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ABSTRACT

The relationship between secondary school professional staff perceptions of school climate and their respective personalities is examined in this study. The Organizational Climate Description Questionnaire-Rutgers Secondary (OCDQ-RS) and the Heath Typology Assessment Instrument (HTAI) were administered to 232 secondary teachers to assess organizational climate and subjects' personality styles. Findings suggest that a school faculty with a significant proportion of teachers who share a particular personality type (X, Y, or Z) will affect the school's organizational climate. A school with a predominantly type X faculty reflects frustration; type Y, constraint; and type Z, alienation. A conclusion is that differences in individual personalities predispose differences in individual perceptions of environment. Three statistical tables and an extensive bibliography are included. (LMI)

AN INTER-BATTERY ANALYSIS OF ORGANIZATION CLIMATE AND PERSONALITY

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Introduction

Organizational climate has been, and continues to be a topic of intense interest among educational researchers and practitioners. Although discussions about this topic still pervade professional literature, definitions and conceptualizations of this phenomenon called organizational climate remain obscure and elusive. Practitioners and researchers alike are unable to agree on what is, or should be, the ideal school climate. Likewise, the measurement of climate and an understanding of the variables which create and shape this phenomenon remain unclear. Despite these ambiguities, educators continue to be adamant in their conviction that climate is critical to effective schools and successful learning environments.

Interest in the study of climate has persisted through a period that has seen educational administrators routinely criticized as managers of archaic and grossly ineffective institutions. While educational researchers readily concede the absence of a causal linkage between school climate and excellence, the importance and implications of the climate are undeniable. Clearly, as schools are encouraged to achieve higher standards and to transform existing structures into ones which foster creativity and excellence, there must exist a receptive environment or culture. As innovations and transitions are

presented, certain organizational conditions must prevail in order for change to occur. As Sergiovanni and Starrett (1987) point out, a favorable school climate does not necessarily lead to school effectiveness. It is, however, an important and necessary element when combined with quality school leadership.

This paper records an investigation of school climate. Specifically, the study examines the relationship between faculty and staff perceptions of school climate and their personalities.

DEFINITIONS AND CONCEPTS OF ORGANIZATIONAL CLIMATE

Many discussions of organizational climate begin with analogies to people and their respective personalities. Familiar terms such as "warm/cold," "considerate/aloof," and "caring/impersonal," are frequently used as descriptors or characteristics of the institutional environment. Such a conceptualization is consistent with Halpin and Croft's (1963) portrayal: "The organizational climate can be construed as the organizational 'personality' of a school: figuratively, 'personality' is to the individual what 'climate' is to the organization." Taguiri and Litwin (1968) theorized that members of the organization are sensitive to these environmental characteristics and may be influenced by them. Other attempts at definition (Hoy & Forsyth, 1986; Hoy & Clover, 1986; Owens, 1981; Sergiovianni & Starratt, 1983) also employ analogies to personality.

A second approach to understanding climate emphasizes the

personal relationships between individuals in the organization. An early definition of climate which illustrates this approach is credited to Cornell (1955). He describes climate as a "delicate blending of interpretations (or perceptions as social psychologists would call them) by persons in the organization in their jobs or roles in relationship to others and their interpretations of the roles of others in the organizations" (p. 222). In a more recent effort to define the phenomenon, Keefe et al. (1985) proposed that, "Climate is the relatively enduring pattern of shared perceptions about the characteristics of an organization and its members" (p. 4).

Educational practitioners often equate climate with morale, job satisfaction, atmosphere, tone, ambience, esprit and temperament of faculty and staff, discipline and control of students, and even the physical environment (i.e., appearance of the building and grounds). While such interpretations of climate are popular, they have not been embraced in mainstream research literature. Furthermore, popular connotations of the term have become so broad that the concept tends to lose all meaning.

All three conceptualizations of organizational climate rely upon individual perceptions in a complex social system. The study of climate is complicated, however, by the fact that these individual perceptions are at once both a function of the climate and contributors to the climate. In other words, individual perceptions are both independent and dependent variables in the

climate equation. Lewin (1935, 1951) considered these relationships in his early work on organizational behavior. He claims that the social or psychological forces in an individual's environment in interaction with that individual's personality determine behavior. The formula representing this relationship is: B=f(PxE), where B, P, and E represent behavior, personality, and environment respectively. The fundamental ideas conceived by Lewin are visible in more recent social system models (e.g., Getzels, Lipham & Campbell, 1968; Hoy & Forsyth, 1986).

ASSESSMENT OF ORGANIZATIONAL CLIMATE

Just as there have been multiple conceptualizations and definitions of climate, so have there been numerous approaches to its measurement and assessment. Since select climate instruments have been reviewed elsewhere (Silver, 1983), only a brief overview is offered here. Anderson (1982) listed and described 11 climate-type instruments: Elementary School Environment Survey, High School Characteristics Index, My School Inventory, Organizational Climate Description Questionnaire, Pupil-Control Behavior, Pupil-Control Ideology, Quality of School Life Scale, Robustness Semantic Differential Scale, School Description Inventory, and School Survey. Five additional instruments were identified by Grace (1985): Classroom Environment Index, Elementary and Secondary School Index, Organizational Climate Index, Profiles of a School, and School Climate Scales. Of these instruments, the most widely used and referenced is the

Organizational Climate Description Questionnaire (OCDQ) developed by Halpin and Croft (1963).

The OCDQ includes eight subtests which in turn cluster into two distinct and reciprocal dimensions describing, but not explaining, teacher-principal relationships and teacher-teacher interactions. The teacher-principal dimension concerns leadership behaviors; aloofness, production emphasis, thrust, and consideration are the factors comprising this dimension. The second dimension, teacher-teacher interaction, emphasizes the patterns of communication and relationships among teachers that emerge over time. Halpin and Croft (1963) identified four factors which comprises this dimension: disengagement, hindrance, esprit, and intimacy. Six configurations or profiles of a school emerge from these two dimensions: open, autonomous, controlled, familiar, paternal, and closed. The two extreme profiles (open and closed) on the continuum or taxonomy have received the most attention in research literature.

Notwithstanding its popularity, the OCDQ has received considerable criticism. As far back as 1973, Hayes pointed to problems with the instrument and recommended that it not be used any longer for research purposes. Thomas (1973) questioned the validity of the four middle climate classifications (between open and closed). Anderson (1982) identified concerns about the appropriateness and validity of the climate categories of the OCDQ. Silver (1983) presented concerns regarding both the

vagueness of the OCDQ framework and terminology. Hoy and Clover (1986) drew attention to the limitations of the OCDQ by concluding that

> ... the OCDQ needs revision. The instrument remains unchanged after more than twenty years. Questions about the reliability and validity of both items and subtests persist. Moreover, conceptual problems abound: there is a lack of underlying logic to the framework; the meanings of some of the dimensions are vague; the climate continuum is ambiguous and likely not a single continuum; and the conceptualization excludes students. Finally, the unit of analysis in the development of the OCDQ was the individual; the appropriate analytic unit is the school. (p.96)

This position was supported in a companion study (Kottkamp et al., 1987) which generated an instrument specifically designed for use in assessing organizational climate in secondary schools. This new instrument, the Organizational Climate Description Questionnaire - Rutgers Secondary (OCDQ-RS), is a revision of the original OCDQ for use in secondary schools. The OCDQ-RS is a 34-item instrument which employs five dimensions of school climate in two categories:

Category I:	Principal Behavior
Dimensions:	Supportive Behavior
	Directive Behavior

Category II: Teacher Behavior

Dimensions: Engaged Behavior

Frustrated Behavior

Intimate Behavior

While some of the terminology employed by the OCDQ-RS is the same as the original OCDQ, the concepts are not identical. Evidence of construct validity of the revised OCDQ was reported by Kottkamp et al. (1987). High reliability coefficients for each of the five subtests have been reported (Kottkamp et al., 1987; Dziuban and Shirkey, 1982). In summary, the OCDQ-RS is a new instrument for the assessment of climate in secondary schools. The subscales possess higher reliability coefficients than the original OCDQ, the conceptual frameworks are sound, and the properties of the five subscales appear stable. For these reasons, the OCDQ-RS was the instrument selected for use in the study reported in this paper.

DETERMINANTS OF CLIMATE

Much debate among researchers of organizational climate concerns the antecedents of perceptions of climate. In her review of the extent of research, Grace (1985) observed: "The question, `What are the determinants of organizational climate?,' is probably the most controversial and confusing issue in the climate literature" (p. 262). Taguiru (1968) stated, "In principle, just about everything may make a difference to behavior, yet to include everything is not useful, in either the

objective or subjective case" (p.14). Research to date has led to two principle categories of contributory factors: structural and personal. These respective categories approximate the nomothetic (sociologial) and idiographic (psychological) dimensions of Getzels and Guba's social systems model.

Research related to structural determinants has included such variables as: school size (e.g., Cressy, 1986; DeBella, 1985; Haffly, 1985; Kauffman, 1982); level/type of school (e.g., Crowder, 1983; Johnson, 1983; Montoya, 1987); location, or urban/rural (e.g., DeBella, 1985; Derhim, 1985; Sardana, 1986); and community socio-economic factors (e.g., Baramini, 1986; Browne & House, 1967; Thomas, 1973). Contradictory findings in the various studies regarding the contributions and causal relationships of such structural variables, however, make definitive statements impossible. The studies do, however, provide support for the Getzels and Guba model, and a foundation for the study of idiographic determinants of school climate.

Idiographic determinants of climate concern the contribution of certain personal characteristics of actors in the organization (e.g., administrators, teachers, students, support staff). Climate emerges after individuals assume these roles and begin interactions within a given structure. Most writers and researchers agree with Hoy and Forsyth's (1986) assertion: "The principal is probably the single most important person in building the climate of the school" (p. 56). Much of the

research in this area concerns the relationship of the principal's leadership style to climate. The relationship of the personality of the principal, however, has not received the attention which might be expected. The few studies regarding the principal's personality have produced weak or nonexistent relationships (e.g., Debella, 1985; Jenkins, 1983; Vrable, 1985). However, considerable research is available which investigates process-type variables which may influence climate. Such factors include involvement in decision making, level of trust between faculty and administration, respect and care afforded faculty and staff by administrators, effectiveness of communications, and rapport and collegiality among faculty and administrators.

Personality of teachers also deserves special attention as a determinant of climate. Halpin (1966) intimates that personality characteristics of teachers might predispose them to modes of behavior that characterize climate as well. He also believes personality factors alone could serve as predictors of climate. This contention has been supported by others (Hellreigel & Slocum, 1974; Hoover, 1978; Moos, 1979).

PERSONALITY AND THE PERSONALITY THEORY OF ROY HEATH

As indicated in the previous section, personality has long been considered an important determinant of climate, but has received little attention in the research literature. Furthermore, personality remains one of the least understood variables in the climate equation. Grace (1985) recognizes that:

> Because the determinants of climate have not been established, additional research is needed which focuses on the internal needs, traits, and characteristics which individuals bring with them to the organization and the role which they play in determining the climate of the organization. (p. 87)

Definitions of personality differ among various psychological theories. For example, two previous studies of climate and personality used the Sixteen Personality Factor Questionnaire (16PF) and OCDQ (Vrable, 1985), and the Myers-Briggs Type Indicator along with the School Climate Profile Indicator (Jenkins, 1983). The former study provided support for a relationship while the latter produced no significant relationship.

A less known, but interesting personality theory was proposed in 1964 by Roy Heath. Heath developed his theory of personality while involved in the "Advisee Project" funded by the Carnegie Corporation at Princeton University. Heath, a clinical psychologist and faculty advisor at Princeton, undertook the intensive study of 36 undergraduates from the month they entered college until their graduation. Extensive interviews during these years provided clues to their personalities. Heath (1978) commented:

> Early on, during the study, four patterns of interview behavior emerged. Eventually, I came to label the

> behaviors as type X, type Y, type Z, and a variant discovered later of each of these types which I called type A. A thesis began to emerge: (The interview patterns were characteristic of the ways X's, Y's, Z's, and A's interacted with their respective worlds. (p. 214)

These interaction patterns fit together into a functional model consisting of two distinct dimensions which provide a holistic representation of personality.

The horizontal axis of the model (the Dimension of Temperament) represents the individual's personal style or temperamental approach to life. The three primary personality types (X, Y, and Z) comprise this continuum. Placement on this continuum depends on the degree to which one's instinctual, inner world, and rational, outer world interact. According to Heath, the dynamics of interactions between these two worlds are controlled by a consciousness filter. Patterns of interaction, as controlled by one's filter, lead to a personality type. Knefelkamp et al., (1978) elucidated further:

> These types are characterized by differing defense systems, dispositions toward the motive behind social involvement (to belong for the type X, to be esteemed for the type Y, to be noticed for the type Z), sources of reward and punishment, environments that challenge or support; by the manner in which they interact with both people and environments; and by the very tasks

that they find either appealing or frightening. (p. 95)

Each of the three types have select characteristics or traits:

Type X. Heath chose the descriptor "non-committer" to reflect the X personality type. This individual's consciousness filter restricts the flow of inner self-awareness, thereby impeding a response to feelings. The X type tends to be a bland but friendly person who is shaped by external forces; responds to the expectations of others; maintains a posture of neutrality; and has a strong need to belong. In conflict, she or he serves as a peacemaker in order to reduce tension or avoid trouble. Safety and security are the major psychic concerns; risk taking and change are avoided. Structure and order in living are paramount concerns. Helping others and being supportive are rich and satisfying experiences for the X type. Agar (1978) summarized the characteristics of the non-committer as a "friendly, bland, likeable and cautious individual. Alienated from and unaware of his inner drives and feelings, the X hesitates to break through his protective shell" (p. 13).

Type Y. Heath characterized the Type Y individual as the "hustler." The consciousness filter of this person is less restrictive, allowing an awareness of the inner drives. These inner drives, however, are perceived as weak and are not trusted, and behavior tends to counter the inner feeling through diligent work and high standards. Heath (1964) described the personality

of the hustler as one that is "at war with itself" (p. 22). The Y type is an aggressive competitor; an eager and hard worker; objective and rational; and a careful planner. Leadership positions suit Y well, although she/he is sometimes considered callous and thoughtless because of impatience for action and a demand for results.

Type Z. The "plunger" is the term Heath selected to connote the style and temperament of his Z personality type. Z's consciousness filter is open, permitting the free flow of inner thoughts and feelings. Impulsive responses and inner emotions frequently typify the unpredictable behavior of these persons. Knefelkamp et al. (1978) observed that they are at the mercy of their feelings: "As such he/she often has difficulty completing tasks because his attention will be captured by something new or he/she becomes bored and lacks self-discipline to continue" (p. 98). The Z type has little concern for schedules and is often described as a free spirit. Mood fluctuations create a vacillating identity which obscures the genuine self of the plunger. These features of the Type Z individual often result in an innovative, interesting individual who is viewed as a bit odd.

The vertical axis of Heath's model represents the developmental dimension of the paradigm. As individuals mature, they tend to become more similar as depected by the convergence at the apex of a triangular model. Heath calls this individual at the apex the "Reasonable Adventurer" or Type A. The Type A

person retains his or her basic temperaments (as associated with Types X, Y, or Z). The Type A, however, is not a unique personality, or a super type. Knefelkamp et al. elaborated:

> A Reasonable Adventurer who is an X type would still wish to serve a maintenance role in a group and to be a more passive than active participant, but the mature expression of this characteristic could be the behind the scenes organizing of a conference in which he brings many diverse people together to explore, discuss and debate a common theme. A Reasonable Adventurer who is a Y type would have a drive for achievement and getting things done, but could channel that energy into providing leadership and encouragement to a group of individuals who shared a commitment to the process or the end goal. A Reasonable Adventurer who is a Z type would likely still respond to unexpected flights of fancy or whimsy, but would be able to harness that creative energy to produce innovative programs or curricula that would affect students positively. (p. 100)

Agar (1978) summarized the six characteristics of the Reasonable Adventurer as: intellectuality; ability to develop and maintain close friendships; independence in value judgments; tolerance of ambiguity; breadth of interest; and sense of humor (p. 19). Essentially, the Reasonable Adventurer is an individual that possesses the personal freedom and competece to actively

engage life, and to tolerate all of its ambiguities.

The purpose of this study was to investigate the relationship between secondary school professional staff members perception of school climate and their respective personalities.

SUBJECTS AND INSTRUMENTS

The subjects for this study were two hundred and thirty-two (232) volunteer secondary teachers from the Central Florida area.

The Organizational Climate Description Questionnaire - Rutgers Secondary (OCDQ-RS), developed by Kottkamp, Mulhern, and Hoy (1987), was used to assess organizational climate. The OCDQ-RS is based on the conceptual framework of an open to closed climate that was established in the Organizational Climate Description Questionnaire (OCDQ), the seminal work of Halpin and Croft (1963). The instrument is a 34-item paper and pencil questionnaire developed expressly for the assessment of climate in secondary schools. It consists of five subscales, two of which measure principal-teacher interaction, two of which measure teacher-teacher interaction, and one of which measures teacher-teacher and teacher-student interaction. The first principal behavior is composed of supportive and directive leadership styles. The second teacher behavior is composed of engaged, frustrated, and intimate interaction behaviors on the part of teachers.

Kottkamp et al. (1987), in their effort to develop the OCDQ-RS, reported high reliability coefficients for each of the

subtests. Alpha coefficients of .91 (supportive principal behavior), .87 (directive principal behavior), .85 (engaged teacher behavior), .85 (frustrated teacher behavior), and .71 (intimate teacher behavior) were revealed. Kottkamp and Mulhern (1987), in the first study to utilize this new measure of secondary school climate, also reported high coefficient alpha reliabilities for the subscales ranging from .73 to .94.

Evidence of construct validity was reported in the development of the revised instrument by Kottkamp et al. (1987):

> The stability of the factor structure supports the construct validity of the dimensions and the constitutive meanings of the constructs. The relations among the items consistently held as theoretically expected; that is, the items measuring each subtest were systematically related to each other as expected in the final analysis of the OCDQ-RS. (p. 44)

Kottkamp and Mulhern (1987) reported construct validity which was provided through factor analysis of preliminary and replicative data. They also noted that, "Confirmation of the expectancy motivation-climate hypothesis provides additional support for the construct validity of the OCDQ-RS" (p. 17).

An open-closed climate continuum, following the conceptual formulation established by Halpin and Croft (1963), was established in the development of the OCDQ-RS via a second order factor analysis. A two-factor solution with a varimax rotation

was given for the five subscales. The supportive and directive behaviors of principals, as well as engaged and frustrated behaviors of teachers loaded strongly on Factor I. Intimate teacher behavior, on the other hand, is the only subscale that loaded strongly on Factor II. Kottkamp et al. (1987) summarized:

> Factor I identifies schools with energetic principals who lead by example, give teachers wide latitude in professional decision making, are helpful and supportive, and work toward both the satisfaction of social needs and task achievement by faculty. Teachers find the work environment facilitating, engage energetically in their teaching task, and feel optimistic about both their colleagues and their students. This first factor constitutes precisely the open-closed continuum the researchers were seeking; hence Factor I was named openness. (p.44)

Openness of secondary school climate is calculated by standardizing scores on the subscales and following the formula:

$$\text{Openness Index} = (S + E) - (D + F)$$

where S corresponds to supportive principal behavior, E to engaged teacher behavior, D to directive principal behavior, and F to frustrated teacher behavior. The higher score on the openness index indicates greater openness in the climate of the school.

Factor II, in accordance with the only subtest that loaded

strongly on this factor, was labeled intimacy. Intimacy is associated with the satisfaction of social needs through friendly social interactions. It has nothing to do with organizational task accomplishment. Indeed, schools with open or closed climates may or may not have intimate teacher interactions. Schools with closed climates may, in fact, have teachers who are cohesive as a group in their opposition to school policies and who are concerned primarily with the satisfaction of social affairs. But it is also possible to have schools with closed climates that demonstrate low teacher intimacy where teachers are not concerned with task accomplishment or establishing friendships with other teachers in the school. Similarly, schools with open climates may have a high level of intimacy where the teachers form a cohesive and friendly faculty who complement the task orientation of their school. However, it is also possible to have an open climate school which consists of a faculty who seek friendships and socialization outside of the school.

In summary, the OCDQ-RS is a reasonably new instrument for the assessment of organizational climate in secondary schools. The conceptual frameworks are sound and the properties of the five subscales appear stable. Additionally, the subscales possess higher reliability coefficients than the original OCDQ. While construct validity of the subtests has been demonstrated through the stability of the factor structures, the new measure

also provides data relevant to a component lacking in the original OCDQ, the students of the school. It is noteworthy to point out the unit of analysis for the development of the OCDQ-RS was the school; therefore, the five dimensions identified are organizational properties, not individual ones. Kottkamp et al. (1987) reported:

> The framework also provides a heuristic perspective for studying secondary schools and developing change strategies and school improvement programs. The OCDQ-RS, however, should be subjected to further analysis in a wide variety of populations and samples to ensure the stability of its factor structure. In brief, the OCDQ-RS is a parsimonious, reliable, and heuristic research instrument ready for further testing. (p. 47)

The OCDQ-RS, therefore, was determined to be an appropriate measure of organizational climate in secondary schools for the purposes of this study.

The Heath Typology Assessment Instrument (HTAI) was utilized to measure the personality styles for the subjects of this study. This scale is a 48-question, paper and pencil, self-report survey designed to identify primary personality types corresponding to the model of typologies proposed by Heath (1964).

The HTAI is a modification of Resident Advisor Heath Typology Instrument (RAHTI) developed by Agar (1978). The RAHTI was the product of an effort on the part of Agar to develop, for

the first time, an objective instrument with logical scoring procedures for assessing the temperamental dimension of Heath's typology among college undergraduate resident hall advisors.

The RAHTI is a Likert type scale with questions clustered into four categories. These four areas of questions "provide a holistic picture of an individual's characteristics and interactive style" (Agar, 1978, p. 29) and are intended to render a comprehensive range of information for assignment to a personality type. The four categories are: (a)interpersonal interaction style, designed to examine the ways in which an individual interacts with others on a one-to-one basis; (b) group interaction style, focused on the roles that an individual assumes when working with others in his charge; (c) interaction of the individual with the organization, examines the role the individual assumes when working with peers and supervisors as a member of a large organization; and (d) individual characteristics, fashioned to identify characteristics unique to particular Heath types.

Questions within each of the four categories are arranged in trios around a common theme. Each trio is composed of an X, Y, and Z item. The pattern of the reponses is assessed and the resulting standardized score indicates the primary personality style of the individual.

The reliability and validity of the RAHTI were established through comparison with the Modes of Existence Test and a

consensus appraisal of personality typology by a team of experts in Agar's study. Data indicated that the Heath typology established by the Modes of Existence Test and the RAHTI agreed in 66.67% of the cases, while the RAHTI and expert ratings agreed in 84.10% of the cases.

The results of this study indicated that it was possible to develop an instrument, using a theoretical basis, that can effectively assess personality temperaments based on thoughts, feelings, and behaviors. While this study was conducted within the context of a particular environment, "its success indicated that it would be possible to create a behaviorally-oriented instrument that can be used with students in other environments, or across environments--a more generalized approach" (Agar, 1978, p. 90).

DATA ANALYSIS

The means, standard deviations, skewness and kurtosis indices were determined for the OCDQ-RS and the HTAI. The five scales for the climate instrument supportive principal behavior (SPB), directive principal behavior (DPB), engaged teacher behavior (ETB), frustrated teacher behavior (FTB), intimate teacher behavior (ITB), and the non-committer, hustler and plunger scales of the HTAI, were combined into an 8x8 super matrix of the following order:

$$\begin{matrix} R_{11} & \\ R_{12} & R_{22} \end{matrix}$$

where R_{11} = a 5x5 matrix of correlations among the climate scales, R_{22}= a 3x3 matrix of correlations among the Heath scales, and R_{21}= a 3x5 non-symmetric matrix of cross correlations among the tests. The matrix $R_{12}\ R_{12}^{-1}\ R_{21}\ R_{22}$ will be recognized as the basic formulation for canonical correlation analysis (Mulaik, 1972).

Alpha reliability coefficients were determined for each subscales of the instruments (Cronbach, 1951). An additional psychometric procedure was applied to the data. In factor analysis the sampling problem of primary concern is psychometric (what is thought to be true for an infinite universe of variates?). Guttman (1953) demonstrated that as one's sample of variates from the population improve the sample correlation matrix in hand will approach a diagonal. Kaiser (1970) used this property to develop his measure of sampling adequacy (MSA) which was intended to index the sample of variable psychometrically. It has been suggested that the MSA can provide the basis of a decision rule for determining whether to factor a variable set in an exploratory manner (Cerny & Kaiser, 1977; Dziuban & Shirkey, 1982). Using the Guttman theorem, Kaiser and Rice (1974) defined the MSA as a function of the anti-image correlation matrix (correlations among the unique parts of the data) $Q=SR^{-1}S$ where $S = (\text{Diag } R^{-1})^{-1}$ and the observed correlation matrix (R).

$$MSA = \Sigma\Sigma r^2_{jk} / (\Sigma\Sigma r^2_{jk} + \Sigma\Sigma q^2_{jk})$$
$$j = k \qquad j = k \qquad j = k$$

This version of the index is bounded by zero and one with values increasing with the psychometric quality of the data. For its current calibration investigators would require values in the .80's to be satisfied with their data set while values in the low .70's should cause one to seriously reconsider the analysis. With most things held constant, MSA improves as the number of variables increase, the dimensionality of the factor solution decreases, the sample size of subjects increases, and the number of variables increases.

Harris and McArthur (1974) presented a comprehensive review of several kinds of inter-battery studies and methods for analyzing their data. Class two of their review was concentrated on inter-domain relationships. Popular models for those relationships have involved the concept of inter-battery factor analysis. Tucker (1958) formulated a procedure for the identification of those patterns. Subsequently, Kristof (1967) suggested an approach which required a scale free factor analysis of entire supermatrix among the variables. Most recently, Browne (1979) formulated a method for developing maximum likelihood inter-battery factor analysis. He demonstrated that the canonical correlation loadings (correlations of the original variables with the canonical varieties) were related to the model developed by Tucker (1958). If G is the (pxq) + matrix of unrotated canonical loadings formed by combining the two matrices (A,B) of loadings on the variable sets, the matrix of maximum

likelihood pattern coefficients is derivable from the relationship:

$F=GU$ Where U is a diagonal matrix of canonical correlations (Huba, Newcomb, & Bentler, 1981).

Those inter-battery pattern coefficients were derived when the climate scales were considered battery "A" and the Heath scales were considered battery "B".

The raw pattern coefficients were transformed according to the independent cluster solution (Harris & Kaiser, 1964). The generalized version of the desired pattern matrix is obtained from:

$$P=WQL^{c}TD$$

where W is a diagonal matrix of uniqueness scaling factors, Q is a matrix of unit-length eigenvectors, L is a diagonal matrix, D is a diagonal rescaling matrix which depends on the choice of the parameters T and an orthonormal transformation matrix and c. The choice of c=0 produces the independent cluster solution. Pattern coefficients absolutely greater than .30 were used for interpretation purposes in all solutions.

RESULTS AND CONCLUSIONS

The results of the study are presented in Tables I through III. It may be observed from Table I that the reliability coefficient for the OCDQ-RS were generally superior to those for the HTAI. The transformed factor pattern is presented in Table III. Three factors were retained with the first a bdoublet

exhibiting a negative salient pattern coefficient (-.42) for directive principal behavior and a positive one (.50) for the "hustler" personality type. This factor was termed "Barricades." The second factor showed frustrated teacher behavior (-.33) negatively related to the non-committer personality. This factor was named "Mother Hen." The third dimension showed intimate teacher behavior (-.30) negatively related to the "plunger" personality (.35). The final factor was named "Square Peg."

The "Barricades" factor revealed the tendency of the Y personality type to be overly sensitive to and unduly restricted by directive principal behaviors. "Hustlers," as a result of their compulsion to be continously engaged in purposeful activity to achieve concrete success, are more likely (than X's or Z's) to feel bridled by the principal and the policies established for the systematic operation of the school. What Y's want most of all, is to be left alone to pursue their work with zealot-like passion, and to be recognized for their herculean efforts. Any policy or procedure which restrains or interferes with their pursuit of a goal or objective is perceived negatively and is reflected in their perception of climate. It is entirely possible that "Hustlers" always feel excessively restricted by principal supervision. Attempts by the principal to stay informed and monitor school classroom activities are viewed as an intrusion, regardless of how unobtrusive these efforts might be. The Y personality type constantly feels held in check and

constrained by these organizational realities.

The "Mother Hen" factor revealed the tendency of the X personality type to que into Frustrated Teacher Behavior. "Non-Committers" react more negatively (than Y's or Z's) to paperwork and noncurricular duties because these tasks have no relevance to providing instruction to students. Having to take attendance or file field trip request forms is extremely bothersome. Being assigned hall duty, lunchroom supervision, or rest room patrol is viewed with disdain. Thus, X's perceive more frustration because these kinds of responsibilities are facts of life in the operation of schools. "Non-Committers" also possess a hyper-sensitivity to the actions and behaviors of their colleagues which reflect dissatisfaction with work or relationships at school. This increased awareness gives the Type X the tendency to constantly scan the environment for discord. Any disagreement, no matter how trivial, is likely to be reacted upon in order to try to bring harmony to the situation. Other teachers may be unaware of any dissatisfaction or dismiss it as unimportant, but the X is always sensitive to its presence and seeks to remedy it. However, the nature of organizations and personal relationships makes this an impossible task since conflict and disagreement are natural by-products of organizational life. Therefore, because of their penchant for peace and stability, the X is in a constant state of dissonance.

The "Square Peg" factor characterizes the negative

relationship between the Type Z personality and Intimate Teacher Behavior. The "Plunger," because of his/her instability and impulsiveness, finds it difficult to cultivate or sustain personal relationships with other staff members. As a result, they feel left out and on the fringe of the social network within the school. Likewise, staff members think of Z as odd and difficult to get to know. They are not comfortable with their moodiness or unpredictability and, therefore, tend to shy away from them in social situations. The Type Z teacher is often left alone because of his/her impulsiveness and is "out of sync" with the rest of the school. No matter how intimate the environment, the "Plunger" feels little closeness with his/her colleagues and can be thought of as an outcast. As a result, the Z has no sense of cohesiveness with colleagues and is alienated from the rest of the school.

It appears that these factors have potential for impact on climate. A school with a critical number of any one particular personality type (X, Y, or Z) may have its climate predetermined by the inherent bias brought to the setting by each typology. A school predominantly staffed with Type X teachers will reflect a climate high in frustration. The "Mother Hen" factor would characterize the environment regardless of what actions the principal took to reduce non-instructional tasks and promote harmony among staff members. A school staffed mostly with Type Y teachers would manifest a climate high in constraint because of

the tendency of these teachers to sense intrusion and interpret principal supervision as negative leadership behavior. The "Barricades" factor would characterize the environment. A school with mostly low Z teachers would be one with very little meaningful social interaction occurring among the staff members and a climate marked by a high degree of alienation. The "Square Peg" factor would dominate the atmosphere of their organization. The possibility also exists that the individual instructional departments within a school might tend to be high in one particular personality typology. That department would manifest a climate perception different from another department within the same school not composed of that typology.

It appears personality modulates an individual's perception in such a way as to predispose them to sensing the significance of these perceptions differently from others not of the same temperament. It would seem reasonable that these differences are greatest at the lower levels of maturity where disparities are the greatest among the three basic personality types, X, Y, and Z.

Table I
Summary Statistics, Reliability Coefficients, and MSA's for the Measures Used in the Study

OCDQ-RS*

SCALE	N	X	SD	SK	K	ALPHA
SPB	237	13.29	4.55	.45	-.74	.89
DPB	227	21.57	3.29	-.78	.56	.63
ETB	231	21.63	4.17	.15	-.76	.77
FTB	238	16.87	2.31	-.39	-.18	.63
ITB	234	10.56	2.25	-.41	.28	.71

* MSA = .85

HATI **

SCALE	N	X	SD	SK	K	ALPHA
Non-Committer (X)	238	55.05	5.54	.01	.09	.60
Hustler (Y)	235	52.79	5.70	.20	.07	.60
Plunger (Z)	237	53.97	5.64	.11	-.13	.65

** MSA = .76

Table II
Correlations Among the Scales of the C_DQ-RS and the HATI
(Decimals Omitted)

SCALE	X	Y	Z
SPB	-01	-04	-01
DPB	-16*	-16*	-13*
ETB	04	08	-01
FTB	-15*	-12	-13*
ITB	03	06	-08

* PL.05

Table III
Transformed Maximum Likelihood Interbattery
Pattern Matrix X

SCALE	Factor I	Factor II	Factor III
SPB	-03	02	16
DPB	<u>-42</u>	-06	-17
ETB	10	03	-04
FTB	04	<u>-33</u>	-07
ITB	05	03	<u>-30</u>
X	08	<u>34</u>	-04
Y	<u>50</u>	-01	-02
Z	27	04	<u>35</u>

* * Decimals Omitted

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