseling center sample. Journal of Consulting Psychology, 1956, 20, 310-314.

Morris, K. T. A comparative study of selected needs, values and motives of science and non-science teachers. Dissertation Abstracts, 1963, 24, 2325.

Murray, J. B. and Barrett, J. Teacher role expectations of teacher candidates. Psychological Reports, 1965, 16, 379-383.

Pivetz, Mildren E. The relationship between teachers; attitudes and effectiveness in the classroom. Dissertation Abstracts, 1963, 24, 2340.

Ryans, G. D. Characteristics of teachers: their description, comparison and appraisal. Washington, D. C.: American Council on Education, 1960.

Sarason, I. G. Personality: an objective approach. New York: John Wiley and Sons, 1966.

Scandrette, Onas. Differential need patterns of women elementary and secondary level student teachers. Journal of Educational Research, 1962, 55, 376-379.

Sheldon, M. S., Coale, J. M., and Copple, R. Current validity of the "warm teacher scales." Journal of Educational Psychology, 1959, 50, 37-40.

Sim, F. M., Widmayer, L. C. and Lesgold, A. M. G 9 MSU ACT. Michigan State University Computer Laboratory 3600 program description, January 27, 1966.

Spangler, D. P. and Thomas, C. W. The effect of age, sex, and physical disability upon manifest needs. Journal of Counseling Psychology, 1962, 9, 313-319.

Stinnett, T. M. and Huggett, A. J. Professional problems of teachers. 2nd Ed. New York: The Macmillan Company, Inc., 1963.

Watson, J. E. Intermediate schooling in New Zealand. Wellington: New Zealand Council for Educational Research, 1964.

Zacharewicz, Mary M. Relations between teaching attitudes of prospective teachers and their self descriptions. Dissertation Abstracts, 1963, 24, 876.

APPENDICES

APPENDIX A

DIRECTIONS AND INSTRUMENTATION

GENERAL DIRECTIONS FOR TEACHERS TAKING INSTRUMENTS

This study is based on the premise that each teacher is an individual who differs from other teachers and that each school building has its own climate which differs from that of other school buildings. We know that some teachers are happy in some schools and unhappy in other schools, but we do not always know why.

What we are asking you as a teacher to do is to tell us something about yourself as an individual and about your school as you see it. This will help us find some of the relationships between schools and teachers that are important for a satisfying vocational experience.

Each of you will receive a label on which you may write your name and next summer's address if you desire a summary of our report.

You will be identified only by the number already placed on your answer sheets. Specific information about identified people will not be published or available to anyone for any purpose.

These schedules, like all tests of this type, can be faked. Faking, however, only destroys the integrity of educational research and results in unreliable findings. You are therefore asked to respond with your true feelings and observations to all questions.

The information we are attempting to gather is essentially in two parts. One asks for information about you, about things you like and dislike; about ways you do and do not feel. This is obtained by asking each teacher in the school to complete the Edwards Personal Preference Schedule. This schedule asks you to choose between 225 pairs of statements, and will take about 40-50 minutes. More specific directions will be given later.

The other part of our request asks for some biographical and vocational information and then asks the teachers and principal to describe this school. This information is obtained from a nine-page questionnaire containing 81 questions which should take about 20 minutes to complete.

Are there any questions?

Order of Administration: General Information
Edwards Personal Preference Schedule

Time: About 2/3 finish within an hour of the time these general directions are given and questions answered.

GENERAL INFORMATION

Sex: Male _____ Name Code _____

Female ____ School Name _____

This questionnaire asks for personal information about you and your school. All information will be confidential and you will not be personally identified to any school authorities or in any report. It is important to this study to obtain your answer to <u>every</u> question. Please read each question carefully and circle the single correct answer or fill in the information requested.

1. If a classroom teacher, please specify the grade(s) taught. If not, please specify your position. _____

2. Age _____

3. Years of experience in education _____

4. Years of experience in <u>this school</u> building _____

5. Educational Background

Less than B. A.	1
B. A. or equivalent	2
B. A. + ...	3
M. A.	4
M. A. + ...	5

6. What were your college undergraduate grades?

C's or mostly C's	1
B's or mostly B's	2
A's or mostly A's	3

7. Marital Status

Single	1
Divorced	2
Separated	3
Married	4

8. Vocational Plans

I see teaching as only a temporary job .	1
I plan to teach until marriage . . .	2
I plan to teach until we have children .	3
I plan to teach for less than five years now, but come back to teaching later on .	4
I plan to stay in education but not as a classroom teacher	5
I plan to teach for the foreseeable future	6
I plan to teach until retirement age .	7
Other (please specify) _____	
_____	8

Why did you choose the school where you are now working? _____

_____

9. Do you feel you have made a success of your job thus far in your career?

Yes	1
No	2
Unsure	3

10. If you could start over again, at age 18, would you choose a different line or work?

Yes	1
No	2
Unsure	3

11. Do you feel less satisfied with your work as time goes on?

Yes	1
No	2
Unsure	3

12. For the following five questions please circle the number corresponding to your best judgment. Definitions for some points on the scale are indicated. You may circle any number, however.

SQ - 1 - How real, authentic or open is the principal or teacher behavior at this school?

Very much so	7 6 5
Moderately so	4 3 2
Not at all	1

SQ - 2 - How satisfied (happy) are you with your attainment of task or job goals?

Very satisfied	7 6 5
Moderately satisfied	4 3 2
Not at all satisfied	1

SQ - 3 - How satisfied (happy) are you with the degree to which your social and interpersonal needs are being met at this school?

Very satisfied	7
	6
	5
Moderately satisfied	4
	3
	2
Not at all satisfied	1

SQ - 4 - Overall, how happy are you working in this job in this school this year?

Very happy	7
	6
	5
Moderately happy	4
	3
	2
Not at all happy	1

SQ - 5 - How free do you feel to take a position of leadership in the school on some issue that concerns you?

Very free	7
	6
	5
Moderately free	4
	3
	2
Not at all free	1

Please read the special instructions on the next page and then go on to question 13.

The following items describe typical behaviors or conditions that occur within an elementary school organization. Please indicate to what extent each of these descriptions characterize your school. Please do not evaluate the items in terms of "good" or "bad" behavior, but read each item carefully and respond in terms of how well the statement describes your school.

The descriptive scale on which to rate the items is printed at the top of each page. Please read the Instructions which describe how you should mark your answers.

The purpose of this questionnaire is to secure a description of the different ways in which teachers behave and of the various conditions under which they work.

MARKING INSTRUCTIONS

Printed below is an example of a typical item found in the Organizational Climate Description Questionnaire:

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

Teachers call each other by their first names. 1 2 (3) 4

In this example the respondent marked alternative 3 to show that the interpersonal relationship described by this item "often occurs" at his school. Of course, any of the other alternatives could be selected, depending upon how often the behavior described by the item does, indeed, occur in your school.

Please mark your response clearly, as in the example.

PLEASE BE SURE THAT YOU MARK EVERY ITEM.

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

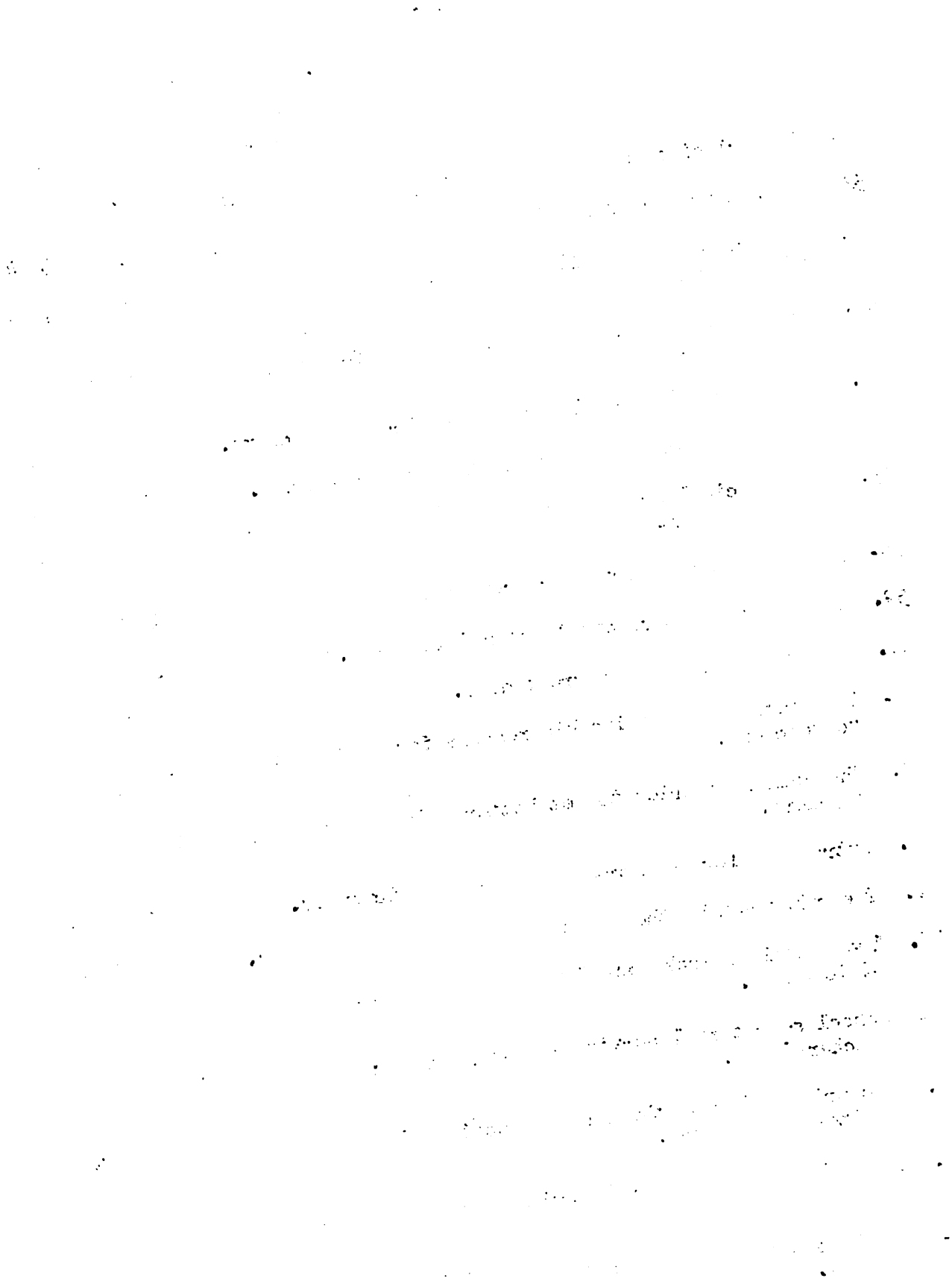
13.	Teachers' closest friends are other faculty members at this school.	1	2	3	4
14.	The mannerisms of teachers at this school are annoying.	1	2	3	4
15.	Teachers spend time after school with students who have individual problems.	1	2	3	4
16.	Instructions for the operation of teaching aids are available.	1	2	3	4
17.	Teachers invite other faculty to visit them at home.	1	2	3	4
18.	There is a minority group of teachers who always oppose the majority.	1	2	3	4
19.	Extra books are available for classroom use.	1	2	3	4
20.	Sufficient time is given to prepare administrative reports.	1	2	3	4
21.	Teachers know the family background of other faculty members.	1	2	3	4
22.	Teachers exert group pressure on non-conforming faculty members.	1	2	3	4
23.	In faculty meetings, there is a feeling of "let's get things done."	1	2	3	4
24.	Administrative paper work is burdensome at this school.	1	2	3	4
25.	Teachers talk about their personal life to other faculty members.	1	2	3	4
26.	Teachers seek special favors from the principal.	1	2	3	4
27.	School supplies are readily available for use in classwork.	1	2	3	4
28.	Student progress reports require too much work.	1	2	3	4
29.	Teachers have fun socializing together during school time.	1	2	3	4
30.	Teachers interrupt other faculty members who are talking in staff meetings.	1	2	3	4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

31.	Most of the teachers here accept the faults of their colleagues.	1	2	3	4
32.	Teachers have too many committee requirements.	1	2	3	4
33.	There is considerable laughter when teachers gather informally.	1	2	3	4
34.	Teachers ask nonsensical questions in faculty meetings.	1	2	3	4
35.	Custodial service is available when needed.	1	2	3	4
36.	Routine duties interfere with the job of teaching.	1	2	3	4
37.	Teachers prepare administrative reports by themselves.	1	2	3	4
38.	Teachers ramble when they talk in faculty meetings.	1	2	3	4
39.	Teachers at this school show much school spirit.	1	2	3	4
40.	The principal goes out of his way to help teachers.	1	2	3	4
41.	The principal helps teachers solve personal problems.	1	2	3	4
42.	Teachers at this school stay by themselves.	1	2	3	4
43.	The teachers accomplish their work with great vim, vigor, and pleasure.	1	2	3	4
44.	The principal sets an example by working hard himself.	1	2	3	4
45.	The principal does personal favors for teachers.	1	2	3	4
46.	Teachers eat lunch by themselves in their own classrooms.	1	2	3	4
47.	The morale of the teachers is high.	1	2	3	4
48.	The principal uses constructive criticism	1	2	3	4
49.	The principal stays after school to help teachers finish their work.	1	2	3	4
50.	Teachers socialize together in small select groups.	1	2	3	4

1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

51.	The principal makes all class-scheduling decisions.	1 2 3 4
52.	Teachers are contacted by the principal each day.	1 2 3 4
53.	The principal is well prepared when he speaks at school functions.	1 2 3 4
54.	The principal helps staff members settle minor differences.	1 2 3 4
55.	The principal schedules the work for the teachers.	1 2 3 4
56.	Teachers leave the grounds during the school day.	1 2 3 4
57.	The principal criticizes a specific act rather than a staff member.	1 2 3 4
58.	Teachers help select which courses will be taught.	1 2 3 4
59.	The principal corrects teachers' mistakes.	1 2 3 4
60.	The principal talks a great deal.	1 2 3 4
61.	The principal explains his reasons for criticism to teachers.	1 2 3 4
62.	The principal tries to get better salaries for teachers.	1 2 3 4
63.	Extra duty for teachers is posted conspicuously.	1 2 3 4
64.	The rules set by the principal are never questioned.	1 2 3 4
65.	The principal looks out for the personal welfare of teachers.	1 2 3 4
66.	School secretarial service is available for teachers' use.	1 2 3 4
67.	The principal runs the faculty meeting like a business conference.	1 2 3 4
68.	The principal is in the building before teachers arrive.	1 2 3 4
69.	Teachers work together preparing administrative reports.	1 2 3 4



1. Rarely occurs
2. Sometimes occurs
3. Often occurs
4. Very frequently occurs

70.	Faculty meetings are organized according to a tight agenda.	1	2	3	4
71.	Faculty meetings are mainly principal-report meetings.	1	2	3	4
72.	The principal tells teachers of new ideas he has run across.	1	2	3	4
73.	Teachers talk about leaving the school system.	1	2	3	4
74.	The principal checks the subject-matter ability of teachers.	1	2	3	4
75.	The principal is easy to understand.	1	2	3	4
76.	Teachers are informed of the results of a supervisor's visit.	1	2	3	4
77.	Grading practices are standardized at this school.	1	2	3	4
78.	The principal insures that teachers work to their full capacity.	1	2	3	4
79.	Teachers leave the building as soon as possible at day's end.	1	2	3	4
80.	The principal clarifies wrong ideas a teacher may have.	1	2	3	4
81.	Schedule changes are posted conspicuously at this school.	1	2	3	4

APPENDIX B

STATISTICAL TABLES

APPENDIX B

STATISTICAL TABLES

TABLE B-1.--Means and standard deviations for various sample groups on scores on Edwards Personal Preference Schedule.

Need Variable	Edwards Adult Women Norms N=4932	Jackson and Guba Elem. Female Teach. N=196	Scandrette Elem. Student Teachers N=73	Gauron Female Psychiatric Hospital Pat. N=163
Achievement:				
Mean	13.58	13.23	12.25	13.66
Standard Deviation	3.95	4.16		4.15
Deference:				
Mean	14.72	15.10	14.14	13.66
Standard Deviation	3.84	4.10		3.99
Order:				
Mean	15.59	13.15	12.75	14.58
Standard Deviation	4.57	4.82		5.19
Exhibition:				
Mean	11.48	13.25	13.93	12.56
Standard Deviation	3.88	3.77		3.71
Autonomy:				
Mean	12.10	11.69	11.16	13.18
Standard Deviation	4.11	4.55		4.21
Affiliation:				
Mean	17.76	17.64	18.33	16.06
Standard Deviation	4.15	4.13		4.32
Intraception:				
Mean	15.28	16.81	17.19	15.80
Standard Deviation	4.13	4.20		4.90
Succorance:				
Mean	12.86	12.92	12.16	13.12
Standard Deviation	4.55	4.63		5.23
Dominance:				
Mean	10.24	11.79	13.81	10.28
Standard Deviation	4.73	4.77		4.71
Abasement:				
Mean	16.89	14.53	14.97	17.48
Standard Deviation	4.88	4.78		5.11
Nurturance:				
Mean	18.48	16.79	16.60	18.33
Standard Deviation	4.43	4.34		4.30
Change:				
Mean	15.99	16.69	17.40	15.92
Standard Deviation	4.73	4.35		4.66
Endurance:				
Mean	16.50	14.95	13.20	15.30
Standard Deviation	4.66	4.97		5.33
Heterosexuality:				
Mean	8.12	11.35	13.45	10.20
Standard Deviation	6.59	6.07		6.92
Aggression:				
Mean	10.16	10.15	8.85	9.92
Standard Deviation	4.37	3.83		4.63
Consistency:				
Mean	11.59			
Standard Deviation	1.83			

TABLE B-2.--Mean scores on Edwards Personal Preference Schedule achieved by female elementary (N=196) and secondary (N=52) teachers with varying amounts of teaching experience (Jackson & Guba) and the stereotype of the elementary teacher as held by the novice and experienced teacher (Hogan).

Need	Jackson & Guba: Teaching Experience			Hogan: Stereotype	
	0-3 Years N=79	4-9 Years N=72	10 or More N=93	0-3 Years N=30	4 or More N=50
Achievement					
Mean	13.71	13.01	13.46	13.19	13.78
Standard Deviation				3.89	4.05
Deference					
Mean	13.15***	15.61	16.55	14.76	16.76
Standard Deviation				3.52	3.82
Order					
Mean	12.29**	12.49	14.24	13.00	16.00
Standard Deviation				4.32	4.68
Exhibition					
Mean	13.61*	13.75	12.42	13.49	12.20
Standard Deviation				3.32	4.09
Autonomy					
Mean	11.30	12.08	11.42	12.90	11.92
Standard Deviation				3.96	4.13
Affiliation					
Mean	18.05	17.69	17.40	16.33	16.36
Standard Deviation				4.09	4.54
Intraception					
Mean	16.21	17.43	16.54	18.16	15.72
Standard Deviation				6.36	4.43
Succorance					
Mean	12.95	13.32	12.51	11.10	11.50
Standard Deviation				4.69	4.28
Dominance					
Mean	12.43	11.72	11.80	12.93	14.08
Standard Deviation				4.51	4.96
Abasement					
Mean	14.51	14.49	14.69	11.10	11.10
Standard Deviation				4.68	4.24
Nurturance					
Mean	16.45	17.54	16.41	15.89	15.78
Standard Deviation				2.98	4.67
Change					
Mean	16.93	16.18	16.19	18.14	16.06
Standard Deviation				4.35	5.04
Endurance					
Mean	14.33**	14.11	16.62	13.59	17.14
Standard Deviation				4.63	4.47
Heterosexuality					
Mean	14.73***	11.78	9.07	11.43	8.48
Standard Deviation				5.48	5.54
Aggression					
Mean	9.39*	10.17	10.65	10.89	9.86
Standard Deviation				4.02	4.21

*Differs significantly from corresponding mean of veteran group at .05 level.

**at .01 level.

***at .001 level.

TABLE B-3.--Inter-correlation matrix of EPPS sub-scores for 295 female elementary school teachers.

	Ach	Def	Ord	Exh	Aut	Aff	Int	Suc	Dom	Aba	Nur	Chg	End	Het	Agg
Achievement	1.00	-.09	-.08	.11	.07	-.22	-.12	-.10	.04	-.27	-.24	-.07	.03	-.03	.07
Deference		1.00	.34	-.30	-.23	.08	.03	.00	-.31	.31	.04	-.17	.22	-.38	-.30
Order			1.00	-.34	-.17	-.12	-.07	-.02	-.29	.18	-.18	-.31	.44	-.29	-.11
Exhibition				1.00	.13	-.17	-.08	-.11	.23	-.27	-.16	.05	-.34	.23	.02
Autonomy					1.00	-.23	-.11	-.20	.13	-.23	-.19	.16	-.22	-.01	.19
Affiliation						1.00	-.08	.09	-.11	.04	.39	.02	-.07	-.13	-.34
Intraception							1.00	-.16	-.03	.00	.01	-.03	.05	-.21	-.06
Succorance								1.00	-.26	.15	.13	-.31	-.11	.02	-.05
Dominance									1.00	-.32	-.14	.06	-.26	.07	.15
Abasement										1.00	.19	-.31	.14	-.40	-.11
Nurturance											1.00	-.13	-.07	-.19	-.31
Change												1.00	-.19	.18	-.11
Endurance													1.00	-.44	-.11
Heterosexuality														1.00	.03
Aggression															1.00

TABLE B-4.--Analysis of Variance of EPPS sub-scores using age as the category variable.

EPPS Variable	Age					F Value	Sig. Level
	20-29 N=114	30-39 N=33	40-49 N=39	50-59 N=74	60-69 N=32		
Achievement	13.33	14.61	13.36	13.49	12.03	1.38	.23
Deference	13.12	14.55	15.13	16.16	16.69	10.37	.01
Order	12.05	12.76	14.33	14.11	14.03	2.58	.03
Exhibition	13.86	13.61	13.31	11.80	11.47	4.30	.01
Autonomy	12.75	13.18	12.77	13.07	12.47	.84	.53
Affiliation	17.07	16.15	17.18	16.65	19.75	4.32	.01
Intraception	17.12	17.06	17.08	16.93	16.35	.76	.58
Succorance	12.76	11.55	10.41	11.32	12.84	3.75	.01
Dominance	11.11	12.97	12.15	10.50	10.78	1.98	.08
Abasement	14.19	14.06	14.31	16.38	17.16	3.53	.01
Nurturance	15.69	15.64	15.21	16.14	17.38	1.55	.17
Change	18.33	16.94	17.46	17.11	16.13	1.53	.18
Endurance	13.91	14.24	16.18	16.85	16.44	5.41	.01
Heterosexuality	13.86	11.36	11.97	8.58	6.75	10.21	.01
Aggression	10.82	11.33	9.15	10.76	9.75	1.46	.20

TABLE B-5.--Analysis of variance of EPPS sub-scores using years experience in education as the category variable.

EPPS Variable	Years Experience in Education				
	0-3 N=90	4-9 N=67	10+ N=136	F Value	Sig. Level
Achievement	14.06	13.12	13.06	1.88	.15
Deference	12.86	14.30	16.15	27.59	.01
Order	11.63	13.00	14.31	8.48	.01
Exhibition	14.22	13.58	11.87	12.49	.01
Autonomy	13.32	11.99	13.01	2.43	.09
Affiliation	16.69	17.00	17.62	1.63	.20
Intraception	17.01	17.66	16.57	1.60	.20
Succorance	12.59	11.63	11.65	1.83	.16
Dominance	11.68	11.46	10.87	.92	.40
Abasement	14.06	14.34	16.07	5.41	.01
Nurturance	15.52	15.49	16.43	1.77	.17
Change	18.10	18.18	16.80	2.96	.05
Endurance	13.39	15.28	16.54	14.35	.01
Heterosexuality	13.84	12.69	8.68	20.10	.01
Aggression	11.03	10.28	10.29	.95	.39

TABLE B-6.--Analysis of variance of EPPS sub-scores using years experience in building as the category variable.

EPPS Variable	Years Experience in Building				
	0-3 N=172	4-9 N=88	10+ N=33	F Value	Sig. Level
Achievement	13.63	13.02	13.03	.81	.45
Deference	13.72	16.17	16.03	17.99	.01
Order	12.28	14.59	14.15	7.42	.01
Exhibition	13.59	12.43	11.30	6.63	.01
Autonomy	12.83	12.75	13.42	.38	.69
Affiliation	16.85	17.67	17.67	1.54	.22
Intraception	17.06	16.69	17.06	.25	.78
Succorance	12.22	11.70	11.06	1.41	.24
Dominance	11.41	11.00	11.09	.25	.78
Abasement	14.31	16.11	16.12	4.68	.01
Nurturance	15.63	16.05	17.27	2.17	.11
Change	18.24	16.23	17.18	5.57	.01
Endurance	14.47	16.23	17.03	7.53	.01
Heterosexuality	12.95	9.07	7.61	16.13	.01
Aggression	10.81	10.28	9.61	1.32	.27

TABLE B-7.--Correlations of computer created EPPS factor scores with the EPPS sub-tests from which created.

EPPS Sub-test	EPPS Factor Sociability[a]	EPPS Factor Conformity[b]
Achievement	-.49**	-.11
Deference	.23	.64*
Order	.07	.62*
Exhibition	-.27	-.40
Autonomy	-.53**	-.43**
Affiliation	.60*	.14
Intraception	.02	.10
Succorance	.53*	.05
Dominance	-.54**	-.36
Abasement	.36	.60*
Nurturance	.63*	.16
Change	-.17	-.31
Endurance	.07	.64*
Hetrosexuality	-.10	-.70**
Aggression	-.33	-.40**

[a]EPPS Factor Sociability is the summation of the following sub-tests: Nurturance - Dominance + Succorance + Affiliation - Autonomy - Achievement.

[b]EPPS Factor Conformity is the summation of the following sub-tests: Deference + Order - Autonomy + Abasement + Endurance - Heterosexuality - Aggression.

*Sub-test scores added by the computer when creating the factor.

**Sub-test scores subtracted by the computer when creating the factor.

TABLE B-8.--(Part A) Inter-correlation matrix of OCDQ sub-scores (by individuals) and OCDQ factor scores (from group consensus) for 316 female elementary school teachers.

	Dis	Hin	Esp	Int	Alo	Pro	Thr	Con	I	II	III
Disengagement	1.00	.23	-.48	-.13	-.15	.11	-.41	-.36	-.43	.16	.11
Hindrance		1.00	-.34	-.24	-.31	.10	-.38	-.29	-.24	.47	-.12
Esprit			1.00	.03	-.14	-.33	.32	.05	.51	-.35	-.09
Intimary				1.00	-.09	-.14	-.22	-.17	-.05	-.21	.12
Aloofness					1.00	.00	-.08	-.15	-.05	-.07	.36
Production Emphasis						1.00	-.41	-.29	-.24	.22	.15
Thrust							1.00	.28	.38	-.22	-.18
Consideration								1.00	.19	-.08	-.33
Factor I[a]									1.00	-.53	-.24
Factor II[b]										1.00	-.02
Factor III[c]											1.00

[a]Authenticity or Openness composed of group consensus on Esprit + Thrust - Disengagement.

[b]Group Satisfaction composed of group consensus on Hindrance + Production Emphasis - Intimacy.

[c]Leadership Initiation composed of group consensus on Aloofness - Consideration.

TABLE 8.--Continued (Part B) Inter-correlation matrix of OCDQ raw sub-scores for entire sample of 358 subjects.

	Dis	Hin	Esp	Int	Alo	Pro	Thr	Con
Disengagement	1.00	.30	-.44	.02	.05	.21	-.22	-.12
Hindrance		1.00	-.30	-.14	-.12	.14	-.29	-.16
Esprit			1.00	.25	.12	-.03	.57	.38
Intimacy				1.00	.15	.13	.08	.17
Aloofness					1.00	.25	.12	.17
Production Emphasis						1.00	-.03	.08
Thrust							1.00	.63
Consideration								1.00

TABLE 8.--Continued (Part C) Inter-correlation matrix of OCDQ double standardized scores for the entire sample of 358 subjects.

	Dis	Hin	Esp	Int	Alo	Pro	Thr	Con
Disengagement	1.00	.22	-.49	-.13	-.11	.08	-.40	-.35
Hindrance		1.00	-.33	-.22	-.28	.05	-.38	-.30
Esprit			1.00	.03	-.13	-.32	.31	.04
Intimacy				1.00	-.12	-.13	-.20	-.17
Aloofness					1.00	-.01	-.09	-.15
Production Emphasis						1.00	-.37	-.27
Thrust							1.00	.27
Consideration								1.00

TABLE B-9.--Correlations of individual teacher factors with OCDQ sub-test scores.

Individual Factor	Dis	Hin	Esp	Int	Alo	Pro	Thr	Con
I Social Needs[a]	-.38	-.41	.06	.64	-.19	-.33	.04	.64
II General Esprit[b]	-.74	-.70	.73	.07	.10	-.31	.72	.34
III Social Control[c]	-.03	-.16	-.33	-.16	.73	.68	-.33	-.30

[a]Individual Factor I is the summation of OCDQ sub-tests Intimacy + Consideration.

[b]Individual Factor II is the summation of OCDQ sub-tests Esprit + Thrust - Disengagement - Hindrance.

[c]Individual Factor III is the summation of OCDQ sub-tests Production Emphasis + Aloofness.

TABLE B-10.--Correlation of school factors and individual factors from the OCDQ.

Individual Factors	School Factors		
	I Authenticity[d]	II Satisfaction[e]	III Leadership Initiation[f]
I Individual Social Needs[a]	.11	-.23	-.16
II Group Esprit[b]	.53	-.42	-.08
III Social Control by Principal[c]	-.20	.09	.36

[a]Individual Factor I was created by summation of individual results from OCDQ sub-tests Intimacy + Consideration.

[b]Individual Factor II was created by the summation of individual results from OCDQ sub-tests Esprit + Thrust - Disengagement - Hindrance.

[c]Individual Factor III was created by the summation of individual results from the OCDQ sub-tests Aloofness + Production Emphasis.

[d]School Factor I was created by the summation of group consensus scores for the following OCDQ sub-tests: Thrust + Esprit - Disengagement.

[e]School Factor II is composed of group consensus scores for the following OCDQ sub-tests: Hindrance + Production Emphasis - Intimacy.

[f]School Factor III is composed of group consensus scores for the following OCDQ sub-tests: Aloofness - Consideration.

TABLE B-11.--Results of analysis of variance tests for 15 EPPS needs and 2 EPPS factors when compared separately on each of three OCDQ factors.

EPPS Variables	OCDQ Factors I[a]	II[b]	III[c]
	Part I--List "A"		
Achievement	$\bar{x}_1$ = 12.72	$\bar{x}_1$ = 12.32	$\bar{x}_1$ = 13.13
	$\bar{x}_2$ = 13.35	$\bar{x}_2$ = 14.02	$\bar{x}_2$ = 13.43
	$\bar{x}_3$ = 14.24	$\bar{x}_3$ = 13.56	$\bar{x}_3$ = 13.61
F value	F = 2.96	F = 4.47	F = .31
Significance of F	.05	.01	.74
Exhibition	$\bar{x}_1$ = 13.02	$\bar{x}_1$ = 13.77	$\bar{x}_1$ = 13.06
	$\bar{x}_2$ = 12.92	$\bar{x}_2$ = 12.92	$\bar{x}_2$ = 12.79
	$\bar{x}_3$ = 13.04	$\bar{x}_3$ = 12.42	$\bar{x}_3$ = 13.16
F value	F = .03	F = 2.88	F = .28
Significance of F	.96	.06	.76
Autonomy	$\bar{x}_1$ = 12.93	$\bar{x}_1$ = 12.41	$\bar{x}_1$ = 13.45
	$\bar{x}_2$ = 12.40	$\bar{x}_2$ = 12.86	$\bar{x}_2$ = 12.52
	$\bar{x}_3$ = 13.62	$\bar{x}_3$ = 13.26	$\bar{x}_3$ = 12.84
F value	F = 2.48	F = 1.04	F = 1.35
Significance of F	.08	.36	.26
Affiliation	$\bar{x}_1$ = 17.17	$\bar{x}_1$ = 17.51	$\bar{x}_1$ = 17.14
	$\bar{x}_2$ = 17.24	$\bar{x}_2$ = 17.21	$\bar{x}_2$ = 17.34
	$\bar{x}_3$ = 17.19	$\bar{x}_3$ = 16.97	$\bar{x}_3$ = 17.09
F value	F = .01	F = .41	F = .12
Significance of F	.98	.67	.88
Intraception	$\bar{x}_1$ = 17.06	$\bar{x}_1$ = 16.84	$\bar{x}_1$ = 16.96
	$\bar{x}_2$ = 16.99	$\bar{x}_2$ = 16.84	$\bar{x}_2$ = 16.95
	$\bar{x}_3$ = 16.77	$\bar{x}_3$ = 17.17	$\bar{x}_3$ = 16.94
F value	F = .11	F = .22	F = .00
Significance of F	.89	.81	.99
Succorance	$\bar{x}_1$ = 11.43	$\bar{x}_1$ = 12.06	$\bar{x}_1$ = 11.96
	$\bar{x}_2$ = 12.26	$\bar{x}_2$ = 11.58	$\bar{x}_2$ = 12.14
	$\bar{x}_3$ = 12.03	$\bar{x}_3$ = 12.37	$\bar{x}_3$ = 11.77
F value	F = 1.14	F = 1.08	F = .23
Significance of F	.32	.34	.79
Nurturance	$\bar{x}_1$ = 15.56	$\bar{x}_1$ = 15.78	$\bar{x}_1$ = 15.30
	$\bar{x}_2$ = 16.03	$\bar{x}_2$ = 15.98	$\bar{x}_2$ = 16.82
	$\bar{x}_3$ = 16.10	$\bar{x}_3$ = 15.95	$\bar{x}_3$ = 15.27
F value	F = .42	F = .06	F = 4.91
Significance of F	.66	.94	.01
Change	$\bar{x}_1$ = 18.63	$\bar{x}_1$ = 17.41	$\bar{x}_1$ = 17.62
	$\bar{x}_2$ = 16.59	$\bar{x}_2$ = 17.30	$\bar{x}_2$ = 17.53
	$\bar{x}_3$ = 17.87	$\bar{x}_3$ = 17.79	$\bar{x}_3$ = 17.32
F value	F = 5.28	F = .30	F = .09
Significance of F	.01	.74	.90
Heterosexuality	$\bar{x}_1$ = 10.28	$\bar{x}_1$ = 10.89	$\bar{x}_1$ = 10.65
	$\bar{x}_2$ = 11.67	$\bar{x}_2$ = 11.76	$\bar{x}_2$ = 10.70
	$\bar{x}_3$ = 11.31	$\bar{x}_3$ = 10.76	$\bar{x}_3$ = 12.26
	F = 1.07	F = .70	F = 1.77
	.35	.50	.17

EPPS Variables	OCDQ Factors I[a]	OCDQ Factors II[b]	OCDQ Factors III[c]
Sociability	$\bar{x}_1$ = 105.37 $\bar{x}_2$ = 106.51 $\bar{x}_3$ = 104.15	$\bar{x}_1$ = 107.35 $\bar{x}_2$ = 104.97 $\bar{x}_3$ = 104.87	$\bar{x}_1$ = 103.70 $\bar{x}_2$ = 107.57 $\bar{x}_3$ = 104.53
F value	F = .76	F = .94	F = 2.37
Significance of F	.47	.40	.09
Part II--List "B"			
Deference	$\bar{x}_1$ = 15.11 $\bar{x}_2$ = 14.85 $\bar{x}_3$ = 14.06	$\bar{x}_1$ = 15.46 $\bar{x}_2$ = 14.61 $\bar{x}_3$ = 14.24	$\bar{x}_1$ = 14.79 $\bar{x}_2$ = 14.75 $\bar{x}_3$ = 14.60
F value	F = 1.90	F = 2.61	F = .07
Significance of F	.15	.07	.92
Order	$\bar{x}_1$ = 13.64 $\bar{x}_2$ = 13.02 $\bar{x}_3$ = 12.99	$\bar{x}_1$ = 13.01 $\bar{x}_2$ = 13.13 $\bar{x}_3$ = 13.39	$\bar{x}_1$ = 12.52 $\bar{x}_2$ = 13.33 $\bar{x}_3$ = 13.53
F value	F = .49	F = .14	F = .99
Significance of F	.62	.87	.37
Dominance	$\bar{x}_1$ = 11.15 $\bar{x}_2$ = 11.28 $\bar{x}_3$ = 11.29	$\bar{x}_1$ = 11.28 $\bar{x}_2$ = 10.93 $\bar{x}_3$ = 11.60	$\bar{x}_1$ = 12.12 $\bar{x}_2$ = 10.78 $\bar{x}_3$ = 11.15
F value	F = .03	F = .57	F = 2.04
Significance of F	.96	.57	.13
Abasement	$\bar{x}_1$ = 15.44 $\bar{x}_2$ = 15.66 $\bar{x}_3$ = 13.53	$\bar{x}_1$ = 16.06 $\bar{x}_2$ = 14.31 $\bar{x}_3$ = 15.09	$\bar{x}_1$ = 15. 1 $\bar{x}_2$ = 14.95 $\bar{x}_3$ = 14.53
F value	F = 4.99	F = 2.95	F = 1.41
Significance of F	.01	.05	.24
Endurance	$\bar{x}_1$ = 15.59 $\bar{x}_2$ = 15.04 $\bar{x}_3$ = 15.35	$\bar{x}_1$ = 15.00 $\bar{x}_2$ = 15.75 $\bar{x}_3$ = 14.93	$\bar{x}_1$ = 14.97 $\bar{x}_2$ = 15.71 $\bar{x}_3$ = 14.96
F value	F = .38	F = 1.06	F = .97
Significance of F	.69	.35	.38
Aggression	$\bar{x}_1$ = 10.26 $\bar{x}_2$ = 10.60 $\bar{x}_3$ = 10.60	$\bar{x}_1$ = 10.22 $\bar{x}_2$ = 10.70 $\bar{x}_3$ = 10.51	$\bar{x}_1$ = 10.51 $\bar{x}_2$ = 10.16 $\bar{x}_3$ = 10.96
F value	F = .19	F = .31	F = .96
Significance of F	.82	.74	.38
Conformity	$\bar{x}_1$ = 110.32 $\bar{x}_2$ = 107.90 $\bar{x}_3$ = 104.38	$\bar{x}_1$ = 110.03 $\bar{x}_2$ = 106.46 $\bar{x}_3$ = 107.13	$\bar{x}_1$ = 107.48 $\bar{x}_2$ = 109.37 $\bar{x}_3$ = 105.56
	F = 1.91	F = .85	F = 1.05
	.15	.43	.35

[a]Factor I is Authenticity or Openness and is composed of group consensus on the following OCDQ sub-tests: Thrust + Esprit - Disengagement.

[b]Factor II is Group Satisfaction and is composed of group consensus on the following OCDQ sub-tests: Hindrance + Production Emphasis - Intimacy.

[c]Factor III is Leadership Initiation composed of group consensus on the following OCDQ sub-tests: Aloofness - Consideration.

TABLE B-12.--Frequency of elementary teachers distributed by age, years experience in education and years experience in building used in the analysis of variance of Factor I--Openness.

Variable	Age					
	20-29	30-39	40-49	50-59	60-69	Total
I Openness						
Low scores	28	11	12	21	6	78
Middle scores	55	17	16	32	16	136
High scores	32	5	12	21	11	81
Totals	115	33	40	74	33	295

Variable	Years Experience in Education			
	0-3	4-9	10+	Total
I Openness				
Low scores	17	23	38	78
Middle scores	49	25	62	136
High scores	25	19	37	81
Totals	91	67	137	295

Variable	Years Experience in Building			
	0-3	4-9	10+	Total
I Openness				
Low scores	48	17	13	78
Middle scores	84	41	11	136
High scores	42	30	9	81
Totals	174	88	33	295

TABLE B-13.--Frequency of elementary teachers distributed by age, years experience in education and years experience in building used in the analysis of variance of Factor II--Satisfaction.

Variable	Age					
	20-29	30-39	40-49	50-59	60-69	Total
II Satisfaction						
Low scores	30	7	9	21	12	79
Middle scores	39	17	20	27	15	118
High scores	46	9	11	26	6	98
Totals	115	33	40	74	33	295

Variable	Years Experience in Education			
	0-3	4-9	10+	Total
II Satisfaction				
Low scores	26	14	39	79
Middle scores	31	30	57	118
High scores	34	23	41	98
Totals	91	67	137	295

Variable	Years Experience in Building			
	0-3	4-9	10+	Total
II Satisfaction				
Low scores	40	32	7	79
Middle scores	74	36	8	118
High scores	60	20	18	98
Totals	174	88	33	295

TABLE B-14.--Frequency of elementary teachers distributed by age, years experience in education and years experience in building used in the analysis of variance of Factor III--Leadership Initiation.

Variable	Age					
	20-29	30-39	40-49	50-59	60-69	Total
III Leadership						
Low scores	35	5	7	20	10	77
Middle scores	43	16	17	34	12	122
High scores	37	12	16	20	11	96
Totals	115	33	40	74	33	295

Variable	Years Experience in Education			
	0-3	4-9	10+	Total
III Leadership				
Low scores	26	18	33	77
Middle scores	33	28	61	122
High scores	32	21	43	96
Totals	91	67	137	295

Variable	Years Experience in Building			
	0-3	4-9	10+	Total
III Leadership				
Low scores	41	30	6	77
Middle scores	77	26	19	122
High scores	56	32	8	96
Totals	174	88	33	295

TABLE B-15.--Frequency of elementary teachers distributed by age, years experience in education and years experience in building used in the analysis of variance of School Climate.

Variable	Age					
	20-29	30-39	40-49	50-59	60-69	Total
Climate						
Open	3	1	2	6	4	16
Autonomous	27	5	10	14	11	67
Controlled	21	2	1	4	0	28
Familiar	17	5	6	8	3	39
Closed	47	20	21	42	15	145
Totals	115	33	40	74	33	295

Variable	Years Experience in Education			
	0-3	4-9	10+	Total
Climate				
Open	4	1	11	16
Autonomous	21	16	30	67
Controlled	18	6	4	28
Familiar	15	8	16	39
Closed	33	36	76	145
Totals	91	67	137	295

Variable	Years Experience in Building			
	0-3	4-9	10+	Total
Climate				
Open	4	10	2	16
Autonomous	39	22	6	67
Controlled	23	1	4	28
Familiar	26	11	2	39
Closed	82	44	19	145
Totals	174	88	33	295

APPENDIX C

CODE BOOK

CARD 1

Column-Source		Item Detail	Code
1	From OCDQ	Climate for School within which teacher is located	1 - Open climate 2 - Autonomous climate 3 - Controlled climate 4 - Familiar climate 5 - Paternal climate 6 - Closed climate
2-3	Face Sheet	School Code	Separate listing
4-5	Face Sheet	Subject Number	Random assignment to teachers within school 01 - Reserved for principal
6	Face Sheet	Sex	0 - Male 1 - Female
7	Q'aire 1	Grade or Position	0 - Kindergarden 1 - First grade . . 6 - Sixth grade 7 - Special education 8 - Principal Blank - no response NB: Where two grades code higher
8-9	Q'aire 2	Age	Code exact age Blank - no response
10-11	Q'aire 3	Years Experience in Education	Code exact years - round to higher number for any part of year; minimum is 01
12-13	Q'aire 4	Years Experience in school building	Code exact years - round to higher number for any part of year; minimum is 01
14	Q'aire 5	Educational Background	1 - Less than B.A. 2 - B.A. or equivalent 3 - B.A. + 4 - M.A. 5 - M.A. +

Column-Source		Item Detail	Code
15	Q'aire 6	College grades	1 - C's or mostly C's 2 - B's or mostly B's 3 - A's or mostly A's
16	Q'aire 7	Marital Status	1 - Single 2 - Divorced 3 - Separated 4 - Married (or re-married) 5 - Widow
17	Q'aire 8	Vocational Plans	1 - Teaching as temporary job 2 - Teach until marriage 3 - Teach until children 4 - Less than five years but come back 5 - Non-classroom position in education 6 - For foreseeable future 7 - Until retirement 8 - Other
18	Q'aire 8	Why chose school	0 - Location (e.g., close to graduate school) 1 - Close to home or where living 2 - Husband works in area 3 - Size of school or system 4 - Administrator or administrative reasons 5 - Only job available 6 - School philosophy, atmosphere, facilities 7 - Personal Contact (e.g., student teaching) 8 - Placement 9 - Other or none given

Column-Source		Item Detail	Code
19	Q'aire 9-11	Job success	Summation of three questions as follows: Question 9: Yes scores 3 No scores 1 Unsure scores 2 Question 10: No scores 3 Yes scores 1 Unsure scores 2 Question 11: No scores 3 Yes scores 1 Unsure scores 2 Range of scores: 3-9
20	Q'aire 12	Scale Question 1 Authenticity of school behavior	Scale range from 1-7 Blank - no response
21	Q'aire 12	Scale Question 2 Job goal satisfaction	Scale range from 1-7 Blank - no response
22	Q'aire 12	Scale Question 3 Social needs satisfaction	Scale range from 1-7 Blank - no response
23	Q'aire 12	Scale Question 4 Overall happiness	Scale range from 1-7 Blank - no response
24	Q'aire 12	Scale Question 5 Freedom to take leadership position	Scale range from 1-7 Blank - no response
		NB: On SQ 7 - Very free, happy etc. 4 - Moderately free, etc. 1 - Not at all free, etc. Other positions not designated	
25		Card Number	Code 1
26		Blank	Blank
27-28	EPPS	Omitted EPPS items	Actual number omitted to maximum 99
29-30	EPPS	Consistency Score	Actual score from EPPS from 00-15

Column-Source		Item Detail	Code
31-60	EPPS	Manifest Need Sub-scores	Actual scores from 00-28 on these needs: Columns — Need Represented 31-32 Achievement 33-34 Deference 35-36 Order 37-38 Exhibition 39-40 Autonomy 41-42 Affiliation 43-44 Intraception 45-46 Succorance 47-48 Dominance 49-50 Abasement 51-52 Nurturance 53-54 Change 55-56 Endurance 57-58 Heterosexuality 59-60 Aggression
61-70		Blank	
71-73	OCDQ	Authenticity: The authenticity or openness of the leader's and the group members' behavior	Factor I in OCDQ: Code subtests as follows for summation score: Esprit + Thrust - Disengagement
74-76	OCDQ	Satisfaction: The group member's attainment of conjoint satisfaction in respect to task accomplishment and social needs	Factor II in OCDQ: Code subtests as follows for summation score: Hindrance + Production Emphasis - Intimacy
77-79	OCDQ	Leadership Initiation: The latitude within which the group members as well as the leader can initiate leadership acts	Factor III in OCDQ: Code subtests as follows for summation score: 50 + Aloofness - Consideration

Column-Source	Item Detail	Code
		NB: Factor scores computed for a school and each teacher within school gets same factor score
80	Individual perception of climate for school within which teacher is located	Code is same as for Col. 1

OCDQ CARD 2
(Sent to the University of New Mexico for scoring)

Column-Source		Item Detail	Code
1-4	Face Sheet	Subject Number	First two numbers are number of school. Second two numbers are random assignment to teachers within the school. (See separate listing for school numbers and number of subjects from each school)
5-7	Face Sheet	Organization Number	Right justified number of school
8	Q'aire 1	Position	1 - Principal 2 - Teacher 3 - Other
9	Q'aire	Sex	1 - Man 2 - Woman
10	Q'aire 2	Age	1 - 20-29 2 - 30-39 3 - 40-49 4 - 50-59 5 - 60 and over
11	Q'aire 3	Years of Experience in education	1 - 0-3 2 - 4-9 3 - 10-19 4 - 20-29 5 - 30 and over

Column-Source		Item Detail	Code
12	Q'aire 4	Years at this school	1 - 0-3 2 - 4-9 3 - 10-19 4 - 20 or over
13-80	Q'aire 13-80	Responses to individual items of OCDQ each column directly relates to answer to that question	1 - Rarely occurs 2 - Sometimes occurs 3 - Often occurs 4 - Very frequently occurs

NB: Question 81 is not coded.
Omitted responses are left blank