IF WE CAN FREE MANAGERS TO MANAGE MORE AND CONTROL LESS, WE WILL BE ON THE ROAD TO RE-ESTABLISHING THE TYPE OF QUALITY LEADERSHIP IN THE WORLD THAT WE HAVE HAD AND ARE ABSOLUTELY CAPABLE OF REASSERTING.

QWL AND THE TECHNICAL SOCIETIES

BY SIDNEY P. RUBINSTEIN

In the pursuit of improved quality and greater employee participation (involvement) during the past 20 years, I have found that these goals are mutually dependent, with either goal providing the opportunity and means for accomplishing the other. For me, employee involvement has evolved to mean a structured system for information sharing, facilitating operator/employee self-control, and problem solving by the work group and supervisor, particularly in their job activity and work methods. This system has become a mainstay of the quality of work life (QWL) movement.

During the same period, the notion that only the specialists can deal with such issues as quality and involvement has been shattered. Today, the knowledge and skills required for such tasks are shared by large segments of our population.

The integration of these goals should be a natural development in industrial society. For they are a function of the knowledge revolution, rising expectations, desire for influence and control over our lives at work and otherwise, and our ethic of avoiding the waste of resources, natural and human.

In addition to meeting those vital personal needs, integration is equally necessary and natural from an organizational point of view. A rapid increase in the rate of improvement in organizational effectiveness and product/service quality is an absolute competitive requirement for individual firms and whole industries at home and abroad. Employee involvement will impact both the rate at which quality problems are solved and the acceptance of new methods, for those who create change will accept it more readily.

There is now expanded interest in the integration of quality and involvement goals. The focus has changed from one of promoting a concept of integration to that of providing professional assistance and direction in developing a system to insure the continuity of that goal. Technical societies can play a special role in assisting their memberships and the nation as a whole in developing a professional approach to this field, thereby avoiding the dangers inherent in a nonprofessional approach to this change.

In developing that integration, responsible practitioners are grappling with the recognition that such involvement systems are easy to start but very hard to sustain. They often arouse great short-term interest and a rush of enthusiasm, only to be followed by a speedy death. The key issue we face now is how to insure the continuity and stability of these systems — which is the true evaluation of their effectiveness.

Principal reasons for this early demise is an inability to get implementing organizations at all levels to be aware of the values and goals inherent in the creation of such a system. The exploration of values can help us avoid the fallacy of looking at these efforts as just more management programs to run for a short period of time and be discontinued at will, usually with a change in management. By exploring its values, the organiza-

tion will see the fundamental differences between current proposals in the quality of work life area and previous practices.

Improper design and start-up of the system can cause failures. For example, a program that is designed as a management effort with no provision to bring in the union as a joint partner from the beginning could cause the adversary relationship between union and management to carry over into the quality of work life area. A method of implementation that does not consider all levels of management and functions threatens the management consensus needed for organizational commitment.

The long-term dangers to successful implementation stem from unrealistic expectations. Involving employees in problem solving will not automatically improve quality. A total integrated system must evolve which begins with analysis of the types of structural changes needed within the current system in order to meet competitive needs. Should this integration of employee involvement within the structure of the quality system not occur, the workers will suffer from lack of guidance and support within the organization as a whole, particularly from the organization's specialist resources. Similarly, management will lose its enthusiasm for the system, because the expected results will not be forthcoming.

The full integration of improved quality and employee involvement and their benefits have been seriously delayed here by persistent social/environmental factors. These factors have had to be identified and systems created to alter or adjust them before an integrated approach could be undertaken with confidence in the continuity.

Efforts in the quality of work life movement are now maturing as a system of employee involvement which combines structured ways of removing the barriers in our social environment with an effective model for implementation. This system has evolved by close examination of our experience and by careful and balanced appraisal of the Japanese and European experiences. Above all, we needed to study more closely the unique and particular American context. We have changed the emphasis from a "simple" focus on employee involvement in problem solving as a means of raising quality levels, to a need for systems that emphasize total organizational commitment. Jointly planned (management-employee) structures insure the integrity and continuity of the system, and review and changes in the quality assurance system insure the integration of quality and participative goals.

To effect this, we have had to develop a deeper understanding of both the values inherent in such systems, and the conflicts in our social environmental structures that influence and shape all organizations.

These conflicts derive from competitive values and conflicting strategies. If we can develop plans to change conflicting strategies into complementary ones, then we can begin to solve them. To ignore the social/environmental issues is to risk the success of the participative system.

There are three major conflicting strategies that reflect competitive values:

1. *The adversarial relationship between employees and management in the United States and the philosophies which perpetuate this type of relationship.* This will be an ongoing problem that must be addressed by all organizations on a continuous basis. Tremendous breakthroughs have taken place which encourage us to believe that this relationship can be changed so that it is adversarial when desirable, as in the collective bargaining process, and cooperative when desirable, as in quality of work life programs. This breakthrough has been a major contribution of the quality of work life movement in the last five years.

This movement has attracted workers, professionals, managers, and trade union leaders who are willing to change their practices and seek solutions to the social/environmental factors. Implicit in these solutions is a win-win objective. Not only must the common interests be identified, but we must seek to understand and respect each other's special interests. Competitive values will remain but conflicting strategies can be changed to complementary ones. The expansion of individual and work team influence and participation should not and need not impinge upon the collective bargaining process, or the authority of management.

In organizations where trade unions participate in the administration of the system (joint committees), policies are formulated which protect the rights of all parties and maintain the voluntary process. Mutual benefits are sought so that improved organizational effectiveness is not at the expense of working conditions or job security. This joint effort helps institutionalize the system and protects against discontinuity when either the management or union leadership changes.

In organizations without unions or where they do not participate, special provisions are needed to protect the integrity of the system.

2. *The conflict between the desire for all to participate and the need for specialized knowledge.* Specialists and their expertise have served as catalysts for change in modern organizations. Whether the specialists will remain the exclusive controller of problem solving processes or whether all employees will participate jointly with the specialists in that process is the principal issue that the technical societies must now address.

Workers are challenging the theory that specialization is the key to the solution of problems of the work area. They see themselves as specialists who have unique insights into their particular work assignments and work environment. The high worker interest in solving work related problems reflects the human desire for self-respect, influence and control over the conditions that affect us. Education ferments this desire but the complexity of technology has inhibited it.

Participation in problem solving is seen as a way to become more than just an appendage to the machine. The vast scale on which workers solve their work area problems in Japan provides irrefutable evidence of the viability of systems which stress the critical role of employee input in the process of changing tools, methods, and systems. The need for specialization will remain, but the changing role of the specialists will drastically affect the future of education, professionalism, and technical organizations.

3. *The contradiction between job security and career development for the individual and the view that the employee is expendable during economic downturns.* Advanced technology and the big financial investments needed to train the work force have led the Japanese to look upon their workers as lifetime employees. Such technological sophistication similarly requires the United States to take a career approach toward its entire work force, including professionals. In large part, the insecurities of professionals about their own jobs have caused them to regard technology as being under their exclusive jurisdiction. This exclusive prerogative would be unnecessary in a more secure work environment. The threat of job loss is the major reason for employee and union resistance to productivity improvement. A national and organizational shift to job maintenance from income maintenance must now be explored.

One approach that I have explored with the federal government and the State Department of Labor is to substitute paid time for problem solving and training for layoffs during periods of economic downturns. All workers would remain employed, but would devote a percentage of their time — say the fifth day or half day — to learning and applying problem solving skills to their real problems.

The outcome would be a more effective and competitive company and national policy. Research is in progress on the feasibility of such a system. (For an expansion, refer to my testimony in Oversight Hearings on the Comprehensive Employment and Training Act, Hearings before the Subcommittee on Manpower Compensation, and Health and Safety of the Committee on Education and Labor House of Representatives, Ninety-Fourth Congress, Second Session, Part 3, 1976.)

A Preliminary Plan

Tasks that can help the professional society develop a model are as follows:

A. *Review of Current Q.C. Practices and Effectiveness*

The ASQC should review and define the relationship of the field of quality control — its knowledge, organization, and experiences — to the evolving value system of worker participation. It must identify that portion of our field which is supportive of these values and that portion which inhibits the value system.

1. For example, the social implications of applied statistics are potentially extremely positive. Applied statistics, as popularized in the early 1940s, was a broad-based vehicle for bringing the scientific method to large portions of industrial society. It placed scientific methodology at the disposal of the average citizen and worker and provided them with simple statistical tools with which to solve perplexing problems. Other professions have contributed to the popularization of their disciplines (e.g., the preparation of educators and trainers who have not been academically educated as teachers, the popularization of industrial engineering principles through "work simplification," simplified computer utilization, para-professional education, and self-help movements).

An area of great personal satisfaction is currently being derived from developing new methods in problem solving based on heuristic concepts as a means to educate schooled and non-schooled problem solvers. Continued support for this trend in popularizing our disciplines would be a positive value for professionals and technical societies to pursue.

2. The ASQC should examine the structure of the quality system within the United States. Our current system often separates the quality control function from the manufacturing function, relying on inspection procedures to guarantee quality. This system is antithetical to the values of participation, as it creates an atmosphere of distrust of the workers rather than encouraging worker involvement in the responsibility for the quality function. The specialized structure has misled management into believing that the control of quality is a technical function instead of an operational function. Where operational management has delegated away the quality responsibility, goals of quality and production emerge as conflicting interests instead of complementary ones. The structure of the system needs to be reviewed.

3. Portions of the management

philosophy of quality control are dated. Although the distinction between common and special problems is still valid and useful, the division between worker-controllable and management-controllable problems presupposes that only managers will solve management-controllable problems and only workers will control worker-controllable problems. We are now seeing, on the contrary, that large numbers of problems which in the past have been assigned to engineering and management for solution can in fact be solved by workers. We must rethink our philosophy and begin to distinguish between worker-correctable and management-correctable problems. When workers are involved in correcting problems they can best protect themselves from being blamed for problems being caused by others.

Quality control specialists are at a crossroads. As concern for and actual responsibility for quality permeates the entire organization — from top management to the work-place employee and team — and a different view of the relationship of production to quality emerges, the quality control professional could lose status and value.

However, if such professionals take the lead in analyzing the new conceptual, structural and technical changes needed to insure an integrated quality control system; if they help provide some of the new forms of training and education for all levels, their role will be strengthened. And they will achieve new levels of satisfaction by moving their organizations from preoccupation with control levels of quality to the concentration on the substantive breakthrough issues that must be dealt with.

4. Finally, we must evaluate our current field effectiveness, particularly in comparison to that of the Japanese, in order to develop a sense of the priorities and urgency of required systems changes. We must compare the Japanese and American systems not only as they are currently constituted, but also in terms of the directions in which they are going.

Japan has in the past 15 years reached international leadership in manufacturing quality in some industries. Dr. Ishikawa, the leading figure in Japanese quality control is now calling for a concentration in quality design: "We must change our way of thinking, that is where the possibility of breakthrough lies. Recently I recommended to some companies that 'You must endeavour to cut costs by 30 percent by effecting a 30 percent decrease in the number of parts but holding to the same level of quality and reliability.' In some cases success has already been achieved."

The combined impact of superior manufacturing and design quality will critically intensify our current competitive difficulties. This ob-

jective for the Japanese quality control system clearly points toward their total systems approach. We in the United States must match this effort if we are to be competitive.

In that regard, I believe that many have drawn the wrong conclusions from the Japanese experience. We must avoid blind adulation (slavish imitation) of that experience and bland dismissal of their accomplishment on the grounds that their environment is so different. Japanese success stems not from the creation of QC Circles in isolation, but from these factors:

1. They integrated quality and participative goals with one another, and —

2. Integrated those goals into a system for planned change, that embraced new management and organizational concepts, and, in turn —

3. Used the positive factors in their social environment and worked to change the negative factors, and —

4. Stressed widespread diffusion of their systems and practices throughout the nation as a means of achieving a national breakthrough in quality/competitive levels. They say the need for change is on a massive scale.

Explicit Sources

One important note in this respect is to see that the Japanese social/environmental forces are implicit in their system, but we must make ours explicit. We must spell those out, and work to change the negative environmental factors, and learn how to strengthen our positive (outside the company) supports.

It is not enough that we match the quality levels achieved by the Japanese. We must also address the issues that will determine our future position. The problems of securing raw materials, worker expectations of improved standards of living, and the need to safeguard our ecology — are all issues that will effect the kinds of objectives that we set.

Such issues also involve the policies of our government and its role. The current reliance of regulatory practices conflicts with the values of independence, self-reliance, and the deep need we all have to exert maximum control over our lives. Where government programs, no matter how well intentioned, impose controls from above, they will be unpopular and ineffective as they violate these basic values. If the government can shift to programs and policies that support local initiative, self-reliance, and couple control with support to building the problem solving structures and competencies for securing the breakthroughs needed, they will get more support and be more effective.

The technical societies, which have considerable influence on government, may wish to explore how they can shape that direction and provide some expertise. The experiences and models on how to improve quality and involvement will be useful in planning how to solve other problems.

B. *Change Needs and Current Values*

Once we have identified the components, philosophies, and tools of our field, we should make a careful appraisal of what changes in the field are needed in order to respond to the newly emerging values. We should then determine how these changes should occur.

This will be a major task for each technical society. Societies will have to focus not on education in the quality of work life technology, but on altering the current technology where it conflicts with the developing values.

C. *Predictive Modeling*

The societies must develop a predictive model of what roles, functions, and skills will be required stemming from these changes in value systems, technology, and participation. The model should provide a means of planning the societies' future activities relating to quality of work life.

D. *Sharing*

Each discipline must do this and

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simultaneously share its results with one another.

E. *Diffusion*

The problems of diffusing the system in the United States are different from those faced by Japan. In Japan, the Q.C. Circles are organized and the educational process coordinated by the J.U.S.E., an industry-financed educational outreach institution which attracts the academic engineering community and management as well as practitioners of various sciences and engineering disciplines. It has had quality assurance as its major focus during the past 20 years. There is no institution comparable to J.U.S.E. in the United States.

Both the QC Circle movement in Japan and participative problem solving originated in the engineering community. These systems were organized to improve quality and other problems faced in the workplace. The motivational aspects of these systems were discovered after the fact. Their early objective was clearly that of improving operations instead of improving attitudes and motivation.

The quality of work life movement in the United States, however, had a different origin. Here the leading forces in its development have been people from the social sciences and human behavior fields in academia, management, and trade unions. Their objective was to introduce work innovations that would specifically reduce worker dissatisfaction in the work area. They were interested primarily in changing relationships and increasing motivation.

Specific quality problems and other problems in the work area were of secondary interest. Many felt that the solution of such problems would be merely a byproduct of the system. The integration of these two areas of leadership is now critical. In fact, this may provide a powerful tool for our achieving the massive breakthroughs needed. For we are witnessing a new definition and practice of "interdisciplinary" efforts — one that embraces not only the different disciplines of behavioral science and technology, but includes at both the theoretical and practical level employees, union leaders, supervisors, managers of many functions, to accelerate the adoption and dissemination of new processes. Trade union leadership and management must play the leading role in changing their relationship. The technical societies must play the leading role in changing the nature of specialization and the popularization of knowledge of their disciplines. State and federal government can play a special role in changing from income maintenance to job maintenance.

In the United States, at first there will be many forms of employee involvement. Clearly the advocates of American-style QC Circle programs see QC Circles as management tools whereas participative problem solving looks upon worker involvement as an integrated system, integrated both technically and socially into the society. Each conception will have its own advocates.

For all these reasons, I do not foresee in the near future any centralized coordinating agency for employee involvement or quality of work life in the United States. During the next few years, there will remain multiple centers promoting this activity. However, the practitioners involved directly in the development of these various systems within their organizations will begin to form networks. These practitioners, coming from differing disciplines, will in effect be forming interdisciplinary operations networks.

The technical societies can encourage the development of these networks and provide them with an audience and a means of exchanging experiences. These networks will lead ultimately to a definition of the field. The technical societies should now focus on the changes needed in their disciplines that will best prepare their members for the changes that will arise in their fields, instead of undertaking direct responsibility.

F. *Potential Issues to be Explored*

1. Will the interdisciplinary approach to quality of work life, which brings together various professionals as well as union leadership, serve as a forerunner of an effort to integrate staff functions?

2. Should the technical societies prepare to open their membership to new groups of para-professionals, e.g., the workers and union leaders who are now involved in quality control and problem solving, who have become interested in the technology available at ASQC?

3. How to integrate the theoretical perspectives of our disciplines: Practitioners in human resource development now need an operational capability in the technical aspects of the new evolving socio-technical systems. Concurrently, practitioners in our technical disciplines now need an operating knowledge of the social factors in our evolving socio-technical systems. The theoretical perspectives need to be unified, codified and popularized. Joint effort on the part of technical societies can contribute significantly to the attainment of this objective.

Our Opportunity

If we can free managers to manage more and control less, if we can free specialists to tackle the tougher problems of design of systems and underlying substantive (common) problems of organization; if we can free employees to solve their common workplace problems — and do so rapidly and on a massive scale, we will be on the road to re-establishing the type of quality leadership in the world that we have had and are absolutely capable of reasserting.

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