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AUTHOR Bartunek, Jean M.: Keys, Christopher B.
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ABSTRACT

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POWER EQUALIZATION THROUGH ORGANIZATION DEVELOPMENT TRAINING

Jean M. Bartunek
Assistant Professor
Boston College

and

Christopher B. Keys
University of Illinois at
Chicago Circle

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Abstract

The effects of a three-year organization development (OD) intervention on power equalization were examined in seven experimental and seven control schools. The principal and teachers from experimental schools participated in OD workshops, in a project coordinating council for planning and policy, and in school goal-setting activities. The power of the principals and teachers became more equalized in experimental schools than in control schools. Teacher participation in decision-making was positively related to power equalization and teacher satisfaction with the administration was partially related to power equalization. Principals in schools where power equalization occurred tended to lose power during the intervention. By the end of the intervention, newcomers were comparable to experienced teachers in power. The results support the view that OD can help reduce power differences in schools.

Power Equalization through Organization Development Training

by

Jean Bartunek and Christopher Keys

In general, power equalization may be defined as a reduction in the differences in power, status, and influence between superiors and subordinates in an organization (cf. Strauss, 1964). Recently, power equalization has become an increasingly prominent theme in the organizational behavior literature (e.g., Bernstein, 1976; Kanter, 1977). The precise form of power equalization varies according to different theoretical perspectives: to Kanter, it represents comparative equality in the ability of manager and employee to mobilize resources; while to Bernstein, it represents worker self-management. Whatever the specific definition of the phenomena, however, the typical assumption in the organizational behavior literature is that power equalization is of value. It is likely to lead to more effective coordination, decision acceptance, and satisfaction. It may increase productivity and it should further the individual growth of the organizational members. Power equalization should reduce the likelihood that superiors will be able to manipulate their subordinates and thus power equalization should lay the foundation for healthy management-worker relations (Brower, 1976; Kanter, 1977; Leavit, 1965; McMahon, 1976; Mohr, 1977; Walton, 1969; Zimbalist, 1976).

How can power equalization best be achieved in an organization? The primary means reported to date has been to increase employee participation in decision-making (e.g., Bernstein, 1976; Leavitt, 1965; Tannenbaum, Kavcic, Rosener, Vianello, and Wieser, 1974; Wood, 1973). Organization

development (OD) has been prominent in this respect. Many authors have identified power equalization through participation as a stated goal of OD (cf. Bennis, Benne, and Chin, 1961; Huse, 1975; Leavitt, 1965; Likert, 1967). For example, Schmuck and Blumberg (1969) hypothesized that increased teacher participation in decision-making would lead to a heightened sense of power by the teachers. Also for McElvaney and Miles (1971), power equalization through participation is central to organizational health and effective organizational problem solving. It is a major goal of OD interventions using survey feedback and consultation.

The results of some laboratory research (e.g., Hoffman, Burke and Maier, 1965; Wood, 1972) indicate that participation and power tend to be positively related. Nevertheless, it has been suggested that in organizations the relationship between participation in decision-making and actual organizational power may depend on the impact of other factors. For example, Bernstein (1976) argued that participation in decision-making may be a necessary but not sufficient cause of power equalization. He described other factors, such as the superior's attitude, which he considered important to achieving power equalization on a long-term basis. Lammers' theory (1967) and Woods' research (1972) maintained that the relationship between participation and power depends in part on the congruence between superior and subordinate goals. Specifically, participation is more likely to increase subordinates' influence when goal agreement is present than when it is not. Similarly, Bennis (1969) has intimated that power equalization can not be achieved in organizations when corrosive conflict and distrust prevail.

If the effectiveness of participation as a means of equalizing power depends on the presence of at least minimal superior support, goal agreement, and trust, then it is important to question the extent to which these properties are characteristic of organizations. A number of authors maintain that these characteristics are not often present. For example, Argyris (1969) has found that trust in work groups is very atypical. Nord (1974, 1978) argued that unequal power is likely to have dehumanizing effects on less powerful people, and that people in authority are unlikely to share their hard-earned power with their subordinates. Rather, inequalities in power are likely to lead to further inequalities (Kipnis, 1976). Heller (1976) and Mohr (1977) noted that people's perceptions of their own power often may not be accurate. They are likely to believe that they have more power than they actually do. Thus, attempts to equalize power by encouraging subordinates to participate in organizational activities may simply delude subordinates into thinking they have more power than they actually have, while not changing their superiors' influence.

Because many factors may affect the relationship between participation and power equalization, one may question whether OD interventions that seek to equalize power by increasing participation can accomplish that goal. In fact, despite considerable OD theory and practice relevant to power equalization, little previous research has investigated whether an OD intervention actually achieved a more equal distribution for power between superiors and subordinates. Schmuck, Runkel, and Langmeyer (1969) described organizational training for a junior high school faculty which resulted in increased power for a principal's advisory committee and other

faculty, relative to the principal. The committee shifted from a purely advisory body to a decision-making one. Also, several faculty meetings were initiated and planned by members other than the principal. McElvaney and Miles (1971) found that survey feedback and consultation yielded equivocal results. School administrators perceived the power of the superintendent had increased; later, teachers perceived an increase in their influence in decision-making on district-wide issues. However, neither study included systematic measures of power equalization gathered from a broad range of participants.

The major focus of the present study, then, was to examine whether an OD intervention that included power equalization as one of its stated purposes was successful in accomplishing that goal. The intervention is described briefly below, and specific hypotheses are presented.

Description of Organization Development Intervention

The intervention was a three-year OD project conducted in a large metropolitan parochial school system. The total intervention focused on several aspects of organizational renewal such as, sharing power, increasing professional and interpersonal competence, developing shared goals, and establishing more open classroom climates. The intervention was complex including: (a) an initial decision retreat, (b) organizational training for school teams, (c) consultation training for the project task force, (d) follow-up consultation in individual schools by task force members, (e) in-service training for all faculty from participating schools, (f) regular meetings of the project coordinating council, and (g) faculty

meetings in participating schools. The project is described in detail by Keys (1979) and Keys, Martell, Peltz, Bartunek, and Szaflarski (1975). This paper will focus on three aspects of the intervention most relevant to power equalization and participative decision-making.

First, during the winter of 1973, four-person teams of principal and teachers from several possible experimental schools participated in a two-day decision retreat conducted by external OD consultants. Following the retreat, faculties in each school made a consensus decision about whether they wished to participate in the OD intervention. Thus, active involvement by the principal and participative decision-making were characteristic of the intervention from the beginning. The project task force made the final selection of experimental schools from those which decided they wanted to participate. The basic organizational training for the experimental schools consisted primarily of two in-service workshops in Spring 1973 for eight-member teams of teachers and principal. During the five days of workshops, the participants received training in collaborative decision-making and power sharing. The principal and teachers from each school worked together to identify common concerns. They learned and practiced a participative problem-solving procedure that included problem identification, force-field analysis, brainstorming, and setting priorities in groups (Schmuck, Runkel, Saturen, Martell, and Derr, 1972). The participants planned how to share their newly acquired skills with staff members who had not attended the workshops. Following each workshop, every team conducted brief training sessions in its school concerning the skills, methods, and norms of organization development. Also, during the

summer of 1974, most of the staff members from the experimental schools attended a two-day workshop in which they analyzed participation patterns in school decision making and practiced participation skills, such as conflict utilization and active listening. Overall, there was a substantial emphasis in the training on participation and power equalization.

Second, power equalization was also a focus in the governance structure for the project. Initially, the project task force, which was composed of three central office staff from the school district and two faculty from a nearby college of education, made the major decisions concerning the intervention. Following the basic organizational training in Spring 1973, a coordinating council was formed which included the principal and a teacher from each experimental school and the members of the task force. During the 1973-74 school year the coordinating council became the decision-making body for the project. In 1974-75, the associate superintendent of the school district and the assistant dean of the college of education, who had previously co-chaired the council, relinquished that role to other council members and a rotating chair was established.

Third, the project had other goals, the achievement of which would increase the likelihood that power equalization efforts would succeed. The most signficant of these aims was formulated by the coordinating council: the teachers and administration in each school would work together to develop shared goals. The teachers and administrators did collaborate during the 1973-74 school year and were successful in achieving shared goals (Keys and Bartunek, 1979). This collaborative determination of goals significantly increased the teachers' perceived participation in

school decision-making. As noted above (Lammers, 1967; Wood, 1972), the existence of shared goals should enhance the probability that participation in decision-making will increase the teachers' comparative power. Thus, the first two hypotheses follow straightforwardly:

Hypothesis 1: Power equalization between the teachers and the principal is greater in the experimental schools than in the control schools.

Hypothesis 2: There is a significant positive relation between power equalization and teacher participation in decision-making.

Most theorists (Bowers, 1968; Hornstein, Callahan, Fisch, and Benedict, 1968), although not all (cf. Strauss, 1963), believe that employee satisfaction should increase as power becomes more equally shared. Therefore, the next hypothesis states:

Hypothesis 3: There is a significant positive relation between power equalization and teacher satisfaction with the administration.

In addition to these specific hypotheses, two other questions concerning the dynamics of power equalization process were investigated. First, what is the effect of the OD intervention and power equalization on the principal's power? Tannebaum (1968) asserts that there is not a fixed amount of power in an organization, but that the total overall power in an organization may expand. Thus, a gain in power for teachers need not result in a reduction of the principal's power and in fact, could increase it. But many do not hold such an optimistic view. They suggest that there is usually an inverse relationship between manager power and employee power. Therefore, the relation between the principal's and teachers' power was investigated.

Second, if teachers gain power relative to their principal, which teachers are most likely to benefit? Do the teachers who were already powerful become yet more powerful? Or do the less powerful teachers make the major gains? Are teachers with seniority more likely to increase their power or are teachers who are newcomers likely to gain? These questions address an issue related to the major focus of this study. They ask whether power equalization resulting from OD includes a more equal distribution of power among teachers as well as between teachers and principals.

Method

Research Participants

The research participants were 89 teachers and 9 principals from 7 experimental elementary schools and 120 teachers and 9 principals from 7 control elementary schools. Two experimental and two control principals changed during the course of the intervention. The teachers participated in the project as indicated in Table 1. The proportion of repeaters (teachers who participated in the first and subsequent years of the study) to newcomers (teachers who joined the project after it had begun) was comparable for experimental and control schools (χ^2 not significant). One of the experimental schools withdrew from the project and thus, from the evaluation after the 1973-74 school year.[1]

As described above, the experimental schools nominated themselves for participation in the OD intervention and then were chosen for inclusion by the project task force. The administrative staff of the

central office selected appropriate matching control schools from the remaining 416 schools in the system. The experimental and control schools were comparable in geographic location, size and ethnic composition of student body and faculty, faculty interest in educational innovation and faculty involvement in professional development activities.

Procedure

Power equalization, reported participation in decision-making, and satisfaction with the school administration were assessed by a questionnaire adapted from Schmuck, Runkel, Saturen, Martell, and Derr (1972). The questionnaire was administered to the research participants on three occasions: Spring 1973 (before the organizational training), Spring 1974 and Spring 1975.

Measures

Power equalization. The following sociometric item was used to measure power equalization (cf., Glidewell, Kantor, Smith, and Stringer, 1966; Moreno, 1934):

> When you want to insure that an idea you are proposing will be implemented in your school, it is sometimes helpful to enlist the support of other individuals. Please list below, by name and position, the individuals whose support of your idea would help most.

Under this statement there were spaces for three names and positions.

Four measures of power equalization were derived from this item for each teacher: comparative choices, comparative influence domain, comparative centrality, and comparative prestige. Power equalization in the schools refers not to the absolute power of the teacher but to the teacher's power in relation to that of the principal. Therefore, to determine comparative choices, the ratio was calculated for the number of times the particular teacher was chosen on the sociometric item to the number of times the principal was chosen.

Arney (1973), Homans (1961), and Katz (1953) have noted that the measure of the number of times a person is chosen is not a completely adequate measure of that person's sociometric status. Rather, it is necessary to take into account the status of the people who choose the person under consideration. Lin (1976; Chapter 17) describes three sociometric measures that take the status of the choosers into account: influence domain, centrality and prestige. (See Burt, 1973, for an example of the use of these measures.) These three measures are described below; each was adapted for this study.

Lin (p. 341) defines the influence domain of a person as "the extent to which the opinion of person i is sought, both directly and indirectly, by others in the group." More precisely, the influence domain of person i consists of both the number of persons who directly choose person i and the number of persons who indirectly choose person i because they choose people who either directly or indirectly choose person i. A teacher's comparative influence domain, then, is the ratio of that teacher's influence domain to the principal's.

Lin (p. 345) defines the centrality of person i as the "average length of the paths in his influence domain . . . . For a person who is directly chosen by four others, the centrality index is one. For a person directly chosen by two persons and indirectly chosen by two others one step removed, the centrality is 1.5, i.e., (1+1+2+2)/4=1.5. Thus, centrality is the ratio between the number of steps involved in each and every path between those who directly or indirectly choose person i, and the number of persons so involved." The lower a person's centrality score, the more central that person is in the network of those choosing him or her either directly or indirectly. Comparative centrality, then, is the ratio of the teacher's centrality to the principal's centrality.[2] The lower a person's comparative centrality score, the more central that person is in the network of school staff.

Finally, Lin (p. 345) defines prestige as the extent to which person i "enjoys a large following (high influence domain) and is centrally located in the group (low centrality). Operationally, the prestige of a person is defined as his influence domain divided by the product of his centrality score and the total size of the group excluding himself (n-1)." Thus, a teacher's comparative prestige is the ratio of that teacher's prestige to the principal's prestige.

Participation in decision making. Participation in decision making was assessed by the following item which was presented on a five-point, Likert-type scale:

> In general, how much influence do you yourself have when the decision will affect you directly?

Satisfaction with the administration. Satisfaction with the school administration was measured by four questionnaire items:

In your present situation, how satisfied are you with . . .

1 . . . the adequacy and fairness of school policies and regulations?

2. . . . the extent to which your effort and achievement are recognized by others?

3. . . . your personal relationships with administrators?

4. . . . the ability and willingness of administrators to give you help when you need it?

For each satisfaction item, participants selected one of six choices from highly satisfied to highly dissatisfied. Across all three questionnaire administrations and across experimental and control schools, the correlations between the satisfaction items ranged from .40 to .87, with a median correlation of .64. Because these correlations were sufficently high to allow combinations of these items, the dependent measure for satisfaction was a linear combination of all four items.

Results

Power Equalization and Organization Development

The mean scores on the measure of power equalization are presented in Table 1. Analysis of variance indicated no significant differences

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INSERT TABLE 1 HERE

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between experimental and control school teachers in Spring 1973 on any of

four measures. The effect of the intervention on power equalization was assessed for repeaters, i.e., teachers present in the first and subsequent years of the study. These effects were examined by two analyses of covariance (ANCOVAs), one using Spring 1974 data and one, Spring 1975 data for the four dependent variables. For both analyses, participation in the OD intervention was the independent variable and the Spring 1973 scores were the covariates. Huck and McLean (1975) indicate that ANCOVAs provide particularly sensitive tests of treatment differences when both pre- and post-measures are available.

Analyses of covariance using the four power equalization scores from Spring 1974 as dependent measures revealed no significant differences between the experimental and control schools, although the effect of OD on comparative centrality approached signfficance, $\underline{F}$ (1,101) = 3.28, $\underline{p} < .07$. Covariance analyses using Spring 1975 scores as dependent measures indicated that the comparative power of the experimental teachers increased significantly more than the comparative power of the control teachers on the three of the four measures: comparative choices, $\underline{F}$ (1,89) = 7.30, $\underline{p} < .01$; comparative centrality, $\underline{F}$ (1,74) = 15.84, $\underline{p} < .001$; and comparative prestige, $\underline{F}$ (1,89) = 7.63, $\underline{p} < .007$. Thus, the results support the first hypothesis. That is, for teachers present from the beginning of the intervention, power equalization did increase significantly more for teachers in experimental schools than for teachers in control schools.

Repeated measures analyses were conducted to determine the patterns of gains in power. For the experimental school teachers, significant gains from Spring 1973 to Spring 1974 were found for comparative choices,

F (1,51) = 10.57, $p < .002$; comparative centrality, F (1,45) = 35.30, $p < .0001$; and comparative prestige, F (1,51) = 16.27, $p < .0002$. Chi-square analysis of the number of influence isolates, teachers with an influence domain of zero and a centrality score of infinity, revealed a significant decline in isolates in the experimental schools from 1973 to 1974 χ^2 (1) = 5.7, $p < .02$. From Spring 1974 to Spring 1975, there was a significant gain in comparative centrality, F (1,29) = 4.02, $p < .05$, and there were non-significant gains for other variables.

The patterns for the control school teachers were similar from Spring 1973 to Spring 1974. Significant gains occurred for controls in comparative choices, F (1,68) = 10.32, $p < .002$; comparative centrality, F (1,58) = 23.36, $p < .0001$; and comparative prestige, F (1,68) = 8.24, $p < .005$. But from Spring 1974 to Spring 1975 significant losses occurred for control teachers on the same three variables: comparative choices, F (1,51) = 5.06, $p < .03$; comparative centrality, F (1,42) = 10.32, $p < .002$, and comparative prestige, F (1,51) = 5.73, $p < .02$. Thus, for the experimental school teachers present throughout the intervention, the significant effects of OD on power equalization were due in part to the experimental teachers' maintenance of their initial gains and in part to the 1974-to-1975 losses by the control teachers.

Power Equalization and Participation

The second hypothesis predicted a significant relationship between teacher participation in decision-making and power equalization. The correlations between participation and power equalization are presented

in Table 2. The correlations in Table 2 support the hypothesis; they indicate a consistent, significant positive relation between participation

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INSERT TABLE 2 HERE

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and power equalization. More specifically, all the correlations between participation and comparative choices and between participation and comparative influence domain are significant. The correlation between participation and comparative centrality reached significance for the 1975 data, and the correlations between participation and comparative prestige were significant for the 1974 and 1975 scores. Thus, the data clearly indicate that participation is associated with power equalization. Nonetheless, it should be noted that the correlations are not large and thus, can only account for a modest amount of the variance in power equalization measures.

Power Equalization and Satisfaction

The third hypothesis predicted a significant relationship between power equalization and satisfaction with the administration. The correlations between these variables and between satisfaction and participation are presented in Table 3. The results suggest that satisfaction was somewhat related to power equalization, most noticeably for the 1974 scores.

INSERT TABLE 3 HERE

Satisfaction and participation were consistently related. The results provided partial support for the hypothesized relation between satisfaction and power equalization.

The Power of the Principals

Wilcoxin rank sum tests (Lehmann, 1975) were conducted to determine whether the intervention had any effect on the principals' power.[3] Results indicated that from Spring 1973 to Spring 1974 there were no significant differences in gains or losses in power between the experimental and control school principals (see Table 4). From Spring 1973 to Spring 1975, the influence domain of the experimental school principals increased signifi-

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INSERT TABLE 4 HERE

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cantly more than did that of the control principals, Wn (6,7) = 30, $p < .01$. However, from 1973 to 1975, the experimental principals' centrality decreased (i.e., the score increased) significantly more than did the control principals', Wn (6,7) = 33, $p < .01$, and their prestige tended to decline more than did the control principals', Wn (6,7) = 39, $p < .09$. Thus, while the experimental school principals developed more links with the teachers in their schools, they also became less central in school influence networks and tended to lose prestige. On balance, it appears that the experimental school principals lost power.[4]

The Dispersion of Power Among the Teachers

The issue addressed was: if teachers' comparative power becomes greater (as it did), which teachers have or gain power? Do the powerful teachers or the less powerful gain in power? Do the repeaters or the newcomers have more power? First, this question was examined by studying the relation between the repeaters' power in 1973 and their gains in power during the course of the intervention. If the more powerful teachers were gaining power, then correlations between initial power and power gains during the intervention should be positive. If the less powerful teachers were gaining power, then initial power and power gains should be negatively correlated.

The correlations between the teachers' power in Spring 1973 and their gains in power to Spring 1974 and Spring 1975 are presented in Table 5. Results indicate that for both experimental and control school

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INSERT TABLE 5 HERE

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teachers, there were strong negative relations between (1) initial comparative influence domain, comparative centrality, and comparative prestige and (2) gains in these three variables. Thus, it appears that the teachers who gained power during the intervention were those whose comparative power was low initially. However, these statistically significant gains must be interpreted cautiously. They may be a function of the OD intervention, a function of regression toward the mean, or a combination of the two.

Second, the dispersion of power among teachers was examined by comparing the power of repeaters and newcomers. In Spring 1974, in the experimental schools there was a significant difference between teachers present since 1973 and teachers new to the school in comparative centrality, F (1,72)=4.28, $p < .04$. In the control schools there were significant differences between repeaters and newcomers in comparative choice, F (1,104)=10.00, $p < .002$, and comparative prestige, F(1,104)=4.26, $p < .04$. All these significant findings indicated that repeaters had greater comparative power than newcomers. By the Spring of 1975, there were no significant differences between any of the tenure groups in either the experimental or the control schools. The results suggest that by the end of the intervention, the newcomers had as much power as the repeaters. In sum, power tended to be dispersed among teachers to strengthen the positions of the newcomers and those initially low in power.

Discussion

Power Equalization and Organization Development

Overall, the findings supported the primary hypothesis of this study: Power equalization increased in the schools which participated in the OD intervention compared to the schools which did not participate. This change took two years to be accomplished, longer than some other OD-related changes such as increased goal agreement and increased participation in decision making (Keys and Bartunek, 1979). Nonetheless, it appears that the intervention did cause power to become more evenly shared between the principal and the teachers and may have facilitated power sharing among

the teachers themselves. The results are supportive of OD theory and practice for two reasons. First, contrary to Nord's (1974) predictions, the principals were willing to share their power with their teachers. They initiated their own participation in the OD intervention and were free to stop at any time. Power equalization occurred without massive upheavals and with other positive organizational changes (Keys and Monroe, 1979). For example, turnover rates for principals and teachers were not greater in the experimental schools than in the control schools. Second, the intervention did not cause increased differences in power between teachers. Mulder (1971) and Mulder and Wilke (1970) have described ways in which participation can increase power differences among group members rather than reduce them. However, in this study, the teachers who were least powerful initially seemed to be the ones who gained the most power. By the end of the intervention, there were no significant differences among teachers as a function of tenure. Thus, power appears to have been shared among teachers as well as between teachers and principal. This finding offers further support for the position that more powerful people will, on occasion, be willing to share their power with less powerful people.

Power Equalization and Participation

The consistent positive relation between participation in decision making and power equalization provides support for the view that participation is an effective means of equalizing power. (cf., Schmuck and Blumberg, 1969; Strauss, 1963.) As noted in the introduction, three

factors may help account for the positive correlations between participation and power equalization, especially in the experimental schools; lack of corrosive conflict and distrust (Bennis, 1969), principal's attitude (Bernstein, 1976); and goal agreement (Lammers, 1967; Woods, 1972). First, there was a relative lack of corrosive conflict and distrust in the experimental schools. Preliminary findings indicated relatively more trust and openness in interpersonal relationships in experimental schools than in control schools in Spring 1974 (Keys, Martell, Peltz, Bartunek, and Szaflarski, 1975).

Second, Bernstein (1976) suggested that the superior's most important attribute is the "consciousness of an educator" (p. 98; cf., Adizes, 1971; Mulder, 1973). The superior must "want and be able to teach subordinates how to use power, but not use power himself (sic) to rule over them." This attribute is striking, given the setting of the present study. In the organizational training and subsequent activities, principals participated with their teachers in learning and using new collaborative skills. Thus, in the experimental schools, both principals and teachers acted as "teachers" to one another with respect to power. Third, Lammers (1967) and Wood (1972) have stressed the importance of goal agreement between superiors and subordinates to effective participation and power sharing. Keys and Bartunek (1979) have documented the high degree of goal agreement in both experimental and control schools and the relatively greater goal agreement in experimental schools in Spring 1974. Overall, then it may be argued that these positive conditions, trust, principals' positive attutide and goal agreement, facilitate power equalization through participation.

Power Equalization and Satisfaction

The positive relation between satisfaction with the administration and power equalization was strongly in evidence only in Spring 1974. These findings provide at best partial support for the hypothesis that power equalization and satisfaction are related (Hornstein, Callahan, Fisch, and Benedit, 1968). Two explanations, one based on the school's activities and one based on method, may be considered. First, more intervention activity occurred between Spring 1973 and Spring 1974 with less activity between Spring 1974 and Spring 1975. Thus, many changes were probably initiated during 1973-74 and maintained during 1974-75. Possibly, teachers were satisfied with the initial changes such as increased participation in Spring 1974 but by 1975 those changes were no longer new. Therefore, satisfaction may have become linked to other administrative behavior, unrelated to power equalization.

Second, prior studies of power equalization and influence have tended to rely on global perceptions concerning the influence of an individual or group in an organization (Tannenbaum, 1968). For example. an individual may simply be asked to indicate on a 6-point scale how much influence he or she has in an organization. Thus, the correlation between an individual's own perception of his or her own influence and satisfaction would be strictly phenomenological. In the present study, power was measured not by a global estimate of one's own influence but by aggregating and analyzing the sociometric ratings of one's colleagues concerning the specific issue of implementing new ideas. This measure is more focused, less transparent, and less subject to the pull of social demand characteristics.

Therefore, it may be less related to general satisfaction with the administration than more global perceptions of influence.

The Power of the Principals

The prestige and centrality of the experimental school principals declined during the course of the intervention, although their influence domain increased. Thus the principals become linked with more teachers, but lost influence over them. It may be that as one becomes associated with more people, it simply becomes too difficult to be near the center of each person's influence network. Also as principals become more closely linked to their teachers, influence based on the image of authority may decline. Teachers may become aware that principals were obtaining input from more teachers and using some of the teachers' ideas as the basis for decisions.

In any case, the results were clearly contrary to Tannenbaum's prediction and findings that increases in power for subordinates would not affect the power of the superior. The difference in results may be due to the methodological differences identified above. Specifically, Mohr (1977) and Heller (1976) have called attention to the tendency to overstate one's own power. A measure of one's global perception of one's own influence would be more susceptible to such a distortion than a specific nomination of influential colleagues as helpful in seeing that new ideas would be implemented.

Nonetheless, the finding tempers the optimism with which OD practitioners may view power sharing. Sharing power means giving away some power. It does not necessarily mean that everyone's power, including the principal's will increase (cf., French and Bell, 1978). Therefore,

it is important for practitioners to approach power sharing with the realistic awareness that superiors may lose power. Practitioners need to prepare these superiors for that shift if positive change is to continue.

Concluding Issues

In sum, the results clearly indicate that the intervention was successful in facilitating a more equal sharing of power in the experimental schools. The results also reveal that power equalization is closely related to participation and somewhat related to satisfaction. Further, gains in power for subordinates are likely to be accompanied by losses in power for superiors. However, there are three issues not addressed above which merit comment.

First, although the comparative power of the experimental school teachers was increased by the OD intervention, the absolute power of those teachers never actually equalled their principals' power. (See Table 1 means.) Thus, from an absolute perspective, the intervention did not effect complete equality of power. But, do OD theorists and practitioners literally mean that there should be a one-to-one comparative ratio of teacher power to principal power? Or is it sufficient that the relative power of the teachers increases? Is there any way of determining an appropriate (or even better, an optimal) ratio of teacher to principal power? OD theorists and practitioners typically have not specified precisely what they mean by power equalization. This specification would be helpful in guiding further intervention and research in power equalization.

Second, the measure of power equalization used in the present study focused on one facet of organizational power, an individual's ability to see that a new idea is implemented. Given the emphasis of OD on implementing new organizational ideas, this measure seemed appropriate for assessing the impact of OD. Nonetheless, the measure did not appraise other forms of power , such as decisions concerning personnel and financial matters. Also, the measure did not examine the relative power of students, parents, school board members, or central office staff. Consequently, the results must be interpreted in light of the limited focus of the measure of power equalization. Hopefully future researchers can broaden the scope of knowledge about power equalization.

Third, the present study did not address the relationship between power equalization and measures of organizational effectiveness such as productivity and adaptation. Other research suggests that manufacturing firms controlled by workers can be very effective (e.g., Bernstein, 1976; Zimbalist, 1976). It remains to be seen whether schools are also more successful when teachers have more control in them. Schools have different characteristics from profit-making organizations, and effectiveness is more difficult to assess in schools. Therefore, it would be useful to investigate the extent to which power equalization actually increases the effectiveness of school organizations.

Footnotes

1. The withdrawal of this school did not affect the results of the study. The scores of the principal and teachers while they were part of the project were supportive of the hypotheses.
2. When a person's influence domain, or the number of people who seek that person's opinion, equals zero, then that person's centrality score is infinity (Lin, 1976). Teachers in this category of "influence isolate" were 16 in 1973, 7 in 1974, and 6 in 1975 in experimental schools and 12, in 1973, 12 in 1974, and 13 in 1975 in control schools. These isolate teachers were excluded from parametric analyses for which centrality was the dependent variable.
3. Nonparametric tests were used rather than ANCOVAS because some of the principals changed during the course of the study.
4. It is possible that the experimental school principals' apparent loss of power was in part due to the limitations imposed by the form of the sociometric item. Specifically, perhaps the appointed teachers were accustomed to choosing three people and, in order to choose more teachers, had to omit the principal. This possibility was examined by calculating the mean number of choices for experimental and control school teachers on the questionnaire administrations. For the experimental school teachers on the three questionnaire administrations the means for number of choices were 2.02, 2.19, and 2.23. For the control school teachers the means were 1.92, 1.96, and 1.90. There were no significant differences between the two groups, thus indicating that the

Footnotes continued

experimental teachers had no more opportunity to omit the principal than did control teachers. In addition, the means suggest that the average teacher did not complete all three blanks on the sociometric item. Therefore, the comparative loss of power for the experimental school principals was not primarily a result of the limits imposed by the questionnaire item.

TABLE 1

Mean Scores on the Measures of Power Equalization

Teachers	Measures of Power Equalization: comparative choices	comparative influence domain	comparative centrality	comparative prestige	N
Experimental Schools					
1973 all repeaters*	.11	.86	1.64	.53	53
1974 teachers present since 1973	.23	.92	1.24	.72	53
newcomers	.12	.95	1.50	.65	21
1975 teachers present since 1973	.29	.92	1.18	.75	38
teachers present since 1974	.14	.85	1.24	.59	13
newcomers in 1975	.13	.92	1.38	.64	13
Control Schools					
1973 all repeaters	.11	.90	1.57	.59	71
1974 teachers present since 1973	.19	.92	1.28	.69	71
newcomers	.03	.80	1.19	.57	35
1975 teachers present since 1973	.11	.88	1.39	.58	58
teachers present since 1974	.08	.87	1.31	.58	31
newcomers in 1975	.06	.86	1.39	.58	14

*Teachers present in 1973 who were also present in 1974.

TABLE 2

Correlations between
Teacher Participation in Decision-Making

and

Measures of Power Equalization for All Teachers

Year	Measures of Power Equalization			
	comparative choices	comparative influence domain	comparative centrality[a]	comparative prestige
1973	.22**	.17*	.01	.13
1974	.28***	.23***	-.05	.21**
1975	.19**	.14*	-.21**	.21**

*$p < .05$

**$p < .01$

***$p < .001$

a For this variable a negative correlation indicates a positive relationship.

TABLE 3

Correlations between Satisfaction with the Administration

and

Measures of Power Equalization

and

Participation for All Teachers

	Measures of Power Equalization				
	comparative choices	comparative influence domain	comparative centrality[a]	comparative prestige	partic-ipation
Satisfaction with the administration					
Year					
1973	.00	.06	.21**	.06	.24**
1974	.18**	.21**	.09	.13*	.12*
1975	.08	.01	-.17*	.09	.20**

*$p < .05$

**$p < .01$

a For this variable a negative correlation indicates a positive relationship.

TABLE 4

Principals' Mean Scores on the Measures of Power

Principals	Measures of Power			
	Choices	Influence Domain	Centrality	Prestige
Experimental Schools				
1973	10.57	14.57	1.18	.76
1974	8.71	15.57	1.59	.64
1975	8.50	15.50	1.49	.64
Control Schools				
1973	9.57	14.42	1.31	.70
1974	8.57	15.29	1.62	.58
1975	10.43	13.57	1.33	.69

TABLE 5

Correlations between Teachers' Initial Power in 1973 and their Gains in Power

Teachers	Correlations between gains in power and the initial measure of: comparative choices	comparative influence domain	comparative centrality	comparative prestige
Experimental Schools				
1973 - 1974	.15	-.61***	-.33**	-.38**
1973 - 1975	-.09	-.66***	-.63***	-.42**
Control Schools				
1973 - 1974	-.07	-.52***	-.54***	-.38***
1973 - 1975	-.11	-.55***	-.53***	-.48***

**$p < .01$
***$p < .001$

References

Adizes, I. The role of management in democratic (communal) organizations. Annals of Public and Cooperative Economy, 1973, 42, 399-420.

Argyris, C. The incompleteness of social-psychological theory: examples from small group, cognitive consistency, and attribution research. American Psychologist, 1969, 24, 893-908.

Arney, W.R. A refined status index for sociometric data. Sociological Methods and Research, 1973, 1, 329-346.

Bennis, W. Organization Development. Reading, Mass.: Addison-Wesley, 1969.

Bennis, W., Benne, K., and Chin, R. The Planning of Change. New York: Holt, 1961.

Bernstein, P. Workplace Democratization: Its Internal Dynamics. Kent, Ohio: Kent State University Press, 1976.

Bowers, D.G. Organizational control in an insurance company. In A. Tannenbaum (ed.) Control in Organizations. New York: McGraw-Hill, 1968.

Brower, M. Experience with self-management and participation in United States industry. In G. Garson and M. Smith (eds.) Organizational Democracy: Participation and Self-management. Beverly Hills, California: Sage, 1976.

Burt, R.S. The differential impact of social integration on participation in the diffusion of innovations. Social Science Research, 1973, 2, 125-144.

DeSanctis, M., and Blumberg, A. An exploratory study into the nature of teacher interactions with other adults in schools. American Educational Research Association meeting, San Francisco, 1979.

French, W., and Bell, C. Organization Development (2nd. ed.). Englewood Cliffs, N.J.: Prentice-Hall, 1978.

Glidewell, J., Kantor, M., Smith, L., and Stringer, L. Socialization and social structure in the classroom. In L.W. Hoffman and M.L. Hoffman (eds.) Review of Child Development Research. New York: Russell Sage Foundation, 1966, 2.

Heller, F. Decision processes: an analysis of power-sharing at senior organizational levels. In R. Dubin (ed.) Handbook of Work, Organization and Society. Chicago: Rand McNally, 1976.

Hoffman, L.R., Burke, R.J., and Maier, N.R.F. Participation, influence, and satisfaction among members of problem-solving groups. Psychological Reports, 1965, 16, 661-667.

Homans, G.C. Social Behavior: Its Elementary Forms. New York: Harcourt, Brace, and World, 1961.

Hornstein, H., Callahan, D., Fisch, E., and Benedict, B. Influence and satisfaction in organizations: a replication. Sociology of Education, 1968, 41, 380-389.

Huck, S.W., and McLean, R.A. Using a repeated measures ANOVA to analyze the data from a pretest-posttest design: a potentially confusing task. Psychological Bulletin, 1975, 82, 511-518.

Huse, E. Organization Development and Change. St. Paul: West, 1975.

Kanter, R.M. Men and Women of the Corporation. New York: Basic Books, 1977.

Katz, L. A new status index derived from sociometric analysis. Psychometrika, 1953, 18, 39-43.

Keys, C. B. Renewal processes in urban parochial schools. Theory Into Practice, 1979, 18, 97-105.

Keys, C. B. and Bartunek, J. M. Organization development in schools: Goal agreement, process skills, and diffusion of change. Journal of Applied Behavioral Science, 1979, 15, 61-78.

Keys, C.B., Martell, R., Peltz, J., Bartunek, J., and Szaflarski, T. An Evaluation of Project START: Assessment of Organizational Renewal. Chicago: University of Illinois at Chicago Circle, Psychology Department, 1975.

Keys, C. and Monroe, G. (eds.). Organization Development in a Metropolitan Parochial School System: Project START Final Report. Chicago: UICC College of Education, 1979.

Kipnis, D. The Powerholders. Chicago: University of Chicago Press, 1976.

Lammers, C.J. Power and participation in decision-making in formal organizations. American Journal of Sociology, 1967, 73, 201-216.

Leavitt, H.J. Applied organizational change in industry: structural, technological, and humanistic approaches. J.G. March (ed.) Handbook of Organizations. Chicago: Rand McNally, 1965.

Lehmann, E.L. Non-parametrics: Statistical Methods Based on Ranks. San Francisco: Holden-Day, 1975.

Likert, R. The Human Organization. New York: McGraw-Hill, 1967.

Lin. N. Foundations of Social Research. New York: McGraw-Hill, 1976.

Lortie, D. Schoolteacher: A Sociological Study. Chicago: University of Chicago Press, 1975.

McElvaney, C. and Miles, M. Using survey feedback and consultation. In Schmuck and Miles (eds.) Organization development in schools. Palo Alto, California: National Press, 1971.

McMahon, J.T. Participative and power-equalized organizational systems. Human Relations, 1976, 29, 203-214.

Miles, R.E. Human relations or human resources? Harvard Business Review, 1965, 43 (4), 148-163.

Mohr, L. Authority and democracy in organizations. Human Relations, 1977, 30, 919-948.

Moreno, J.L. Who Shall Survive? Washington, D.C.: Nervous and Mental Disease Pub. Co., 1934, No. 58.

Mulder, M. Power equalization through participation? Administrative Science Quarterly, 1971, 16, 31-37.

Mulder, M. The learning of participation. International Sociological Conference on Participation and Self-Management. Zagreb: Institute for Social Research, 1973, 4, 219-228.

Mulder, M., and Wilke, H. Participation and power equalization. Organizational Behavior and Human Performance, 1970, 5, 430-448.

Nord, W. The failure of current applied behavioral science: a Marxian perspective. Journal of Applied Behavioral Science, 1974, 10, 557-578.

Nord, W.R. Dreams of humanization and the realities of power. Academy of Management Review, 1978, 3, 674-679.

Pfeffer, J. Power and resource allocation in organizations. In B. Staw and G. Salancik (eds.) New Directions in Organizational Behavior. Chicago: St. Clair, 1977.

Schmuck, R.A. Improving classroom group processes. In R.A. Schmuck and M.B. Miles, Organization Development in Schools. Palo Alto: National Press Books, 1971.

Schmuck, R.A. and Blumberg, A. Teacher participation in organizational decisions. National Association of Secondary School Principals' Bulletin, 1969, 53, 89-105.

Schmuck, R.A., Runkel, P., and Langmeyer, D. Improving organizational problem solving in a school faculty. Journal of Applied Behavioral Science, 1969, 5, 455-482.

Strauss, G. Some notes on power equalization. In H.J. Leavitt (ed.) The Social Science of Organizations: Four Perspectives. Englewood Cliffs: Prentice-Hall, 1963.

Tannenbaum, A.S. Control in Organizations. New York: McGraw-Hill, 1968.

Tannenbaum, A.S., Kavcic, B., Rosner, M., Vianello, M., and Wieser, G. Hierarchy in Organizations. San Francisco: Jossey-Bass, 1970.

Walton, R.E. Two strategies of social change and their dilemmas. In W.G. Bennis, K.D. Benne, and R. Chin (eds.) The Planning of Change, second edition. New York: Holt, Rinehart, and Winston, 1969.

Wood, M.T. Effects of decision processes and task situations on influence perceptions. Organizational Behavior and Human Performance, 1972, 7, 417-427.

Wood, M.T. Power relationships and group decision-making in organizations. Psychological Bulletin, 1973, 79, 280-293.

Zimbalist, A. The dynamic of worker participation: an interpretive essay on the Chilean and other experiences. In G. Garson and M. Smith (eds.) Organizational Democracy: Participation and Self-Management. Beverly Hills, California: Sage, 1976.