

## Workers' Participation and the Distribution of Control as Perceived by Members of Ten German Companies

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This article reports the results of a study that explored the implications of workers' participation for the exercise of control as perceived by members of ten German companies. Data based on questionnaire responses by members at all levels suggested that the distribution of control was more egalitarian and/or that it implied a greater total amount of control in the more participative compared to the less participative companies. These results were considered in the context of theories about participation and in view of the perceptual basis for the measures of control. •

Participation in an industrial organization implies, by definition, that workers enter into decision making along with owners and/or managerial personnel and that workers thus exercise legitimate control within their organization. We use the term control as synonymous with influence (Tannenbaum, 1968: Ch. 1). The distribution of control or influence in a participative organization should be different from that in a nonparticipative organization. Yet predictions about the nature of this difference are controversial, for a number of reasons. First, participation may take on different forms, each of which might have different effects. Autonomous work groups, works' councils, worker representatives on the board of directors, and collective bargaining, for example, each illustrate participative procedures that are likely to have different implications for the distribution of control in an organization. Second, the mere existence of participative procedures in an organization is no guarantee that the procedures will, in fact, provide a means for workers to exercise control. Participative schemes, in other words, may not be effective in achieving real participation. For example, members may not have the skills, consciousness, or will that they need to participate effectively; managers may resist and therefore prevent participation by employees; or, the procedures themselves may have been installed in the first place as a symbolic gesture or as a manipulative device intended to meet a social demand or a legal requirement for participation, but they may not actually provide means for workers to influence decisions.

We shall explore two hypotheses concerning the relationship between participation and control. We refer to the first as the "power equalization" hypothesis. According to Strauss (1963: 41), "The main thrust of the human relations movement has been toward . . . 'power equalization,' that is, towards reduction of the power and status differential between supervisors and subordinates." According to the power-equalization hypothesis, "the rank and file exercises a degree of control in the participative organization that it does not exercise in the nonparticipative organization, thus reducing (if not eliminating) the large power differential that ordinarily exists between groups at the bottom and at the top of the hierarchy" (Kavčič and Tannenbaum, 1981: 401). Leavitt (1965) referred to a number of authors, including McGregor (1960), Likert (1961), Morse and Reimer (1956), and Argyris (1962), whose theories identified participation with some form of "power equalization." Furthermore, although power equalization may not be stated explicitly as a consequence of participation, it is nonetheless implicit in the thinking of many social scientists who, like Dahrendorf (1968), take a zero-sum view of control or power in

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organizations. Given the zero-sum assumption, an increase, through participation, in the control exercised by those at lower levels must be accompanied by a reduction in the control exercised by persons at upper levels, thus resulting in some degree of equalization in power. Although these arguments were stated in terms of change, they suggested that participative organizations at any point in time will be characterized by smaller power differentials than will otherwise comparable nonparticipative organizations.

The second hypothesis concerns the total amount of control, rather than its distribution; it suggests that participation increases the total amount of control in an organization.

Participation is often thought to imply taking power from managers and giving it to subordinates, but in fact managers need not exercise less control where there is participation. The reduction in managerial power may occur but it need not, and there is evidence to suggest that participation may be a means through which managers actually increase their own control along with that of workers. Thus contrary to stereotypes that assume participation to be a vaguely permissive or laissez-faire system, the participative organization may be one in which the *total amount of control* is higher than in the nonparticipative organization. (Tannenbaum, 1976: 78–79)

March and Simon (1958: 54) provided insight into the relationship between participation and the total amount of control in an organization:

Where there is participation, alternatives are suggested in a setting that permits the organizational hierarchy to control (at least in part) what is evoked. "Participative management" can be viewed as a device for permitting management to participate more fully in the making of decisions as well as a means for expanding the influence of lower echelons in the organization.

Similarly, Hofstede (1967), Jacques (1968), Lammers (1967), Mulder (1971), Pateman (1970), Strauss and Rosenstein (1970), and Tannenbaum (1968) provided arguments consistent with the hypothesis that participation may lead to an increase in the total amount of control in an organization.

Several studies have provided tentative support for this second hypothesis. Russell, Hochner, and Perry (1979), employing the control-graph method, found that worker-owned refuse-collecting companies, which are more participative than conventional refuse-collecting companies, are characterized by a greater total amount of control, as reported by members, than are the conventional companies. Rosner (1980) found that relatively participative industrial plants in Israeli kibbutzim are also characterized by a greater total amount of control, as reported by members, than are less participative kibbutz plants. Kavčič and Tannenbaum (1981) saw some evidence, in a longitudinal study of 100 Yugoslav work organizations, that there was a small increase in the total amount of control as reported by members over a five-year period, during which increases in the formal participativeness of the organizations occurred. Tannenbaum et al. (1974), in comparing relatively participative Yugoslav and kibbutz factories with moderately participative American factories and less participative Italian and Austrian factories, saw a correspondence between participativeness and the total amount of control reported by members in these organizations. They concluded that their data "may appear ironic in the context of the 'permissiveness theory' of

participation that assumes participation to be a system of very little control. On the contrary, these data add credence to the contention that the participative organization may be more highly controlled than its less participative counterpart . . .” (p. 60).

The above hypotheses are not mutually exclusive. Both the hypothesis concerning equalization and that concerning the total amount of control may be correct (or both may be incorrect). The first hypothesis implies that the difference between the amount of control exercised by persons at the top and at the bottom is smaller in the more participative than in the less participative organization. The second hypothesis implies that in the more participative, compared to the less participative organization, control is greater at some (if not at all) hierarchical levels without being correspondingly less at other levels.

This article examines data relevant to the above hypotheses. The data are from 10 German companies that differ from one another in participativeness as defined by the power of their works’ council or of other institutionalized participative bodies. While all of the companies in this study had works’ councils or other participative groups, consistent with German law, some companies had relatively powerful councils or participative groups actively engaged in joint decision making with management in a variety of issues such as work methods, budgets, accident prevention, promotion, and transfer. Other companies, on the other hand, had relatively weak councils or groups that had legal status in their companies but did not engage very much, if at all, in decision making. We assume that the former companies are more participative than the latter.

We examined the hierarchical distribution of control, as reported by members at all levels, and how the relatively more participative and less participative companies differed from one another in this distribution. We were also concerned with the distribution of control that members preferred. In addition, we examined how the distribution of control differs among different areas of decision making, a question that has concerned many authors (Patchen, 1963; Zupanov and Tannenbaum, 1968; Bernstein, 1976; Gundelach and Tetzschner, 1976; Hammer and Stern, 1980; IDE, 1981). We therefore explored the above hypotheses separately in each of four areas of decision making: finance, production, personnel, and work environment.

Our theoretical formulation implies differences in actual control between more and less participative companies. Our measures of control, however, were based on the judgment of members, and they might therefore be in error as measures of the *actual* distribution of control. They might, for example, be misperceptions resulting from ideologically manipulated feelings rather than being descriptions of the influence actually exercised. We cannot entirely rule out such possibilities. We did, however, employ several alternative approaches in the questionnaire, to measuring control, including measures based on the judgment of different groups within the organization, in order to examine how results based on these approaches might differ in their implications for the effects of participation.<sup>1</sup>

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For a discussion of the use of these questionnaire measures of control, see Gundelach and Tetzschner (1976); Patchen (1963); Szafran (1981); Tannenbaum and Cooke (1979); and Tannenbaum and Smith (1968).

## Participation and Control

### WORKERS' PARTICIPATION IN GERMAN WORK ORGANIZATIONS

Germany has a special tradition concerning participation. Traditionally, the labor movement in Germany has been based on the conflict of interests between the owners of the means of production and the working class. Given this basis, legally prescribed participative procedures are thought to provide a means for the workers, through their representatives, to exercise countervailing power against the owners and their representatives. The idea of institutionalizing a representative form of participation has led, since 1891, to a number of laws on participation in plants, the latest of which was the Works' Constitution Act of 1972 (*Betriebsverfassungsgesetz*, 1972),<sup>2</sup> which was fully supported by German unions. According to this law, plants with at least five employees over 18 years of age and with at least three employees who have worked in the plant for six months or more must establish a works' council consisting of representatives elected by the employees, if such a council is requested by the employees. For the plants included in this study, the council consists of 5 persons in plants with 51 to 150 employees over 18 years of age, 7 persons in plants with 151 to 300 employees, and 9 persons in plants with 301 to 600 employees.

Upper-level managers are precluded from serving on the council and from nominating candidates. Otherwise, there is no specification in the law about who among the employees may be nominated or by what means they may be nominated. They may, for example, be nominated by themselves, by the union, or by any other group in the plant. There is a provision, however, that white-collar as well as blue-collar workers should be included as representatives. Also, representatives should, if possible, be drawn from different departments and jobs, and they should be selected to take into account the percentage of male and female workers. In plants of 301 to 600 employees, one member of the council is paid his or her normal salary while working exclusively for the council. In plants with more than 600 employees there is more than one paid representative, but none of the plants in this study was that large.

While unions are not formally represented in the works' council, they may play a role through the election of important union members to the council. Thus, even though unions opposed the first laws on participation because of the little influence granted to the councils, the labor movement now supports codetermination in Germany. In principle, councils and unions complement one another as representatives of the workers, since councils have the formal right to veto management proposals; to make their own proposals; or to obtain information, depending on the issue, in areas where unions have not traditionally exercised control.

The law contains two principles to guide the interaction of management and the works' council. First, the council and management must cooperate on the basis of mutual confidence (*vertrauensvolle Zusammenarbeit*). This means that they must strive to maintain a viable and effective organization. Second, the works' council is forbidden to initiate strikes on plant-specific issues such as wages and working conditions (*Friedenspflicht*). Conflicts over these issues within a plant are

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For the development of the Works' Constitution Act and a discussion of codetermination (*Mitbestimmung*) see, for example, Sachverstaendigenkommission (1970); Aleman (1975); and Muszynski (1975).

settled by a unification committee (*Einigungsstelle*), which consists of an equal number of persons from both sides and one neutral person. The council has recourse to work courts up to the federal level in the event of its dissatisfaction with the verdict of the unification committee. The initiation of strikes is in the domain of the unions and is regulated by laws (e.g., *Tarifvertragsgesetz*) different from the Works' Constitution Act.

The works' council is formally empowered by the Works' Constitution Act to exercise different degrees of influence in different areas of decision making. We have selected for study four areas that are treated prominently in the act.

1. *Work environment*, which includes working conditions and accident prevention. In this area, management is required to elicit suggestions from the works' council, although management makes the final decision.
2. *Production organization*, which includes the allocation of tasks and the choice of shift, work methods, and hours of work. The power of management relative to the council in this area is the same as in the first area.
3. *Personnel*, which includes promotion, transfer, and type of payment. The works' council has veto power over decisions about promotion and transfer, but not about payment.
4. *Finance*, which includes the making and evaluating of budgets. Here management is required only to inform the council of management decisions.

The Works' Constitution Act, like any law, is subject to interpretation and thus is understood differently by different interest groups and is applied differently in different companies. For example, the council has a right to countermand proposals for changes in the design of jobs and in the work environment if the changes are not in accord with "accepted scientific knowledge" concerning humanization of work. "Accepted scientific knowledge," however, is subject to interpretation and this leads to ambiguities in the rights of the council and therefore to differences between companies. Unions have been particularly concerned about modifying German law to strengthen the councils in the area of "work humanization." Furthermore, in some firms more than in others, there is a commitment to a social philosophy that is supportive of workers' participation. Some firms also encourage initiatives from the councils and/or go beyond the legal requirements of the Works' Constitution Act by providing workers with opportunities to exercise influence through semiautonomous work groups or other forms of direct participation.

Companies also differ from one another in their prevailing style of leadership, namely, the degree to which supervisors are responsive to influence from their subordinates. They differ, too, in the extent to which information about ongoing business matters is made available to employees. Thus, the distribution of control in a firm is not entirely determined by law but also by the formal and informal ways in which the interaction between managers and workers actually occurs (Walker, 1974; Tannenbaum, 1976; Dachler and Wilpert, 1978; Nightingale, 1979).

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### RESEARCH DESIGN

The field work for this study was performed between mid-1977 and mid-1978. In order to get access to ten firms, we contacted about 200 firms. In approaching companies, we made explicit our aim to study participation, and this probably contributed to a selection of companies that were above average in participativeness in the view of their managements. The companies were also likely to be above average on criteria of good industrial relations, since such relations are valued in Germany, as is participation itself, and managers who view their company as low on these criteria were probably reluctant to take part in the research. We have indications, furthermore, that the plants studied were economically successful. Thus we were dealing with a select group of companies. It is unlikely, however, that this selection had the effect of overstating the differences we were examining in a test of our hypotheses. On the contrary, it probably had the effect of limiting the differences between our more and less participative groups and thus provided a conservative basis for the test of our hypotheses.

The objective of our design was to compare five firms that were highly participative with five firms that were less participative. As a first step in locating and including in our study five companies that were unusually participative, we attempted to select five companies from an association of firms, *Arbeitsgemeinschaft für Partnerschaft in der Wirtschaft*, that is committed to an idea of "partnership." We assumed that the association included a higher proportion of participative firms than that found in the general population of firms in Germany, although this assumption does not take into account, among other things, the owners' intentions in installing participation. We were able to get the participation of only four firms in this association, however. Three of these plants had works' councils. One did not because no one in the company requested that a council be established; nonetheless, this plant had an active set of autonomous work groups designed to meet the requirements of the Works' Constitution Act. We then selected six plants that were not members of the association, on the assumption that they would be relatively less participative.

The selection procedure provided an initial, rough basis for classifying firms as relatively more or less participative and, after having selected the plants, it became possible to examine the assumption that companies belonging to the association were, in fact, more participative than the other plants in our set. We did this by obtaining information from the chairperson of the representative body and from the top manager in each of the nine plants with a representative body. We could not get such ratings from the company that did not have a works' council, but we assumed that this company was relatively participative since it had an active set of autonomous work groups. The information concerned the *actual* power of the participative body with respect to a variety of decisions. We asked the informants, "How much *actual* power does the *participative* body have with regard to . . ." (a variety of issues such as work methods, budgets, accident prevention, promotion, and transfer). Informants responded on a 6-point scale ranging from 1, "the body does not have a right to deal with this issue," to 6, "the issue is decided jointly by the participative body and management." The two informants in each of the

companies, except one, agreed closely with each other about the power of the participative body in their company. For example, the rank order correlations between the ratings, excluding the one disagreeing pair, was .77. In the case of the major disagreement, the chairman of the council gave the participative body an average score of 3.25, which placed this plant below all of the others on participativeness, while the manager gave the participative body a score of 5.75, which placed the plant above all of the others on participativeness. The ambiguity in this company was due to the existence of semiautonomous work groups in addition to the works' council. The top manager, but not the chairman of the council, took these groups into account in rating the power of the "participative body." Because these groups were highly participative, we placed this plant among the more participative plants.

The above classification corresponded reasonably well, although not perfectly, to the initial classification based on membership in the association. For example, we divided the ten companies into two groups, those above and those below the median rating on participativeness. Seven of the 10 organizations classified in this way fit the initial classification made in selecting companies for the study. In the three cases that did not fit, we concluded that the information provided by the informants in the company was a better basis for determining the participativeness of the company, since this information, unlike the information in the initial selection procedure, concerned an important criterion of participativeness — the power of the works' council — and/or was based on an intimate knowledge of the companies. Therefore, we used this information to classify the firms on participativeness. We made this choice before having seen any of the questionnaire data.

We tried in our plant selection to control a number of characteristics like size and type of industry, but we could not match the plants as closely as we had hoped. The more participative plants ranged in size from 170 to 500 employees (average, about 300), and they fell into the metal works, chemical, and pharmaceutical industries. The percentage of members who were unionized varied from 2 to 80 percent, with an average of 28 percent. Each of the less participative plants had between 180 and 250 employees (average, about 230). These firms belonged to the metal works, chemical, and textile industries. The percentage of members who were unionized varied from 6 to 84 percent, with an average of 53 percent.

The sample was drawn according to criteria that were established for a larger project of which the research reported here is a part. While these criteria were established to optimize analyses of the larger project, they were nonetheless conducive to the analysis presented in this paper. On the average, sixty respondents were selected in each plant, including all worker representatives. Two thirds of the respondents were persons without subordinates, while one third occupied leadership positions. The 40 rank-and-file persons were chosen randomly. Superordinates fell into the sample only if at least one of their subordinates was selected.

Questionnaires were administered to the sampled members in each of the companies. All of the questions were answered on a five-point scale, from 1, "very little influence," to 5, "a very great deal of influence."

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We had an *N* of 10 for testing differences between the companies and applied the Mann-Whitney test to determine the significance of these differences. Scores for each company were calculated as follows: first, we computed for each plant average scores for each relevant group (i.e., workers, first-line supervisors, other managerial personnel); second, we weighted each group mean per plant (that is, workers, first-line supervisors, and other managerial personnel), according to the proportion of each of these groups in the total sample of all plants. The plant scores were an average of these weighted group means. We calculated confidence levels on the basis of the one-tailed test, where the hypothesis implies a directional prediction (e.g., that the influence exercised by workers is greater in the more participative than in the less participative companies).

Table 1

### Characteristics of the sample

	More participative plants	Less participative plants
Number of respondents	289	312
Managers	32	38
First-line supervisors	49	52
Rank and file	180	194
Council members	28	28
% Male		
Managers	100	97
First-line supervisors	84	79
Rank and file	49	64
Council members	66	90
All respondents	62	71
Average level of education*		
Managers	3.2	3.6
First-line supervisors	3.1	2.9
Rank and file	2.4	2.5
Council members	2.9	2.8
All respondents	2.7	2.7
Average age†		
Managers	7.2	6.0
First-line supervisors	5.8	5.7
Rank and file	5.2	5.2
Council members	5.9	5.6
All respondents	5.6	5.4
Average seniority in plant‡		
Managers	4.9	4.6
First-line supervisors	4.6	4.7
Rank and file	3.5	4.2
Council members	4.9	5.0
All respondents	3.9	4.4

\*Education was coded on a 5-point scale, corresponding to five levels of schooling: 1 = less than 6 years; 2 = 7–9 years; 3 = 10–12 years; 4 = 13–17 years; 5 = more than 18 years.

†Age was coded on a scale from 1 to 9, corresponding to 5-year intervals, except for the lowest and highest scale points: 1 = less than 20 years; 2 = 20–24 years; 3 = 25–29 years; 4 = 30–34 years; 5 = 35–39 years; 6 = 40–44 years; 7 = 45–49 years; 8 = 50–54 years; 9 = 55 years and older.

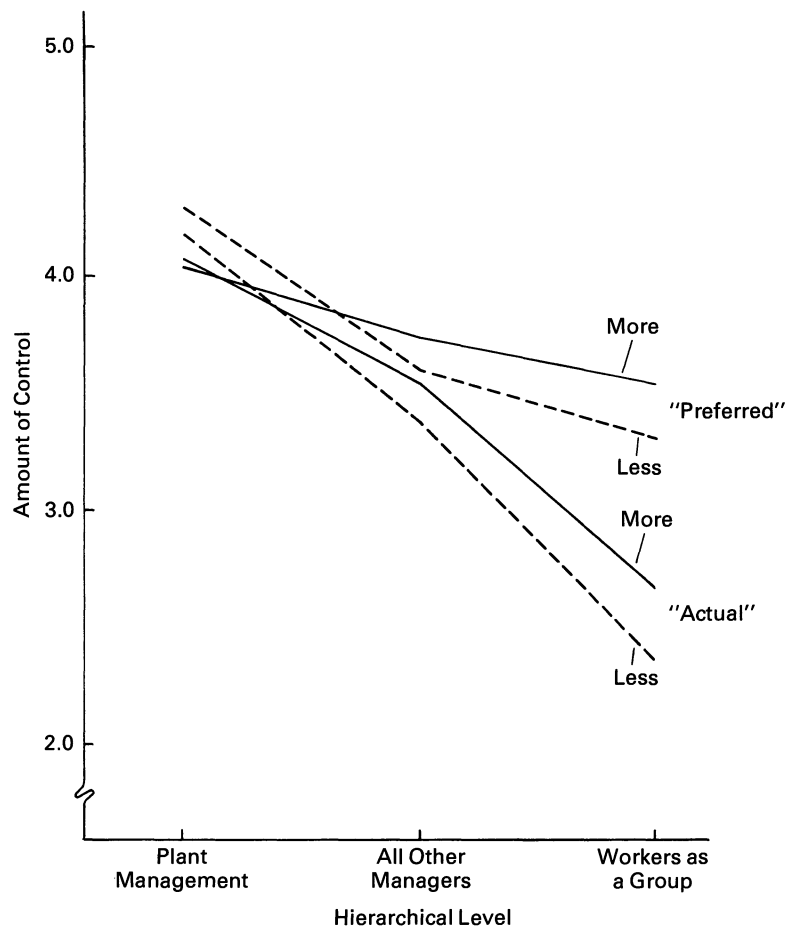
‡Scores are based on the following scale, which assumes that the effects on members of socialization into an organization are more significant during the early years of membership than during later years and that the psychological implications of seniority follow roughly a law of diminishing returns: 1 = less than one year; 2 = 1–2 years; 3 = 3–5 years; 4 = 6–10 years; 5 = 11–15 years; 6 = more than 15 years.



The characteristics of the sample shown in Table 1 indicate little difference between the "more" and "less" participative plants in the hierarchical distribution of respondents. A two-tailed Mann-Whitney test shows that only the difference in the proportion of male members in the works' councils between the less and the more participative plants is significant at the .05-level.

## RESULTS

Figure 1 shows data that provide a first test of the power-equalization and total-amount-of-control hypotheses. It presents, in terms of the "control graph," the "actual" and "preferred" distribution of control for the relatively more and less participative companies, respectively. The "actual" curves are drawn on the basis of responses of all sampled members (including managerial and supervisory personnel but excluding council members) to the global question, "How much influence do the following groups or persons *actually* have on what happens in this plant?" The "preferred" curves are drawn on the basis of the question, "How much influence *should* the following groups or persons have on what happens in this plant?" The several hierarchical groups listed in the questionnaire are placed along the horizontal axis of the graph. Analysis of variance indicates that the variance between companies, in



**Figure 1. Distribution of "actual" and "preferred" control as reported by organization members in more and less participative plants.**

## Participation and Control

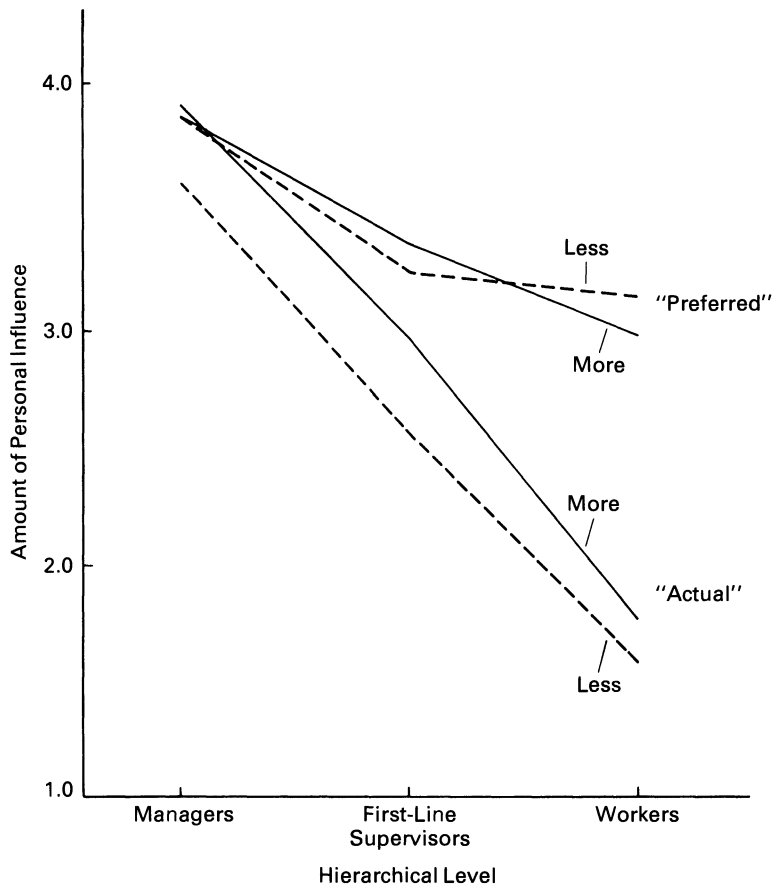
the judgment of respondents about the control exercised by each hierarchical group in the company, is significantly greater than the variance within companies ( $p < .01$ ). Thus, even though the measures of control are based on perceptions by individual members, there is nonetheless some agreement among members of a plant about control in their plant.

The figure suggests that the more participative plants have a somewhat more egalitarian distribution and a higher total amount of "actual" control than do the less participative plants. The difference in slope (where the slope represents the difference between the influence attributed to plant management and to the workers as a group) between the more and less participative plants is significant at the .005-level in the one-tailed, Mann-Whitney test. The difference in the total amount of control (measured in terms of the sum of the control attributed to the three hierarchical levels) is significant at the .13-level. The difference between the influence attributed to the workers in the respective sets of companies is significant at the .02-level of confidence by the Mann-Whitney, one-tailed test. The corresponding significance level for the influence attributed to the middle level is .08. The difference ascribed to plant management is not significant. The participative systems studied here appear, according to our respondents, to enhance the control of workers at the bottom without decreasing correspondingly the control exercised by managers and supervisors.

Participation, according to these data, may also have an effect on the preferences of members regarding the distribution of control. Persons in the more participative plants appeared to want a flatter distribution than did those in the less participative plants. Since we did not offer a hypothesis and did not make a directional prediction in this case, we applied a two-tailed test and found the difference between the two sets of companies in "preferred" slope to be significant at the .05-level of confidence according to the Mann-Whitney test. We did not find a statistically significant difference in preferred total amount of control, however.

Four additional measures from the questionnaire provided a further test of the hypotheses concerning power equalization and total amount of control. Figure 2 presents data from the first of these measures. In this case, respondents were asked to report their own influence and the averages were plotted for respondents at three hierarchical levels.

In Figure 1, each respondent reported about the three hierarchical levels (top management, all other managers, and workers as a group) thus, presenting his or her implicit picture of the hierarchical distribution of control. In Figure 2, on the other hand, the distribution is constructed on the basis of each member's report of his or her own influence. In other words, the report by a respondent at one level about influence at that level is not affected by the report of a respondent at a second level about his or her own influence at the second level. The two figures also differ somewhat in the way the three hierarchical groups are defined. The top group in Figure 2 is broader, including all managers above first-line supervisors, while the middle group in Figure 2 is narrower, including *only* first-line supervisors. Analysis of variance between companies is signifi-



**Figure 2. Distribution of "actual" and "preferred" personal influence as reported by organization members in more and less participative plants.**

cant at the worker level ( $p < .001$ ), supervisory level ( $p < .02$ ), and managerial level ( $p < .06$ ).

Figure 2 suggests a difference between the two sets of companies in members' reports of the total amount of control but not in reports of power equalization. Figure 2 is therefore only partly consistent with Figure 1. (The significance of the difference between the two sets of companies at the managerial, first-line supervisory, and worker levels is .07, .02, and .13 respectively, according to the Mann-Whitney one-tailed test.) Furthermore, the "preferred" distributions in the more participative and less participative plants are rather similar to one another in Figure 2 ( $p = .26, .38$ , and  $.09$  for managers, supervisors, and workers, respectively). The somewhat higher aspirations about control for workers in the more participative compared to the less participative plants that we inferred from Figure 1, but that are not apparent in Figure 2, may apply only to the preferred influence that is exercised by hierarchical groups — not to that exercised by individuals, as shown in Figure 2. Ideological norms very likely become associated with a system of participation, and it is likely that the preferred curves reflect those norms to the extent that the norms are relevant. The ideological norms about participation through representative bodies, such as the works' council, are probably more relevant to control by groups than by individuals and thus they affect the preferred curves in Figure 1 more than in Figure 2. Nonetheless,

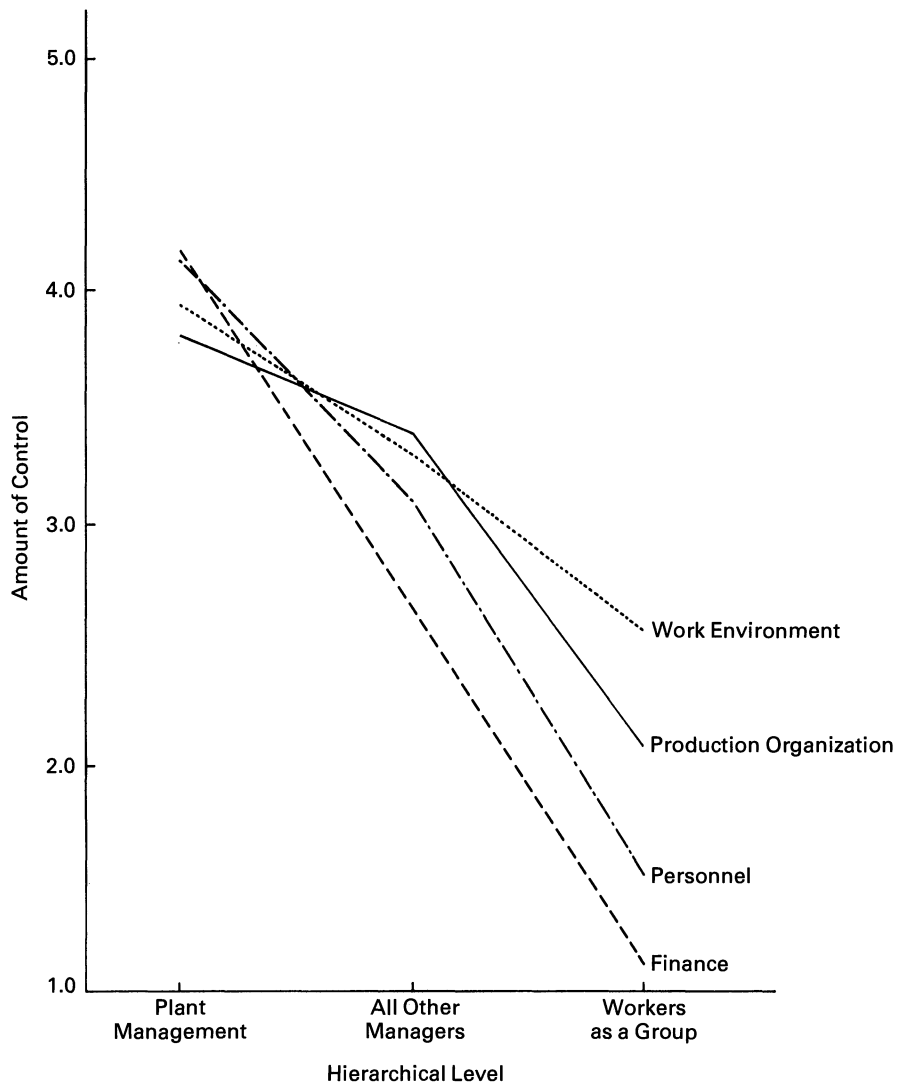
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while Figure 2 shows little difference between the more participative and less participative companies in preferred distribution of control, it does show a difference in "actual" distribution. We take this to be supportive of the measure. There does not appear to be a simple "halo effect" at the company level in the responses to these items such that a company portrayed as high on actual control will automatically be portrayed as high on preferred control. Thus both Figures 1 and 2 suggest that the actual distribution of influence or control is different in the more participative compared to the less participative companies. The participative plants are characterized by a more equalized and/or greater total amount of control. These differences occur whether norms about preferences apply, as in Figure 1, or do not apply, as in Figure 2, and despite the similarity of preferences about personal influence between the more participative and less participative companies in Figure 2.

A second additional approach to a test of the power-equalization and total-amount-of-control hypotheses employs a question like that used in Figure 1, except that it utilizes information about the influence of a given hierarchical level only from persons at that level. For example, managers report only about managers, supervisors only about supervisors; and workers only about workers. We assume, for purposes of this approach, that persons at a given level are better able to report on the influence exercised at their level than are people from other levels. The results based on this assumption yield essentially the same picture as does Figure 1, with the minor exception that the curves of the more participative and less participative companies do not intersect near the top. In the interest of saving space, we do not present these data since they are essentially like those of Figure 1.

A third additional approach also employs a measure like that of Figure 1, except that respondents evaluated the influence of the respective hierarchical groups in each of four areas: production organization, finance, work environment, and personnel matters. Respondents discriminated very well between the way control is distributed in the respective areas. Figure 3 shows, and paired *t*-tests indicate, highly significant differences in slope and total amount of control between each curve and every other curve.

The distribution as reported by members is most egalitarian, and workers have the most influence with respect to work environment. The distribution is least egalitarian, and workers have the least influence with respect to the making and evaluating of budgets. The distribution for production organization approaches that for work environment, while the distribution for personnel matters approaches that for budgets. These data, which suggest differences in distribution of control between the four areas, seem realistic to us. Furthermore, the Mann-Whitney, one-tailed test shows that members in the more participative plants report flatter, more power-equalized slopes than do members in the less participative plants ( $p = .01, .02, .04, \text{ and } .09$  for finance, work environment, personnel, and production organization, respectively). The test yields no significant differences, however, between the more and less participative plants in the total amount of control in the four decision areas.



**Figure 3. Distribution of control with respect to four decision areas.**

As a final test of the hypotheses about power equalization and total amount of control, we examined judgments about the distribution of control portrayed in Figure 1 as reported separately by persons at each of three hierarchical levels. Table 2 presents these data. The three major rows define the three groups of respondents, while the columns define the groups about which respondents estimated influence.

With the exception of managers, groups in the more participative companies reported that the workers have more influence than was reported by the corresponding groups in the less participative companies. Similarly, the distribution of control (i.e., the slope of the curve) appears to be more egalitarian in the more participative than in the less participative companies, as portrayed by all groups except the managers. The statistical probabilities associated with these differences using the one-tailed Mann-Whitney test, are .03 and .06 for the response of the workers and first-line supervisors, respectively. Finally, the data provided by workers and first-line supervisors were consistent with the hypothesis that the total amount of control is

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Table 2

### Distribution of Control as Reported by Different Groups within Plants

Respondents	Control exercised by		
	Plant management	All other mgrs.	Workers as a group
Workers			
In less participative plants (N = 5)	4.1	3.3	2.2
In more participative plants (N = 5)	4.1	3.5	2.6*
First-line supervisors			
In less participative plants (N = 5)	4.5	3.3	2.5
In more participative plants (N = 5)	4.3	3.6*	3.1*
Other managerial personnel			
In less participative plants (N = 5)	4.5	3.8	3.1
In more participative plants (N = 5)	4.4	3.9	3.2

\* $p < .05$ , one-tailed

greater in the more participative than in the less participative companies ( $p = .05$  and  $.01$ , respectively).

The lack of the predicted difference between the control attributed to workers by managers in the two sets of companies seems to be due to managers in the less participative companies ascribing too much control to the workers rather than due to the managers in the more participative companies ascribing too little. This conclusion is suggested if we use the consensus between managers and nonmanagers as a criterion of the validity of the managers' reports. For example, managers in the less participative companies disagreed substantially with each of the nonmanagerial groups in their companies. Managers in these companies reported an average score on workers' control of 3.1, compared to average scores of 2.2 and 2.5 reported by the nonmanagerial groups. On the other hand, the managers in the more participative companies reported an average score of 3.2, which is reasonably close to the range, 2.6 to 3.1, reported by the nonmanagerial groups in these companies. Managers in both sets of companies tended to report somewhat higher scores than did the other groups, but the managers in the less participative companies were especially prone to over-reporting. This suggests that they may have been expressing a participative bias that overstated the actual situation in their organizations.

### CONCLUSIONS

The data of this study in ten German plants are, in a number of respects, like those found elsewhere, suggesting that they illustrate three phenomena that have some generality. First, the hierarchical distribution of control occurs in all plants whether relatively more participative or not, and it is reported by all groups of respondents — managers, supervisors, and workers.

Second, the distribution that members prefer implies a greater total amount as well as a more equalized distribution than that which they perceive to exist. The more egalitarian distribution of control that members prefer implies increasing the control exercised by workers rather than decreasing that exercised by managers. The preference, furthermore, stops short of complete equality, with all groups indicating the managers *should* have more control than workers. Nonetheless, the major

discrepancy between the control that is perceived to exist and the control that *should* exist, according to members, occurs at the bottom.

The data are unequivocal with respect to the above effects. The effects are apparent whether the data are based on self-reports of influence or on reports by all respondents about each of the hierarchical groups. Furthermore, similar results have been found almost without exception in earlier studies of a large number and wide variety of organizations and in societies that differ from one another in culture and political system (Tannenbaum et al., 1974; Tannenbaum and Cooke, 1979; Bartölke, 1982). The kind of data gathered in this study appear to have a high degree of reliability and face validity, at least at this gross level. The "actual" and "preferred" distributions apparently reflect norms that prevail broadly in industrial and industrializing societies, although the norm for the "preferred" distribution is quite different from that for the "actual" distribution.

Finally, the distribution of control as reported by members in the relatively more participative companies appears to differ from that reported in the less participative companies. Participation, according to our respondents, appears to have the effect of increasing the control exercised by workers without decreasing that of managers. On the contrary, managers in the former companies perceived themselves to exercise more influence than did managers in the latter companies. We therefore have some support in these data for both the power-equalization and total-amount-of-control hypotheses, at least insofar as control is perceived by organization members.

The difference between the more participative and less participative companies in the distribution of control reported by members resembles, on a small scale, the difference between the distribution members prefer for their organization and the one that they perceive to exist. The distribution in the more participative companies, more than in the less participative companies, looks like the model defined by members as the "preferred" distribution — a curve that implies a relatively high degree of power equalization and a high total amount of control. Participation may be a way of moving toward a distribution of control that members prefer. This does not mean, however, that participation necessarily reduces the discrepancy between members' preferences and their perceptions of the realities about the distribution of control in their organization. Members' ideals regarding the control exercised by workers and/or managers might also be higher in a more participative than in a less participative organization.

The above differences between the more and less participative companies also illustrate the possible effects of a primarily indirect, representative form of participation on the distribution of control as perceived by members. Research in Norway and Sweden (Holter, 1965; Emery and Thorsrud, 1969; Rubenowitz, Norrgren, and Tannenbaum, 1982) suggest that while workers are likely to perceive that *direct* participation by workers implies that they have some control, they are not so likely to see such implications in representative participation. Similarly, an analysis by the IDE International Research Group (1979) in twelve countries of Europe and Israel shows no relationship between the extent to which representative bodies have de

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jure (formal) power to make a variety of decisions (as judged by key management and union respondents) and the amount of influence exercised by the workers (as rated by "specialist-experts"). On the other hand, the analysis does demonstrate a significant positive relationship between the extent to which the workers themselves have de jure power and the influence that they exercise.

Results from this study seem to indicate the members' reactions to indirect participation may be different in Germany than they are in other places, such as Norway and Sweden. Two of the five participative plants in this study had a system of direct participation along with indirect participation, but these two plants did not appear to be exceptional in the amount of control, according to our several measures, that was attributed to the workers. For example, while one of these plants ranked first, the other ranked sixth in the influence workers attributed to the workers; and on the other measures of worker influence these two plants were, on the average, at about the middle of the distribution of the participative plants. The differences in the distribution of control as reported by respondents in the more and less participative plants therefore seemed unaffected by the inclusion among the participative set of two plants that had some direct participation along with indirect participation.

Indirect participation implies a more centralized system of participation than does direct participation, and it is possible that members of German organizations are more responsive to such participation than are organization members in some other countries. Support for this interpretation is provided by studies that demonstrate the comparatively centralized problem-definition and problem-solving processes in Germany (Child and Kieser, 1979; Hofstede, 1979; Lammers and Hickson, 1979), thus indicating that Germans, more than some other nationalities, are accustomed to and perhaps more receptive to centralization.

Our findings on the increase in total amount of control as a result of greater participation, have one final implication. The average member in companies with relatively powerful councils reported him or herself personally to have more influence than the average member in companies with weak councils reported having. But if participation in these companies does in fact enhance the control exercised by members, it may also increase the control to which members are subject. The control that members exercise within the company is, after all, exercised over other members. Thus, if the likelihood of exercising more control is one of the benefits of participation to members, the likelihood of being subject to greater control is perhaps one of the costs. But control in the participative organization is presumably different from that in the traditional organization. In theory, it is more mutual (rather than exclusively hierarchical and unilateral), and it is supposed to be less coercive than in the traditional organization. Ideally, this control derives from mutual esteem, respect, and the acceptance of others as equals with needs and interests of their own. Real participation does not eliminate control, but changes its quality.



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