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TEACHER PERSONALITY AND CLASSROOM CLIMATE.

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TO DISCOVER IF PERSONALITY CHARACTERISTICS, NEEDS, VALUES, AND ATTITUDES OF TEACHERS PREDICT CLASSROOM CLIMATE, 36 MALE PHYSICS TEACHERS VOLUNTARILY ATTENDED A BRIEFING SESSION FOR A NEW HIGH SCHOOL PHYSICS COURSE AND TOOK A BATTERY OF PERSONALITY TESTS BEFORE TEACHING APPROXIMATELY 2,000 JUNIORS AND SENIORS TAKING THE NEW COURSE. CRITERION MEASURES ADMINISTERED INCLUDED THE ALLPORT-VERNON-LINDZEY STUDY OF VALUES (AUL), THE EDWARDS PERSONAL PREFERENCE SCHEDULE (EPPS), THE MINNESOTA TEACHER ATTITUDE INVENTORY (MTAI) AND THE CLASSROOM CLIMATE QUESTIONNAIRE (CCQ), A NEW MEASURE DESIGNED FOR THIS STUDY. DATA WAS COLLECTED THROUGH A NEW TECHNIQUE OF RANDOMIZED DATA GATHERING IN THE CLASSROOM. STATISTICAL ANALYSIS INVOLVED CANONICAL CORRELATIONS OF 29 TEACHER PERSONALITY MEASURES AND 18 CLASSROOM CLIMATE MEASURES. FINDINGS INCLUDED (A) TEACHERS WITH NEEDS FOR DEPENDENCE AND POWER, ORDER AND CHANGE HAD FORMAL, SUBSERVIENT CLASSES WITH LITTLE ANIMOSITY BETWEEN CLASS MEMBERS. (B) TEACHERS WITH NEEDS FOR INTERACTION (AGGRESSIVE AND AFFILIATIVE) HAD CONTROLLED, GOAL DIRECTED CLASSES (STUDENTS MAY FEEL LESS PERSONAL INTIMACY WITH EACH OTHER BECAUSE THE TEACHER MAY MONOPOLIZE AFFECTIVE GROUP INTERACTION). AND (C) THE SELF-CENTERED TEACHER HAD A CLASS THAT WAS DISORGANIZED, CONSTRAINED, LOOSE IN STUDENT SUPERVISON, AND LOWER IN GROUP STATUS. (AF)

draft

Teacher Personality and Classroom Climate

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Intuitively, one feels that the teacher's personality and attitudes must have potent influences on the climate of the classroom. But recent reviews of the literature on teacher personality (Getzels and Jackson, 1963) and social interaction in the classroom (Withall and Lewis, 1963) conclude that studies relating these factors are inconclusive, unreplicated, or conflicting. The present study is another try at this old problem. However, it differs from previous research in four ways: it rests on a socio-psychological theory concerning the classroom group as a social system (Getzels and Thelen, 1960); it employs a new measure, the Classroom Climate Questionnaire (Walberg, 1966); it attempts to deal with the complexity of the problem by relating 29 measures of teacher personality to 18 dimensions of classroom climate in a multivariate analysis (canonical correlations); and it exemplifies a new technique of randomized data gathering in school classrooms (Walberg and Welch, 1966).

Getzels (1952) derived his conceptual framework from a general theory of action in the social system (Parsons and Shils, 1951) and applied it to the process of educational administration. Later, he and Thelen (1960) adapted the framework for the study of the classroom group as a unique social system.

The main elements and relations between elements in the Getzels-Thelen conception of the classroom group here can be summarized analytically as follows:

Institution	→ Role	→ Expectations	→	
Class	→ Climate	→ Intentions	→	Behavior
Individual	→ Personality	→ Dispositions	→	

The upper line is termed the "nomothetic" or sociological dimension of action. Roles are defined in terms of established institutional expectations--obligations, prerogatives, and powers. Some of the research on the professional roles of teachers, especially beginners, has been recently interpreted using this aspect of the theory (Walberg, "Denominational and Socio-Economic Correlates of Professional Self Concept in Beginning Teachers", Journal of the Sociology of Religion, 1967) but it is not of central concern here. The lower and middle lines bring out the relationships of interest. While role refers to shared characteristics of role incumbents, the lower line pertains to the unique, personal behavior dispositions, and for this reason is called the idiographic or psychological dimension of activity. The central attributes of personality are need dispositions, "individual tendencies to orient and act with respect to objects in certain manners and to expect certain consequences from these actions" (Parsons and Shils, 1951, p. 114). The middle line refers the origins of behavior in the classroom, "balance of emphasis

on the performance of role requirements and the expression of personality needs ... as a function of interaction within the classroom group" (Getzels and Thelen, 1960, p. 79). The aim of the present study is to predict the middle dimension, class climate,from the lower dimension, in this case, the teacher's personality. Like any good theory, the Getzels-Thelen framework reveals gaps in empirical research and suggests new relationships for testing. Several questions may occur to the reader. How are the teacher's personality needs mediated in his classroom behavior? What is the influence of the institution--the school--and the personalities of class members on classroom climate and the teacher's personality? What are the relations of climate to student motivation and achievement? Several of these questions are presently being investigated.

Measuring the group characteristics of a school class presents some difficult problems. The obvious tack is systematic observation (Medley and Mitzel, 1963). This was ruled out for two reasons. The sample of teachers under investigation is scattered throughout the country, and travel and personnel costs would have been prohibitive. Secondly, the writer shares Watson's opinion (1963) that the teacher and the class may put on an act for an observer but the teacher's personality and its effect on the class climate is the key to understanding the psychology of teaching.

A scale was derived for the measurement of classroom

climate from the Group Dimensions Descriptions Questionnaire (Hemphill and Westie, 1950), an instrument designed for the general measurement of a wide variety of adult groups. The adaption consisted of leaving out one irrelevant scale, Permeability (access to membership), and changing all individual items to make them descriptive of students and classes. The psychometric properties of the instrument have been described (Walberg, 1967) and illustrative items and scale reliabilities are given below.

A large number of personality tests for the teachers were considered and two comprehensive, theoretically-based measures of values and needs were selected, the Allport-Vernon-Lindzey Study of Values (1960) and the Edwards Personal Preference Schedule (1959). In addition, as an attitudinal measure of teacher personality, the Minnesota Teachers Attitude Inventory (Cook, Leeds, and Callis, 1951) was employed in the predictor battery using a recently discovered factor analytic dimension of the Inventory (Walberg, 1967).

The statistical technique, canonical correlation, was developed by Hotelling (1935) who considered it highly promising for research in educational psychology. Unfortunately, the technique is still largely of interest to theorists and, perhaps because of the heavy calculations, few empirical applications have been carried out (Tatsuoka and Tiedeman, 1963). The problem in canonical analysis is to find one or more sets of weights for the predictor and criterion variables which,

when multiplied by the variable values, will maximize the correlation between the two sets. The canonical vectors reveal the contributions of the individual variables to the significant canonical variates. The more familiar multiple correlation is a special case of canonical analysis where there is only one criterion (or dependent) variable. The canonical vector elements can be interpreted analogously as beta weights in multiple correlation.

The study is part of a series of studies[1] and makes use of data collected randomly within classrooms (Walberg and Welch, 1967). To save testing time and still give a great number of tests when using the classroom as the unit of analysis it is possible to order a battery of tests randomly and use the scores of class members who take each test to estimate the class mean[2]. This is practical when the tests are self-administering and untimed or if the timed test is longer than the rest of the battery. The Classroom Climate Questionnaire was administered simultaneously with the Henmon-Nelson Intelligence Scale, the Allport-Vernon-Lindzey Study of Values, and the Personal Opinion Survey (a selection of personality measures). This means that the scores of approximately one-fourth of the 2000 students in the 72 experimental clases were used to estimate classroom climate

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[1] This study is a part of the evaluation activities of Harvard Project Physics.

[2] This does not preclude studies with individual students as the unit of analysis.

by calculating the class mean from each student in the class taking the Questionnaire.

Method

Subjects

Thirty-six men teachers of physics voluntarily attending a briefing session for a new high school physics course took a battery of personality tests during August of 1966. Walberg and Welch (1967) reported the personalities and characteristics of this group, and Walberg (1967) summarized the study in a later publication. Suffice it to say that, because of their high achievement in physics, greater theoretical and aesthetic values and needs for autonomy, their personality profile resembles that of creative scientists. The average age was 38 with a range from 22 to 59. Twenty-eight had master's degrees, and the average teaching experience was 12 years. The teachers came from 17 states scattered throughout the country.

Some 2000 juniors and seniors in the 72 experimental classes trying the new course participated in the study. During the month of November, 1966, a number of tests were given using randomized data collection (Walberg and Welch, 1967) as explained previously, and about a fourth of each class took the Classroom Climate Questionnaire. The average Henmon-Nelson IQ of the students is 115 with a standard deviation of 14.

Instruments

The personality and attitude measures administered to the teachers include the Allport-Vernon-Lindzey Study of Values (AVL, 1960), the Edwards Personal Preference Schedule (EPPS, 1959), and the Minnesota Teacher Attitude Inventory (Cook, Leeds, and Callis, 1951). The AVL yields six value scores ranging in split-half reliability from .84 to .95. The EPPS has 15 personality need scores with split-half reliabilities from .60 to .84. Seven factor scores from a previous study of the same teachers (Walberg, 1967) were used in place of the standard total score on the MTAI.

The rationale and development of the Classroom Climate Questionnaire has been described. Factor analysis of the individual scale items for the student sample revealed 18 factors quite different from the original 12 scales designed for adults (Hemphill and Westie, 1955). Items loading on the factors were added and a series of reliability and validity coefficients were calculated (Walberg, 1967). The average inter-correlation of items loading on each factor was boosted "N" times where "N" is the number of items using the Spearman-Brown formula. These estimates of internal consistency ranged from .54 to .84 with a median of .76. However, since the Questionnaire was designed to measure classroom climate, a group measure, the reliabilities for individuals were boosted to the number in the class rating the climate, assuming an "N" of 10 using an extension of the Spearman-Brown formula described by Remmers, Shock, and Kelly (1927). The

group reliabilities, illustrative items, and factor names are shown in Table 1.

Procedure

A computer program designed and written by Jones (1964) in collaboration with William Cooley and Paul Lohnes was employed in extracting the canonical correlations from the correlation matrices of the predictors (teacher personality measures), criteria (mean climate measures from the 72 classrooms), and in the inter-set (all matrices available from the writer). The rationale and statistical method of canonical correlation in educational research has been described by Tatsuoka andTTiedeman (1963)- and the computational methods are outlined by Jones (1964).

The first statistical test is the hypothesis of no significant correlation between predictors and criteria. A Chi-Square of Wilk's Lambda was 716 with 522 degrees of freedom and very highly significant ($p < .001$). Subsequent tests with successive roots removed, revealed no significant ($p < .05$) residual canonical correlation after four canonical variates were extracted. The four significant canonical correlations in order were .94, .93, .89 and .89. The important elements of the canonical vectors of teacher personality and classroom climate are presented in the next section.

Results and Discussion

It is important to note at the outset that the personality measures, especially the EPPS, describe personal traits in

somewhat clinical, if not pathological terms. This stems from long-standing interests of psychologists in abnormality. Of course, samples of normal subjects vary along scales of heterosexuality, guilt, or dependence, as the present sample does. This should not be construed as an indication of clinical abnormality. Indeed, our previous study (Walberg and Welch, 1967) and our own observations indicate that the sample teachers are quite superior in ability and personality. Hence, any variance in sensitive scales or any of the other scales must be interpreted as departure from a mean of a rather select, and, unfortunately, non-representative, non-random group. However, replications and generality of the findings to other groups may be promising because correlations in homogeneous groups such as the present sample tend to be attenuated, while more representative samples generally yield larger correlations.

The first canonical correlation was .94 and weighted .25 or more (or -.25 or less) on four measures of teacher personality and five measures of classroom climate as follows (rearranged in order of weights: decimals omitted, read in hundredths):

Succorance	50	Organizational Formality	38
Order	38	Group Subservience	26
Change	33	Social Heterogeneity	-36
Political (AVL)[3]	25	Strict Control	-40
		Internal Friction	-46

[3] personality measures other than the EPPS are noted in parentheses.

The most striking thing about the personality side is the antithesis implied in the two sets of measures, dependence (Succorance)-power (Political) and Order-Change. Teachers scoring high on this canonical variate, if the measures are valid, value power and yet are dependent, and need both order and change. This personality constellation of the teacher is reflected in a relatively formal, subservient classroom climate in which the students do not perceive much friction or many social differences among themselves and do not feel strictly controlled. It should be noted that Subservience, according to the items on the scale, refers to control by an outside group, probably the school administration or the curriculum project staff.

Multivariate procedures produce complex findings and hopefully reveal some of the intricacies of the data under analysis. Let us speculate about the psychological meaning of these complex relationships. The problem of emotional antithesis or conflict has been investigated by Freud, Hull, the Functionalists, and others (Hilgard, 1964), and a resolution common to these theorists is some form of sublimation, "leaving the field", or other indirect solution rather than a painful confrontation of polarities. The ploy taken by teachers with combination dependence and order ambivalences may be to accomplish their ends by substituting the authority of the principal, a list of rules, or some other device. Apparently this can be successful in that

order is preserved: the students do not feel strictly controlled and apparently get along relatively well with one another.

The second canonical correlation was .93, and the important weights are as follows:

Abasement	45	Strict Control	35
Affiliation	38	Personal Intimacy	30
Nurturance	37	Goal Directedness	29
Aggression	33	Responsibility Stratification	-26
Endurance	31	Group Status	-34
Deference	25	Classroom Intimacy	-63

Ambivalence is also implicit in this variate--affiliation-nurturance-defe ence and aggression. Other personality elements in this pattern are guilt (Abasement), endurance, and deference. The pattern predicts a strict, goal directed, unstratified classroom climate. Students in these classes obtain lower status from class membership and feel much less classroom intimacy but more psychological intimacy. It is important to note that intimacy refers to fellow class members not between teacher and student.

Lewin, Freud, and other psychoanalysts have analyzed emotional ambivalence, and find, in addition to the love-hate antithesis, feelings of guilt and some forms of fixation or rigidity often accompany the pattern. If the students are the objects of the teacher's feelings, it is plausible that

the students feel that the class is controlled, goal directed, and unstratified. The members may feel less intimate with one another in class because the teacher with strong needs to interact both affiliatively and aggressively may monopolize the affective interpersonal relations. Perhaps the class is similar to a family in that a loving parent may have children with remote sibling ties but a remote parent may have children who feel quite close.

It seems reasonable that such a class may have lower status but why the students should feel psychologically intimate is puzzling. One explanation is that they have more opportunity to observe one another interacting emotionally with the teacher.

The third canonical corre ation was .89, and the more important weights are:

Nurturance	34	Goal Directedness	33
Intraception	31	Social Heterogeneity	-26
Order	29	Group Subservience	-30
Aggression	27	Organizational Formality	-33
Exhibitionism	26	Interest Heterogeneity	-33
Change	25	Egalitarian	-57
Affiliation	25		
Abasement	-34		

The pattern of teacher personality is similar to the antithesis brought out in the first and second canonical variates: order

and change, aggression and nurturance-affiliation. The other positive elements suggest another kind of tension among needs: exhibitionism on one hand and introspection and analytical interests in the motives of others (Intraception) on the other. Teachers with this pattern also tend to feel less guilty (Abasement). The classroom climate predicted tends to be relatively goal directed, homogeneous socially and with respect to interests, lacking in organizational formality, subservient, and less egalitarian.

The relationships among the personality predictors, among the climate criteria, and between the two sets are complex and difficult to interpret. The personality side of the variate may be a composite of the re idual variance and error left over from the first and second correlations since it resembles aspects of both of them. However, one suspects that teachers controlling three apparently different tensions between their own needs might have classes with climates reflecting control and tension. This may account for classes which are directed, homogeneous, subservient, but at the same time less egalitarian and formal.

The fourth and last canonical correlation was .89, and the weights were distributed as follows:

Achievement	51	Disorganized	47
Heterosexuality	32	Egalitarian	32
Abasement	26	Speech Constraint	29
Expressiveness	26	Social Heterogeneity	-31
Pupil Centered (MTAI)	-41	Strict Control	-36
		Group Status	-37

The relationship between the patterns of teacher personality and classroom climate seem much more straightforward in this case. The teacher who is self-centered in terms of high needs for achievement and expressiveness, interest in the opposite sex, and less pupil centered tends to have disorganized, constrained classes in which the students feel homogeneous and less closely supervised. As one might expect, membership in these classes is associated with lower group status.

Conclusion

The findings suggest several predictable relationships between teachers' personalities and classroom climates. Several kinds of tensions in the teacher's personality appear to be associated with patterns of climate as perceived by students. Measured needs for both dependence and power, order and change on the part of the teacher make for a formal, subservient climate with little animosity among the class members. Teachers with needs to interact with others both aggressively and affiliatively tend to have controlled, goal directed classes. Students in these classes may feel less personal intimacy with one another because the teacher may monopolize the affective interaction of the group. A third pattern was more complex and difficult to interpret. It apparently contained elements common to the first and second canonical. A fourth pattern of personality seemed quite definite, the self-centered teacher. Important aspects of

classroom climate associated with this pattern were disorganization, constraint, loose supervision of students' work, and lower group status.

The hypothesis derived from the Getzels-Thelen socio-psychological theory is supported. The personality characteristics of the teacher, his needs, values, and attitudes predict the climate of his classes. As pointed out earlier, there is much to learn about classroom climate both as a dependent variable and an independent variable. Certainly the present study must be replicated. Canonical studies of mean initial characteristics of classes in terms of achievement and interest in science, conceptions of self and the universe are now in order to predict classroom climate. A second study (in collaboration with G. Anderson) using the standard deviations of these predictor variables is being carried out to determine the effect of student heterogeneity on climate. An additional canonical study of climate as a predictor of adjusted classroom gains in knowledge, understanding, and interest is planned as the posttest data are returned at the end of the academic year.

Table 1

Sample Items and Reliabilities for the Classroom Climate Questionnaire

Factor	Sample Item	Class Reliability*
Internal Friction	Certain students in the class are responsible for petty quarrels	98**
Classroom Intimacy	A student has a chance to know all the other members of the class	97
Goal Directedness	The class knows exactly what it has to get done	97
Social Heterogeneity	Members of the class vary greatly in social background	97
Interest Heterogeneity	Some students are interested in altogether different things than other students	91
Goal Diversity	The class is working toward many different goals	95
Group Status	Membership in the class gives members a feeling of superiority	96
Democratic Policy	Each member of the class has as much influence as any other member	97
Group Subservience	The class is under outside pressure	93
Satisfaction	Personal dissatisfaction with the class is too small to be a problem	92
Strict Control	Students in the class work under close supervision	91
Disorganization	The work of the class is frequently interrupted by having nothing to do	92
Alienation	Failure of the class would mean nothing to most members	97
Personal Intimacy	Each student's personal life is known to other students of the class	93
Responsibility Stratification	Work in class is left to those who are most capable for the job	92
Egalitarianism	Each member of the class enjoys the same privileges	95
Organizational Formality	The class has rules to guide its activities	91
Speech Constraint	Only certain kinds of ideas may be expressed freely within the class	87

* Assuming an N of 10
** Decimals omitted; read in hundredths

References

Allport, G.W., Vernon, P.E., and Lindzey, G. Study of Values Manual, Boston: Houghton Mifflin Company, 1960.

Cook, W.W., Leeds, C.H., and Callis, R. Minnesota Teacher Attitude Inventory. New York: The Psychological Corporation, 1951.

Edwards, A.E. Edwards Personal Preference Schedule. New York: The Psychological Corporation, 1959.

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. 506-582.

Getzels, J.W., and Thelen, H.A. The Classroom Group as a Unique Social System. NSSE Yearbook, 1960, 59, Part II, 53-82.

Hemphill, J.K., and Westie, C.M. The Measurement of Group Dimensions, Journal of Psychology, 1955, 29, 325-342.

Henmon, V.A.C., and Nelson, M.J. (revised by Lamke, T.A.). The Henmon-Nelson Tests of Mental Ability. Boston: Houghton-Mifflin, 1957.

Hilgard, E. (Ed.). National Society for the Study of Education: Theories of Learning, 63, 1964.

Hotelling, H. The Most Predictable Criterion. Journal of Educational Psychology, 1935, 26, 139-142.

Jones, K.J. The Multivariate Statistical Analyzer. Cambridge: Harvard University, 1964 (mimeo).

Medley, D.M., and Mitzel, H.E. Measuring Classroom Behavior by Systematic Observation. In N.L. Gage (Ed.), Handbook of Research on Teaching. Chicago: Rand-McNally, 1963, 247-328.

Parsons, T., and Shils, E.A. Toward a General Theory of Action. Cambridge: Harvard University Press, 1951.

Remmers, H.H., Shock, N.W., and Kelly, E.L. An Experimental Study of the Validity of the Spearman-Brown Formula as Applied to the Purdue Rating Scale. Journal of Educational Psychology, 1927, 18, 187-195.

Tatsuoka, M.M., and Tiedeman, D.V. Statistics as an Aspect of Scientific Method in Research on Teaching. In N.L. Gage (Ed.), Handbook of Research on Teaching. Chicago: Rand-McNally, 1963, 142-170.

Walberg, H.J. Denominational and Socio-Economic Correlates of Professional Self Concept in Beginning Teachers, Journal of the Sociology of Religion, 1967.

Walberg, H.J. The Measurement of Classroom Climate. Cambridge: Harvard University, unpublished tables, 1967.

Walberg, H.J. The Structure of Self Concept in Beginning Teachers, Journal of Educational Research, in press.

Walberg, H.J. Personality Correlates of Factored Teaching Attitudes, Psychology in the Schools, in press.

Walberg, H.J., and Welch, W.W. A New Use of Randomization in Experimental Curriculum Evaluation. Cambridge: Harvard University, unpublished paper, 1966.

Walberg, H.J., and Welch, W.W. Personality and Characteristics of Innovative Physics Teachers. Journal of Creative Behavior, Spring, 1967, 2.

Watson, F.G. Research on Teaching Science. In N.L. Gage (Ed.), Handbook of Research on Teaching. Chicago: Rand-McNally, 1963, 1031-1059.

Withall, J., and Lewis, W.W. Social Interaction in the Classroom. In N.L. Gage (Ed.), Handbook of Research on Teaching. Chicago: Rand-McNally, 1963, 683-714.