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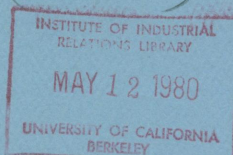
CENTER FOR QUALITY OF WORKING LIFE

THE INDIVIDUAL-ORGANIZATION CRISIS

by

Louis E. Davis

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There are a number of societal issues challenging the future of our society, of its capitalist form of economic organization, and of its organizational forms as we know them. To properly understand these issues they must be seen in ecological terms, in the scientific sense of the term ecology. Ecology is a science concerned with organisms and their environments, their interactions and the processes which change both organisms and their environments. The future survival of our economic organizations may be seen in terms of organizational ecology as a question of organization-environment interactions.

There are many crises affecting our economy and its organizations. The crisis of concern here is that of the relations between people and organizations. Unfortunately it is a silent crisis. For our society to survive in the form that we know acknowledgement and understanding of this crisis will be required. Our society is very much structured for and focused on individuals, on the options available for individuals, on individual opportunity and yet, is a functioning society that has to get its work done in a variety of ways. Organizations are the frameworks through which most of society's work is executed and within which individuals seek to satisfy many of their needs. Organizations, as the common instrument for meeting both societal and individual needs, are therefore sensitive to changes in the expectations and demands from both quarters.

One reason for the lack of acknowledgement of the individual-organization crisis is that people are seen as employees, and, as such, as members of organizations while it is forgotten that they equally are members of the social environment. They are affected by the organizations in which they work and by the social environment in which they reside. They bring aspects of that environment with them into the organization and vice versa.

The ecology of any organization is very much affected by what its members bring with them from their environments. The present crisis between people and their organizations is closely related to that process. We will gain understanding of this crisis if we focus our attention on a particular segment of the social

environment which is crucial to all of our organizations. This segment of the organizational environment is the 97 million plus people who constitute the American work force. Each of our organizations gets its members from this workforce, and these are affected by what happens to this workforce.

Changes in our society and, in particular, the changes in the values of the workforce that have seriously undermined the traditional relationship between organizations and their members has led to a crisis for organizations that may only be resolved by the evolution of new organizational forms.

The silent crisis has a number of manifestations. At the moment the focus is on productivity but this is only one focus. For the last several years the annual increase in productivity has been about 1.6% per year, whereas the historic average for the 20 years following World War II was 3.2% per year, an improvement at about half the historic post-war rate. The low rate of improvement has led to a great deal of thrashing about. Dire predictions are offered and doom is forecast. Simplistic solutions are dominant. Managements appear to be looking for pills to treat symptoms without realizing they have a far more fundamental problem, i.e., that many major organizations are losing their ability to effectively utilize the human resources available to them. This is one aspect of the crisis between people and organizations that was mentioned earlier.

Two aspects of productivity statistics tell us quite a bit about the magnitude of the crisis. First, the decline in the historic rate of productivity improvement has lasted 10-12 years indicating that this is not a passing or temporary problem, but rather is the consequence of some basic changes in the social environment. Second, the statistics report the entire national economy so we may not be comforted that this is a problem only of some poorly managed firms. The issues are fundamentally societal, stemming from reactions to what all organizations are doing and not just a few. What is becoming crucial is the growing inability of existing organizational forms to adapt to changing demands and constraints

of our society.

Those responsible for training managers, and, therefore, potentially in a position to offer guidance to organizations and their future managers, have an obligation to introduce understanding of changes in values so as to create a management community capable of meeting these new challenges with more than silent avoidance.

THE CHANGING VALUES OF THE WORK FORCE

What is happening in the work force? There is doubt that it can be called a workforce in the 1980's given how people are now redefining themselves in relation to work. The genuine impression of those who are professionally engaged in watching these changes is that the changes exhibited by people who work are studiously overlooked. This is more than benign neglect. There is a collective avoidance in our society of workforce-organizational issues among scholars, business leaders, and union leaders. The views of top union leaders and business leaders are remarkably similar on these issues. There is wide agreement and support of the conventional wisdom about work and workers. Workers are seen as economic beings to be motivated by increases in pay and fringe benefits, and what they must do to earn these rewards is largely irrelevant as long as there are no dangers to life and limb.

Some have said that the durability of the conventional wisdom about work and workers derives from the fact that the workplace is perhaps the most conservative of American institutions. This may be the consequence of the enormous number of issues that are entangled in the workplace. Included are management issues of authority and of control, and worker issues of reward, compensation, and equity. The meaning of work and jobs as part of the lives of members of organizations makes the workplace a central concern for American society. One may well understand the fears that underlie the reluctance to examine the workplace, but such conservatism will not serve society well in meeting the challenges of the

future.

Unfortunately not many organizations are preparing for these challenges. Given present trends, we may predict that by the 1980's the human side of organizations will be very unsafely left to low-level personnel departments. Instead, given the evolving values of the workforce, the intimate knowledge of values and of people and their needs will become an essential part of a top manager's training if he is to effectively direct large-scale institutions. This prediction is supported by social survey data in the U.S. much of it recently obtained by Daniel Yankelovich¹, who has studied the shifting values of the American workforce for many years.

One aspect of the workforce relates to the employment-unemployment issue and recent data suggest much about values that are counter-intuitive. Social survey data of 1976-77 indicate that the desire to hold a paid job, i.e., to be gainfully employed, has become a compelling need for far more Americans than those presently counted as unemployed. Independent estimates have been made by a number of serious scholars that there are about 24 to 27 million members of our society not now in full-time employment, who want jobs. These are largely women, young and old, who would take jobs if available. Yet our society traditionally has had a job creation rate of between 2 and 2½ million jobs per year. So much of the discourse about whether we have 6% unemployment or 7% unemployment is not very useful given the actual magnitude of the demand indicated by the above data.

Examine the age of retirement from the workforce as an illustration. The retirement age has been extended to 70 years in 1978. However, the actual retirement age in the United States averages 62 to 63 years and is declining. In General Motors, for example, the average age of retirement, including managers and blue collar workers, is somewhat less than 60 years of age. Last year about half of the U.S. retirees were under the age of 65. Raising the retirement age to 70 years may not mean very much except to some privileged people who love what they are doing. However, raising the retirement age becomes significant when we

consider the job holding data at the opposite end of the workforce. Competition for jobs is extraordinarily strong among the young, and even more so, among young blacks. The unemployment rates among young blacks is estimated to be between 40 to 60 percent. It has not been below 30% in the last 7 or 8 years. The impact of this fact on how our society is going to survive is something that needs serious attention. What will the effect be if certain age groups and segments of our population never form the connection with modern American society gained through the workplace? As such the workplace can be seen as the locus of our strongest connections with our society; especially in American society.

In contrast to this picture there are millions of jobs, available which remain unfilled. The Los Angeles Times recently carried an article about an experiment with providing jobs for disadvantaged youth. After a year the experimenters gave up because there remained scores of unfilled jobs which people simply did not take. The jobs were considered undesirable and dead-end. These and low paying jobs are not likely to be filled. This is not a new development. There were signals about this some twelve years ago to which nobody paid attention coming from studies done in Boston. Studied were available jobs and unemployed blacks. The two pools remained the same. On the surface, it looked as if the unemployed simply didn't care about taking the jobs. In fact a micro-study indicated that, they did take the jobs, but did not keep them, because the jobs had no future. There appears to be a threshold effect operating. There is a minimum amount of value, need satisfaction and future-relatedness or quality of working life that people expect from a work situation, before they are willing to take and hold a job. This is a new phenomenon and it adds to the complexity of managing organizations.

To summarize what has been said about the workforce, there are millions of people who want jobs and compete for available jobs. Millions of young people, more so black young people, cannot find a connection with our society for lack of a workplace. While the trend is to retire at younger ages among many who would,

presumably, enjoy doing something else, the retirement age has been extended, presumably, for the very few who do enjoy their work. Finally, we have millions of jobs that are unfilled because no one is willing to suffer them. It appears to be more desirable to live on welfare or on unemployment compensation with all the undesirable associated side effects, rather than take some kinds of jobs. In California, and in other states illegal workers are "imported" to do the work that society cannot get its members to do. These are some of the aspects of the workforce environment within which the relationships between people and organizations are being played out.

CHANGES IN THE VALUES OF THE EMPLOYED

What are the changes occurring among the members of organizations, the people holding the paying jobs. Very recent social survey data¹ indicate that there are millions of people holding paying jobs who find the contents and present incentive or reward provided by their engagement with work to be so unappealing that they are no longer motivated to work very hard. Coupled with this is a curious, totally counter-intuitive, phenomenon which has interfered with our understanding of what is going on. We observe that while people are withdrawing their involvement with their jobs, they insist on steadily rising increases in pay and fringe benefits. One might infer that this is compensation for the lack of appeal of the work that they are required to do. A good way to state this phenomenon is the less they are committed to do, the more they want.

This gives us a perspective very different from the conventional wisdom on the decline in productivity levels. A strong contributing factor appears to be the withdrawal of organizations' members from involvement in unrewarding jobs. Furthermore, we can see that what is going on among many of the employed is not very different from what we have seen among many of the unemployed. Both are members of the same society.

Returning to the growing shortcomings of our traditional work incentive and reward systems, there is a mismatch between the carrot and stick incentives - the

carrot of more pay and the stick of withdrawing security - and new motivations arising among the workforce. While carrot and stick incentives appear to have worked well enough in the past, since the late 1960's the values of our society have changed dramatically with regard to how and why people associate themselves with the institutions of society.

An important source of the mismatch arises from the uniformity of the system of rewards and incentives. As all else, it is a poor assumption that says that everybody wants the same thing, i.e., that money motivates everyone equally. Our systems of rewards do not reflect the diversity of expectations and goals held by different people. For some, money may be the main consideration. For others leisure, status, challenge of the work, the well-being of the organization or future rewards may be very important incentives. Different segments of the workforce assign greater or lesser importance to each of these goals of work, and therefore, a variety of rewards should be available to fit the variety of goals. Stated otherwise, workplace should afford opportunities for meeting various personal goals. At present our organizations are inflexible in their pervasive and singular reliance on economic incentives. The set of wildcat strikes in 1972 between the UAW local and General Motors at Lordstown, Ohio is a good illustration. They are of importance because they were the first strikes in the United States in which the issue was the quality of the jobs themselves, and not the kinds of jobs, the pay, or the working conditions. Both the union and the management saw increasing the pay as the solution.

The exclusive reliance on economic incentives has another drawback. Our society, and within it our organizations must continuously prove their ability to meet the demands for money and security. During the 25 years of growth since World War II this ability was amply demonstrated. But in the 1970's, there has been a loss of confidence in the employer's ability to meet the needs of money and security. Note that 'stick' of withdrawal of security, once thought to be an

instrument of control by the employer, is now turned into a measure of the employer's inability to meet workers' needs.

One of the dramatic changes in our society centers around individuals. There is a widespread growth in the perception, that it is not the individual that is at fault if and when expectations are not met; it is the institution's and society's fault. This is not simply a matter of placing blame but signifies a very important shift in what was called the Protestant or Work Ethic. Success was attributed to individual endeavors and each individual had obligations to be met. "If I am not successful, something must be wrong with me." Among younger people, this value is in a state of strong decline. Now it's "Something is wrong, and it is not necessarily wrong with me. In fact, it might not have anything to do with me, but with the situation in which I find myself." In terms of organizations, this means that people were formerly socialized to the Protestant Ethic as the basis of their value system and accepted a mismatch between their own needs and organizational rewards as an individual burden. Today, people have thrust this mismatch back unto society, and in particular, unto the organizations doing society's work.

Another important value change is the separation of success from self-fulfillment. California has made a major industry of self-fulfillment and many enterprises are ready to sell self-fulfillment services. Of course, they would not be in the market unless large numbers of people had not become significantly concerned with their own success and its meaning. The latest survey data (1978)¹ indicates that for about 52% of Americans their aspirations for self-fulfillment can no longer be wholly satisfied through conventional measures of success: more money, a bigger house, a bigger car, a higher paying job, a better job title, etc. This is moreso the case among the younger, the better educated, as well as the more affluent members of our society. The 'carrot' of increased pay does not satisfy self-fulfillment needs. A very closely related shift in values is the development of an ethic built around the concepts of duty to one's self in

contrast to the traditional ethic on which Western societies were built: the ethic of obligation to others. Clearly this is a further expression of the concerns individuals have about their own self-fulfillment.

Now to values towards work and jobs revealed in recent survey data on questions of work and leisure. Only 21% in the latest survey say that work means more to them than leisure does. Sixty percent enjoy their work but it is not the major source of their satisfaction, and 19% are so exhausted by their work that they cannot even conceive of work as even a minor satisfaction. Another important value change in the workplace is the growing refusal on the part of individuals to subordinate their own personalities to the work roles that they have to carry out. Contrast this with the past when men defined their identities through their work roles. Today that is looked upon by younger people as depersonalization. All Western organizations fundamentally are built on the principle of depersonalization. It is one of Weber's central criteria for bureaucratic organization. All bureaucracies start with that proposition and "scientific management" makes a religion out of depersonalization, but younger people are strongly opposed to depersonalization. Another way of looking at this refusal by younger people to accept subordination of their own personalities is that there is a strong aversion to becoming an object in the work role, i.e., a cog in the machine. This is producing new challenges to managerial concepts of efficiency and control.

To women the paid job has acquired a new symbolic meaning. It is seen to be the badge of membership in the larger society and the symbol of self worth. Women are the most rapidly growing segment of the U.S. workforce, constituting 42% of the workforce at present. In their quest for paid jobs women are going to learn the harsh realities, as men learned long before them, that all work is not equally good or rewarding. There are many voluntary jobs which are much better than paid jobs. What will be the effect of this confrontation with reality has yet to evolve.

A change very important to the men in the workforce involves the emerging redefinition of the meaning of masculinity. The definition has been very important to our society as it developed because men saw their obligation to those who were dependent on them as taking precedence over any kind of sacrifice they would have to make. Masculinity was self-defined as successfully providing for one's dependents. All kinds of relatively poor jobs were taken by men, and many held for long years, in order to satisfy these obligations.

This sort of masculine self-esteem is dissolving, leading to grave concerns over how society will maintain itself. When balances change in society, as when more women join the workforce, existing relationships between men and work can be expected to change. The more women in the workforce and the more security and the more independence they develop, the more there will be a shift in the meaning of masculinity away from sacrifice, and the carrying out of obligations to one's dependents. Consequently, what were formerly symbols of masculine success are being devalued -- automobiles, homes, appliances; and so on. are now important for their use value and not as status symbols. This may explain why money success is not the powerful motivator it was once. In addition, as mentioned before, demand for money payment is in many instances a revenge for the lack of satisfaction with jobs. People want rewards that justly reflect the contributions they make. On the other hand, if they are misused, they want to be compensated for being misused. It would be a gross distortion to interpret these demands for more money as signifying the growing importance of economic incentives.

THE CAUSAL FACTORS UNDERLYING THESE CHANGES

Why have all these changes come to pass? Why has an economic system that was demonstrably successful for so long come to be problematic in one of its fundamental relationships, that between people and organizations? To find answers we must examine organizations in the context of ecological systems.

An ecological approach requires us to view organizations as systems and, therefore, to inquire about the causal factors underlying changes in organizational environments. We have been discussing the changes in that environment which is particularly critical for organizations, i.e., the American workforce.

Let us examine the crucial impact of education on the workforce. According to the United States Office of Education, 1978 is the year in which the average length of schooling of the United States workforce of approximately 97 million people will have reached 12 years. Most of our organizations are designed on the basis of principles developed for us by Frederick W. Taylor in 1910 when the average educational level of the workforce was only three years. The issue here is not how much students learn in 12 years. The issue for organizations is the fact that people have been socialized into a particular kind of society, a school society, during the formative years of their lives. We, and organizations, overlook this socialization process at our own peril. In the school socialization process the individual is paramount, as it should be. Twelve years of such socialization has an enormous impact on these future members of organizations who now ask "Who am I?, What am I here for? What is my engagement with work all about? What are you (the organization) doing to me?" Extended education has brought with it rising expectations that personal needs will be met and that we are entitled to have our expectations met - at the workplace which has been referred to as "the psychology of entitlement." What were once seen as privileges to be earned are now seen as entitlements which are slowly becoming rights due us as a matter of course. Young people are beginning to claim the right to an interesting, self-fulfilling, self-developing individually centered job. We see this expressed through the extraordinarily high value being placed on individuals as individuals rather than as members of organizations.

Can organizations realistically expect to find sufficient employees with the old values? Formerly many of them came from rural communities. In the early 1960's Turner and Lawrence² did some studies of industrial workers. Values of

urban workers compared with those of rural workers were significantly different then. Professor Gerald Susman, of Pennsylvania State University, re-examined this question about ten years later. He found³ that the values had become so homogeneous that rural or urban background had no influence. We are an urban society where urban values predominate. Very few workers with the old rural values are likely to be found who would accept being fitted into bureaucratic organizations.

Older workers, who remember the great depression of 1929-39, and experienced the effects of unemployment, are moving out of the workforce. For the depression generation, economic success and security were survival issues. For today's workforce, they are taken more for granted. Few contemplate hunger and extreme hardship associated with some jobs, even with job security. As with all else in life, the past cannot be recreated; "A good dose of unemployment" will not bring back old work values. Meeting the challenges of the future, therefore, requires that organizations be designed on the basis of the new and emerging values.

There is a growing mismatch between the educated "new breed of workers," who have become the majority of the workforce,⁴ and existing design of organizations. Organizations, both public and private, have been designed according to the principles of rational bureaucracy and scientific management, complete with fractionated, routinized jobs. We are a long way from making the necessary changes in organization design, incentives, reward systems, and performance measures, that will enable organizations to cope in the society of the 1980s.

OTHER ENVIRONMENTAL IMPACTS ON THE WORKPLACE

There are other environmental phenomena which significantly impact organizations. Two phenomena of a political nature have occurred in the United States which have been little publicized. First, the cost of refusing to work or to take a job found by the individual to be unacceptable has been greatly reduced. We are referring to the extensive welfare system and, in some instances, unemployment insurance. The economic fears that once drove millions of Americans to take

any kind of job in order to subsist has been very substantially diminished.

Second, the United States, by law and by administrative regulation, has decided to make the workplace the arena for changing American society. That is the meaning of affirmative action, equal opportunity and related laws and regulations. The United States is saying that through the process of employment, our society will change in directions of becoming more open, equitable, democratic, etc. Formerly our society had placed this burden on its schools. For employing organizations this is a new burden that so far they are not prepared to perform, given their existing structures. Organizations have not done so very well in their operation that they can readily accept the burden of social change now thrust upon them. No other society has made the workplace the locus for changing all of society. Yet, the U. S. has done this. As yet there is very little recognition of the changes needed in the structure of organizations and jobs in order to satisfy this new requirement.

The technological environment as well, has had a major impact on organizations and their workplaces. The effects of advances in technology are poorly understood. Generally, they are perceived as a factor in eliminating jobs. This may not be the primary effect. Technological advances have so increased the material producing capability of our society, that scarcity as a concern has almost disappeared. The transfer payments to large segments of our population who do not have employment income are not simply money payments, but claims to goods and services. They are only possible because of the tremendous productivity that technology has helped achieve. Therefore, the changes in the values and expectations of the workforce and the political phenomena of reducing the cost to the individual of not working, are both, to a considerable extent, results of advances in technology.

The increasing rate of technological development is causing turbulence in the economic and marketing environments of most large organizations. In a state of turbulence, environments are no longer passive, but interactive such that the actions of an organization and others may lead to unanticipated outcomes. In Western Society, particularly in the United States, the rate of change is so great,

individual organizations find it very hard to reduce the relative uncertainty in which they have to exist, no matter what kind of long-range planning they do. Indeed, long-range planning may become a trap. Ackoff⁵ has focussed on the crux of the problem of the turbulent environment for organizations when he indicated that under turbulent conditions, experience is not the best teacher. It may even be the worst teacher preparing us only to deal with situations that have ceased to exist. The best teacher may be experiment. But how do we design organizations that can learn from experiments?

This issue will be discussed at the close of this paper. For now, let us note that the widely applied and taught theories of bureaucratic organization are all based on stability and control. Usually, lip service is paid to the need for change, and seldom is there concern with designing adaptive capabilities into organizations. In addition to the effects of turbulent environment on organizations, there has been a rapid increase in the capital investment required to use the new sophisticated technical systems. The increase has come from the application of advanced technology as well as from the requirements for controlling pollution. Even a simple product such as mayonnaise which was once made in large-sized batches by mixing metered ingredients is now made continuously using computer-monitored pulsating valves. A recent new petrochemical plant with an organization design to suit the new values has an investment of \$2.1 million per worker. There is a new energy project on the drawing boards that will cost \$4 billion and take seven years to design. The old precondition for such enormous capital investment was stability and the ability to effectively plan for, at least, the useful life of the project. That is exactly what turbulent environments have denied the modern organization which must now address itself to the complex question of adaptability.

The rapidly increasing capital requirements for sophisticated technical systems have not helped managers understand the impact of such systems on the workplace. Publicists have led us to believe that automation decreases the dependence of organizations on their workers while engineers project the image of people-proof

production systems. In our mind's eye, we are asked to imagine plants spewing out products with scarcely anyone around. This simply is not the case. True, the number of employees per unit of product output is reduced; however, the dependence of the organization on its remaining members increases with the sophistication of the technical system. Why? The answer is counter-intuitive. The necessary insight comes from hard experience and deep analysis gained from working with organizations having sophisticated technical systems. Consider the petrochemical plant which cost over \$2 million per worker. At that level of investment every programmable or controllable task has been built into the system, i.e., taken over by machines. What remains are the unprogrammable tasks such as monitoring, diagnosing, adjusting, fine-tuning, and maintaining the system. These are skilled tasks on which the organization is critically dependent if output is to be maintained. Not only are extremely large investments in sophisticated technical systems required, but the organization has high vulnerability in its increased dependence on the activities of the relatively few remaining workers.

Additionally, advancements in technology have altered the nature of work itself. Since 1900 when F.W. Taylor introduced Scientific Management, many millions of jobs have been fractionated into measured and programmable single elements. Efficiency was easily measurable in output-per-unit of time, and anything that could distract workers from the purely mechanical execution of their tasks was eliminated. Modern sophisticated technical systems largely absorb fractionated tasks. The easily programmable and measurable tasks are automated. What remains for people to do is radically different. People working in high technology settings, live in a work world very similar to that of professionals. Their working world is one of abstractions, not concrete objects. They work by reading dials, meters, and computer printouts, and remotely operate valves, pumps, gates and other devices by pressing buttons in a control room far from the objects or machines being manipulated. These activities would have absolutely no meaning to workers unless they developed certain cognitive (mental) maps of the interacting processes which cannot be seen or touched.

There is no way to fit this kind of work into the principles of scientific management and bureaucracy. Skills come to have different meaning; efficiency and productivity take on different meanings as do the notions of management direction and control. To managers control means being able to tell an employee what, when, and how to do a task, and being able to measure the performance against the manager's expectations. In advanced technical systems, the most a manager can do is ask the employee to use his best judgment in situations which he is likely to understand better than the manager does. Thus, advances in technology have resulted in new kinds of work relationships which present new challenges to management and confound the principles by which our organizations have been designed traditionally.

It may be helpful to summarize the many aspects of the individual-organization crisis. In the workforce environment of organizations, there are millions of people who want to hold jobs and there is strong competition for most jobs. Concurrently there are millions of jobs unfilled because no one is willing to suffer them. Among the employed, involvement with their jobs is changing. Demands are growing for increased pay as compensation for unsatisfactory jobs. This is occurring at a time when greater commitment is required on the part of individuals to operate the new sophisticated, capital intensive technical systems. Additionally, there is a growing mismatch between our traditional carrot and stick money reward systems and the new values of younger workers. The separation of self-fulfillment from success has devalued the meaning of economic rewards by which success was formerly measured while organizations uniformly continue their over-reliance on economic incentives. People refuse to subordinate their personalities to their work roles, undermining depersonalization which is the very basis of bureaucratic management. In the face of these changes the fault is seen to be the organization's rather than the individual's as formerly.

Underlying these developments are the effects on the workforce of an average of twelve years of schooling and its socialization to individual values. Older workers with security fears stemming from the great depression and others still holding to the rural work

ethic are being displaced as the majority by younger workers who are a new breed. The United States has reduced the cost to individuals of refusing to take unacceptable jobs while making the workplace the focal point for solving many of our society's inequities. Finally, the rapidly changing technological and economic environments have created turbulence and uncertainty for organizations while requiring large capital investments. The application of sophisticated technical systems, increase the dependence of organizations on their members and so change the nature of work that traditional methods of management and control are rapidly becoming inapplicable.

The economic and organizational systems that have been remarkably successful in the United States until now have come to the point where significantly new directions must be found both at the level of society and at the level of organizations. We are still bemused by past success thus failing to recognize that we are passing a watershed in individual-organization relationships. This is the silent crisis.

It is clear that in the 1980's it will be perilous, if not willfully negligent to examine the functioning of organizations, or the creation of new ones, and the modification of existing ones without taking into account in open meaningful ways Quality of Working Life considerations.

NEW DIRECTIONS

This review began by exploring the crisis between individuals and organizations but it does not need to end on a crisis note. There are prospective solutions. Significant and rewarding new directions are being developed in some leading firms largely through new forms of organization which constitute effective and efficient alternatives to bureaucracy and scientific management. These forms provide very flexible and adaptive organizations designed to meet the challenges of the changing economic and political environments, the demands of complex technologies, as well as the expressed needs of their members for enhanced quality of their working lives. An examination of the characteristics of these organizations reveals the potentials of the new designs.

Most of the alternative forms of organization were not invented in the usual way organizations are created. They are the product of deliberate organizational design or renewal (redesign) activities undertaken by design teams who usually began by developing organizational philosophies or charters stating the desired societal, organizational and personal (individual) objectives to be embodied in the design. These charters or guides for design stated the values on which the organization was to be built or rebuilt. Since the design process was itself participative, the design team doing the actual work of design had representatives from all levels and functions of the organization contributing to the process of inventing the organization structure, its jobs, reward systems, etc. Frequently, particularly when designing new organizations, all who can contribute were not available, therefore, as little as possible of the structure was usually specified (the principle of minimal critical specifications)⁷ leaving to those who came to work in the organization the maximum amount of input to invent the specifics of their working lives.

Contemplate the shift in values exhibited in the structure of the alternative organizations. The central design issue is no longer how to maintain authority and achieve control by management which is fundamental to scientific management and bureaucracy. Instead, individual and societal values are included and the structure of the organization is taken to be evolutionary with the specifics to be worked out later as needed by those who work in the organization. The design of a highly automated new paper mill in this continuous process industry serves as a case illustration. The operating functions of workers in this kind of setting are to monitor, adjust, control and maintain the equipment, to anticipate breakdowns, and to act to minimize down time. People are primarily there to exercise discretion and act upon their own decisions in decentralized locations. In conventional organizations these are management functions. In this regard the designers of the organization perceived what they had to choose from among the following in structuring the organization:

1. One supervisor for each worker so that the former can carry out the discretionary or decision part of the action while the latter acts to implement the decisions already made.
2. Supervisors who do all the work
3. Workers who supervise the work

The third was selected by the design team which was only logical. In settings where responses to randomly occurring events cannot be specified as to time and place, people must be given the authority to do what must be done. Heretofore, authority to act when, where and how needed (work authority) had never been extended (except to craftsmen) to workers who in actuality have the responsibility for achieving the outcomes.

A second characteristic of the new forms of organization resides in the choice of self-maintaining groups as the building blocks of the organization. This sets aside one of the fundamental principles of scientific management and bureaucracy, namely that it must be possible for a supervisor or manager to hold each of his subordinates directly responsible as an individual for his performance. This requirement leads to the one person--one task basic organizational building block of scientific management. The new or alternative forms of organization utilizing self-maintaining organization units as the basic components of the larger organization have internal boundaries selected on very different principles. These are located so that the units, groups or teams can operate as small systems, actually mini-societies, within a larger system or society internally coordinating their activities and leaving to management the boundary controlling function and integration of the units. The units are charged with responsibility for a systemically bounded set of operations. The internal boundaries separating such organizational units are located so that the units or teams can develop and exist as mini-societies which require achieving multiple goals coming from the larger organization and from its members. The boundaries are located so that each organizational unit or team is associated with identifiable product or process outcomes for which it can take responsibility. To be self-maintaining the unit must possess the requisite response

capability skills and functions to respond to the demands placed upon it and to the exigencies in its environments. Therefore, the members of such units or teams must possess individually or collectively all the requisite skills necessary to operate and maintain its part of the work process to provide product or service. These include operating skills, maintenance skills, planning and evaluation skills and the social skills needed to maintain the team or unit as a social system.

An illustration of such an organizational unit exists in the Receiving and Shipping Team of a new food products manufacturing organization structured on alternative concepts. This team carried out the function of receiving incoming materials which subsequently were to be transformed into desired products by processing teams. Usually receiving departments are designed on the basis of being necessary but not quite acceptable appendages to an organization. They carry out the drudgery of bringing in and storing materials, and later withdrawing them for delivery to processing units. The activities of such departments usually consist of low skill level, routine, and sometimes physically demanding movement of materials. People performing this work are usually classified as forklift drivers performing routine activities under the direction of supervisors who know what the situation is all about and make the needed decisions. Any leavening of this situation by record keeping, inventory control, etc., is minimized by specializing such tasks and assigning them to clerks.

In the design of the new food manufacturing organization and its Shipping and Receiving Team illustrated here, the application of the concept of the self-maintaining organizational unit (mini-society) led to establishing a team that saw its responsibility to be the "buying" incoming materials and "selling" usable materials to the processing teams. The members of the team while doing some routine work in unloading, transporting and warehousing also perform testing of incoming materials to determine whether they meet specifications, decide on their acceptance and receive them by placing them in storage or reject them by returning them to suppliers. Each team member performs various combinations of all these activities and associated record keeping. The members of the team see themselves as being

in the "Wholesale business" of buying raw materials and supplies, keeping them in inventory and selling usable raw materials and supplies to the processing organizational units on a timely basis. They are measured and held responsible for these activities, and see their reputations built upon how dependable they are as "wholesalers". How and when they carry out the activities is left to the members of the team; there is no supervisor. It is their responsibility to organize and reorganize themselves to do all the work required. By being measured on outcomes achieved they have come to see themselves and function as a self-maintaining mini-organization performing needed work and the activities needed to maintain themselves as a mini-society nested within a larger one. The requisite response capability of the team, not only includes the necessary work and decision skills but also the social skills for maintaining an organizational unit and its members.

A third aspect of the new designs is that they are the outcome of the effort to jointly optimize the technical systems and the social systems of the organization since both are totally interrelated in the process of achieving desired outcomes. Traditionally engineers design technical systems and their machine and tool components so that they are optimized on the basis of economic criteria. Optimizing on the bases of social criteria is seen most often to be satisfied by designing the technical system so that it is people-proof. People, i.e., the social system, are then expected to adapt themselves to the technical system which usually has been designed to minimize the feedback of needed information and the possibilities of human intervention. Joint optimization seeks to combine the complementary advantages of the technical system and the social system and, in particular, to integrate the very great adaptive (problem solving) capacity of people with the great productive capacity of complex technical systems which in the short run are rigid or non-adaptive in the face of various deviations or changes.

A newly designed chemical plant illustrates this very well. The plant is operated by 6 teams each (17 workers and a team coordinator) who have operating skills and mechanical, electrical and social maintenance skills. Each team assigns its members to their daily tasks as limited by available skills. Flexibility and adaptability will better be served as the skill-mix of each member increases. Therefore, training opportunities are built into the work program so that members may accumulate knowledge and experience. Workers are not paid according to tasks performed or job titles but for the levels of knowledge and skills each has achieved. The technical and social needs are complex so that several years will be required to master all of the operating and maintenance skills needed by team members. In contrast fractionated tasks which constitute jobs under scientific management may be learned in a few hours. The working life of team members is not preprogrammed. Indeed, given the great variety of tasks available to the team, the team "re-invents" the working lives of its members daily. The team is responsible for its output and quality as well as for the utilization of its resources - chief of which are the efforts of its members. Thus, not only is there no such thing as one-man, one-job, neither is there direct control of an individual's performance by a supervisor.

The technical system was designed to be integrated with the social system; control rooms were consolidated to permit team operation, quality control procedures are built into the team's tasks and monitoring information or feedback belongs to the teams. A critical decision in the design of the technical system was to operate the costly computer system off-line, permitting operator decision making rather than computer control. Thus learning will take place because the computer cannot learn while people can. Learning how to effectively operate the complex process is the central problem for economically successful performance. By means of this design which provides needed work authority, stimulates and rewards learning and relies on self-management of individuals and teams the quality of working life of individuals is strongly enhanced while the technical and economic

success of the organization is assured. Importantly this organization design, undertaken with cooperation and participation of the union, led to a unique union-management collective agreement emphasizing quality of working life factors.

The efficient and effective performance of these alternative organization forms and the high levels of satisfaction of most criteria of quality of working life bode well in the search for overcoming the individual-organization crisis.

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