Conducting Action Research: Relationships Between Organization Members and Researchers

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Action research in an organizational setting draws researchers and the employees involved into a joint process aimed at meeting both research and intervention objectives. The active collaboration of participants has major implications for researcher roles, and the manner in which these role shifts are carried out has a significant effect on study outcomes. Few have concretely analyzed the issues faced by researchers and organization members as they assume shared roles in the action research process. This article treats the relational aspect of researcher-participant co-investigation as a methodological issue. The authors share aspects of their experience in implementing an action research project aimed at understanding and reducing the deleterious effects of occupational stress. Relationships between researchers and organization members are dynamic. As they develop over time, role-related tensions and differences may arise around the issues of values and interests, resources and skills, control, political realities, and rewards and costs. Each of these is addressed, using examples from the authors' recently completed 6-year study. Further, the action research study participants helped revise this article and that process taught the authors much about these methodological issues.

Action research and basic research in the social sciences make different assumptions regarding the role of basic study participants and of action in the research process. Further, the methodological approaches variously labeled as action research, partici-

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patory action research, and participatory research differ in the degree of researcher-participant mutual learning, in the degree of participant influence over the research process, and in the emphasis on action relative to research and theory building (Brown & Tandon, 1983; Elden, 1981a; Fals-Borda, 1984; Peters & Robinson, 1984; Whyte, 1984, 1991). These approaches contend that study site member involvement in social research does not contaminate such research but rather improves it—particularly in formal organizational settings, as these often feature diverse parties, multiple needs/ objectives, and dynamic work environments (e.g., Brown & Kaplan, 1981; Elden, 1986; Susman & Evered, 1978; Tichy & Friedman, 1983). In addition, action research (defined more fully below) enhances diffusion of new ideas, change in individual behaviors and in organizational practices, and long-term program acceptance (Elden, 1983, 1986; Paul, 1955; Steuart, 1975). These concrete results all follow from participant involvement in the research and change process. Furthermore, because we know that increased involvement and control over decisions is linked to health status and quality of working life, the action research process might be health-enhancing in and of itself (Caplan, Cobb, French, Harrison, & Pinneau, 1975; Cottington & House, 1986; Gardell, 1977; Golembiewski, Hilles, & Daly, 1987; Holt, 1982; Israel & Schurman, 1990; Jackson, 1983; Karasek & Theorell, 1990).

Despite these advantages, action research is not without dilemmas and tensions both for researchers and for research site members. In particular, as the involvement and control of participants in the process increases, the researcher role shifts in major ways—from expert to consultant to co-learner (Cummings, Mohrman, Mohrman, & Ledford, 1985; Elden, 1981a; Whyte, 1984). The manner in which action researchers anticipate and handle these multiple roles can have a significant effect on the design, the implementation, and the outcomes of the study (Lawler, Mohrman, Mohrman, & Ledford, 1985). Indeed, action research has been criticized recently as primarily an intervention "tool" that contributes little to social sciences theory building (Porras & Robertson, 1987).

The issue of roles is at the core of managing the research and action process. Although a considerable literature addresses the question of role in general (Schein, 1987), and numerous case studies describe specific roles played by researchers and participants (Gavin, 1985; Shea & Berg, 1987), there exists little concrete analysis of the issues and dilemmas faced by researchers and participants alike as they learn to

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assume more shared roles in the research process. (Important exceptions here are Cassel, 1980; Schein, 1987.) As Cummings and Mohrman (1987) point out, action research methods include both a "content" and also a "relationship" component. The content aspect refers to generating research questions, designing methods, collecting and analyzing data and so forth. The relationship component refers to the

> nature of the interactions between researchers and organizational members, including the role of researchers in the change process and their positions vis-a-vis other stakeholders. Because the relationship aspect of action research is relatively tacit and serves as a context for research content, it can easily be neglected in favor of the more tangible content component. (p. 302)

The purpose of this article is to analyze the relational aspects of researcher-participant "co-investigation" by sharing our experience in implementing one action research study aimed at understanding and reducing the deleterious effects of occupational stress. To address potential role-related dilemmas, we adapt the argument of Chavis, Stucky, and Wandersman (1983) to explore such issues as values and interests, skills and knowledge, control, political realities, and rewards and costs. Chavis and his colleagues describe citizen use of information obtained from a basic research project to benefit the community studied and argue that scientists need to "return" basic research to the community. Analyzing the potential gap between "scientists" and "citizens," they examine challenges quite similar to those faced by researchers and research site members in the conduct of action research. Chavis et al. suggest that in developing relationships between scientists and citizens, potential sources of tension arise when (a) the parties involved hold different *values and interests* on issues of time frame, the immediate use of the findings, action versus research, and ideology; (b) the multiple *skills and knowledge* required are not available; (c) the researcher has to give up some *control* over the project; (d) the *political realities* and ramifications are uncomfortable for researchers; and (e) the *rewards and costs* involved are not balanced.

These role-related tensions between organization members and researchers, arising inevitably in the course of action research, represent important sources of conflicting interests and perspectives. These conflicts may, on one hand, strengthen the "ecological validity" (Bronfenbrenner, 1979, p. 28) of the research product or, on the other, may seriously undermine the action research effort. Two key factors in determining the direction the process will take are (a) the researcher's willingness to share control and ownership of the process with study participants and (b) the researcher's ability to facilitate a process that allows participants to contribute their expertise and to enhance their competencies in research and change endeavors. We will describe and analyze our experience in each of the five areas listed above through examples drawn from the above-mentioned study.

After describing our particular approach to action research, we present a brief background on the project and an overview of the major processes in which we have been involved. This contextual and methodological information sets the stage for a discussion of our role and that of organization members in this research, along with role changes over time. This analysis includes both positive effects and limitations and

tensions that we have experienced. Finally, several general implications of shared roles in the conduct of action research will be suggested.

Writing and revising this article itself has helped us learn about these issues. For instance, action research emphasizes mutual involvement and control of the process, and Yin (1984) suggests that one important tactic for ensuring validity in case study research is review by key informants. Thus we shared an earlier draft of this article with the employees with whom we had collaborated.[1] Their specific reactions and comments, as well as our assessment of the experience of jointly discussing various issues, are presented throughout the article.

WHAT IS ACTION RESEARCH?

Action research is frequently used by applied organization change agents (Porras & Robertson, 1987). Its core method involves researchers and employees in a joint process aimed at meeting both research and intervention objectives (Blumberg & Pringle, 1983; Brown & Tandon, 1983; Lewin, 1946; Mergler, 1987; Pasmore & Friedlander, 1982; Peters & Robinson, 1984; Sommer, 1987; Susman, 1983). The action research approach of this study is a cyclical problem-solving process that includes diagnosing, action planning, action taking, evaluating, and specifying learning (Susman & Evered, 1978). Many different conceptualizations of action research exist (Peters & Robinson, 1984), as well as comparisons between action research and participatory research (Brown & Tandon, 1983). As described elsewhere (Israel, Schurman, & House, 1989), the present study combines several elements of these models. Our approach to action research has six key characteristics:

1. It is *participatory*. Employees are involved in most aspects of the research and action, and the issues addressed are generated by the employees themselves, not just by the theories of researchers (Brown & Kaplan, 1981; Elden, 1981b, 1986; Kemmis, 1983; Susman & Evered, 1978).
2. It is *cooperative*. Employees and researchers engage in a collaborative joint process in which both contribute their expertise (Kemmis, 1983; Peters & Robinson, 1984; Susman & Evered, 1978).
3. It is a *co-learning process*. Researchers both insert their theories and knowledge and also recognize and build on employees' "local theory," and that understanding is used by employees to change the organization (Elden, 1981b, 1986).
4. It involves *system development*. Through the action research process, a system (e.g., organization) develops the competencies to diagnose and analyze problems and to plan, implement, and evaluate interventions aimed at meeting identified needs (such as reducing work stress) (Kemmis, 1983; Susman & Evered, 1978).
5. It is an *empowering process*. Through participation, employees gain increased influence and control over their own lives (Elden, 1981b).
6. It achieves a *balance between research and action*. Researchers and organization members jointly determine and strive to maximize both their knowledge and understanding of a given phenomenon and their capacity to take concrete actions to change the situation.

We selected the action research approach for two reasons. First, it emphasizes establishing a coequal and interdependent relationship between researchers and employees. Second, its long-term intent is to transfer ownership and control of the process to employees themselves. The remainder of this article explores the relational issues that we and our colleagues from the workplace experienced as we operationalized these action research principles. In retrospect, these principles have guided our actions to minimize negative effects of the role-related dilemmas associated with issues of values, skills, control, politics, and rewards.

PROJECT BACKGROUND

The project site, a manufacturing plant located in southcentral Michigan, employs approximately 1,100 employees. Approximately 90% of the work force are hourly (nonsupervisory), 95% are male, and 80% are White. The hourly workers are represented by a major national industrial union, and the facility is part of a large multiplant local union. When our study began in fall 1985, the facility was a single plant in a particular division of the corporation. This facility subsequently was subdivided into two "plants" reporting to two different divisions. More recently, these two divisions were merged into one, although the plants continue under separate facility-level management. Each plant is primarily a machining facility with only a few assembly operations. Consequently, jobs are perceived as desirable. The average seniority of the hourly work force is very high (average = 20 years) compared with that of the work force at the company's assembly facilities. As is typical of older facilities in the process of transition to newer, more modernized products and processes, both of these plants contain a diverse set of technologies and managerial practices.

This project is based on a theoretical model that conceptualizes occupational stress as a process in which individual and environmental sources of stress (e.g., work overload, shift work, exposure to chemical hazards) are associated with a variety of physiological (e.g., elevated blood pressure, cardiovascular disease), psychological (e.g., tenseness, anxiety disorder), and behavioral (e.g., drug use and abuse) outcomes. These short- and long-term responses to stress potentially are moderated by factors such as social support, participation in and control over decision making, personality factors, biophysical characteristics, and genetic predisposition (for a review of the literature informing our model, see Israel & Schurman, 1990; Israel et al., 1989).

This action research project aimed to increase our understanding of the relationship between occupational stress, psychosocial factors (e.g., social support and participation in and influence over decision making), job satisfaction, and mental and physical health. Intervention objectives focused on meeting the immediate needs of the organization, such as reducing the sources of work stress and strengthening psychosocial factors that might mediate the negative effects of stress on health and quality of worklife. The intervention emphasis has been primarily on reducing the sources of stress in the work environment. Teaching employees how to manage or cope with stressful situations has been only secondary.

In unionized firms, our model of action research requires joint union and management sponsorship and support. Our initial entree to the site involved obtaining such joint commitment, and this continued to be an important component of our work throughout the project. For example, whereas the first 3 years of this project were funded by the National Institute on Alcohol Abuse and Alcoholism, Years 4 through 6 were supported by national joint union and management health and safety funds.

OVERVIEW OF THE PROJECT

Although a detailed description of accomplishments to date is not appropriate here (see Hugentobler, Israel, & Schurman, 1992; Israel & Schurman, 1991; Israel et al., 1989), a brief overview of the project will assist the reader in understanding the role-related issues analyzed in this article. After the researchers had gained entree and support from union and management, a representative from each organized a committee that would be involved in all aspects of the action research process. The makeup of this 25-person committee was approved by both union and management. The committee was composed of representatives of the different product areas in the plant, different job levels and functions, minorities, and women. We worked closely with this Stress and Wellness Committee (the name members selected for themselves), and it is this committee's and our role that we analyze in this article.

The committee actively participated in almost all aspects of the study, identifying sources of stress (stressors) in the workplace, developing a survey instrument administered plantwide to all employees, using survey results to identify major sources of stress in the plant, and then developing interventions to reduce these sources of stress. Based on the data generated through this research process, the committee selected four major stressors: lack of participation and influence in decision making, hassles with supervisors, conflict between producing quality versus quantity of product (tied in with equipment problems and concerns about job security), and lack of communication and information. Examples of the action strategies pursued are publication of a daily newsletter, establishment of information display cases throughout the plant, formation of a pilot project in one department using a team problem-solving approach to address major stressors, implementation of health awareness and screening programs (including changes in cafeteria food), and ongoing feedback to people throughout the plant on sources of stress and recommendations for how these sources could be reduced.

In accordance with our multiple goals and objectives, we used multiple methods to collect relevant data. Our quantitative and qualitative data sources were 42 semistructured in-depth interviews with top union and management and members of the Stress and Wellness Committee (SWC); three plantwide surveys ($n = 630$, $n = 300$, $n = 649$) that examined stressors, psychosocial mediating factors, and health variables; focus group interviews with SWC members, supervisors, and problem-solving team members; in-depth field notes of all meetings within the factory; and surveys of members of several groups involved in the project, including the SWC. The results

presented here draw primarily on these last two data sources (see Hugentobler et al., 1992, for a detailed description of the data collected and their analysis).

ROLE-RELATED ISSUES BETWEEN
RESEARCHERS AND EMPLOYEES

Values and Interests

Chavis et al. (1983) suggest that one possible source of tension between researchers and research participants is different values regarding interest, time frame, and the immediate use of findings. Value conflicts can emanate from various differences in people—including those in goals, interests, norms, power, roles, and culture—and also from changes in organizations and in society. This question of different values held by researchers and organization members includes deep-seated value or ideological differences and also conflicting norms and interests. Our experience suggests that such differences in values and interests are not always problematic. In fact, they can be a source of strength. Numerous factors shape these outcomes, including whether the value placed on different outcomes or processes is developed and held jointly or separately; whether a balance can be reached between the different interests represented; and whether the value difference is a matter of preexisting ideology. Following are examples of how divergent values and interests affected our role and that of SWC members in this project.[2]

Developing Jointly Held Values

Most Stress and Wellness Committee members had never served on a committee composed of representatives from all demographic, functional, and positional groups in the factory. Thus the first task was to develop jointly held values about the committee's purpose and processes (Cummings & Mohrman, 1987, consider this step important). During formation of the committee, we discussed the need for process norms regulating how the group would work together. Through brainstorming, SWC members identified and agreed on the following norms: Everyone participates, everyone's opinion is important, participants agree to disagree, everyone is equal, confidentiality is maintained, others' opinions are listened to, decisions are based on consensus, and there is open discussion. Although these jointly developed norms, and the values implicit in them, are congruent with our perspective on action research, it became clear during the early group meetings that people in this organization had not previously worked together on the basis of such norms. Initially, committee members with more access to information or authority (e.g., salaried members, hourly members who held special "program coordinator" positions, and union representatives) tended to participate more and have more influence than did shop floor employees. However, over time, this changed in two interesting ways. In the surveys used to evaluate SWC functioning (conducted in 1986, 1988, 1989, and 1990), committee members over time reported increasing trust and openness, shared participation, comfort in expressing

their point of view, and listening to others even if they disagreed. Over that same period, committee members also expressed more dissatisfaction that some members had more influence than others. We interpret these two seemingly conflicting trends as evidence of committee members' increasing internalization of the values of equality, openness, and mutual influence. In our role as facilitators of SWC meetings, we tried to create an atmosphere and process that encourages adherence to these norms. Particularly during the early stages of the group's development, for example, we facilitated discussions in which the committee assessed the extent to which it was operating in accordance with jointly developed norms and members identified changes they needed to work on. As the project progressed, when new people joined the SWC, committee members themselves (not the researchers) raised the issue of group norms and explained their importance to the group's work to newcomers.

A dilemma the group faced over time, however, was a growing recognition that these norms were not valued by others in the plants and did not reflect the culture of the larger organization. This became particularly evident in the implementation of the various SWC interventions, where less emphasis was placed on operating in accordance with these norms, both by the committee itself and by others involved. The values reflected in these norms operated mostly in the committee's internal process. This suggests the importance of direct participation and the difficulty of "diffusing" these values to others in the plant who have not experienced the same lengthy learning process that the SWC itself went through.

Balancing Different Interests

Although our initial "agenda" was to introduce the action research process, SWC members readily adopted a research-oriented approach. They especially liked the plantwide survey, stating that it would allow everyone to have input into identifying plant needs and that this, in turn, would allow evaluation of the effectiveness of interventions in reducing sources of stress. Committee members often stated that a strength of this project is the fact that it has a research component, not merely an action one. In addition, committee members began to collect data to guide their own efforts. For example, in the second plantwide survey, they asked employees what types of information they needed to do their job and used these findings to revise the weekly newsletter. SWC members also conducted a group interview with members of the pilot project team concerning accomplishments and barriers and used these findings to develop recommendations for establishment of successful problem-solving teams throughout the plant.

However, differences over the research and action components of the project sometimes created tension between the university team and the employees. Significantly, the issue never became research versus action but, rather, concerned emphasis and timing. On several occasions when we suggested collecting additional data (e.g., a follow-up survey in the product area where the pilot project was being conducted and an evaluation survey of participants in a smoking cessation class), the SWC decided not to do so. Committee members were reluctant to conduct additional surveys because they felt employees had not seen enough action as a result of previous data

collection. In addition, SWC members were not convinced that the further information was going to be helpful. Thus there were points at which our interest in and the value we placed on data collection, primarily for basic research and evaluation purposes, went beyond what the committee members considered valuable, although this boundary was never clear-cut.

This dilemma relates in part to differences in time frame that might exist between researchers and employees. The collection, analysis, and feedback of results from the first and second plantwide surveys was a very lengthy process. The project had been in operation for 18 months before any concrete action strategies based on the data were discussed and implemented. SWC members found this time lag frustrating, especially because their co-workers were asking them what were they doing on the committee. Hence, although committee members believed in the value of research for guiding and evaluating the interventions, research was viewed as a barrier when it appeared to delay action and get in the way of carrying out programs and seeing results.[3] As one SWC member wrote in response to the question on the evaluation questionnaire about what he or she dislikes about the way the researchers facilitate the meetings: "[When they] dwell too much on research and not enough on action," and "sometimes research for the university gets in the way of the original purpose of the Stress and Wellness Committee to help." When we shared these results at a subsequent SWC meeting, we recognized this as an important issue and asked the group if it was a problem. One committee member offered, "I think as a committee we realize that it is, but we barrel our way around it." Another member suggested, "It depends on where you're at. Being on the floor, I would prefer to do something benefiting the plant," thus implying that action is more beneficial to the employees than is research. Thus, even within an action research effort, the different value placed on research and action has an impact on the role that employees and researchers play, and balancing different interests is an ongoing part of the process.

Differences in Preexisting Personal Values

A final point concerning values and roles relates to something we initially viewed as "ideological" differences between ourselves and the committee members, and illustrates the importance and value of co-investigation. When we shared an earlier draft of this article with the committee, their very first and strongest comments were on the following paragraph:

> Early in the project, we found ourselves in an unusual role dilemma. As university researchers, we were perceived as the "experts." As women, we were members of what, in this plant, was a clear minority group in a male dominated work setting. This raised the issue of how to handle two different power dimensions of our dual roles as experts and as women. While our goal was to create mutual ownership of the process, this did not mean that we wanted to give up our right to have some influence. It became clear early on, from our being referred to as "girls" for example, that our predominantly female team had a quite different perspective on women in society than did the mostly male committee. Given our stated objectives and aims for the project, we as "outsiders" did not consider it to be appropriate or effective to try to address these value differences. Thus, we elected

not to directly confront what have sometimes been uncomfortable, even annoying, situations for us. However, as we became more familiar with and established greater trust with committee members, there have been several conversations (usually after official meetings are over) in which we have openly discussed some of these issues. Although we have never directly confronted issues of sexism, we believe that through these informal discussions and role modeling, we have seen changes. For example, we are now referred to as "ladies," and on several occasions committee members have apologized for comments that other employees have made about women that they thought we might be offended by. Thus we believe that while on the one hand, as social scientists engaged in action research, it is important to respect the value differences between us and the people we work with, the development of a mutual, trusting relationship on the other hand, provided the opportunity for us to express our point of view concerning some of these differences as well.

Reactions by Committee Members

At the first SWC meeting in which we discussed this article, the first committee member comment was "I thought you 'ladies' did a nice job." This remark was followed by considerable laughter. This statement was the beginning of an extensive, open discussion regarding the text given above. Several members indicated that they use the term "girls" when referring to family and friends and that they were concerned that we appeared to have been "offended," which was certainly not their intention. In a similar vein, other comments were "I'm surprised it's even an issue," "I thought we're like family," and "I thought people of your stature wouldn't assume a gender reference—that this wouldn't be a concern." Another member, however, asked if there was widespread use by the committee of the term and stated, "I hope I didn't ever refer to you as 'girls'!" We explained that we have some values and beliefs in common with them, as well as others that are part of our "university culture" that are different from theirs, and that we wanted to respect their values. One of the authors stated that she had noticed that the committee had changed, over time, the way it referred to the university team and that we had interpreted this as a growing sign of respect for our competence. Several committee members agreed that such was probably the case.

Several members suggested that we should have discussed this topic earlier in our work together. We concurred but indicated that it would have been a mistake to confront the issue at the very outset of the project. The committee agreed, as one member stated, "If you had done that it would have been a case of you setting the ground rules. 'This is how we're gonna operate.' You would have run into a brick wall." During this discussion it became clear to everyone that "language" matters. It also was evident that a variety of different meanings were associated with the term "girls." This discussion was the most candid by far that the group ever had about values. It identified differences in values between researchers and employees and also among employees themselves. Furthermore, the sincerity and frankness of this conversation suggested a level of trust on the part of the committee and a readiness to have addressed this topic earlier in our process. By not initiating such a discussion in a more timely fashion, we may have delayed enhancing our mutual learning and respect. In this same discussion, committee members called attention to our use of the term "worker" to refer to them and expressed their dislike for a term that, in our vocabulary, had positive connotations (see Note 1).

Implications for Theory and Practice

In action research, all parties involved jointly define the values that will guide their actions (Emery, 1976). This principle applies crucially to the development of and balancing of values concerning the processes involved in the conduct of action research. Thus, for example, it is necessary to jointly develop ground rules and guiding norms for a steering committee's operating procedures and to develop a process whereby value conflicts (e.g., emphasis on action or research) can be addressed jointly by researchers and research participants. With regards to differences in preexisting personal values or ideology, it is critical that researchers adhere to Freire's (1976) position: Outsiders/researchers should not take a "cultural invasion" approach in which they communicate (intentionally or unintentionally) a belief in the superiority of their values, belief systems, ideology, cultural norms, and practices over those of the participants with whom they work. This issue of differences in values and interests that might exist and of tensions that might arise among all participants in the action research process is one that has to be examined and dealt with on an ongoing basis. This is only possible if the parties involved have mutual respect for the differences that exist.

Skills and Knowledge

A second issue raised by Chavis et al. (1983) concerning the relationship between "scientists" and "citizens" in the application of basic research findings is the need for researchers to have multiple skills, not only in research methods but in areas such as organizational, clinical, educational, and community psychology. Skills in group process, training, team development, and communication are especially crucial in the action research effort, given the emphasis not only on translating results to the people involved but also on involving them in all phases of data collection, analysis, translation, and program planning and implementation. Furthermore, within the action research approach, it also is vital to draw on the existing knowledge and skills of organization members, as well as to engage in education and training with them regarding the collection, analysis, interpretation, and dissemination of research findings, and the translation of research results into action strategies. The following are examples of this use of multiple skills and of a co-learning process that involves both researchers and organization members.

Developing a Research Team

This action research project required a multidisciplinary team with (a) the requisite methodological skills—both quantitative and qualitative research methods; (b) content knowledge, such as work stress, organizational behavior and change, public health, occupational health and safety, labor and industrial relations; and (c) process skills, such as group facilitation, training, consultation and the social and political skills necessary for developing and maintaining a relationship with the action research setting (Cummings & Mohrman, 1987; Gottfredson, 1984; Israel et al., 1989). We

were able to assemble such a multidisciplinary team. A critical point here is that we did not merely identify individuals with particular knowledge and skills who would be responsible for separate aspects of the project. Rather, we identified persons with distinct as well as overlapping areas of expertise, all of whom were committed to the development of an action research team with shared roles and responsibilities. For example, some team members are well-versed in quantitative research methods, others specialize in qualitative methods, and several are highly skilled in both approaches. Our ability to develop and work collaboratively as a multidisciplinary team has been due largely to the mutual respect we have for each others' capabilities, and our adherence to the operating norms defined by the Stress and Wellness Committee. Although the team approach itself proved very demanding of time and energy, we consider it one of the strengths of the project. It is a major reason why we were able to successfully carry out the various research and action tasks in a dynamic, turbulent setting.[4]

Conceptual Model of Stress

During the first several meetings of the SWC, we designed an experiential activity in which committee members described situations at work in which they experience stress, how it makes them feel, and how they typically respond to the perceived stress. Through discussion, we helped the group generate a model of stress and health that reflected their "local theory" of organizational stress. This theory actually turned out to be quite similar to the conceptual framework on which this study is based. Thus, through the use of experiential learning and group process principles, the committee drew on its expertise and developed a model of the stress process that extended beyond individual determinants and the concomitant need for individual behavior change, to include broader organizational and societal factors. From this group process we gained a better understanding of the stress process in this particular organization. The items in the SWC model became the basis for questions included in the three plantwide surveys. For example, committee members identified stressors outside of work that had an effect on work stress and health and decided that these should be included in the survey. Although we were aware of the role of nonwork sources of stress in an overall stress model, we initially assumed that we would not be permitted to examine these nonwork phenomena as this would be perceived as intrusive. It was only through suggestions of employees themselves that this area became a component of the study. This input in turn has added to the body of knowledge on the relationship between work and nonwork stress (Klitzman, House, Israel, & Mero, 1990).

Analysis of Survey Data

In addition to drawing on existing employee expertise, another aim of action research is the transfer of skills, especially in areas of research methods, problem solving, and program planning. Our strategies for "training" members of the SWC to interpret the results of the first survey will serve as an example.

Following administration of the first survey, we conducted preliminary analyses of the data. Given the substantial amount of data, the committee asked us to prepare a report summarizing key findings. As a team, we struggled to make the written and graphic presentation of these results as concise and understandable as possible. To make what became a 100-page document accessible and useful to committee members, we used a small group task force design and planned a 2-day "offsite" meeting to analyze this report. Prior to the meeting, we created several subgroups within the committee, each of which represented the diversity of knowledge and of experience that members had in dealing with such data. We gave a "homework" assignment to each committee member: to read and summarize the findings in a single section of the report that would be the focus for their subgroup. At the offsite meeting, the first task for each subgroup was to list and discuss the findings and to clarify any questions. Different members of our research team facilitated these small work groups. Following these small group discussions, each group was responsible for explaining the findings from their section to the entire committee. Without exception, the group-generated summaries were excellent overviews of key findings.

The subcommittee responsible for examining the correlational results had the most difficult time. We had anticipated this, and rather than presenting a correlation matrix in the report, we used various methods of visually illustrating the correlations. As it turned out, some members of the committee indicated that they did not understand these illustrations, others found them very helpful, and several other members suggested that they would rather have seen the numbers themselves (actually included in an appendix to the report).

This example indicates both the difficulty and importance of feeding data back in a way that will be understandable for all persons involved. Particularly within an action research project it is necessary that participants understand and "own" the data. Thus the research team needs to develop strategies that build on the knowledge and skills of the people involved. During a subsequent offsite activity in which the committee was trying to determine the most important sources of stress to work on, one member suggested equipment breakdowns and commented that "equipment breakdowns affect lots of different facets of work life," to which another member replied that he "could not buy in" to this assertion and (referring to the illustrations in the report) stated that "equipment breakdown has a weak relationship with negative outcomes," especially as compared to other stressors. Several similar interchanges convinced us that we had been able to present the data understandably in a way that enhanced the knowledge and skills of committee members.

Implications for Theory and Practice

The relationship between researchers and research participants in action research is affected by the extent to which multiple skills and knowledge areas exist and are further developed and used by all persons involved. The research team needs to recognize and value the "popular knowledge" of participants—that is, their individual and collective knowledge based on personal experience (Gerschick, Israel, & Checkoway, 1990). In this project, for example, the research team has extensive knowledge and

skills in research methods, group process, and program planning, whereas committee members know what it is like to work within the organization—its structure, behavior, and culture and how to collect data effectively and to design interventions appropriate to the setting. The research team's role is to facilitate a process that uses organization members' knowledge to develop "local theory" that can guide both research and action. This co-learning process, in which both researchers and participants insert their theories and knowledge, is a key component of action research (Elden, 1981b, 1986).

Control

Another issue raised concerning the relationship between "scientists" and "citizens" is that the researcher may give up some control over the project when citizens become involved (Chavis et al., 1983). Although people conducting basic research might consider this a dilemma, a joint cooperative process in which researchers and organization members share control is a key dimension of action research. Control has been conceptualized according to different levels (e.g., individual, organizational) and dimensions (e.g., actual vs. perceived, content vs. process) (Israel & Schurman, 1990; Lewis, 1987). Our focus on control is in a sociological or extrapersonal sense—control aimed at influencing events and situations in the environment (Holahan & Wandersman, 1987; Sutton & Kahn, 1988). Given our focus on the role of the SWC, our concept of control emphasizes the influence of individual members within the committee, as well as the collective control and influence of the committee within the factory as a whole. The shared control issue surfaces in the content and the process of all aspects of both research and action. Furthermore, our concept of control includes the act of participating in decision making and also the effects of such participation on increased influence and control (Israel & Schurman, 1990). The following examples illustrate the extent to which shared control was achieved in this project and the effects of this achievement.

One major dilemma of action research for the researcher is determining how much influence, if any, one is entitled to. In any field study, researchers have limited control over the setting (Schein, 1987; Seiber, 1982). For example, our role as researchers in facilitation of the Stress and Wellness Committee meetings changed over the course of the project. Initially, the project was perceived as "ours" because we had obtained federal funding to conduct the research. In the beginning, we took the major role in setting the agenda, planning and conducting meetings, and fostering group development (e.g., encouraging participation and open communication, raising questions to be addressed, fostering consensus decision making, and evaluating meetings). However, recognizing our control over this process, we were careful to provide facilitative process questions or suggestions on how the group might proceed; we did not provide directive content suggestions on decisions the committee should make. Although we controlled the conduct of the meetings, we did not control committee actions. We felt this approach was crucial for establishing mutual ownership of the project. However, at times we felt that our lack of influence on content issues had negative consequences, as the following example shows.

After analysis of the results of the first survey, the SWC decided to share the results with everyone in the plant. We concurred with this decision and facilitated a discussion of how best to share this information. Different committee members suggested numerous strategies; the committee examined the advantages and disadvantages of each. Toward the end of the meeting, following a long and somewhat heated discussion, one committee member recommended implementing the approach least favored by everyone in the beginning. Out of exasperation, the group hurriedly agreed, even though two members continued to express reservations. Throughout this discussion, we withheld our opinion that the committee's decision (to send a descriptive packet to each employee's home containing charts and graphs that were not self-explanatory) was an ineffective method. Not wanting to be overly directive, we were cautious in our attempts to exert influence. Fortunately, sending out these materials had no negative effects, but we felt that an opportunity to clearly communicate the findings had been missed.

Following this event, we discussed decision-making processes with the committee, pointing out that we thought a consensus approach had not been followed in this instance. The committee agreed that even though this process had not been ideal they were glad to have "pushed" to arrive at a decision. The committee then decided that the mailed distribution of the handout packet would be only the first step in providing feedback. The two dissenting members had made this very recommendation at the initial meeting.

This incident, along with others, convinced us that we needed to change our role in meetings so as to voice our opinions and directions. We also concluded that the necessary trust and rapport had been established so that committee members were comfortable disagreeing with us and vice versa. Thus we made a conscious decision to change our role and shared this decision with the committee. The following example of another committee decision indicates the effects on the committee of our being more directive. It also shows our occasional discomfort at not wanting to assert too much influence, on the one hand, but actually experiencing lack of control, on the other.

During the third year of the project, when the committee was working on several organizational change level interventions, we suggested that it consider conducting some highly visible, beneficial, and enjoyable activity or event. Co-workers had frequently complained that they did not know what the SWC was doing. Further, past experience in organizing problem-solving teams indicates a need for tangible results (Bushe, 1988; Cunningham & White, 1984). Initially, we discussed with the committee the possibility of conducting a "health fair," and a subcommittee was formed to explore this further. The subcommittee met numerous times on its own, visited other plants conducting health promotion programs, and then recommended to the SWC that it develop and implement a health awareness and screening program in the plant. The subcommittee suggested working with the plant medical department to provide cholesterol and blood pressure screening, hiring an outside vendor to administer a health risk appraisal questionnaire, and sending a monthly health promotion newsletter to employees' homes. The subcommittee was prepared to write a proposal to obtain funding for this program.

Although we were encouraged by the subcommittee's initiative and control in this process, we were concerned by what we (and others) consider limitations of traditional health promotion programs (Fielding, 1984; Israel et al., 1989; McLeroy, Green, Mullen, & Foshee, 1984; Sloan, Gruman, & Allegrante, 1987). Furthermore, we felt that a major effort in this area would direct the committee's energy and attention away from the broader organizational sources of stress.

During the 3 months when this issue was a major SWC focus, we did not spare words in sharing our reservations about the health promotion program. We were frustrated by our inability to get committee members to examine the research "evidence" indicating the major limitations in the approach they were adopting. Instead, they turned the tables on us, providing their own contrary "evidence" by collecting data from program coordinators at other plants engaged in similar programs. It became a struggle over whose "data" were more powerful. In the end, they prevailed.

After this incident, we were confident that playing a more assertive role did not result in our dominating the process. When it became clear that they were going to proceed with a health promotion program, we decided to try to influence the project design and to get the committee to understand the program's limitations. In accordance with our suggestions, the final proposal (unlike the initial plan) included the following elements: obtaining permission from employees to notify their physicians and to follow up with those whose test scores had indicated high blood pressure or cholesterol levels, mention of providing health promotion classes, and a strategy for documenting participation and results in the screening and follow-up.

The committee obtained $40,000 to carry out this project, and over 60% of the plant employees participated in the screening. Somewhat to our surprise (but not to the committee's), this project was viewed throughout the plant as a tremendous success. Beyond the high initial participation rate, 33% of those with borderline or high cholesterol levels at the initial screening came in for a recheck after 12 weeks, and approximately 70% of these had decreased their cholesterol level an average of 14 points. Also, committee members reported that the screening and health awareness newsletter had become a major focus of conversation across the shop floor. As one member stated, "We talk about lack of communication as a problem. Well, a bonus to us with the stress and wellness thing, it's a common thing to talk about. It's like a beehive down there. They're talking. The guy's not behind a machine all isolated, but talking." Furthermore, over 70% of the employees who completed the third plantwide survey ($n = 649$) indicated that it was "somewhat" or "very" true that the newsletter and screening program provided useful information about their health. In response to numerous complaints during the screening about the poor quality and nutritional value of the cafeteria food, the SWC was also successful in having several changes made in the food service (e.g., increased hours, monthly menus, greater selection of low-fat, low-cholesterol food).

In our discussion with committee members about this section of the article, they made such comments as "I never knew that you had that feeling that you lost control" and "I've sensed power struggles, but felt that you guys maintained control pretty well. . . . At times I thought you were trying to use your expertise in the field to gain

control.[5] You were very good at getting points across." Another member provided a somewhat different perspective: "It's a matter of a good facilitator. You're leading us through a process—not trying to sell us." Clearly, our own ambivalence on this issue understandably has been perceived differently at times by members of the committee.

Thus, although as action researchers we advocate joint process and control between employees and researchers, at times we have experienced discomfort at not being in control or not having our expertise listened to. Nonetheless, the final product of this health promotion program was enhanced by the joint influence of the parties. Given the enthusiastic response of others in the plant, we had to learn once again to "trust the process," to accept the knowledge of the committee, to recognize our own biases, and to accept the difficult lesson of, as one committee member noted, "I told you so!"

In some areas, we have not shared control of the process. For example, all quantitative analyses of survey data have been conducted by the university team. Given multiple project goals and the limited time that organization members were able to devote to this project, we decided not to "train" employees in these aspects of the research. Instead, we helped them develop skills in the interpretation of quantitative research findings in order to engage in joint learning and problem solving.

Another example of nonshared control is perhaps of more concern. Committee members have not been directly involved in the ongoing collection and analysis of field research notes. Although we shared observations on the group's development based on field notes and the results from the committee's yearly evaluation survey, the committee spent little time explicitly observing and analyzing its own learning process. Thus, while we, the research team, spent considerable time reflecting on the committee's efforts and on how to effect organizational change, without their direct involvement we may have missed an opportunity for considerable learning and development. Realistically, however, it is unlikely that much attention would have been devoted to this subject even if we had tried to direct more focus on it. The committee initially became somewhat impatient at spending time on process rather than on task activities. Had we pushed in this direction, an additional source of tension between the committee and ourselves would have arisen. Even so, the committee itself became more reflective about its processes over time. For instance, joint discussion about this article served as a catalyst for such reflection.

Given our emphasis on equalizing and enhancing committee members' influence and control over decision making, certain results from the committee's yearly evaluation surveys are instructive. At the individual control level, on the 1990 questionnaire 69% of the committee members (compared to 50% in 1989) indicated that they were "very satisfied" with their influence over SWC decisions. In addition, compared to previous evaluations, fewer members reported being bothered by some individuals having more influence than others (85% reported that they were not at all bothered). At the organizational level in 1990, more than 80% of committee members (compared to 43% in 1989) responded that the SWC had enough influence in one of the factories. They also indicated that the SWC did not have enough influence in the other factory (55% reported "not too true" and 45% reported "not at all true" that they have enough influence). This difference in perceived SWC influence in the two factories reflected

the reality of what the committee was able to accomplish in the two plants. Unfortunately, evaluation questionnaires contained no items directly addressing the issue of shared control between researchers and committee members. However, several questions are related. All committee members (100%) indicated that the amount of direction the staff provided to the committee meetings and the project overall was "just about right" (as compared to "too much" or "not enough"). Furthermore, more than 74% of members reported that the staff "very much" encouraged open communication and participation and helped to solve problems that occur.

Implications for Theory and Practice

As stated earlier, action research is an empowering process in which, through participation, employees gain increased influence and control over their lives (Elden, 1981b). It also is a collaborative joint process; hence the issue of shared control between researchers and research participants. The concept of empowerment has been examined in diverse disciplines with widely varied definitions and assumptions (Freire, 1970; Kindervatter, 1978; Rappaport, 1987; Wallerstein, 1988; Zimmerman, in press). Empowerment refers to the ability of people to gain understanding and control over personal, social, economic, and political factors in order to take action to improve their life situations (Gutierrez, 1988; Kindervatter, 1978; Zimmerman & Rappaport, 1988). As discussed elsewhere (Israel, Checkoway, Schulz, & Zimmerman, 1992), empowerment often is defined at different levels of analysis and practice (e.g., individual, organizational, community). We suggest that in using an action research approach in an organizational setting, both individual (psychological) and organizational empowerment are relevant constructs. Briefly, individual empowerment refers to an individual's ability to make decisions and have control over his or her personal life (Israel et al., 1992). Organizational empowerment is a combination of processes that enable individuals to increase their control within the organization and enable the organization to influence policies and decisions in the larger community (Israel et al., 1992). At both levels, the role and conceptualization of power is a critical dimension of empowerment. This concept does not imply that power is a zero-sum commodity: increasing the power of one individual or organization does not imply decreasing the power of another (Bartunek & Keys, 1982; Gerschick et al., 1990; Israel et al., 1992; Swift & Levin, 1987; Tannenbaum, 1968). Rather, power is a resource that can be generated and expanded. This point applies both to the research team and to the larger organization. Hence the argument for shared control presented here is consistent with the concept of empowerment.

Political Aspects

Numerous authors have recognized that returning research data and sharing other roles with "respondents" has political ramifications with which some researchers are not comfortable and which they may not have the skill to handle (Chavis et al., 1983; Myrdal, 1969). We agree with Rappaport (1977) that both inactions and actions of researchers are political and with Gaventa (1980) that some research roles may face

political opposition both in the research setting and in their own institutional base. Thus, in conducting action research, researchers need to be aware of the effects of their data and actions on the system in which they are involved and of the impact the political dimensions have on what researchers can accomplish and how. Toward this end, the participation of SWC members and the joint involvement of union and management were critical.

For example, the political trust and involvement needed to carry out this project would never have been possible had it been perceived solely as the domain of the union or of management or of the university. Through our joint approach, we have been better able to understand political dimensions that have an impact on what is feasible and needed within the plant, and we designed our data collection and action components accordingly. At times this has slowed down our process; for example, the committee sometimes faced time delays in scheduling joint meetings with union and management leaders. However, we often have been able to "weather" political conflicts because we and the committee could go to the union and/or management for their support. Once again, it was not the research team alone that engaged in these activities. Committee members were greatly involved and usually were responsible both for identifying potential political pitfalls and for helping to avoid or resolve them.

More specifically, our initial intention was to form an action research committee of 10 to 15 employees interested in stress in the workplace, representing each product area and shift in the plant, each worker group—men, women, and minorities—and union and management leaders. In accordance with the conventional wisdom in organizational change theory (Bushe, 1988), we sought to enlist key decision makers from both management and union to serve on the committee. However, union and management representatives who worked with us to constitute the committee emphasized that it should not be "top heavy," that it should include a substantial number of both hourly and salaried employees from the shop floor. These representatives indicated that shop floor members should be "well-respected by their peers, noncontroversial, people who can get information out to others in the plant, and people who are considered to be informal leaders." This view was based on previous experience, where key union officials or managers were too busy and did not attend meetings and where shop floor employees distrusted such committees because they did not see many results. Thus, even though the original SWC (with 25 members) was larger than we had wanted and did not include some roles that we would have preferred, we respected employees' knowledge of what was politically appropriate for their organization and deferred to their expertise. The result, in our judgment, was that the committee composition was a major factor in the project's longevity.[6]

As another example, after being in the plant only several months, we were asked to present an update on the project to top union and management leaders. Several committee members instructed us on what we should say:

> Be sure and . . . include that committee people are representative of the plant, selected by both union and management, that the committee wasn't going to be undercutting the union contract, that the project represents a real effort to help both hourly and salaried employees to deal with stress, both

in and out of the work situation. It's a grass-roots program and people need to be realistic about what a program like this can and cannot accomplish and that this is not just another project . . . that this is long term—not here today, gone tomorrow—[with] far-reaching implications. . . . [It] needs to become a way of life on the shop floor, involving individual, management, and union concern to address these issues.

Thus, following the committee's advice and understanding of the political arena, we were able to avoid mistakes that could have created stumbling blocks for us as outside researchers.

Another point that we did not understand clearly at the outset was the role of the university as a "third party" to a joint union-management initiative. Coming from a university, we often had been perceived initially as outsiders and treated with some degree of suspicion. We recognized the history and legitimacy of such concerns, particularly since university researchers often are allied with management, and tried to conduct ourselves in a manner that would minimize them. However, during the early phases of this project, committee members emphasized the value of university involvement. Specifically, we were told that one reason why they were willing to become involved and why they felt this effort had a chance to succeed where others had failed was the university's involvement as a "neutral" party—their words—and the fact that it was not just a union or a management or a union/management project. For instance, during a planning session for a presentation that the committee gave to top union and management, the committee requested that we be there because, as one member stated, "You could be a neutral party in case things get shaky." Although we do not consider ourselves "neutral," at least on important values, we came to understand that in this particular setting we did, relatively speaking, fit this description in that we were not aligned with either the union or management.

Further evidence of the importance of this perception of the university and of the value of the joint union-management approach was provided by responses to an open-ended question on the committee evaluation questionnaires. We asked committee members "How is this project different from other programs that you have been involved in at the factory?" In addition to several comments about the group working together in a team approach, numerous remarks were made about the longevity of the project and its jointness, such as "It is still in existence after 4 years," "It's still alive and doing things," "It is not based on one-sided self-interest," "It has greater union and management involvement," "It seems to be quite durable due in a large part to the University of Michigan facilitators' persistence and influence," and "There were no real legitimate joint products before it, only [name of one program] and it was dominated by politics."

Similar points were raised in our discussion with the committee regarding the draft of this section of the article. One member commented, "There is a survivorship here among those of us that have remained, a sense of trust that doesn't exist with other committees. I think you need to express that somehow. If you're trying to get people to believe, you've made us believers." Other members noted that within this political environment, and with the numerous management and union changes that have occurred, the project "has become a sacred cow," "has come across as very whole-

some," "very noncontroversial," and that although "we know how the evil side of politics can be used to discredit something" this has not occurred with this project.

Implications for Theory and Practice

The failure of classical organization development (OD) theory and practice to attend to the inherently political nature and power dimensions of organizations has received extensive criticism in the OD literature (Bradshaw-Campbell, 1989). In brief, critics charge that OD theory, relying on functionalist views of organizations, defines power as an objective aspect of reality and emphasizes its structural and quantitative aspects, ignoring the political processes through which power is socially constructed as different interest groups pursue their goals. Consequently, OD practitioners and techniques can become unwitting tools, helping those already in power to maintain their control over organizations.

Despite this critique of OD theory, there has remained a wide gulf between, on the one hand, normative and theoretical arguments about the need to attend to power dynamics in organizations, and, on the other, practical approaches to intervention that can survive the political process long enough to lead to redefinitions of existing power arrangements. Our experience exemplifies an approach that can create a foundation for sustainable intervention.

We agree with Mirvis and Seashore (1979) that the task of action research is to create "ethical relationships" through incorporation of the perspectives and interests of all organization members into the change process. Our approach to action research has centered on creating such ethical relationships between and among ourselves and SWC members and on building on these relationships as the foundation for organizational change. Obtaining the support of both union and the management independently, while taking care not to be perceived as aligned with either party's vested interests, was an important first step. The plant-level union committee has been able to use its influence consistently to provide stability and continuity to the SWC project in the face of extremely high managerial turnover as well as strongly contested local union politics. The SWC has been able to influence the union because most of the hourly members of the committee have been union activists and understand the union's political process. Understanding that political process has allowed the SWC to survive the intricacies of a highly politicized context long enough to learn how to initiate change effectively in this setting. Survival is a crucial issue, as time has emerged consistently as a major variable in empirical studies of the effects of interventions (e.g., Jackson, 1983; Likert, 1967). Even under optimal conditions it takes time for action research to produce its effects. This case was far from optimal; the fact that we managed to survive at all is considered by SWC members as a "major accomplishment." Only during the sixth and final year of the project were there strong indications that the SWC's goals and processes may become incorporated into the larger plant organization (see Israel, Schurman, Hugentobler, & House, in press). Our ability to sustain this intervention is directly attributable to our incorporation of the political and power dimensions of organizations into our overall action research strategy.

Rewards and Costs

Chavis et al. (1983), discussing the relationship between "scientists" and "citizens," address the potential rewards and costs for researchers applying their results to practice—rewards and costs received from colleagues, from the researchers' institution, and from funding agencies. Our experience with the SWC suggests two further points. First, this potential dilemma is accentuated when taking an action research approach. Second, both employees and researchers are confronted with this issue.

Researchers know that action research is not valued as highly within the academy as are more traditional research approaches. For instance, we have been criticized for not using an experimental design and especially for not having a control group. To the contrary, our nonexperimental design choices are both necessary and a strength of this approach, given its purpose and setting (Bullock & Svyantek, 1987; Israel et al., 1989). One colleague suggested that because we do not have a control group "we could in no way contribute to the body of science and knowledge." Although this certainly is not the view taken by most of our colleagues, we recognize that our approach is not considered mainstream within academic circles.

Federal funding sources also are more likely to favor traditional research methods rather than innovative approaches such as action research. Although initially we did receive federal funding, a major critique of our renewal application concerned research design. Fortunately, we did receive joint union and management funds for project continuation.

Another cost of action research is the tremendous time demands placed on the research team. Like the traditional academic researcher, we collect and analyze data for professional audiences. However, our further tasks have been to provide feedback and reports of research findings to employees in the plant and also to facilitate the design and implementation of interventions based on data collected. For the researcher, professional "recognition and rewards" come primarily from publications in peer-reviewed journals, and our time for this has been reduced by these other activities.

Employees involved in an action research project also face costs. Co-workers of some SWC members complained when they attended meetings because it created a personnel shortage in their work area. In one instance, a committee member decided to cease participation rather than to continue creating problems for his co-workers. When we asked committee members on the evaluation questionnaire "How, if at all, has the Stress and Wellness Project influenced your own work life?", several members stated that it had added to their work load and stress level. Furthermore, involvement in the process may raise expectations that change will occur, and when it is slow to happen, feelings of frustration and lack of control may result. Thus negative, unintended consequences may be associated with employee participation in action research, and action researchers need to consider this issue.

Fortunately, employees have experienced rewards as well as costs. Several committee members have changed jobs so that their full-time duties now entail being a member of a team engaged in problem-solving activities. Although we do not claim that their SWC involvement "caused" these changes, we believe that their documented

role on the SWC provided them an opportunity to learn and apply new skills and to take on additional responsibilities, all of which may have contributed to their job changes. Furthermore, in response to the above question on the evaluation question-naire, most committee members were positive (e.g., "improves how you deal with things," "I have been more conscientious about others," "made me more conscious of existing conditions and that recognition is the first step to a cure").

For us, the rewards have far outweighed the costs. Being part of a process of mutual learning and exchange has given us a sense of personal satisfaction, as we believe that this process is contributing both to a better basic understanding of the dynamics and effects of occupational stress and to concrete action steps that have the potential to improve working conditions for the employees in the plant. Although the latter changes are not yet a reality, we are encouraged to believe that such benefits will be obtained. Furthermore, we are committed to using our writing to increase the knowl-edge and understanding of the action research method, with the hope that it may begin to be better valued.

Involving Employees in
Writing About Action Research

As noted, our goal was to involve the employees in all aspects of the action research process. Thus after having written the first draft of this article, we shared it with committee members and integrated their remarks throughout this revised version. This experience enhanced the content and clarity of the article and also enabled us to engage in in-depth conversations about the project process and our respective roles. The draft article posed sensitive issues that we had not previously discussed with the committee (e.g., use of the term "girls," control dynamics). Our reluctance to discuss these issues partly concerned the committee's preference for work on tasks rather than for discus-sion of the process of conducting action research. Further, of course, we were uncertain about how the committee would respond to our interpretations. However, the wide variety of divergent opinions expressed by committee members, the humor used, and the pointed questions they asked made clear the level of trust and the intensity of shared feelings. These conversations went beyond the issues addressed in this article, and included discussion of numerous topics. These ranged from understanding the history of the project and planning for its future to the assumptions underlying scientific methods.

After incorporating committee member feedback, we shared the revised draft of the article and invited reactions. Their overall positive response is reflected in the comments of two members: "It gives us more ownership" and "I always thought there was kind of a scientific arrogance in these articles, people's expertise should be respected. I think the integration of our feedback takes the arrogance out of it." This experience serves to underscore the necessity of involving employees in reflecting on the process—another key element in institutionalizing action research into the work setting.

CONCLUDING REMARKS

Whether engaged in basic, applied, or action research, researchers face numerous issues when involving "citizens/employees" in the research process. Some researchers consider these issues as dilemmas or challenges. Although we have experienced some role-related tensions, the relationship between researchers and employees in this action research effort actually has minimized problem areas. Thus these issues can be viewed as beneficial elements of the action research process. Therefore, as researchers committed to enhancing knowledge and improving working conditions, our experience suggests the need to engage employees in ways that take into consideration values and interests, skills and knowledge, control, political aspects, and rewards and costs as outlined below:

- *Values and interests*: Researchers and employees need to jointly determine areas of interest and operating norms. They need to recognize that the value placed on research and on action may differ and that any such differences should be respected. Furthermore, researchers should neither seek to impose their values and culture on those with whom they work, nor should they abandon those values. This is the essence of mutual respect and influence.
- *Skills and knowledge*: Action research requires a multidisciplinary research team that draws on the existing knowledge and skills of employees and also provides education and training as needed. Both parties have to be equipped to participate successfully in this process.
- *Control*: Researchers and employees need to share control over both the process and content of the action research effort. Researchers need to be aware that their influence will be limited and that they may not always be comfortable with this lack of control.
- *Political aspects*: A joint union/management/researcher study inevitably faces political problems. Employee participation in such a joint effort increases the likelihood that the project will succeed within a political context.
- *Rewards and costs*: Researchers and employees need to recognize the costs as well as the rewards associated with action research. Researchers especially need to be able to deal with their "marginal" status and to be sensitive to the increased time and energy demands and alienation from their peers that they (along with research participants) may experience.

This article shows how we have tried to address these issues in our work. Clearly, action research is a complex long-term process that requires continued commitment from all involved over the "long haul." We are convinced that the quality of both the research and the action components of this project has been greatly enhanced by the participation of employees. Given our emphasis on employee influence and control, we view this as a potentially empowering process for the people involved. At the same time, we realize the limits in the extent to which power and control will be shared within the organizational setting. Our aim as action researchers is to exemplify how joint efforts between organization members and researchers can be mutually beneficial to the parties involved.

NOTES

1. In an earlier draft of this article, we used the term "workers" to encompass both hourly and salaried employees. The conventional use of the word "workers" refers only to nonsupervisory employees. However, in the context of action research, with its emphasis on co-equal and cooperative relationships, we considered the broader reference to workers more appropriate. We recognize that in other situations the distinction between managerial and nonmanagerial employees is important. In discussing the earlier draft with us, several hourly and salaried employees commented that they did not like the use of the word "worker," suggesting either that it implies a nonskilled work force or is used to distinguish between hourly and salaried employees. Following extensive discussion, the group decided that they preferred the term "employees" to "workers," and hence this change has been made throughout the article. This important and sensitive issue needs to be examined in each action research setting.

2. The results presented are drawn from data collection techniques used to document and assess the role of Stress and Wellness Committee members. These techniques are focus group interviews at SWC meetings, ethnographic field notes of all SWC meetings, and yearly surveys completed by SWC members evaluating (for example) the group's process, their role in it, the progress of the project as a whole, and the university team's involvement. These qualitative data were analyzed following procedures similar to those suggested by Chesler (1987). For more detailed information, see Hugentobler, Israel, and Schurman (1992).

3. We consider this relatively long time frame to be due in part to our university-based model of action research, with its emphasis on employee involvement throughout, and our interest in basic research as well as action strategies. Although organizational change almost always is a slow process, the approaches used by private consultants (e.g., persons trained in human resource and organization development) may enable them to carry out action strategies more quickly than we have. However, as indicated throughout this article, there are long-range advantages to using an action research approach as long as a proper balance is reached between research and action. At the third survey administration we were able to considerably shorten the time between data collection and feedback, which helps to strengthen the link between research and action.

4. In response to this reference to the plant, several committee members commented that they do not view it as a "dynamic, turbulent setting," at which point we indicated that we could change this wording. However, most committee members concurred with one person's suggestion: "Don't take it out. Just because we don't see it as turbulent doesn't mean it isn't. We've been here 20 years—this is just the way we see it." At this point another member stated, "I've been in a lot of other plants and this is the most turbulent I've ever been in." Here again, it was important to recognize that perspectives differ within the committee itself, not merely between the research team and the committee members.

5. This statement reveals again the issue of multiple meanings. We thought the speaker was implying that we tried to control the group. When asked to elaborate, he explained that he meant we "maintained control of ourselves well" when we were not in control of the process.

6. Over half of the original SWC members were from the shop floor; remaining members included program coordinators from joint union/management programs, as well as one representative each from both top management and union leadership. Due to personnel changes in the plant, these latter two roles were not represented on the SWC for several years. The committee examined the political ramifications of lack of involvement by key decision makers, and during the last year of the project the committee composition was changed to include a top manager from the plant and several union leaders.

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