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QUALITY
OF
WORKING LIFE
IN THE
UNITED STATES

PROBLEMS AND PROSPECTS

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QUALITY OF WORKING LIFE IN THE UNITED STATES,
PROBLEMS AND PROSPECTS,

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A Report Based on the 16th Annual Research Conference
on "The Changing World of Work" Institute of Industrial
Relations, Los Angeles, March 14, 1974.

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FOREWORD

The papers contained in this report are revisions of those first presented at the 16th Annual Research Conference on "The Changing World of Work," Institute of Industrial Relations, March 14, 1974. Since then, the Center for Quality of Working Life has been established within the Institute to research the problems and realize the prospects. What was presented then is still applicable to our present condition, with perhaps a sobering of the enthusiasm expressed in some of the papers for achieving an enhanced quality of working life in the United States in the face of continuing high levels of unemployment. This report is a companion to that issued in 1975 on the *Humanization of the Workplace -- The Swedish Experience*.

Los Angeles, September 1976

Louis E. Davis
Chairman
Center for Quality
of Working Life

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THE CHANGING ENVIRONMENTS OF ORGANIZATIONS

Louis E. Davis

The quality of life in the workplace has received a great deal of attention and in some quarters has been the subject of considerable controversy in recent years.^{1/} This controversy reveals growing challenges to our notions of what is happening to us and to our society, and to the roles we have established in getting done the work of society. On the one hand, work and how it is organized is stoutly defended -- it is all good and proper and the issue is to get a greater material return for work done. On the other hand, questions are being raised both by workers and researchers, as to the price to be paid for the high material gains. Researchers report marked changes, particularly among youth, in definitions of material success and in what are acceptable behaviors in pursuit of material success. Throughout this paper the term *workers* is used in a loose and non-specific sense, referring to anyone who works, at whatever level in an organization. As such, it includes almost everyone, since, as the 1970 Census data show, the self-employed in the U.S. work force now amount to less than 6 percent. What we are witnessing in the U.S. is that issues concerning the quality of working life are being raised at all levels of organizations.

Growing numbers of managers have begun to question their structures, work systems and job designs. The structure of organizations and jobs has remained substantially the same over the past 75 years, while a great many changes have occurred in the social environment. So, in looking at *The Changing World of Work*, it is crucial to begin by examining what is happening in the society which surrounds organizations, i.e., the environments of organizations. Changes in environments have an impact on what goes on in the workplace since there is no way in which an organization can isolate itself from its various surroundings.

As for change itself, the rate of change is accelerating, substantially affecting our futures. For many aspects

of our lives the future is *here!* The "futures" we are in contain the roots and the elements of what is coming, and the wise organizational leader is concerned with finding the relevant indicators and trends to aid in guiding the organization for which he is responsible.

Our dilemma is that all of us are trapped to a significant extent by the past. Our training and education, so strongly built on the past, has not prepared us very well for assessing the future. We are conditioned to seeing and being sensitive to the issues of the past. Some of us are beginning to see new trends and think that things are anything but alright, while others think things are substantially alright and see the past continuing into the future.

There is another trap that particularly affects organizational leaders: the jurisdictional or specialist trap. Specialists, such as sociologists, psychologists, planners, forecasters, and so on, look at the world each in his own very particular way. What each sees, of course, is what falls within his particular jurisdiction, i.e., what he has learned to recognize. However, the most critical and plaguing concerns of present-day society do not fall neatly into any particular jurisdiction and, as a consequence, tend to get slighted.

Changes in the environments most central for an organization's members, and for industrial relations, are those in the (1) social environment -- what is happening in our society; (2) technical environment -- what is happening to processes and products in terms of getting the work done; and (3) workplace itself -- what is happening to those who work and how they do their work.

Many of the changes in the social environment have their origins in the past success of the American economy, which has led to demographic changes, and has led, and is leading, to very important changes in values, in needs and in expectations of most members of our society. The demographic changes indicate that our society has invested, and continues to invest, very heavily in longer and longer

years of schooling on the part of a larger proportion of our population. This particular development is very much associated with rising expectations in our society. Young people, in particular, are bringing the expectations and experiences they have developed within the school setting into the workplace. Organizations disregarding these changes in expectations are beginning to feel the consequences.

Another demographic change, which will have long-term effects, is reduced family size. Reduced family size and longer years of schooling has some effect on consumption, but very much of an effect on the changing and evolving role of women -- particularly the changing world of wives. The participation rate of women in the labor force continues to climb, but now for reasons additional to economic ones.

A third demographic shift is the large youth component in our society stemming from the postwar baby boom. They constitute our future work force, have been in school longer than any other segment of our society, and bring to the workplace needs and expectations that have already affected other aspects of our society.

Economic success has led to changes in how society sees its obligations to its members. For example, although not stated specifically, the United States has an implicit policy that starvation is no longer acceptable. What are the consequences of this "policy" in terms of people taking certain kinds of jobs, staying on those jobs and being satisfied with them? The consequences are already visible, although frequently masked by the current state of the local economy.

Another very important change, largely among those below the age of 35, is a reduction in the fear of economic insecurity. Surveys indicate those below age 35, clearly, have a very reduced concern with economic insecurity, while those over age 35 consider it a very important, if not the major, concern. Those below age 35 are questioning the accepted definition of success for the individual. The very meaning of success in America, and what it is worth to achieve, is changing, and it is remarkably changing for

those in their late 20's and early 30's. These changes warn us that there is a trap in continuing to use aggregate demographic data since averages do not reveal critical shifts in specific age groups. We would do well to remember that in the near future the younger age group will be the majority of the work force.

The definition of success in the United States is still built around money, around job status, around possessions, and around mobility for one's children. However, the importance of these criteria is shifting depending upon age. Thus, older people assign one set of priorities to these, and younger people assign another set. Growing numbers of the population are challenging, not the definition of success, but what it is that the individual has to pay to achieve success -- what does he have to give up for money, for status, etc. There is growing challenge to the making of sacrifices to achieve success as now defined. A recent survey undertaken by the Opinion Research Corporation (1973) on the prestige ranking of the professions shows an interesting order. The ranking seems to be related to the implication of the sacrifice that individuals have to make in achieving success: the highest ranking given, 66% , is to physicians; scientists, 59%, are second; lawyers, 44%, third; and at 20% are businessmen, in last place.

Another developing trend is away from the postponement of self-gratification, i.e., away from sacrifice in the present to achieve future rewards. There is a growing emphasis on *self*, on realizing one's own potential, one's own growth, one's own actualization. This language is very popular at present, reflected in questions raised by managers and workers: "Who am I?" "What am I doing here?" "What am I here for?" "What's being done to me in my everyday life?" The intrusion of new definitions of success ranks above how-much-will-you-pay-me-to-work.

These changes are visible in new demands and in organizational responses. For example, voluntary overtime has become a collective bargaining issue. Organizations

are offering flexible working hours to accommodate newly expressed needs. Additionally, we are beginning to see different job structures, different managerial styles -- all in various ways responding to an old, but now openly articulated concern, that can be paraphrased as, *we who work are thinking persons, not machine elements; we are not morons to be used for the moronic jobs now provided.* Serious organizations are looking to see how they are going to design better jobs and organizations more suited to the new aspirations, and the new expectations.

There is another set of changes of which there is a growing awareness that should be touched on briefly. These have to do with changes in the division of labor between the sexes. We are not specifically referring to the women's movement, although the changes are very much related to it. The relationships between men and women are changing, becoming more flexible. Roles are not yet being interchanged, but there is flexibility in terms of obligations, expectations, and responsibilities.

Women are entering the work force in ever larger numbers, but, interestingly, now not for economic reasons alone. About 40 percent of the present work force are women. And growing numbers of women are entering the work force not because they need the income, but because through work they are seeking opportunities to satisfy sets of needs related to personal growth and development and to personal worth. The appropriate focus centers on the psychological reasons for women working.

Additionally, we have to look at one other development which must not be interpreted as being a consequence of the change in women's relationship to men, but rather as a growing concomitant: there is a specific threat which is arising because of the increasing participation of women in the work force. In satisfying their particular needs by working women, they inadvertently threaten the social contract between men and the American society. In the United States, if making sacrifices for the family -- by taking frustrations at the workplace, by engaging in

meaningless deadend work -- is not going to be as important for men as it once was, what of the future of our society and its organizations?

Two further changes in the social environment are having their effects. There is the growth of a *psychology of entitlement*, a new agenda of social and individual rights. The civil rights movement, followed by the women's rights movement are part of this development in which desires that are thought to be appropriate and justified in our society are beginning to be seen as *rights*. Health, education, retirement are now seen as rights (in surveys conducted recently among the American public) rather than as nice things to have if they can be gotten. The right to determine "where I am going and what is happening to me" is also very much becoming visible.

Another important change is the growth of an adversary culture that challenges established ways of doing things. In the world of work, the challenge is to the cult of efficiency -- the implacable unfolding of rationalizing the way we have to live. Challenges exist in relation to all kinds of issues: opposition to offshore drilling, opposition to computer snooping, opposition to the continued bureaucratization of organizations, opposition to what is seen as a false sense of progress, opposition to growth, opposition to people unalterably becoming what their work roles prescribe.

We are witness to the weakening of the central theme of work organizations which has persisted in the United States for roughly the last 75 years, namely that desired organizational outcomes can only be achieved when workers are controlled and regulated, since they are unreliable. This rock-ribbed concept on which scientific management and bureaucracy rest is under serious attack.

There is a concomitant weakening of an earlier established position, which in some of our writings we have called the notion of workers being operating units.^{2/} Very much a part of the American culture until now (and largely still existing) is the concept that people are

seen as only elements of systems for getting done the work of society. As such, society gives license to adjust, modify, change by training or by other means, people, as operating units, to suit the needs of organizations.

Let us now examine changes in the technological environment of organizations where a complete interlocking is taking place between the changes in technology and the changes in our society discussed above. This in itself is a message that the Center for Quality of Working Life, Institute of Industrial Relations, has been trying in various ways to make visible. One cannot look at society and at its people in work settings without looking at the technology simultaneously. Leading changes in technology indicate what the future may be like. The changes to be alerted to are coming from advanced technological settings -- from process industries, from computer-based industries or services -- and not from conventional, routine, well-established technological settings. Such technology is slowly spreading these changes to ever wider segments of production and service organizations. And in such advanced technological settings there are crucial changes *within* the workplace: the primary role of workers now changes from supplying manual skills and physical power to providing diagnosis, to regulating and controlling activities now performed by the equipment and the processes with which workers are associated.

Importantly, such organizations become more, rather than less, dependent on their workers. These organizations are characterized by massive investments wherein one million dollars invested per employee is not unknown. Here managers are far more dependent on workers than they have ever been because the future of the organization, its economic viability, is dependent on the commitment of those employed to keep it going, to forestall interruptions and disturbances. Success depends on keeping the plant going, on avoiding stoppages. And in the avoidance of stoppages, decision-making shifts radically down at the workplace, because the manager at the top, or the engineer, has little connection in the immediate instant in time with

what is going on in the process. Only the people involved know, and if they cannot find out, or are not permitted to respond, difficulties will arise.

This has been one reason why, in a great number of new organizational designs, we see structures in which there are few or no supervisors; in which the personnel rules, and the reward systems are similar to those found in all professional organizations. A very significant shift in roles takes place on the part of members of such organizations in which they become regulators and controllers of processes; they become diagnosers of disturbances; they become people who take action at the appropriate time when they consider it important to do so. They become very highly competent in the fundamentals of the technology. They handle enormous amounts of information, and, in fact, they become overseers and connectors of the system. There is a conceptual blurring of what is a supervisor and what is a worker so that it is reasonable to consider whether every worker is a supervisor of process and equipment or every supervisor a worker.

What do these changes have to do with conventional organizations? No organization is all-advanced or all-conventional; they are always mixed. What is happening in advanced technology settings portends the future. Together with the negative consequence of fewer people needed in the plant, is the positive consequence of very attractive jobs in which people have ways of satisfying their needs, in which they are not coerced into doing their work, and in which the rewards, social as well as monetary, are satisfying. Alternative organizations^{3/} evolving in advanced technological settings reflect the position that enhancing the quality of working life of its members is an essential design objective.

To conclude the review of the environments of organizations, attention needs to be given to national debate about job satisfaction of the American worker.^{4/} There is an intense controversy over whether Americans are satisfied or dissatisfied with their work. Those engaged in that controversy have not helped us understand what is going on in some segments of our society. A brief

examination of satisfaction research shows that we seem to have a dividing line at age 35. Those over age 35 demand the economic benefits of income, security, and retirement. While they want more from their jobs, they do not demand other things in addition. The most dissatisfied segments of our working population are those under age 25, both men and women, and blacks of all ages. (These figures are quoted from survey data collected by Opinion Research Corporation, New York.) Of course, there are many different reasons for dissatisfaction between those under age 25 and blacks of all ages. For the former, the dissatisfaction is very much associated with the societal changes discussed; that is, the absence of psychological benefits in the workplace, the absence of opportunities to advance, do more interesting and more varied work, have more satisfying relationships in the workplace, get more recognition, and so on. For blacks, dissatisfaction is associated largely with the failure in meeting their basic economic demands.

Within the under age 25 group, there is a split developing, according to Yankelovitch, between college and non-college youth. Quoting from his data:² college youth for the years 1967-1973 show an enormous and rapid increase in career orientation. College youth are going back to the establishment. In 1967, 55 percent of the college youth were interested in careers, and in 1973 it was 66 percent. There is a growing rejection of the "work ethic," less emphasis on hard work in the future. There is a jump from 41 percent to 50 percent in those who want to invest themselves in working hard to achieve success in the future. However, concomitantly there is a decrease in the belief that hard work pays off, from 69 percent in 1969 to 44 percent in 1973.

In examining the expectations, as expressed in 1973, of college youth regarding the major influences on choice of a job or a career, they indicated that: "the challenge of the job ranked first." Seventy-seven percent "wished to be able to make meaningful contributions at the place I work and what I do;" 72 percent listed "free time for outside interest;" 69 percent, "the ability to express myself;"

68 percent, "money that we can earn;" 61 percent, "security;" 58 percent, "a chance to get ahead;" and so on. The general impression is that the college youth "have it made;" they know they are going to get the right jobs; it may be a struggle to get them, but they know they are going to be in the system; they know they are on their way up once they get in.

For the non-college youth, on the other hand, Yankelovich signals us that they will have very particular concerns. This group will represent the bulk of our work force in the future. The majority of non-college youth face the threat of alienation in the workplace; they face being locked into meaningless jobs; they know now, and they say, that the future is not very bright for them -- and all this against the notion of rising expectations discussed earlier. What of the future of our society? There are indications of extremely negative and deleterious consequences.

FOOTNOTES

1. See Louis E. Davis, Albert B. Cherns and Associates, *Quality of Working Life Volume I: Problems, Prospects and State of the Art*, Free Press, New York, 1975.
2. See Louis E. Davis and James C. Taylor, *Design of Jobs*, Chapter 5, Penguin Books, London, 1972.
3. Louis E. Davis, "Evolving Alternative Organization Designs: Their Socio-Technical Bases", March 1976.
4. James C. Taylor, "Job Satisfaction and Quality of Working Life: A Reassessment", April 1976.
5. Daniel Yankelovitch, *The New Morality: Changing Values of Youth in 70's*, McGraw Hill, New York, 1974.

QUALITY OF WORKING LIFE -- DEFINITION AND DIMENSIONS

Gary M. Cadenhead

The quality of working life concept encompasses the whole person, not just economic man. This dynamic concept, as well as the priorities assigned to the elements within it, will vary over time, from organization to organization, and from individual to individual. The factors determining the quality of working life are complex and interdependent; although they are not fully understood, there is considerable agreement about what are their important dimensions.

The research of Louis E. Davis has been of central significance in the question about the growing recognition of the importance of the content of work itself. He has developed criteria defining the psychological requirements -- or needs -- of a meaningful job. The first is the need for the *job content* to be reasonably demanding of the individual, in terms other than sheer endurance, and that it provide some variety. Second, is the need for some area of *decision-making* in which the individual can exercise discretion and can call his own. (This requirement is related to "democracy at the work place," participatory management, or autonomous work groups.) The third criterion involves the individual's need to know what his *roles* are and how he is performing them; of critical importance in this context is reassurance through feedback. The fourth criterion deals with the need for *social support* and *recognition*. Fifth, is the need to *relate* what the individual does or what he produces to the objectives of the organization and to his life in the community. Sixth, is the need to be able to *learn and continue learning*. These criteria all are interrelated -- if the individual has a variety of challenging tasks, if he has some autonomy in dealing with them, and if he has feedback on his performance, learning is going to take place and will continue.

The seventh criterion is the need to see that the job leads to some kind of *desirable future* -- a future that is

only possible through promotion and is more frequently limited by it. The idea of a horizontal career is relevant here. Some examples of horizontal careers are the professions -- physicians, lawyers, teachers, artists, university faculty -- in which there is growth over time and in which skills and knowledge and the intrinsic nature of relevant activities become richer and more sophisticated. Career success as well as the other six criteria relate specifically to the content of work itself, and this is perhaps the most important factor affecting the quality of working life.

Another way of looking at quality of working life is suggested by James Taylor, who developed a classification scheme resulting from his research on quality of working life and the preparation of an extensive bibliography of conceptual thinking in this field. He draws a distinction between the characteristics of the work and the behavioral consequences or the outcomes of those characteristics. For example, in looking at an organization, quality of working life could be determined by observing whether most jobs meet the seven criteria outlined above, or it could be measured by observing the behavior of the people in those jobs. Taylor found eleven criteria which define the behavioral consequences of quality of working life: (1) *alienation*, defined here as a distancing or estrangement of the job occupant from the job, from the task, from the organization, or even from himself as an employed person; (2) *health and safety concerns*; (3) *economic security*, in the sense that it is freedom from fear and anxiety about income and future employment; (4) *self-esteem*, conceptually defined as one's satisfaction with one's feelings of self-worth, and one's attitude involving strength of occupational identity; the next two refer to *self-actualization*; (5) *learning* in the sense of expanding one's skills, and (6) *using knowledge* one already has; (7) the *environment criterion* relates both to the physical and to the social environment; (8) *control and influence over one's task*; (9) *career aspiration* meaning career opportunities as well as expectation; and the two final criteria refer to *extra-work activities*: (10) how does the work on the job affect family life, and (11) consumption patterns, creative activities, and community involvement.

Even the more traditional factors of quality of working life -- wages, hours, and conditions of work -- have come into question. For example, is adequate compensation the same as equitable compensation? Or (a related issue which will be discussed more fully by Edward Dulworth of the General Foods Corporation in Topeka, Kansas) what should be the basis for compensation? Should it be the job, or should it be the knowledge and skills of the individual? But even if these issues were resolved to the satisfaction of most, high quality of working life would not automatically result. Workers more and more wish to take charge of their work lives; their motivation is a phenomenon that reaches outside the plant into home and community-related issues.

My purpose has been to present a framework of the dimensions of quality of working life in a *total* sense. While there are other schemes and systems of classification, as well as different viewpoints in approaching the concept of quality of life at the workplace, the variables described here are covered in the majority of efforts to define the quality of working life.

JOB SATISFACTION -- ISSUES AND CRITERIA

James C. Taylor

Marvin Hoffenberg and Gary Cadenhead, later today, will introduce some ideas about how to evaluate and measure the aspects of the changing nature of work which Lou Davis has indicated as important. In this present hour, I wish to take up the related issue of job satisfaction as a measure which, we feel, should not be included either as a rigorous or meaningful indicator of quality of working life or as the major variable upon which to decide actions.

A question we are frequently asked is: what is the result of the change in work, and in attitudes toward it? The real question behind that one is: do you mean people are not satisfied with their work? Our answer to that is both Yes and No. Yes, in that there are many signs that workers at all levels are acting or behaving differently at work, or regarding work, than they have in the past. Such acts as: increased absenteeism, turnover, decreasing product quality, and lessened willingness to accept authority per se have led us to the conclusion that these employees are expressing displeasure with something at work -- in short, that they are dissatisfied. But, if we ask if morale or satisfaction surveys show any decline in job satisfaction, we must answer No -- No, because roughly the same proportion of workers today, as twenty years ago, report they are satisfied (or are not dissatisfied) with their jobs.

The problem with job satisfaction then is not one of determining that something is going on "out there;" rather the problem is a measurement problem -- and a definition problem. In the first place, we are using job satisfaction (an attitude) as a surrogate for behavior. This is, in part, the measurement problem. In the second place, we are, with job satisfaction, taking a concept for which we have no fixed definition. Our definition for job satisfaction is no better than our definition for quality of working life, although we have had many more years to think about the former than the latter. In short, what I wish to discuss with you today is that although we would like to be able

to talk about quality of working life as the major contributor to job satisfaction, I will present evidence, and will urge you to consider job satisfaction as a concept which we cannot measure with the same sort of precision that we can measure other elements in the quality of working life; we should not use job satisfaction as an empirical criterion at this time.

I would like to begin by suggesting that job satisfaction has the two major drawbacks I indicated above. It does not serve us as a well-defined concept. By well-defined, I mean a definition about which there is little or no disagreement among users. Moreover, "job satisfaction" is weak in a methodological or measurement sense as we have traditionally used it. By this, I mean that even if we can agree to use one or another of the myriad definitions around, our measurement (or our operationalization of that definition) will probably result in the ultimate measurement of something other than what we had in mind. This happens because the measurement of an attitude (which job satisfaction is) involves both the assessment of the object of the attitude and some standard or norm to which it is compared.

Let us first take up the issue of definition of job satisfaction. Job satisfaction can be defined in at least two ways: it can be defined rather narrowly as satisfaction of psychological needs, or it can be more broadly defined as an attitude (or a like or dislike) regarding certain objects. That is, satisfaction can be seen as a measure of the degree to which the job is liked as an object.

Turning to the first of these, job satisfaction-as-need-satisfaction is commonly encountered in the literature. Need satisfaction, however, is very narrow. It is an attempt to tie fixed (or apparently fixed) human needs to measures or statements of satisfaction with the job. It is, for example, possible to maintain that everyone needs some basic physical characteristics or elements. Thus we all need some food and some sleep, but that is too narrow since any job (hopefully) will provide us with enough of the required resources to sleep and eat. However, we can also say (as Maslow does) that everyone needs security, and

jobs can provide security. Even though we may agree with that in general, we may disagree with it in regard to the specific level at which anyone of us desires security, or at the basic level at which our security needs are satisfied. We all have security needs, but those security needs may be satisfied to different degrees by the same element of the job.

Most of you are familiar, I expect, with Frederick Herzberg's two-factor theory of satisfaction and motivation. You are probably also aware that there is a great debate over the validity or correctness of this theory. Herzberg suggests that the kinds of basic things that everyone needs affect the level of dissatisfaction rather than the level of satisfaction. In a way, one of the reasons why his theory is so popular is that it is quite attractive intuitively. I think many of us would admit that dissatisfaction might be the thing we are looking at in the absence of fulfillment of basic physiological or human needs, while job satisfaction may, in fact, be connected with higher-order needs. But more higher-order needs are surely a matter of individual differences when it comes to stating categorically that a particular job would fulfill a particular need in any one person.

The other general definition of satisfaction is basically the notion of job satisfaction as attitudes, or likes and dislikes. It is not the satisfaction of *needs* concerning us here, but the satisfaction of *wants*. This definition is very ambiguous. I would maintain that it is ambiguous because it relies on liking what is known. That is, we may not want something and therefore will not be dissatisfied or frustrated -- until we know about it, or until we know that it exists, or know it is available. Expectations of what is "out there" differ both with education and exposure to alternatives. And whether these expectations exist in certain persons, is not the only way people can differ. If two people, two individuals, hold the same expectations, they can still differ in their assessment of the potential availability and/or the importance of these expectations to them. So, to ask people whether or not they like something involves, first of all, do they know it exists? Secondly, do they think it possible

to achieve? These attitudes or wants are not as much measures of what work and jobs are like, but are more like measures of the vagaries of the population regarding what is available, or the norms or standards that the respondents to job satisfaction studies bring with them.

Let us now look at job satisfaction as a measurement device rather than a defining concept. As a single measure, job satisfaction has excessive generality. However, it is the most frequently used (or observed) single outcome measure in the literature today. There is obviously a need for measuring something, but I would like to maintain that the use of job satisfaction measures evades the problem of defining the norms or standards implicit in what I have just presented in the definition of satisfaction of wants. Such measures rely on the respondents tacitly to define these norms within their responses. We need to be able to define the existence and magnitude of the job and job-related elements that are considered by these norms. Only then, I would maintain, can we begin to touch on the characteristics of quality of working life. In the case of job satisfaction, so long as organizations maintain jobs of a given design, or in a certain work place, or of a certain condition, we can assume that employees can find satisfaction with those levels, provided these persons do not know -- or cannot mentally picture -- a work situation much different or much better than the one created by the organization. In other words, we cannot measure satisfaction with what is not known.

Another measurement issue rests with the fact that satisfaction can also be seen as a function of one's ability to adjust to a given work situation, or to modify that situation to one's needs. That is, workers may report satisfaction with a job to which they have adjusted their needs or requirements irrespective of the real quality of that job or of their working life. If these employees see no avenues of escape, and if they have made a suitable adjustment, they could well see their work (whatever it is) as satisfactory. When this kind of adjustment satisfaction is measured, it may or may not be measuring a stable characteristic. To the degree that this characteristic is

an unstable one, satisfaction is a less reliable measure of quality of working life. On the other hand, people can adjust jobs and work to suit themselves, instead of adjusting themselves to the job. Recent examples of such adjustment are soldiering on the job and sabotage of both product and plant, which represent workers' attempts to modify the job or work place to suit their own needs; a frustrated operator might say that the job is satisfactory or satisfying if he can safely do mischief to the organization by such means.

These illustrations, I hope, make clear that even though we can define job satisfaction in a certain way, our measures of satisfaction may still not tell us anything about the job. When we go out to measure satisfaction, we are never certain whether the respondent or employee knows that there is something better to compare with. Even if there is something better, the employee can evaluate his job in terms of how well he is able to adapt to it (even if it is a lousy job), or how well he is able to adapt the job to suit some wants created by certain frustrations on the job.

Methodologically, job satisfaction measures are always relative measures; that is, they are an assessment of one's state relative to something else. "I am satisfied with this job because my needs are fulfilled." "I am satisfied with this job because my wants are seen to." "I like this job because this job is better than other jobs I have known, or than other jobs in this plant." "I am satisfied with this job because I have adapted to it and am thereby able to tolerate it better." "I like this job because I have changed this job and thereby made it more tolerable." As we can see, these measures are always implicitly relative to something else. When we use specific satisfaction measures (specific, that is, to particular needs or wants), we can obtain a long list of satisfaction with certain elements. We are still measuring each and every one of those specific elements relative to some norm or standard against which we say it is satisfactory or satisfying because it is better than that norm.

This is in the nature of attitudinal measurement. When we are talking about jobs and work, however, we are talking about certain phenomena that exist in more absolute time and space -- something that can be measured in a behavioral way, something for which behaviors are undertaken. But the job satisfaction measures are attitudinal rather than behavioral. They are not measures of on-the-job behavior; they are not perceptions of that on-the-job behavior. And, in fact, they are not even opinions about certain behavioral facts on the job. A measure of behavior would be observation of the frequency of interaction between a subordinate and a superior, combined with an assessment or a judgment of the supportiveness, for example, of that relationship. We could obtain perceptions of that behavior as well by asking the respondent to tell us the extent to which his or her supervisor responds supportively. Finally, we could even ask for opinions*, for example, does the supervisor react supportively? But attitudinal measures of job satisfaction do not even measure this opinion. They are always measuring like or dislike relative to some unmeasured object or event.

There is at least one other reason why job satisfaction is not a methodologically good way of assessing quality of working life. This methodological problem can be called the problem of cognitive dissonance. It is a special case of the idea that we adjust to our jobs and work. We find that the job satisfaction usually increases for people who stay on jobs over a period of time, and is higher for people with longer time in a job or grade. For example, job satisfaction for people who have held jobs for five to ten years is usually lower than satisfaction for people who have held those jobs longer than that. This result is sometimes explained on the basis that "we become what we do." The longer we stay on a job, the more we come to de-

* An opinion is usually a report of facts stated in a way that attitudes come into play. If you like the supervisor (an attitude), your opinion of his supportive behavior may be higher (because of your attitude in general) than the opinion of someone else whose attitude toward the supervisor was lower (that is, someone who disliked the supervisor).

fine ourselves in terms of that job, while at the same time, the less likely it is for us to change that job; so we come to identify more with the job and confuse assessments of the job with assessments of ourselves. If this kind of identification operates at all to confound the results of job satisfaction research, it creates an additional methodological problem. And, in fact, in terms of this kind of increasing satisfaction with years on the job, I would maintain the problem is more than a minor one in methodological issues of job satisfaction research.

The most significant sign, I think, of job satisfaction as not measuring what is going on in the world today -- when it comes to the work itself -- is the fact that measures on job satisfaction done within the last two or three years show the same basic results as did similar surveys conducted twenty years ago. An overwhelming proportion of American workers state they are at least "not dissatisfied" with their jobs and work. Yet at the same time, major corporations like General Motors and General Electric are faced with ever-rising turnover in spite of increases in wage rates. In addition, absenteeism has increased dramatically over the past decade; for instance, in the auto industry, absenteeism increased 100 percent over the ten-year period 1962-72.

If we can agree that these problems of apparent work alienation are significant, then how can we explain the fact that morale surveys continue to show that the American labor force is satisfied with its work? I would maintain the reason is that definitionally and methodologically, job satisfaction is an improper measure of the quality of work experience; job satisfaction is a better measure of the ability of employees to adapt or adjust to basically unsatisfactory labor and working conditions.

My own experience with job satisfaction as an outcome measure of organizational behavior is (as you might expect) basically negative. In an admittedly unrepresentative sample of organizations I have studied over a ten-year period, I consistently found high reported job satisfaction. I found that whether or not those organizations are in good productivity positions, whether they are in a good position

with regard to union-management relations, and whether or not behavioral measures of organization revealed high or low levels of modern management styles, the levels of job satisfaction for the workers in those organizations remained unexplainably high. Results for blue-collar, white-collar, administrative, and management people in these organizations suggest that 85 percent of all workers in all of these very different companies reported they are not dissatisfied with the work itself. At the same time, we find that this measure of job satisfaction, which we have used over and over again, is not very highly related to the behavioral measures in those organizations. That is, internally, if we are to look at differences among work groups within these organizations, the relationships between organizational behavior and job satisfaction are not terribly high.

I would explain these findings on the basis that regardless of how well we define job satisfaction and how carefully we break it down, we are still measuring more than perceptions of the work itself. We are still measuring unknown norms, references, and expectations that differ from person to person, from place to place, from time to time, and that these expectations and these references are always changing and the people are always adapting to what they have, is the reason why we cannot use job satisfaction as much as we would like to as a measure of the quality of working life.

Job satisfaction research, or morale studies, have historically been used to either support or attack the status quo -- and the trend continues. I wish to review briefly some of the more important recent examples of such studies.

In support of the thesis that the quality of working life is high, two important studies have now become available. A. A. Imberman, of the consulting firm of Imberman and DeForest of Chicago, states that a survey of 3,800 employees in five factories reveals that 79-85 percent reported satisfaction with assembly line work.¹⁷ Researchers at the Rutgers University Medical School report, in a

recent issues of *Archives of General Psychiatry*^{2/} that of 576 UAW members interviewed in 1968, 95 percent were satisfied with their jobs in an auto plant.*

Both of these studies suggest that in general, a vast majority of workers report they are satisfied with their jobs. These results are consistent with more extensive national surveys reported from time to time. For example, a 1954 national survey of a half-million workers by Science Research Associates (SRA) of Chicago, reported a high 81 percent were satisfied with their work.^{3/} More recently the Gallup organization reports 87 percent of those polled in the 1964 national sample were satisfied with their jobs, and 77 percent of those polled in 1973 were satisfied. These results are similar in that they clearly suggest that "a whole lot" of American workers report satisfaction with work. They also show little change (only 4 percentage points) over the twenty-year period from 1954 to 1973, or they show a 10 percentage point decline in the ten years from 1964 to 1973.

Looking at such general results in another way, it seems that within the range of most normal circumstances, job satisfaction (or the absence of dissatisfaction) ranges from a low of 75 percent to a high of 95 percent.

This pattern receives additional support from an examination of data that were systematically collected from some 20,000 employees at all levels in a variety of different organizations. The Center for Research on the Utilization of Scientific Knowledge at the University of Michigan gathered these data between 1966 and 1970 from some 33 organizations nationwide.^{4/} Although they were not randomly sampled, these organizations differed on dimensions like management philosophy, economic condition, as well as size, technology, collar color, and the like. Overall, 85 percent of all 20,000 employees reported being

* These investigators state that although their sample was representative of an insured group of UAW members in a pre-paid union health plan in Baltimore, it is characterized by white 40-year old male workers, who have been over 13 years on the job, and who earn \$9,000 or more per year.

satisfied (or, more specifically, not being dissatisfied) with their jobs. An insurance office of 200 employees topped the list of the 33 organizations with 95 percent not being dissatisfied. A paper mill employing 440 people set the low point among the 33 organizations with 76 percent of employees reporting no dissatisfaction with the job. Although not a representative sample of American organizations, this range of satisfaction is not unlike those found in the national surveys alluded to above. We can take our choice once again -- either both the paper mill and the insurance office have a "vast majority" of satisfied employees, or the paper mill is a "miserable" 20 percentage points lower in job satisfaction than the insurance office. Both interpretations are probably valid with regard to the attitudinal and adaptive aspects of the American work force vis à vis their work. Neither, however, is necessarily a valid interpretation of the overall and absolute quality of jobs and work.

A fine example of measuring current worker attitudes and feelings suggests the present limits on what we can know in this regard. The University of Michigan's Survey Research Center studied a national sample of 1,500 American workers in 1969.⁵ This survey was conducted as rigorously and carefully as any available. Although the data are very complex and comprehensive, the overall results regarding job satisfaction are similar to those above: for any single demographic characteristic -- e.g., race, age, sex -- of respondent, the minimum "not dissatisfied" was 75 percent. The most dissatisfied group were black workers, under age 30, 37 percent of whom reported they were either fairly or very dissatisfied with their jobs. That represents 63 percent "not dissatisfied." This survey also found that job satisfaction was related to collar color and to income, although the major study results regarding "worker alienation" (which is not measured in their study by satisfaction) do not show direct relations to blue vs. white collar or income to the same degree. Obviously, even the job satisfaction measure in this important survey of workers seems to be reflecting something other than the quality of the jobs or of work itself.

I do not seek to criticize the research using job satisfaction, but rather the use of that variable in evaluating the quality of working life. Much of this research just mentioned purports to show the extent to which American workers at all levels are satisfied with work. And much of this research, in turn, was undertaken expressly to study this phenomenon of work satisfaction in the American labor force -- but much of it was not. Much of this research was rigorously and carefully undertaken and/or reported -- and some of it less so.

However, out of this mass of job satisfaction data, one fact and one assumption (call it a nagging suspicion!) emerge. The fact is, that regardless of the sampling procedure or methodological rigor of the studies themselves, it was found that an inordinately high proportion of those surveys report satisfaction (or the absence of dissatisfaction) with their jobs, given present levels of such problems as absenteeism and turnover. The suspicion is, that for the reasons mentioned earlier, these results may tell us something about the level of expectation of the American worker, something about his or her ability to adjust to a job, to accept it with age, or to adjust that job to specific wants, or something about how workers identify closely with the job so that they cannot rate that job without reflecting on their own core values.

Given the above assumption, I believe that these results do not reflect directly on the jobs themselves, and, therefore, do not reflect directly on the quality of working life. Whether we personally choose to apply the accumulated evidence to show that the American worker is "satisfied" or is not satisfied, must be our own choice, and by our own definition of what "job satisfaction" means. We should not, however, confuse this assessment with that of the quality of working life as a measurable aspect of jobs and work.

FOOTNOTES

1. Imberman, A.A. "Is It True What They Say About Assembly-Line Workers?" Address given before Industry Convention, Doral Country Club, Miami, Florida, November 10, 1972. Available through Imberman and DeForest, Management Consultants, Chicago, Ill. 60604
2. Siassi, I., Crocetti, G. and Spiro, H.R. "Loneliness and Dissatisfaction in a Blue Collar Population." *Archives of General Psychiatry*, 1974, 30, 261-265.
3. SRA survey reports in *Changing Times*, October 1954.
4. ISR survey of organizations' statistical standards (all company figures): Updated for June 1, 1970. Unpublished paper. CRUSK, Institute of Social Research, Ann Arbor, Michigan.
5. This survey has been reported many places. C.F. Herrick, N.Q. "Who's Unhappy at Work and Why?" *Manpower*, 1972, 4, 1-7.

ENHANCING THE QUALITY OF WORKING LIFE: ORGANIZATIONAL TRENDS

Louis E. Davis

In response to the environmental changes previously examined, a growing number of organizations are experimenting with and instituting changes in their structures, rules, rewards, etc. and design of their jobs. The experiments with new organizational and job forms are enormously important because of what can be learned from the new possibilities they reveal. A brief history of this development is indicated as background.

The first experiment with such new forms of organization and of jobs took place in 1950 in some English coal mines. It is regarded by most as the originating study that set people to thinking about the possibilities for changing organizations and jobs in directions which are both useful and important to the success of the organization as well as to the needs of the people within it. In the United States, the first such study was started in 1952, on an assembly line in a pharmaceutical plant. There is now a history of more than twenty years of experimentation, and there are a number of basic considerations that have come out of these experiences with alternative ways of getting society's work done.

Modern organizations, their structures, their jobs, their work content, all are *inventions*! As inventions they are based upon the world view held by their inventors of work systems, i.e., upon their world view of how organizations function successfully, upon the assumptions held by their inventors or designers, the local requirements of organizations, the particularities of employees and labor market, and, of course, the culture in which the organization finds itself.

The point to be made is that organizations and their jobs are inventions and not entities found in nature. Long ago they derived from traditions reflecting the religious and social structure of society, but no longer.

Jobs, more properly crafts, were reflections of the knowledge of materials or tools, but rarely so now. Even these determinants of organization structure and jobs have been steadily diminishing since the 1780's and are almost gone, leaving us with organizations and jobs as inventions. What this means -- and what has been very aptly demonstrated in a wide variety of these new experiments -- is that one invented form may be suited to one era and new and different inventions are required by and suited to other eras. This poses a dilemma for most organizations, namely, the need to examine whether or not they should change the (invented) organization form in which they are living. Such a task requires wide understanding on the part of managers, union leaders, organizational designers, and many others. There is a need for acquiring the ability to undertake and try out new organizational inventions.

Recent experience indicates that large organizations are feeling the impact of some of the previously discussed trends much sooner than smaller organizations. As a consequence, many are feeling the pressures to change and do not know quite how to respond. Too frequently they wait for some special event to take place, such as building a new factory, in order to try out new organizational forms. Such waiting is usually unnecessary since opportunities abound to introduce new forms of organization and jobs. In any firm there are more product changes, production process changes, and more equipment changes taking place that present opportunities to examine whether or not a new kind of organization, or new kinds of jobs, would be possible, than can be utilized. By trying out new forms, these situations present opportunities to learn how the various needs previously discussed can be satisfied.

Another consideration requires examination, namely technology -- the techniques, the equipment, and the other artifacts that an organization needs to get its work done, that is, to make its products or produce its services. It was very widely accepted until recently that in order to employ a particular technology, to gain the benefits of it one had to use it in the way in which it was placed before us. We thought it necessary to adjust the organization

structure, the jobs, and the people in order to use a particular technology. Enough organizational experiments have taken place in the last few years to indicate that the case is very much to the contrary of the accepted previous view of technology which may be called technological determinism. What has been demonstrated is that there is more than one way of using technology, and considerably more than one way of interfacing an organization and its jobs with a particular technology. If necessary, the technology itself may be redesigned to fit the organization and its jobs and still achieve economic objectives.

Understanding that there are many alternatives in technology which may be used, leads to the realization that we have many options, and hitherto overlooked possibilities of how to design organizations and the jobs within which a technology is embedded. This is a very new learning, and therefore difficult to understand until one has had some experience with the fact that there *are* economically feasible alternatives for how technology can be used, and that it is we who have to choose. The choices are substantially determined by what it is we want to do with the people within the organization -- not the other way around. This is not a hard lesson to learn, but, nonetheless, one that must be learned.

A variety of experiments with organization structure and job design have taken place and they can be variously classified. One such, classified according to technology, may be called "high technology" organizations and includes experiments with different organizational forms in paper-making plants, chemical plants, oil refineries, aluminum smelting, and so on. Another group of experiments is in what we may call "modern technology" industries, and includes electronics, food production, appliances, aircraft, and aircraft instrumentation. And there are a growing number of experiments in other new kinds of technologies, in the service industry including insurance companies, banks, and so on. Let us review what appears to be happening in each of these categories.

Common threads run through the various experiments in high technology industries.* The managements of these kinds of organizations are extremely sensitive to, and highly aware of, the need to so develop, or so structure, organizations and jobs that high levels of commitment on the part of those who have to do the work can grow within the organizations. As may be surmised, in such plants the economic viability is very frequently associated with continuous running, with avoidance of work stoppages and breakdowns, and in many instances more so than with the actual throughput that is achieved. In such plants, whether one ton more per hour, or one ton less, is attained frequently is less significant than whether there is a stoppage caused by a breakdown or a disruption. Studies indicate that how quickly a stoppage is overcome is a function of the work authority and the competence of those who have the work to do. Whether they can make the appropriate decisions is partly a function of authority and partly of competence where success depends not on doing routine tasks, but on coping with the difficulties, disturbances, and frustrations that arise in the workplace. The operational effectiveness is related to whether individuals or teams are given regulation and control of the technical system.

When organizations address themselves to overcoming downtime problems, they frequently begin to provide the means for the building of commitment to the performance of work. Why the concern with commitment? The nature of these disturbances and activities are such that there is no way through the superstructure of an organization -- supervisors, managers, and so on -- to intervene rapidly enough. Only those who are on the scene can take the appropriate action in a timely fashion. Such local or work authority becomes the basis on which an improved quality of working life can be built.

The organizations that have engaged in these experiments over the years turn out to be inordinately "flat" in

* Louis E. Davis, "Evolving Alternative Organization Designs: Their Socio-Technical Bases," March 1976.

terms of structure; a few have no supervisors at all. One plant in the paper industry, which is now three years old, has no supervisors. The highest and lowest level of supervision is embodied in the plant manager who has a span of control of 60 to 1. Based on the decisions made in the workplace and how jobs and work groups are structured, there just are not any viable roles for supervisors to play. And with no such meaningful role possible, the management had to face that reality and say, "we won't have any." This has made those workers obviously different from those in conventional organizations.

Another characteristic frequently found in these organizations is that there are no well-defined jobs. What one sees in these experimental chemical plants, paper mills, and so on, is that the boundary of the job is the boundary of the work team: the team is associated with and responsible for a technical process, and what team members do in any one instant in time is what they agree has to be done. When the boundary of the job is the boundary of what the team has to do, individuals, of course, require considerably more competence, considerably higher investment in training, considerably more control of the workplace or more autonomy, more feedback, commitment, etc. There are some semi-autonomous work teams who can reorganize themselves at will; that is, they can reassign what has to be done to their members as they see circumstances changing. A great deal of the internal structure, i.e., jobs, is deliberately quite informal.

Occasionally one finds teams with leaders, and there is somewhat more formality, but that is not what is crucial. The teams are relatively self-directing; given all the knowledge and information they have, they do what they determine is necessary, at any instant in time. This, of course, means that they have to have enormously larger amounts of feedback and of information than is given to people in conventional work organizations. For managers, it raises the question of what they want to make accessible to the people who do the work, what kind of information they want to open up -- and if they think about it seriously, they discover they can give a great deal more information than has been given customarily. In these

organizations, work teams usually have "organizational space," or "organizational turf," or an area of decision-making that is pretty much their own. They can control the process within the particular objectives that previously have been laid out or agreed to. They have access to all relevant output data and have immediate feedback. If feedbacks depend on test data and timeliness is a requirement, they do their own testing, and such things as chemical laboratories and inspectors tend to disappear.

To repeat, people in such organizations have a high level of local, or what may be called work authority, over all the activities that must be performed. This raises a new theoretical context, in that we may have had a misconception all along about authority. There may be, in fact, two forms of authority: that authority which we might call *institutional* authority needed for connecting the organization with its environment, and then *work* authority needed by those who get the work done in order to accomplish the objectives which are within the institutional authority. In most organizations those two concepts have never been thought through as being separate; and most often work authority is limited in the name of institutional authority. Understanding this fundamental difference will be crucial to future design of jobs that provide higher quality of working life.

Another aspect of these new organization designs is that the members of these organizations can develop and depend upon a high level of social support in the workplace, i.e., one knows that one can rely on others for help needed in performing the job, as well as for sympathy and understanding. Pay or reward systems in these plants are quite different from the conventional; frequently workers are on salary rather than being paid by the hour (the latter makes no sense in the new context); frequently they are paid by what they are able to do, or on the basis of what they know, that is, by qualification rather than by the specific tasks they perform since these tasks may be changed by the individual or group as needed. There is mobility right within the workplace. Enormous opportunities become available to learn to do different things because of the loosely-defined job structures within which people can shift around to do

different tasks. Learning is no longer something one must go to school to do. Learning now takes place at the workplace because of how the jobs and the work teams are structured. In fact, in some of the newest organizations part of the objectives of these work teams is to see to it that their members do learn; that is, they are given assignments to do work that needs doing, as well as to learn something new. This is an important addition for the individual for his own development.

Further, in relation to social-systems support, one finds minimal rules and regulations governing the individual worker. Very frequently there are no time clocks; rules about discipline are agreed to within the work groups as to how they will handle themselves; disciplinary matters are worked out within the group up to the point of sanction because social justice may be a factor in sanctioning. (Groups can gang up on an individual very easily, under certain circumstances, and that must be avoided.) Who imposes these ways of living together, which in conventional organizations are determined by management-established rules? Usually groups agree to them *with* the manager and, in a few instances, with the involvement of the union.

In these organizations one finds a high degree of participation as well as different kinds of participation. Participation now has meaning and purpose and is needed, particularly at the work-group level. There are extensive opportunities for individuals to decide what is going to be done and how to do it, and they decide with remarkable dispatch. Where people need to connect with each other across work shifts, as in process industries which are 24-hour, seven-day operations, they work out ways of overlapping with each other in what may be called deliberate and specific "hand-over" exercises in which the on-coming people learn about existing problems from those leaving. Who is present, what has happened, what needs to be done are bases for deciding what members of a team will do. Those doing the work do not require direct management or supervision. There is also a high degree of participation between workers, work groups, and those at managerial level. In fact, the whole notion that communication is a special activity that management must engage in somehow disappears.

There are other changes, though with much smaller impact, which involve the recognition of differences and needs in communities and within families. For instance, there is the interesting case of a textile mill which required 300 people to work in its plant; the plant was established in what was formerly a fishing village with a long history of cooperation in carrying out the work of fishing and sharing in the outcomes of the catches. When the plant opened, management, in effect, signed a contract with the village. They asked for 300 jobs to be filled. Those who wished to work were trained. All management asked for was the assurance that 300 jobs would be filled; whether it would be Mary Jones at 8:00 a.m. on Monday or John Smith at 8:00 a.m. on Tuesday did not matter. The firm wanted the people to do the work, would train them and it was up to the community to provide them. This mode of operation has been going on for a substantial number of years.

More recently in some universities, some banks, and an insurance company on the East Coast, similar developments are becoming visible. They are offering a job to a family; some days the husband works and some days the wife works at the same job. These are small trends, but indicative of responses to the changes that are taking place in the social environment.

What happens to managers in some of these new organizations can be very scary. Managers' roles shift remarkably within the plants from managing the people, that is, managing the inside of the work organization to managing what may be called the boundary of the organization, i.e., dealing with the difficulties, the disturbances, the changes that are going to enter the organization from the outside and affect the ability of those inside to carry on their activities competently. Interestingly enough, in most organizations this is what managers would like to do, but they feel bound, or become bound, to managing the internal details. In the new organizations, however, this is precisely the shift that takes place, to what may be called *co-managing*; the manager *providing* for the internal capabilities, skills, structure, resources, and competences for getting the work done, while

he himself deals with the environmental factors and the external disturbances that will affect the functioning of the work group or organizational unit. This concept is supported by an experiment with supervisors where they were provided with autonomous work groups and their behavior changes were observed over a period of three years. Most, but not all, supervisors shifted their activities to boundary management, i.e., dealing with external intrusions, as compared with the internal supervision done before. This means, of course, that managers will have to learn to behave differently in the new settings. Everyone's life is different in these organizations.

The long years of experimentation with responsive organization designs have led to a conclusion which is, of course, at best a tentative one: in all of these instances for which we have data, our own or those of others, the performance of the organization which is important to its economic viability has improved. Output, quality, meeting schedules, reducing costs, show improvement; although, while each of these does not improve in each instance, on the whole there are improvements. Simultaneously there are enormous improvements in the dimensions which we can call, tentatively, the dimensions of the quality of working life. Behaviorally, this is seen in reduced absenteeism and turnover, increased competence as seen in advancements within the organizations, increased satisfaction, greater knowledge of what is happening around one, greater dignity and pride in accomplishment, greater responsibility and better rewards. At present we may conclude that we are not faced with the bugaboo many managers and union officials have been worried about, that there is a tradeoff between productivity and quality of working life. Rather, the new organizational forms that have been developed so far serve as demonstrations that quality of working life and economic viability both improve with structural changes in the organization which are directed at quality of working life needs for the individual, the group and the organization.

MEASURING THE QUALITY OF WORKING LIFE

Marvin Hoffenberg

We are increasingly aware that one world, among the many we live in, is created by statisticians. There is no level of employment or unemployment, of income and prices, independent of the definitions, instruments, and operations of the statistician. And, these reflect the cultural values of the times, the theoretical basis of particular disciplines, e.g., economics in defining national income, and the technologies of measurement. In addition, the actual measurement is often in response to a particular problem and the appreciation of that problem. For example, during the Great Depression there was no consensus on whether people on W.P.A. projects were to be counted as employed or unemployed. Separate counts were published for such an attachment, and the users of employment statistics included or excluded them as they judged appropriate. All of this is apropos of measuring the quality of working life.

The phrase, "quality of working life," invokes a sympathetic response among many individuals, but no consensus has yet developed on a definition of the problem that it implies. Thus, those who attempt to improve the quality of working life are grappling with an ill-defined problem that occurs in the context of complex systems, and no generally accepted basis is in use for the measurement and evaluation of their efforts. This lack of consensus has not prevented attempts to measure or to evaluate the quality of working life. There continues to be concern and measurement in this area, and a strong and improving linkage between measurement and evaluation.

In grappling with measuring the quality of working life, we are dealing with a socio-technical system which has multi-outputs that are multi-valued. Translated into production terms, this means that the processes involved have many attributes and may be valued in different ways. Customarily, a monetary value (actual or imputed) is associated with output, but it may also be valued relative to

the satisfaction derived from it by ultimate users, from the standpoint of its social value, or, in terms of how the necessary productive activities affect those individuals involved in them. Thus, the value of production may be viewed as a physical, monetary, utility, or normative concept. Consequently, when the operations underlying any measure of production are examined critically, it becomes evident that one, among alternative concepts has been used. All measures are appraisals of production rather than value-free factual statements. The weights, or prices, attached to the multi-products are sensitive to market or subjective evaluations of their worth, all social evaluations.

With the above as background, I will now turn to the efforts of a task force on measurement of which I was a member.^{1/} The task force dealt with the following issues: first, questions of social design; what is it we want to know? -- the concept of the quality of working life within what theory or theories that were acceptable to its members. Secondly, questions of statistical design; what instruments and operations would make the concept operational, and control errors of observation? Thirdly, value questions; from what stance and whose point of view should prevail, and by what norm should quality be judged? Within the charge set by the committee responsible for the conference, the task force constrained itself to measures that exist or were in the process of construction, and on aggregate measures as social indicators of the quality of working life.^{2/}

By indicators, was meant measures of systems performance involving the setting of boundaries for the "working-place system," as a subsystem of the more general system-output of "the quality of working life." No consensus was achieved on this boundary problem. Since social indicators are aggregative measures, after some conflict, a decision was made to concentrate on aggregates of individuals. For measurement purposes, system performance measures are sufficient, hence aggregate indicators. But for policy purposes more is needed. A normative judgment is required: some measure of what performance should be. And, since our interest is in the difference between what is and what should be, it is necessary to make judgment on the movement of the

system toward, or away from, the norm before an intervention policy is developed. Measurement and analysis can help in determining system performance and its trajectory. The establishment of norms is a consensus definition and not reached through measurement or analysis, but through a consensus process. The measurement task force made a decision not to concern itself with establishing norms, but to assign it to the evaluation task force.

The final aggregative measures -- criteria -- for measuring the quality of working life selected by the measurement task force are:

1. Employment conditions. Measures of the physical aspects of health and safety as well as other aspects of employment such as hours of work, shift hours, and events where there is both a physical and nonphysical component.
2. Employment security. How do workers feel about the future of their jobs?
3. Income adequacy. "Income" may be family income or work income, and its adequacy in relation to the worker and his family-life cycle including the individual's retirement pension.
4. Equity. The worker's evaluation of his own relative status.
5. Worker autonomy. How much control does the worker have over his task environments?
6. Social interaction and isolation. This criterion was divided into two parts: (a) task-related; while the individual is working on a particular task, is he alone or does he have social interactions that result in psychological support under conditions of stress; and (b) non-task-related and referring to social interaction within the workplace.

7. Self-esteem. A feeling of self-worth on the part of the individual.
8. Democracy in the organization. Several criteria are involved here: (1) the methods by which decisions are reached; (2) the individual's ability to express his own preferences; and (3) his opportunity to develop and take on decision-making responsibilities.
9. Worker satisfaction. The degree to which the needs of the worker are met in the work situation.

The above nine criteria were considered as appropriate at defining and measuring the attributes of quality in the workplace. These criteria have both objective and subjective (attitudinal) dimensions and the task force recommended that both types of measurement be made. It was also recognized -- since the task force was composed of nationals from various countries -- that precise definitions used would vary from culture to culture.

The nine measures (criteria) are designed as *signaling devices* (indicators) of what, overall, is going on in the workplace and designed for influencing organizational, trade union, or public policy. There is a need for such measures. They can be used at the individual organizational unit level, but are not appropriate measures for diagnosis and evaluation of what goes on within that unit. The UCLA Center for the Quality of Working Life is turning its attention to internal measures that would permit an evaluation of management actions in improving life at the workplace.

Such measures are designed to assess the internal environment of the organization. They are, again, indicators, but on the micro-level in contrast to the macro-level measures above suggested by the task force. A tentative and sample list of measures for the micro-level is shown at the end of the paper. These measures are both "objective," obtained from company records, for example; and "subjective" matters of perception and valuing from both managerial and employee positions. They also can be integrated

with incentive and evaluation systems so as to make efforts to improve the quality of working life an ongoing activity that is valued by all members of the organization. Once experience has been gained in the measurement at both the micro- and macro-levels, linkages can be forged for an integrated measurement system, but this is in the future.

Problems of measurement and problems of evaluation are interdependent and will develop together. The field is progressing beyond the development of "shopping lists" and is beginning to operationalize concepts. All of this takes time. There is also a growing recognition that if the promises of those whose efforts are to improve the quality of working life are to be generally accepted, then the question, "does it make a difference?" must be answered. The answer will involve quantification, evaluation, and the development of standards by which to judge.

SAMPLE LIST OF MEASURES

I. Personnel Throughput Measures

- A. Recruitment (Blue collar, white collar)
 - Criteria for selection
 - Methods of selection
- B. Training
 - Induction
 - Skill
 - Skill progression
- C. Career
 - Transfers
 - Criteria for promotion
 - Methods of promotion
 - Promotion data
- D. Separation
 - Procedures
 - Compensation
 - Separation data
 - quits, discharges (turnover), cutbacks
- E. Behavior Variations
 - Absence
 - Lateness
 - Accidents
- F. Reward System
 - Modes of payment
 - Progressiveness of salary - perceptions
 - Merit payments - perceptions
 - Benefits
 - fringes, pension, separation payments
- G. Utilization of People - Shiftwork
 - Information supplied to employees about organization, policies, performance
 - Arrangements for work scheduling
 - Arrangements for material supply

H. Governance

-Participation structure

works council - frequency of meetings

committee structure - frequency of meetings

-Grievance machinery

numbers of grievances, types of grievances

and frequency, location of grievances (dept.),

outcomes - nature of settlement, follow-up

procedures.

II. Measures of Effects of Employee Behavior on Production and Costs

A. Production

-Quantity of output

productivity, adherence to production schedules.

-Quality of product/services

evidence from quality control measures

distinguishes human/equipment sources of

error

B. Maintenance

-Machine maintenance

quality, quantity - downtime.

C. Costs

-Unit labor cost

-Overtime work

-Materials utilization

-Waste

D. Equipment utilization

III. Employees' Evaluation of Their Work Experience in the Organization - Attitudes (Beliefs/Experiences)

A. Orientation to work

-instrumental

-solidaristic

-career

- B. Evaluation of various features of job (set of measures in a developmental sequence)
 - use of skills
 - acquisition of new skills
 - variety
 - opportunity to make suggestions
 - opportunity to make decisions about target setting, work scheduling, material supply.
 - social value of what is done in the job
 - pay (adequacy, intelligibility of calculation, fairness, etc.)
 - benefits (adequacy, intelligibility, fairness).
 - conditions of work (physical, environmental, organizational, shift work, etc.)
 - quality of social interaction inherent in job

- C. Evaluation of organization
 - security
 - stability
 - criteria for promotion
 - opportunities for promotion
 - recognition of work done, contribution made
 - suggestion scheme
 - acceptance of suggestions, explanation of rejection.
 - adequacy of information supplied to employees
 - company as employer generally
 - "climate" of organization
 - induction procedures
 - grievance procedure

- D. Evaluation of management and supervision
 - quality of leadership
 - likes and dislikes of supervision
 - likes and dislikes of management

- IV. Evaluation by Managers, Supervisors
 - of employees
 - of perceptions and attitudes
 - of organization
 - as employer of themselves, of workers;
 - as effective;
 - as a work environment, climate, etc.
 - of community/location
 - of own jobs

V. Objective Measures of the Organization

A. Flexibility and Adaptability

- measures from survey of organizations
(Taylor and Bowers)

B. Community relations

- demands on educational infrastructure -
general, technical
- contribution to education infrastructure -
general, technical
- catchment area for employees
- participation in local community activ-
ities (by categories, grades)
- local services contributed by firm
- effects on family members of firm's members

C. Union Relations

- Union-management interactions
frequency, nature, subject.
- Union-worker interactions
direct, via shop steward
- percentage unionization by category

FOOTNOTES

1. Task Force on Measurement, *International Conferences on the Quality of Working Life*, Arden House, Harriman, New York, September, 1972.
2. See Louis E. Davis, Albert B. Cherns and Associates, *The Quality of Working Life, Volume II; Cases and Commentary*, The Free Press, New York, 1975, pp. 370-374.

NEW ORGANIZATIONS AND JOB DESIGNS

Edward R. Dulworth

I'm here today to share with you our experience of organizing the management system for a new plant, and to talk about why we did it, what we did, what our system is generally and specifically, how it is working -- or isn't working -- today. I will try to get a kind of total idea across of what we did with this plant, assuming that you know nothing about it. I want also to say that I'm not here to tell you what to do with your organization or to provide a model that works for you or others. I am here to pass on an experience.

In 1968 we had decided in our business that we needed more manufacturing capability. Having made that decision, we picked an area of the country in which to build a plant, the particular location for it and what the technology and design would be. After that process, one of the individuals in our organization thought we ought to look into management systems for this new plant, that it was an opportunity to create something different, to experiment, to learn if there were better ways. The reason, I think, for this suggestion was that on the one hand we had problems: we had experienced major kinds of problems in our business, many of them alluded to today -- problems like poor quality in manufacturing, many grievances, many personnel problems, high rates of absenteeism, thefts, sabotage, much waste -- the kind of problems that nobody likes, that need to be solved. Our experience was that we weren't finding basic solutions, that we were firefighting, handling things as they came up. But they kept coming up so fast, that we weren't really finding ways to make improvements.

On the other hand, we had experimented with different kinds of techniques to solve our problems, having some success with innovations like participative management, mutual objective setting, agreements -- contracts, if you will -- broadening jobs horizontally and vertically, job-enlargement and job-enrichment, and broader communications, feedback systems of more data to the people in the organi-

zation. When the decision was made to investigate organizational systems -- and that, by the way, was a corporate decision -- it cost more money than we typically would have spent to put together an organization for a new plant -- a task group was created to go about this organizational investigation. The concept behind the strategy was that this task group would create the organization, would come up with a proposal that the corporation would have to bless, and that they would manage the plant, become the implementors who would have to live with what they had created. I'm sure you can all see that a little more stress is put on the situation when you have to live with what you say.

When the task group was created, I was asked to head the group and select three other people who would be part of the core group and would go on to operate within the plant. Our assignment was to eliminate all the "givens", to assume nothing, and to create an organization that best fit the business we were in, the plant we were building, and what we thought was possible. We also had a consultant in the core group with whom we had worked in the parent organization for some years. Richard Walton is a behavioral scientist, now at Harvard University. He was to act as a resource person to this core group, to investigate the organization and come up with a proposal. I want to discuss now the qualifications of these people, what I think was important about them.

They all had substantial experience in manufacturing organizations; they all knew the technology, the business, had varying degrees of knowledge and had credentials and knew how to run the technology; they had all had a lot of bad experience within our organization and within others; they all had a gut feel about people and what it takes to operate within an organization. In terms of specific skills in the makeup of the group, we had available engineering and technical skills, substantial management experience, systems-informations systems, computer capability, and we had one individual who had been president of a large union and had come from that into management.

With this group we began work. We were given about five months to study and investigate organizations and present a proposal. My own responsibilities included building the plant; I headed the design/construction group. Well, what did we do? First of all, we researched the data that we could find about organizations, the theory, the written material, the case studies, whatever was available. We found that there was a fantastic amount available and we educated ourselves about where to go and what to look for. We also visited many organizations in the United States who were using different kinds of management systems from what we were used to. Organizations like Hallmark Cards, Dupont, Proctor and Gamble, Westinghouse, B.F. Goodrich, and some others were very nice to give us time to let us really get in and take a look, let us talk to their people across the organization to find out what they were doing. We spent substantial time doing that. We also consulted with experts and educators, so-called management experts in different fields, people in compensation, in behavioral science, in systems, individuals like Louis Davis.

Finally we were coming to conclusions in this core group about what we thought we could do and we were summarizing our thoughts, gaining consensus within the group at the end of this five-month period. We now had a concept in mind -- we call it the Topeka System in General Foods -- that was where we were going to be located -- and we sold it to General Foods management at the end of that period of time. We spent about two months talking to almost everybody in power in the company about what we were going to do, and that wasn't easy. In any event, we got the blessing to try and implement our concept. I want to describe to you the components of the document we created at that time because I think they are important; it is like a strategy, an approach, a document that we use as a living tool within this organization. Before I do that, let me briefly describe the technology that we were facing.

Pet food manufacturing is fairly sophisticated today; it is high-volume, highly automated, something like a chemical plant, not too much manual labor, although there is some. There are a lot of closed loop control systems, com-

puters operating within the plant, elements that have a fairly high technology. This particular plant was going to manufacture 300 tons of dry dog food a day -- the brand names are Gravy Train and Gaines Meal -- that is about 10 railroad cars of dog food a day, a fairly significant throughput. The plant was to cost about 11 million dollars -- in Professor Davis' terminology of investment per man, about \$100,000 dollars per man for this kind of plant. The range of work is fairly sophisticated: everything from driving fork trucks, unloading materials, to batching, mixing, formulating products, some by hand, but mostly automated, to setting up control systems and monitoring those systems, trouble shooting within the processes, to quality control measurements. There are fairly sophisticated tests for fat, protein and the like, from laboratory work to packaging, packaging lines, some manual and some not -- a spectrum of that kind of work that is quite typical in manufacturing.

With this kind of technology and this kind of plant, we looked at this kind of organization in terms of three different factors: first, business conditions or the environment as we saw it; second, what we describe as human potential or our ideas as to what turned people on or off, a value system, if you will; third, specific characteristics of this system that would form a basis of operating in this organization. To save time, I will not cover the business conditions here; I will discuss our ideas about people, the value system, and then some of the characteristics of the system.

People have ego needs, they want self-esteem, a sense of accomplishment, autonomy, increasing knowledge and skill and data on their performance. People invest more in situations which allow them to meet these needs. An individual has a need to be able to see himself as a significant part of the whole, be it his position in a human group or his role in a complex technology. People have social needs, they enjoy team membership and team work, while at the same time they enjoy friendly competition. People want to be able to identify with products they produce and the firms that employ them. People have certain security needs -- they want reasonable income and employment security, they want to be protected against arbitrary and unfair treatment, they want to be assured of due process.

Those were our statements about what we could see in people, and then relating to that we came to characteristics of the system: first of all, a minimum work force and a lean management structure. We made that statement because our experience said that we often over-crewed, over-manned, and by doing that created problems for people -- too much time available, not enough to do, not enough activity, which created other problems within the organization. We were willing to take risks on that side -- we would be under-manned, under-crewed, we would start there.

We wanted to have design and layout improvements in the physical plant which allowed concentration on more meaningful elements of work. Here we wanted to change things to fit the people, to fit our context of what was meaningful; we would eliminate some manual work. We wanted to have daily self-measurement techniques for cost, yield, and spoilage, the factors that you must know as you are operating; we wanted to have direct feedback. We wanted the people to participate in the decisions of the business, across the organization. We felt that we would get a more flexible capability with a more responsive organization. We wanted an information system which would support appropriate decisions.

In other words, a lot of data had to flow into the organization which is typically in management's hands. We wanted to treat the people maturely and demonstrate that within this organization we didn't want different kinds of societies -- we wanted to demonstrate that everybody is a mature, responsible individual and we will back that up with action. For example, we don't have any time clocks, and I see that as a demonstration of how we feel about responsibility and whom we think we can trust. We wanted to cut down the symbols that differentiate between management and operators -- the status symbols. We did some of that physically -- we don't have reserved parking at the plant; we have one entrance, a front door, and everybody comes and goes that way; we don't have separate lunchroom or locker room facilities; the offices are very accessible to everybody in the organization. So it is things like that, as well as promoting behavior to cut down differentiation.

We wanted broader educational opportunities, within the organization and outside for personal improvement. We have encouraged learning informally, and we also have supported outside learning in the sense that work-related education would be paid for -- tuition and books -- by the company. We liberalized that and said any education will be paid for. We wanted to encourage individual goal-setting by everybody in the organization both personally and as part of the business. We also extended that, we wanted to encourage groups to do the same thing.

In terms of advancement and pay within the organization, we wanted a merit system; we eliminated seniority and we have a merit system. I can give you an idea of what it is. We wanted a progression level which gave people an open opportunity to master all the skills that were necessary within an operation, so the result was a single job classification and a progression: as an individual learns more jobs and can demonstrate that he knows them, he gets paid more, but it doesn't make any difference what he is doing on a daily basis.

We also decided to have a team organization, arrange groups within teams, and with that, we essentially cut the plant in half; the work force typically was to be about 70 people on three shifts, 24 hours a day, five days a week. We created two teams, one operating each half of the plant. Their assignment is to operate their area; they decide who does what and when; they decide on progression and training within their group; they award rates; they award merit increases within the group; they hire their own people if they have need -- a vacancy; within the organization they counsel their own people; they fire their own people; within these teams they have that authority.

Now, not all of these innovations existed when we started. We have been operating three years, and some of these things have come about as we progressed, for example, hiring and firing, deciding compensation for individuals within the group. To encourage innovation in everybody within the organization, one approach was encouraging people across the organization to learn as much as they could, have a lot of mobility. We felt that would encourage people to be creative, to foster good ideas, implement new things --

and they didn't have to compete in these efforts. Within these teams, in addition to the normal kinds of production work that would be typical in most organizations, we added all the maintenance and care for the plant and all the quality control measurement on the product. So these teams operate, they maintain, and they measure their results.

We felt that a leader was needed in the beginning, particularly in each of these teams and he would form his team. Our concept was he would be a management person, coming into the organization; we would hire him and he would hire his teams since we were starting with no work force. His role would be like that of a coach, a resource to the group, a facilitator, not a director, not a controller.

He would help that group learn, he would help them get together to do the best job they could; he would operate within certain boundaries. Professor Davis mentioned problems involving peer group pressure on an individual. That does happen, and one of the roles of the team leader was to deal with it as it came up. Within his group he had veto power; he had one vote, but he could veto and he could change things. We wanted to have real participation in establishing and changing work rules within this organization. So we didn't establish any in the beginning; the organization established the kind of rules the members felt they ought to have, and these are what we have.

In terms of employment stability, we felt that we could at least guarantee anybody who was scheduled for a week's work that week. In actuality, we have been able to manage through what would be typically lay-off situations because of the flexibility within the organization -- people being able to do so many things. We keep a backlog of work that doesn't have to be done right now -- it could be training, development, maintenance care. This is used for slack periods and we have those periods; we have spent some money in that area to maintain stability. In any event, in the three years we have been operating the one plant, nobody has been laid off. With respect to counseling or disciplinary measures, again that is up to the group. But we wanted to make certain that those problems would be approached on a counseling basis -- no disciplinary lay-offs, no termination by steps. The important thing was to resolve the problem within the group.

Now, in order to get the kind of people who could operate in this organization, we thought we would have to pay above community average wage levels to get employment selectivity. But we didn't in fact do that; we are about average with the community across the spectrum of the work. There were a lot of applicants at the time, so we spent substantial time interviewing before anybody was hired. The important part about that, for us, was trying to make a fit, both finding people who could operate within this organization, who had a good chance of making it, and would be knowledgeable about what they were getting into. One last critical factor I will mention is that we specifically said the organization was open to change and that we recognized the need for that. As things change in our business environment, the needs of the people may change; we weren't locked into the system that we started with.

This is a kind of overview or summary of our organizational approach, and of course those are a lot of words -- we had to proceed from those words to implementation and to an operating organization. We have been operating in this organization for about three years. There are some results, there are data on how we have done, and there were some problems. I'll try to highlight some of the more important problems.

We found that this kind of organization demanded a lot of openness among our members, a lot of honesty and a willingness to deal with problems individually or collectively. A lot of people don't respond immediately, and it takes time to develop. It is a continuing kind of problem as new people join. And because of that kind of problem, other things are not being solved; real issues, real needs go by because people aren't willing to talk about what they are. In terms of performance, one of the areas of negative performance is our inability to get people to keep the plant as clean and as orderly as we think it needs to be. Also, some people don't fit the organization; they come in and find out what it is about, live with it for a while and decide it is not their cup of tea. Because of that, on some occasions people have left voluntarily, on others they have been fired. We would like to be perfect in making fits, but it hasn't happened.

We have had a lot of problems with our parent corporation, General Foods, because of the way we operate, which is so very different from the rest of the organization. One of the questions that comes up is, "Who is in control?" All the time that question comes up and it is kind of hard to answer in our organization. I don't know from day to day. I know what results are, but I can't answer that question very well.

There are a lot of system conflicts within the corporation because there is much demand for data and information within our plant. In turn, we make demands on the parent organization for information that I didn't get in the past, but the people want it and that creates turmoil. And there are all kinds of notions about what is good business and what is bad business within the parent company that we don't believe in. One of my jobs is to handle that issue with the company, so at times I become the advocate for the group and the enemy of the company; and that is not a very comfortable position.

We have had trouble with our manager learning how to operate within this organization, myself included, and our experience was very different in the past. We grew up in different kinds of systems, and it is frustrating to be faced with some of the things that happen -- you wonder who you are sometimes. We have had more trouble with the managers than with the people, and we have had trouble with career opportunities -- not within the organization, but outside the plant. We have, in a way, created a situation where we are not trusted, or we are not looked upon as potential candidates for the company as a larger base. Some of us have not been offered career opportunities that we might normally have had, and that will create a bigger problem in time, because one may well ask why should anyone join this kind of organization if it eliminates their career opportunities. So, we are trying to face that problem.

Well, on the positive side -- in terms of controllable cost -- our costs range from 20-40 percent less than both under the original assumption of the business proposition and as compared to the other plants. In terms of dollars, today that is about two million dollars less a year, so it is a

sizable amount. In terms of quality over this period of time, our quality rejects have been about 80 percent less than would be a norm in the business, or what we had experienced in the past in the other organization. In terms of problems like sabotage, theft, or shutdowns, we haven't had any that are related to what the people do or what would be initiated by them. Absenteeism has been about one percent, and we pay for about 90 percent of it; that is, if an individual is excused by his team, he gets paid as if he were there, and that rate is about one percent. Turnover has been about 10 percent per year; about half of those have left of their own volition or for better opportunity and about half of them have been fired.

In terms of education, about three times as many people are taking advantage of the outside education that is available in this group, as compared to other plants within the company. In terms of what the people say -- and I pay attention to this -- they like the work, they like their jobs, they like the opportunities. They are also very open about the negative aspects; it isn't all nice and they are willing to talk about it.

In any event, indications are that people are in fact taking more responsibility for their lives, for their families, and within the community. And there were some instances where prejudice issues have been worked out man-to-man or within a group, and real progress has been made in that area, not just lip service; but people have changed their opinions and their prejudices within this organization.

Finally, General Foods is working on spreading some of these concepts and notions on a corporate-wide basis. There are several experiments in progress in about a dozen plants in the company.