

An Answer to Worker Woes

Vicki Tatz
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Automobile assembly line in Sweden.

In Sweden, America and other highly industrialized countries, experiments are now being conducted that may provide the answers to a whole series of worker "woes" that are plaguing production today. High turnover rates, chronic absenteeism, poor workmanship, even sabotage are just some of these problem areas. The results are obvious. In the first three months of 1974, for example, output per man-hour suffered its worst drop on record—at least since 1958 -- when it declined 6.2 percent.

When Henry Ford combined interchangeable parts and the subdivision of human labor in 1913 he brought into being the era of mass production and revolutionized the industrial world. But mass production looks on the worker as just one more interchangeable part, programmed to perform a small task that is precisely specified on the basis of time and motion studies. He is assumed to be a passive element in the production process, motivated primarily by his economic needs. Mass production is based on the principles of job simplification, repetition, and close control. Innovation and dealing with problem-solving situations are left to specialists.

While the benefits of mass production were immediately observable in better pay and availability of consumer goods, its disadvantages are becoming more obvious in a society which lays increasing value on initiative, a critical attitude toward authority, and mutual cooperation. Jobs are dull, tiring, and destructive of the worker's self-esteem. Monotony and exhaustion led to resentment and sloppy work and management responded by tightening the controls even more and simplifying jobs. This just exacerbated the monotony, exhaustion, and resentment.

Each Part Essential

In a specialized assembly line each part of the line is essential, so absenteeism can pose a major problem. By the end of the 1960's, many industries in Sweden found themselves unable to recruit enough new workers, to keep those they had recruited from quitting and to keep those who stayed with them on the job every day. Turnover climbed as high as a third of the payroll for some companies. These problems and an experiment which tried to deal with them are discussed in an article by Lars Bjork in *Scientific American*, March 1975.

Many companies began to listen to the ideas put forth by a group of social scientists in Sweden who felt that more satisfactory methods could be developed based on different assumptions about the nature of man, of workers, and the job situation. They stated that human beings are not passive but that they reason, evaluate, and strive toward goals. When workers go home, they are grown-up men and women; regarding them as grown-ups on the job changes one's view of what they can do and of the principles of work organization. People need not be motivated by piecework rates; they can be motivated by the task itself as well as by pay. Groups can solve problems, learn from the process, and derive satisfaction from it.

Management can simply specify such essentials as quantity, quality, and cost. Workers can find the best way each job should be performed on their own.

One Man, One Machine

The experiment described in the article focused on Department 698 of the Sickla Works, near Stockholm, of Atlas Copco Mining and Construction Technique, Inc., a department involved in the final assembly of rock-drilling machines. While management stipulated that current production levels had to be maintained during the experiment, the main objective was increasing worker satisfaction.

This was to be achieved by changes aimed at giving the worker more opportunity to influence his own job, to take on responsibility, to solve problems and to advance his own development on the job. Would such changes affect motivation to work and productivity? The department, consisting of 12 men and a foreman, put together some 40 different drill models, mostly variations on six basic types. Operating on a traditional "one man, one machine" basis, each worker had one of the following tasks: degreasing the incoming part) in a washing machine, grinding and honing the air-throttle elements, preassembly, assembly, testing, painting, and packing. There were two floaters, an "instructor" and an adjuster who between them handled quality control, set up the machines for new products, checked on unsatisfactory components, and corrected errors in assembly. Most of the workers knew only their own regular job and perhaps one or two of the easier other jobs. The foreman directed the work and administered the complicated pay systems. An informal hierarchy had developed based on skill, job difficulty, and pay levels, leading to a great deal of concern and mutual suspicion, especially with regard to pay levels. The two assembly-line workers felt most exploited: underpaid and bound to one location and to a flow of work they could not control.

Through discussions and individual interviews, each employee discussed his own job and suggested improvements, mostly involving small changes. One major change however, was suggested by almost every worker -- doing away with the conveyor-belt assembly line and substituting a large table on which the drills could be assembled at the men's own pace and in their own way. When it was tried, it was found that drills could be assembled just as fast as on the production line, but the table made for freer and less monotonous work.

But it was hard to handle the heavy steel components and move them around, so elements of the belt were brought back. The workers were now able to see it from a different perspective -- not as a source of stress but as a tool -- a means for transportation with its speed controlled by the workers themselves.

New Social Relationships

Even more revolutionary, the workers became a single team, with equal pay. The team was split into small work-groups which carried out the entire sequence of operations for a single batch of drills, deciding for themselves the best and most satisfying method of performing each operation. It was not an easy period, because not only were the workers learning new jobs, but also new social relationships -- group cooperation instead of the individualistic and even antagonistic relations that had been shaped by the one-man, one-machine organization.

In addition, a planning group which included workers was established to discuss current production, establish priorities, and deal with changes in parts or produces. A second group was formed to help workers keep abreast of new technological developments.

Gradually tensions eased and workers took on responsibility for the department's objectives and for one another. After a year, the experiment was declared a success and both management and workers wanted to continue the new system.

The reasons it was declared a success were obvious: not only did productivity increase about five percent, but the men's attitudes are considerably changed. They know one another's jobs, and are anxious to cooperate, so they can fill in when someone is absent.

Because they are more oriented now towards mutual goals and much more informed about the flow of materials and the logic of production schedules, they are better able to cope with variations in deliveries and with rush orders. The entire operation became more flexible.

From the workers' point of view, the changes were equally satisfactory. From just being concerned with individual product quantity and quality they take group responsibility for the entire department's production flow. "We untangle pileups ourselves," they reported. The men also help one another with new jobs: "We have to be more considerate of each other now. Before the experiment we didn't have any desire to get together. Everyone worked for himself."

Worker Satisfaction

The major objective of the experiment had been worker satisfaction, and perhaps the most obvious sign that this had been achieved was the fact that none of the men wanted to return to the old system.

A similar experiment is still under way at Harman International Industries in Bolivar, Tennessee, which assembles mirrors for the auto industry. The auto industry has been plagued with some of the most serious problems with workers in recent years. This pilot test for the United Auto Workers Union (UAW) was initiated about a year ago.

Under the guidance of professionals, workers and supervisors began a series of give-and-take sessions that eventually led to small groups deciding to work in teams, rotate jobs, supervise themselves, and make other changes in their work areas.

Michael Maccoby, a psychologist at the Institute for Policy Studies, who has been head of a major study of work funded by Harvard University, was called in to direct the project. He was determined that changes would be instituted by the workers themselves. "If management brings the change then the project isn't working," he has stated.

The UAW is studying the experiment closely. Irving Bluestone, head of the General Motors Department of UAW and one of the key men behind the effort, said, "If this experiment is successful, it gives us a lever to present to other companies of what direction to take. We are not starting from scratch here as in other experiments with a fresh, clean plant and a new work force. If these efforts are going to spread, they've got to spread in the old plant."

Go Home Early

The Harman workers' first reaction to the proposals was suspicion that management would use them to boost production quotas. The teams that did organize among themselves—they decided who would do what jobs, kept their own records and covered for each other when one team member was absent -- found that they could turn out their quotas in much less time than before. So far, quotas have not been increased; workers who finish early go home after perhaps half a shift. But other jobs which are machine-paced are not as easily changed and workers on those jobs still need to work a full shift. This area of potential conflict will have to be resolved in the future.

Oscar Rivers, 34, used to come in at 6:40 a.m. and finish at 3:30 p.m. Now, he and two others who polish shells of mirrors for Cadillacs, finish their quota of 1716 shells a shift by 11:30 a.m., and go home. "It's fun to be in a group," he said. "Everyone cooperates. I get home now to see my kids get back from school." He plans to use his extra time to take a course in auto mechanics at the plant.

"What we want to do is change the total atmosphere, so that people trust us and share their everyday problems on the job," said Arthur McCarver, plant manager.

So far the experiment has just scratched the surface but the plant now has the mechanism at least to bring about a big change in Worker-management relations. These initial steps, therefore, have the potential to radically change these relationships in the future. Mutual respect and trust could be the basis for a whole new phase in industrial relations. Instead of workers and management regarding each other's interests as mutually exclusive, they can come to an understanding of their common goals and interests. Concern for the good of the whole can come to replace self-centered interests based on distrust and fear. Even though this picture may sound too rosy, the trend we can see beginning -- concern for the common good -- can be a solution to the prevailing economic difficulties.