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*PERSONALITY STUDIES, *ADMINISTRATIVE PERSONNEL, *DOGMATISM,
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MANN-WHITNEY SUM OF RANKS TESTS, EUGENE, OREGON

THE RELATIONSHIP BETWEEN DOGMATISM ON THE PART OF SCHOOL PRINCIPALS
AND ACCURACY OF OTHERS IN ESTIMATING THEIR LEADERSHIP BEHAVIOR WAS
STUDIED. THE LEADER BEHAVIOR DESCRIPTION QUESTIONNAIRE (LBQ) AND
THE ROKEACH DOGMATISM SCALE (RDS) WERE THE INSTRUMENTS USED FOR
MEASUREMENT. A SAMPLE OF 24 PRINCIPALS WAS SELECTED AND ADMINISTERED
THE INSTRUMENTS. THE SUPERINTENDENTS AND TEACHERS OF THE SAMPLE WERE
ADMINISTERED THE L.B.Q. THE TOTAL SAMPLE WAS DIVIDED INTO TWO
PARTS, OPEN-MINDED AND CLOSE-MINDED. THE SCORES WERE ANALYZED BY THE
MANN-WHITNEY SUM OF RANKS TEST. THE RESULTS INDICATED OPEN-MINDED
PRINCIPALS WERE ABLE TO ESTIMATE MORE ACCURATELY. A BRIEF DISCUSSION
WAS ALSO PRESENTED OF A MORE GENERIC THEORY WHICH EXPLAINS THE TREND
OF THESE FINDINGS. EMPIRICAL RESEARCH WAS SUGGESTED IN MANY
ASSOCIATED AREAS FOR A BETTER UNDERSTANDING OF EDUCATIONAL
ADMINISTRATION. (RS)
OPEN-MINDEDNESS AMONG ADMINISTRATORS

by

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The research reported herein was supported by the Cooperative Research Program of the Office of Education, U.S. Department of Health, Education and Welfare. It was directed by the writer of this paper under the sponsorship of Professor Donald J. W mills of the section on Educational Administration, the Pennsylvania State University.
The purpose of this paper is three-fold. First, some preliminary thinking about educational administration and educational administrators which led to the exploratory investigation to be presented will be shared with you. Second, the study and results will be reported. Third, there will follow a discussion of a more generic theory which seems to account for these rather elusive "findings" and which holds some suggestions for fruitful areas for research in educational administration.

In his review of leadership, Gibb (8:859) has noted two well-established things about the relation between personality traits and leadership. There is no consistent pattern of traits which are common to leaders, but there is evidence that the performance of the group is affected by the member personalities. Also, leadership is differently evaluated from above and below. (8:916) The researches of Gross (9) and Halpin (10) have found this to be true of educational administration. Different observers perceive differently the behavior of the administrator. This has been found also in the "in-basket studies". (14:234) Thus, it is important to note that the administrator's behavior is perceived by different groups who rarely show agreement in their perceptions. Accuracy in estimating these various perceptions seems to be a desirable characteristic for any administrator to have in order to be fully effective.

This thinking led to a question. Is accuracy in estimating other's perceptions related to the personality structure of the individual? Bruner and Tagiuri (3:648) have noted that authoritarianism as measured by the F-scale (1) has been found to be a determinant in the perception of others. As Rokeach (18:13) has pointed out, the wide use of the F-scale has given rise to a certain amount of conceptual confusion through an unwitting shift from the particular concept of "fascism in the personality" to the more general concept of the "authoritarian personality." This more general concept embraces a host
of different types of authoritarian content which nevertheless show a common structure. It is this structure of belief systems which is reflected in the way a person espouses his beliefs, rather than the actual content of these beliefs. A person may be intolerant of those who disagree with him, and closed in his mode of belief; or he may be accepting of others regardless of their beliefs, and more open in his mode of belief. The findings of Rokeach (18:passim) suggest that important aspects of mental functioning are attributable to this personality structure variable, rather than to intellectual ability as such.

In order to pinpoint the focus of this study, it seems best to summarize this part of the present paper. The basic assumption of this study was that the school principal, to be effective, must be able to make accurate estimations of the perceptions that others have of his leader behavior. In a very real sense, he is bound by the "phenomenological box" discussed by Halpin and Croft (11:9). How he really behaves is less important than how his teachers and his superintendent, among others, perceive that he behaves. It may be that this ability is related to the personality structure of the principal. This study, then, deals with the more general concept of authoritarianism which has been briefly described above and has been labeled "dogmatism" by Milton Rokeach. It is an investigation in a school setting of whether accuracy in estimating the perceptions of others, as measured by the very salient dimensions of the Leader Behavior Description Questionnaire (LBDQ), is related to personality structure, as measured by the Rokeach Dogmatism Scale.

Rokeach defined a given personality as an organization of beliefs or expectancies having a definable and measurable structure. He developed the Dogmatism Scale to measure the extent to which belief systems are open or closed. An open-minded individual (ideal type) receives stimulus information without distortion, and evaluates and acts on that information on its own
merits unencumbered by irrelevant factors coming from within himself or the outside. The role of external pressures is minimized by this person. Conversely, a closed-minded individual (ideal type) when receiving information is vulnerable to rewards and punishments meted out by authority figures or reference groups that will distort his perception, influence his evaluation and direct his action. These are the two ideal types of persons which can be "identified" by scores on the Dogmatism Scale. The high scorer is closed-minded, while the low scorer is open-minded.

Within the school, the principal is perceived as exhibiting behavior along two dimensions which can be identified by items of the LBDQ.

Initiating structure refers to the leader's behavior in delineating the relationship between himself and members of the work group, and in endeavoring to establish well-defined patterns of organization, channels of communication, and methods of procedure. Consideration refers to behavior indicative of friendship, mutual trust, respect, and warmth in the relationship between the leader and the members of his staff. (10:4)

These dimensions, which were found useful in studies of leadership in schools (2, 4, 6, 7, 10) and other types or organizations (17), were utilized in this study to measure the perceptions of the principal by his superintendent and his teachers, and to measure the principal's accuracy in judging these perceptions. Thus, the major concepts of this study are the personality characteristic of Dogmatism and the dimensions of Initiating Structure and Consideration.

That characteristics of the perceiver influence the perceptual process is well established. If one is aware of his own personal characteristics, he makes fewer errors in perceiving others. (16) The opposite type of person has been described by Rokeach as follows.

...the more closed the belief system, the more difficult should it be to distinguish between information received about the world and information received about the source. (18:58)
Since the closed-minded person seems to distort more, there should not be a
definite relation between similarity in dogmatism and similarity in perception.
In other words, two closed-minded persons could distort in different directions.
But, even though the closed-minded person distorted, the open-minded person, who
is unencumbered by irrelevant factors, would be more able to judge this distortion
accurately and adjust to it. It would seem then that the open-minded principal,
who distorts less, would be able to make more accurate judgments of the
perceptions of him by others.

From this preliminary thinking, the following hypotheses were developed to
explore further the relationship between accuracy of perception and dogmatism.

1. Open-minded principals more accurately estimate their teachers'
descriptions of their leader behavior on the dimension of
Initiating Structure than do closed-minded principals.

2. Open-minded principals more accurately estimate their superin-
tendents' descriptions of their leader behavior on the
dimension of Initiating Structure than do closed-minded
principals.

3. Open-minded principals more accurately estimate their teachers'
descriptions of their leader behavior on the dimension of
Consideration than do closed-minded principals.

4. Open-minded principals more accurately estimate their superin-
tendents' descriptions of their leader behavior on the
dimension of Consideration than do closed-minded principals.

To test these hypotheses, a sample of twenty-four principals was drawn
from school districts in different areas of Pennsylvania. These people were
employed as full time administrators and all of them had served for more than
one year in their present positions. Most of them had been in these positions
for some time. The LBDQ was administered to the superintendents and teachers of these principals and the principals themselves were administered the Dogmatism Scale and a form of the LBDQ which was adapted to ask for their estimates of the perceptions that the superintendent and teachers had of their leader behavior.

The total sample was divided into two equal parts according to their dogmatism scores. The lower one-half of these scores represented the open-minded and the upper one-half represented the closed-minded. The appropriate absolute difference score of the principal's estimate minus teachers' or superintendent's perception was determined for each principal and these scores were then ranked over the entire sample. A sum of rankings was obtained for the open-minded group and for the closed-minded group. The Mann-Whitney Sum of Ranks Test was used to test the null hypothesis that these two sums were samples from a common population. The "z" value was referred to a normal curve table for the level of significance. Table 1 summarizes these findings.

Table 1
Results of the Mann-Whitney test of Hypotheses one through four

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>&quot;z&quot; value</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.46</td>
<td>.32</td>
</tr>
<tr>
<td>2</td>
<td>1.13</td>
<td>.13</td>
</tr>
<tr>
<td>3</td>
<td>-1.097</td>
<td>.34</td>
</tr>
<tr>
<td>4</td>
<td>1.5</td>
<td>.067</td>
</tr>
</tbody>
</table>

Principals' estimates of teachers' perceptions. The difference scores between principals' estimates and their teachers' mean LBDQ rating were used for hypotheses one and three. The statistical testing yielded inconclusive results in hypothesis one (p = .32) and indicated a tendency opposite the predicted direction in hypothesis three (p = .14). On the dimension of Consideration the closed-minded principals tended to be more accurate, but not significantly so in their estimates of their teachers' perceptions.
Principals' estimates of superintendents' perceptions. Open-mindedness showed a mild tendency to be related to the principal's ability to accurately estimate his superintendents' perceptions of his leader behavior. Significance levels obtained were at the .067 level for the dimension of Consideration (hypothesis four) and the .13 level for the dimension of Initiating Structure (hypothesis two).

At this point it is evident that none of the hypotheses of this study have received support at the .05 level of statistical significance. Zetterberg has noted that the criteria for making a judgment about the acceptance of a proposition should not rest solely on customary levels of significance. (20:41)

A very important additional concern is that the proposition be integrated in established theory. Thus, in obtaining a significance level of .06 for a finding which had theoretical support, Zetterberg noted that,

...should we not, after all, play it safe and reject the proposition? Even if we are 85 per cent sure, is it not correct, in the name of science, to reject it? The answer is no. Scientific advance is as much hampered by the error of rejecting something true as by accepting something false. (20:41-42).

Since levels of significance in the present study tended to be strong for certain hypotheses, it was decided to explore these findings further.

The fairly pronounced but not significant support of hypotheses two and four seems to indicate that the dogmatism variable may be related to the accuracy with which principals can estimate how their leader behavior is perceived by their superintendents. This accuracy was determined by obtaining an absolute difference score between the superintendent's perception and the principal's estimate of this perception. The same method was used for comparing the principal's estimate with the teachers' perception of him. The teachers' perception score was the mean value of the total faculty under the principal. Admittedly this estimation is a much more difficult task for the
principal than making an estimate of just one person's perception of him as was the case with the superintendent's perception. This may account for the pattern in the study which indicates some support for those hypotheses dealing with the superintendent.

One possible explanation of the occurrence of this pattern of accuracy in estimating superintendents' perceptions, but not in estimating teachers' perceptions, may be the requirement on the one hand to estimate one person's perception and on the other hand to estimate a group's perception. A theoretical discussion by Harvey, Hunt and Schroder (13) of the nature of conceptual systems appears to have bearing on these findings. That Conceptual Systems Theory as expounded by Harvey and others is relevant to education is evidenced by its inclusion as a seminar topic at last year's AERA annual meeting. A concept, according to Harvey, (13:1) "...is a system of ordering that serves as the mediating linkage between the input side (stimuli) and the output side (response)." The function of concepts for Harvey appears to be much like the function of belief systems for Rokeach. (12:93, 115, 163) This subject-object tie can differ on a continuum from abstractness to concreteness. The more concrete, the more the structure of this mediating guide is fixed and restricted to, or dependent upon, physical attributes of the activating stimuli.

The difference between concreteness and abstractness as described by Harvey are very similar to the difference between open and closed belief systems (12:115, 163) In fact, the dogmatism scale has been used as one of many instruments for identifying the different nodal positions that function along the concrete-abstract continuum. (19) The greater one's abstractness, the more capable he is of abstracting relationships from objects of his experience and of organizing them in terms of their interrelatedness. He tends to make many differentiations of his world and environment while the concrete person
makes few differentiations and keeps these isolated rather than integrating them. Also, the greater one's concreteness, the more his response is dictated by stimulus "oughtness." (13:25)

Thus, the abstract person uses more alternatives and is less compartmentalized and more flexible in relating to his environment. He seeks information when confronted with ambiguity. He is more able to handle information which does not support his present beliefs, and to see more objectively his roles as a transactor in relations with others. An explanation of the results of this study could be that the open-minded (or abstract) principals who were able to differentiate their own and others' perceptions saw their teachers as a group holding many different perceptions of the principal's behavior and therefore could not accurately estimate teacher perceptions as a group.

In informal discussions after administration of the instruments of this study, many of the principals indicated that certain items, usually on the dimension of Consideration, described "desirable" behavior while others, usually on the dimension of Initiating Structure, described behavior that was "undesirable." These findings are in line with those of Charters, who has found that Consideration items are more heavily imbued with social desirability than are Initiating Structure items. (4:113) The attachment of positive value to the dimension may explain the demonstrated accuracy of the closed-minded (or concrete) principals in estimating their teachers' perceptions of their Consideration behavior. In other words, the concrete principals could have felt that they "ought" to exhibit more Consideration behavior toward their teachers. Therefore, they were more sensitive regarding their behavior on this area and were more accurate in their estimates on this dimension. At the same time, they were not able to accurately estimate the teacher's perceptions of their Initiating Structure behavior. They were less sensitive to behavior on this "undesirable" dimension.
It seems plausible therefore that Harvey and associates offer a theoretical explanation for these rather conflicting results. The open-minded principals who were able to differentiate their perceptions and to organize them into an integrated whole were thus able to more accurately estimate the perceptions of individuals (superintendents) of their leader behavior on both dimensions. They were not able to provide one single estimation of a whole group's perception because of this differentiation factor. At the same time, the closed-minded principals, who do not differentiate, were able to accurately estimate their teachers' perception on the Consideration dimension which was more desirable than Initiating Structure.

In conclusion a few implications of this paper will be discussed. The findings of this study, although not statistically significant, do show important trends which can be theoretically explained and which should lead to further research. There is a slight indication that dogmatism may be related to the ability to perceive clearly. Open-minded principals demonstrated more accuracy than closed-minded principals when estimating superintendents' perceptions. But the findings concerning estimates of teachers' perceptions did not follow any pattern and tended to be in the opposite direction in hypothesis three. These findings should lead to further investigations. If the discussion above has predictive utility, then it could be hypothesized that open-minded principals more accurately estimate individual teachers' perceptions than do closed-minded principals.

The discussion of Conceptual Systems Theory, and dogmatism as an individual variable associated with it, raises some points for future research. It could be that these two concerns may provide an important link between the individual and the organizational dimensions of leadership which have been discussed by Lipham. (15) Indeed, it has been suggested in the "organizational
climate" study that the principals and the teachers from a sample of open-climate schools and from a sample of closed-climate schools "...would differ in respect to concretism, intraception and the ability to accept and deal with their own emotional impulses." (11:107) These variables, as well as many more of those listed, are suggestive of the concrete-abstract continuum.

Finally, the work of Harvey, Hunt and Schroder, (13) which is rooted in the literature of social and clinical psychology, contains suggestions, supported by data, for describing the individual's organization for processing information; his relations to other humans; his openness to modifiability and the conditions that will produce change. More empirical research in all these areas is necessary for a better understanding of educational administration.
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Abstract

of

OPEN-MINDEDNESS AMONG ADMINISTRATORS

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This paper presents the results of an investigation of the relationship between dogmatism in school principals and accuracy in estimating the perceptions that their superintendents and teachers have of their leader behavior. It was hypothesized that the open-minded principals would be more accurate in estimating the perceptions of both superintendents and teachers on both dimensions than would closed-minded principals. Obtained probabilities were .067 for superintendents' perceptions on Consideration; .13 for superintendents on Initiating Structure; -.14 for teachers' perceptions on Consideration; and .32 for teachers' perceptions in Initiating Structure. The paper closes with a brief discussion of a more generic theory which seems to explain the apparent trend of these findings and traces some implications for research in educational administration.