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The Use of Unrecognized Cultural Mechanisms in an Expanding Machine Shop

With a Contribution to the Theory of Leadership*

Cultural techniques include the mechanisms for handling relationships between persons and between groups. Such mechanisms are largely unrecognized and difficult to identify. Hence it is seldom easy to demonstrate how groups use them to bring about observable social change. An opportunity to illustrate their use arose during work on the Glacier Project (Jaques, 1951; Vol. I, "Working-Through Industrial Conflict"), when, in November 1949, the workers' committee of the factory's mass production unit, the Line Shop, asked the research team of the Tavistock Institute of Human Relations to cooperate in an investigation of the reasons for the apparent apathy of the workers of the shop towards joint consultation.

The Line Shop had been faced with the need to expand to meet an urgent demand for its products. The process of expansion aroused acute feelings of anxiety in the workers. It will be shown how the unrecognized techniques for allaying these anxieties led to the emergence of other problems and affected the character of the joint consultative procedures which were used to solve them. It will also be shown that although the attempts to deal with the emergent problems were apparently unsuccessful, the workers' committee accurately represented its constituents and contributed positively to the successful accomplishment of the task of expansion.

The paper is presented in three parts: first, a description of the economic position, organization and social climate of the shop; second, an analysis of the use by the shop of unrecognized cultural mechanisms; and finally, a brief discussion of the leadership roles taken in the shop. In accordance with project policy, the author drafted the paper and submitted it to the Subcommittee of the

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Shop Council, who in discussion modified and revised it. The author acknowledges their active help and collaboration.*

Economic and Social Background

The Line Shop is a machine shop which produces finished light bearings and bushes for the motor industry in a highly competitive market. It uses mass-production methods, organized in lines of from three to twenty-four interdependent machine operations. The bearings are precision products which have to be machined to tolerances of the order of $\pm 100,000$ th inch, but jobs are so broken down that high degrees of engineering skill are not demanded. Many machine operations, however, although repetitive, require considerable dexterity and experience. Runs vary from a few days to weeks, and a change of job nearly always requires a change in the number and kind of manufacturing operations included in a line. Job changes, absenteeism and labor turnover make frequent transfers from line to line necessary.

The Line Shop is managed by a superintendent, who was appointed in June 1949. He is responsible to the works manager and has responsible to him a foreman in charge of production. Each line is controlled by a supervisor who is also responsible for setting up his machines. A Production Engineering Department advises the superintendent on production methods and ratefixing. The shop draws on common factory services for tools, maintenance and general stores.

The joint consultative bodies are:

- The Shop Committee representing workers, composed of 10 members of recognized trade unions.
- The Shop Council composed of superintendent, foreman, two assistant foremen, all supervisors and members of the Shop Committee.
- Subcommittee of the Shop Council, composed of superintendent, foreman, one representative of the supervisors, three members of the Shop Committee and the officers of the Council.

The establishment of the Line Shop, in 1934, was regarded with fear and distrust by other workers who saw in the new production techniques a threat to their security and status. Women and juveniles were employed at low rates of pay, and working speeds were very high. The shop soon became known as the

*Members of the research team engaged on this sub-project: Elliott Jaques, Director of the Project; K. W. Bamforth, J. M. M. Hill, and I. Leff, Research Fellows; and G. Ladhams, part-time consultant.

“sweat shop.” In April 1935 a strike was called. It did not have union support and ended in failure. There was a longer term effect, however, and at the end of World War II management tried to halt the trend towards the de-skilling of jobs and the use of cheap labor by introducing into the Line Shop demobilized servicemen in place of many of the war-time female employees.

Expansion during World War II increased the numbers employed to a peak of 300 in 1944. At the end of the war night-shifts stopped, and by the end of 1947 there were 180 workers. In the early months of 1949, there was a trade recession and many employees were dismissed. The Line Shop suffered most severely. Over a period of four months the number of workers was reduced from 180 to 80. In the summer of 1949, a recovery of the trade position, completed by devaluation in the autumn, led to the second expansion.

Severe competition has demanded a constant technical struggle to develop faster production methods while retaining high standards of accuracy. But the motor industry is an unstable market and causes a varying work-load in the shop. Plenty of work imposes pressure to meet delivery schedules—unless advantage is taken of the demand, customers will be lost. Too little work arouses anxiety that workers will be dismissed and that supervisors will either have to leave or to accept a reduction in rank. The crisis of 1949 is fresh in memory, and the recent expansion with its scramble to meet tight delivery times is an uncomfortable reminder of much that has happened in the past. A dilemma must be faced: on the one hand, cutting costs and increasing speeds earns the shop the reputation for “sweating,” and demands toleration for the reduction of the number of workers required for the production of particular bearings; on the other, resisting the constant reorganization aggravates fears of future redundancy.

Many other factors reinforce the climate of insecurity. Frequent changes in shop management and the constant transferring of supervisors from line to line are indications of the severe strain under which those in authority have worked. Daily events—changes in work group membership, shifting of machine tools, fluctuating bonuses, variations in the quality of raw materials, and the need to introduce and to train newcomers without reducing output—prevent the line work-groups from settling down to a steady and reassuring rhythm of work. When members of the shop compare themselves with other workers in the factory, their skills seem more easily acquired than the skills required in other departments. They feel that they are judged by quantity rather than quality and that, in the determination of their worth, the exercise of ingenuity, initiative and improvisation are discounted.

The above account is the background to a series of events which occurred between October 1949 and October 1950. In the first phase the Shop Committee resigned, resumed power, and four of its members resigned again; and the research team undertook the first investigation and reported its results to the