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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

shop. In the second phase the Shop Committee increasingly involved the management in its dealings with the problems of its constituents; and the research team undertook a second investigation. The third phase was characterized by a wage negotiation in which only three members of the Shop Committee took part, and from which the other members of the Committee and the workers were, by general consent, excluded.

### *The Use of Unrecognized Cultural Mechanisms*

#### *The First Phase, October 1949 to January 1950: The Fight/Flight Group Culture*

##### RESIGNATION OF THE SHOP COMMITTEE

To analyze the meaning of these events, the concepts developed by Bion (1948–51; Sutherland, Vol. I, “Bion Revisited”) in his work on group behavior will be used. In October 1949 the Shop Committee resigned, having decided that it was not representative because of the number of new workers in the shop. Thirty-two nominations for a new committee were received. But 23 of the nominees withdrew before the election, and the remainder included some who were said to have been nominated as a joke. The members of the Shop Committee thereupon postponed the election, temporarily resumed office, and sought help from the research team. The Shop Council confirmed the request for help and agreed that “all aspects of the work and relationships within the Line Shop should be investigated.” Members of the research team held discussions with each working group and reported the results to the whole shop.

The investigation showed that the Shop Committee was not considered to be effective in handling shop problems and its meetings were resented as a waste of time. The workers recognized, and accepted the necessity of fulfilling, the increased demand for bearings to keep the shop from losing ground to its competitors. They liked working on fast moving, smoothly running lines and they resented everything—meetings, the disturbance of established working teams, and the introduction of inexperienced newcomers—which dislocated production. But they disliked having to accept constant reorganization and were uncomfortable at the prospect of being classed as “sweats.”

Using the concepts outlined in the previous section, this situation may be described as follows: The sophisticated group, that is the group producing bearings in a competitive market, was suffused with the emotions associated with the fight/flight basic assumption. The fight, led by management, was

against competitors who threatened the security of the shop. The fight/flight culture, however, demanded that the members of the group accept reorganization and tolerate feelings of guilt about sweating. These demands were difficult to concede, and there was a conflict between the basic group and each individual in it.

#### SCAPEGOATING OF THE RATEFIXER

This conflict led the workers to ask themselves what they got for their hard work and high speed. They turned their attention to earnings and complained about fluctuations in the bonus rates; such complaints, however, brought them face to face with a problem. Management was responsible for the situation in which the fluctuations occurred. But management also provided the leadership necessary to keep the shop full of work. Some other target for their complaints had to be found. The ratefixer was readily available. He timed operations and drew up the layouts which set job times. And so, disregarding explicit company policy that the authority of the ratefixer was only advisory, the workers placed on him responsibility for earnings, and sought relief from their discomfort by denouncing him. They granted his skill in determining operational times, but they sharply questioned his judgment in assessing average workers and average speeds. The group was still using a fight/flight culture; but the target was now an immediate and known person, instead of a distant and impersonal competitor.

#### INTERACTION OF THE SHOP COMMITTEE AND ITS CONSTITUENTS

At the end of December, the members of the Shop Committee formally withdrew their resignations, and received a vote of confidence from the shop.

In January, at a meeting of the Shop Council called to discuss the report of the investigation, the committee produced four proposals for dealing with shop problems:

- (a) To raise the base rates with a corresponding reduction in the proportion of total wage represented by bonus;
- (b) To maintain present rates, but to revise the rating standards used in ratefixing.
- (c) To change to a flat, hourly-wage payment;
- (d) To transfer authority from ratefixer to management for deciding extra payments for allowances, and to pay all other work at time and a half instead of time and a third.

These proposals were referred back to the Shop Committee and management. Within a few days of the meeting, four members of the committee resigned again and were not replaced.

The recall of the Shop Committee arose out of the difficulty in which the workers found themselves when they sought leaders to deal with the ratefixer. They could not pick shop management to provide this leadership since shop management and the ratefixer were both part of company management. Other leaders had to be found, but they had to be unusual leaders. For although at the manifest level the workers were opposing the ratefixer, they were intuitively aware that they were also opposing their own shop management. To be too successful would be to jeopardize their security by making the shop less competitive. They therefore sought to get leadership which would not too seriously embarrass management by recalling the Shop Committee which they had recently condemned.

The Shop Committee, still smarting under the apparent apathy and ingratitude of its constituents, accepted office again, but realized that it could command little support. When management, even though prepared to re-examine the methods of payment and of ratefixing, was nevertheless not prepared to be stampeded into hurried concessions, the committee lost heart. In using the report of the investigation as the prop for its proposals, it foreshadowed the subsequent flight. It also foreshadowed a change in the group culture of the shop. The four who resigned again became the leaders of the fight/flight group—leading it in flight from the consequences of its attack upon the ratefixer.

It may now also be suggested—in view of the findings of the investigation in November and of the subsequent events in the shop—that when, in October, the total Shop Committee had resigned, they had been using one of the techniques of the fight/flight culture and had run away from the problems of representation. That they had correctly interpreted the mood of their constituents was shown when the shop followed their lead by not providing sufficient candidates for a new committee.

### *The Second Phase, February to March 1950: The Dependent Culture*

#### CONFLICT ABOUT INTERLINE MOBILITY AND THE INTRODUCTION OF NEWCOMERS

The second investigation by the research team at the beginning of February showed that bonus earning was still an urgent problem but that the emphasis had changed. Complaints about fluctuation had become complaints about low

TABLE I Line Shop Labor Turnover Data, October 1949–October 1950

<i>Month</i>	<i>Entrants</i>	<i>Leavers and transfers to other shops</i>	<i>Total at end of month</i>
<i>1949</i>			
October			125
November	21	3	143
December	11	2	152
<i>1950</i>			
January	13	5	160
February	16	4	172
March	23	5	190
April	13	8	195
May	16	6	205
June	9	8	206
July	4	3	207
August	11	5	213
September	25	14	224
October	16	30	210

earnings on difficult and complex jobs. In addition, two problems—interline mobility and the introduction of newcomers—previously discussed only in relation to their effects on bonus fluctuations emerged as problems in their own right.

The workers said that job layouts were being used as excuses to transfer those who were not wanted. There were two kinds of worker: core members of lines, who were never transferred, and the others, who were continually pushed around. A test check of interline movement for the first thirteen weeks in 1950 showed, however, that no distinction could be made between core members and the others, only three workers had stayed on the same line during normal working hours.

The workers resented newcomers because experienced operatives had to stop work to help them. The introduction of newcomers also aggravated fears of possible redundancy, particularly as the total number approached the number employed before the 1949 crisis. The numbers employed together with entrants and leavers are shown in Table I.

Although the complaints voiced during the second investigation were about the same things as during the first, a change had taken place in their tone and context. By the beginning of February, explanations about the reasons for transfers within the shop could not eradicate feelings of rejection among those transferred, and information about the shop load could not reassure workers that their jobs would not soon be in jeopardy. The workers could no longer get a

sense of security from challenging their competitors or criticizing the ratefixer. Their disquiet was great, and they behaved as though they wished the management to look after and protect them. In Bion's terms the change may be stated thus: the tension caused by the sophisticated group using the fight/flight basic assumption (*ba*) to suppress the emotions associated with dependence had increased until the dependent *ba* could no longer be contained at the proto-mental level. By early February the group composed of the workers in the Line Shop was behaving as if it had made, and was acting upon, the dependent *ba* and there was a conflict between the sophisticated and the basic groups.

Because the workers were now leaning upon management, they badly needed management to be infallible. But to maintain a belief in such perfect reliability, they had to cope with their knowledge of management's responsibility for the expansion and the transfers, and with their own observation of the kind of mistakes which are inevitable in any industrial organization. They suppressed their knowledge and observations by turning once again upon the ratefixer—who could be held responsible for the layouts which made transfers necessary—and again making him the scapegoat upon whom they might displace any perceptions of management fallibility, however slight. To the extent that this mechanism of displacements did not succeed, they became depressed.

But even when the workers managed to maintain a perfectionistic belief in the reliability of management, they then had to construct the complementary belief that they fully deserved management's care and attention. In addition, therefore, to finding a scapegoat for management, they sought a scapegoat for their own mistakes and bouts of irresponsibility. Already resenting the newcomers as potential rivals for jobs, they now heaped upon them criticisms for being greedy for attention and ungrateful for what was done for them.

#### REQUEST FOR A FLAT RATE

On 8 February, after a preliminary meeting between the Subcommittee of the Shop Council and the Company Management, the members of the Shop Committee who had not resigned decided to negotiate for a flat rate method of payment. They then turned to consider whether to start negotiations at once, or to seek ratification of their decisions from the shop. Strong opinions were expressed in favor of each course, the final decision being that they should go back to the shop for sanction. Having taken this decision, they then went even further and entrusted the conduct of the shop meetings to management; only one member of the Shop Committee taking an active part in them.

One way of describing this behavior of the members of the Shop Committee is to consider their position both as members of the dependent group and as its

potential leaders in the consultative system. One of the characteristics of a dependent group is its concern for the welfare of each of its members. It values them all. The request for a flat rate—a method of payment which asserts the value of the individual to the group whatever his output—may therefore be interpreted as a direct manifestation of the group culture of the shop, expressed by the members of the Shop Committee as representatives of the workers. In addition, the members of the Committee were aware, however unconsciously, that the group they were leading in the consultative system was a dependent group. They recognized that a dependent group demands omnipotent leadership and neither expects nor wishes to be consulted by leaders to whom omnipotence has been attributed. The members of the Committee wanted to lead but they felt oppressed by the demands made upon them. In this conflict they themselves turned to management for help and reassurance.

During this phase the Sub-committee of the Shop Council, by refusing to consider other methods of payment, to accept suggestions for experimental approaches to shop problems, or to permit further investigation, protected the shop from what Bion called “the hatred of learning by experience.” That both the Shop Committee and the Sub-committee of the Council had accurately assessed the feelings of the workers was shown when, on 15 March, the day-shift meeting gave a vote of 120 against three in favor of the negotiations for a flat rate.

*The Third Phase, The End of March 1950 Onwards:  
The Return of a Fight/Flight Culture*

BEGINNING OF CHANGE IN THE GROUP CULTURE

By the middle of March management was beginning to experience difficulty in obtaining sufficient new workers and the shop was becoming increasingly heavily loaded with orders. This was well known to the workers and they were becoming reassured by it. On 17 March, two days after the day-shift meeting, a meeting was held with the night-shift. It differed markedly from that with the day-shift. At the day-shift meeting there were few questions and an almost unanimous vote in favor of negotiating for a flat rate. In the night-shift meeting there were pointed questions, discussion was lively; workers said they did not know the members of the Shop Committee or what they were doing. The voting was inconclusive; 12 voted for and 12 against negotiating, while 20 abstained and asked for more information. Some of this difference may have been due to the different sizes of the meetings and to the times at which they were held; the day-shift meeting being held in the last hour of the working day, and the night-shift meeting, which lasted longer, being held in the middle of the

shift. But the differences are not altogether accounted for by size and time. An additional factor was that a change from a dependent to a fight/flight culture had taken place in the shop during the few days between the two meetings.

The change in culture was also reflected in the meeting of the Subcommittee of the Shop Council on 23 March. The workers' representatives strongly opposed further discussions at shop floor level. In their previous experience of a fight/flight culture, it will be recalled, they had been rejected, and had then found themselves involved in an abortive attack upon management; in the dependent culture, they had been oppressed by the impossible demands of their constituents that they should be omnipotent. They wanted to avoid either possibility. A new course, however, was now open to them: to take up the offensive on behalf of their group, but to protect the group from the consequences. This new course had been made possible by the reassurance given to the shop by the combination of the increasing load of work and the shortage of labor. The need for a new course had been indicated to the committee by the attacks made upon it by its constituents at the night-shift meeting.

#### PROLONGATION OF THE WAGE NEGOTIATION

The negotiating group consisted of the works director, personnel director, works manager, cost accountant, production engineer, ratefixer, superintendent, shop foreman, one supervisors' representative and three leading members of the Shop Committee. At its first meeting in May, the three leading members of the Shop Committee said that their constituents would be unlikely to accept current basic rates plus average shop bonus. At this and succeeding meetings members struggled against the condition, previously accepted, that the total wage bill should remain the same, and, while negotiating for a flat rate, they bargained for higher rates of pay. They also subscribed to the idea of introducing a grading and merit rating scheme which would widen the range of pay between the experienced and inexperienced. They were once more prepared to accept the principle by which those who worked hardest should be best rewarded, in contrast to their attitude a month before when they wanted everyone treated the same. The negotiations were prolonged and both management and members of the Shop Committee were reluctant to release information about their deliberations to the shop or even to other members of the Committee. The fight/flight culture was once more in operation, but the resulting conflict between workers and management was now encapsulated in the negotiating group. To understand the implications of this return to the fight/flight culture, albeit in a different form, it must be seen in the setting of

the whole movement through the three phases as outlined in the following section.

### *The Three Phases—Recapitulation*

The three phases which have been described in the previous sections occurred during a period in which there was a continuous process of expansion in the numbers employed in the shop. Seen as a whole, the pattern of behavior in the Line Shop from October 1949 to October 1950 may be described as one in which the workers were making constant attempts to find adaptive cultural mechanisms with which to allay the feelings of insecurity aroused by expansion. During what has been described as the first phase the shop used a fight/flight culture. The phase ended with the shop in flight for the second time; the problems which had emerged—bonus and ratefixing—had produced too great a conflict between management and Shop Committee leadership, with the result that there was a partial return to the unstable situation with which the period had started. The failure of the fight/flight culture as an adaptive mechanism was followed by a change in the group culture, and the shop then behaved as if it had made, and was acting upon, the dependent basic assumption. During this period the Shop Committee made a dependent relationship with management, in which leadership in the consultative system devolved upon the three leading members of the Committee. When the dependent culture no longer sufficed to allay feelings of insecurity, because of the inability of those in the shop to continue denying the fallibility of management, the fight/flight culture was again adopted.

The experiences gained during the operation of the dependent culture, however, allowed the techniques of the fight/flight culture to be used in a way which differed from that in which it had been used in the first phase. Although the dependent culture could not provide long-term stability, it did provide a transitional period during which those in the shop, and members of the Shop Committee in particular, could recover from their previous failure and learn new ways of behaving. The experience, under the protection of management, of meeting their constituents face to face, of successfully disentangling the consultative and investigation processes, and of receiving an overwhelming vote to continue negotiations, reassured the leading members of the committee to the extent that they became able to carry within their own group much of the conflict in the shop resulting from the attempts of its members to adapt themselves to the expansion. When, in the third phase, the shop returned to a fight/flight culture, it was able to use the culture in a new and more stable manner. During the first phase, a conflict between the basic group and the

needs of its individual members had led to flight and had preceded a change in group culture. But now the fight on behalf of individual needs could be encapsulated within the negotiating group. By this mechanism, consistent with the fight/flight culture, the total shop group was freed to use its culture in performing its sophisticated task—the production of bearings in a competitive market.

### *Leadership at Manifest and at Unconscious Levels of Behavior*

The analysis of the use by the Line Shop of unrecognized cultural mechanisms may serve to throw some light on certain aspects of relations between leaders and followers. During the period which is covered by this paper, the consultative system of the Line Shop operated mainly at the level of the basic assumptions and formed, not a system of communication at the manifest level, but a part of the mechanism of unrecognized communication whereby the group culture was expressed and maintained. At the manifest level, the task of the Committee was to determine the opinions of its constituents about current events and future policy and, in the light of those opinions, to take such action on behalf of the workers as it judged appropriate. The sanction for this task was based upon the belief that it would be in harmony with the sophisticated task of the shop, that is, with the production of bearings in the face of severe competition. In each of the situations described, however, the sanction for the behavior of the Shop Committee has been shown to have derived, not so much from the sophisticated group as from the unconscious group culture, that is from the group operating upon either a fight/flight or a dependent *ba*. It is not surprising, therefore, that the members of the Shop Committee found it difficult to take part, as elected leaders of the workers, in discussions of current problems and future policy, since, at the sophisticated level of bearing production, the leadership roles in the shop belonged exclusively to management. The Shop Committee was expected, and allowed, to lead only when there was conflict between the sophisticated group and the basic group or between the basic group and the individuals who composed it, and when management's leadership of the basic group was felt by the group to be inadequate.

When the members of the shop felt persecuted by the basic assumption of the fight/flight group they looked for leadership in handling the disagreeable emotions associated with it. Because of the conventions surrounding representation, the members of the Shop Committee were, in the eyes of their constituents, protected from retaliation. They could, therefore, be abandoned without compunction. Abandonment did not, however, necessarily mean that the committee was no longer taking a leadership role, but that the level at which

leadership was being exercised had changed from the manifest to the unconscious.

These phenomena may be stated more generally. At the manifest level leadership can be considered as requiring, for its successful exercise, followership in the same direction as that taken by the leader. But at the unconscious level, leaders may fill required leadership roles, and yet move in a direction which, at the manifest level, appears to differ from that taken by their followers. Where there is conflict between the sophisticated group and the basic group, or between the basic group and its members as individuals, different kinds of leadership may therefore be required simultaneously. If the kinds of leadership demanded cannot all be provided by the leader of the sophisticated group, the leader may be rendered impotent by the conflicting demands made upon him. In some circumstances other leaders may take some of the conflicting roles, and the group may demand of these leaders that they accept what may manifestly appear as apathy and ingratitude. If, instead of accepting the role they have been given, they try to operate at a sophisticated level, they are likely to be rejected. Thus the failure to provide sufficient candidates for a new committee in October 1949 was not only a following of the flight lead given by the Shop Committee; it was also a rejection of the committee for failing to protect its constituents from the feelings which they had tried to escape.

In field theory terms, locomotion induced by the leader of a group at reality level may be followed, not only by a restructuring of the social field at this level, but also by a restructuring at the irreal level, demanding leadership and locomotion in different directions. In this situation it is possible for the regions of high potential within the manifest and unconscious fields of the same group to be in different positions. The important point is that a restructuring of a social field at the reality level may only be possible if the restructuring at the irreal level is in different directions and has different leaders. In a situation such as that of the Line Shop, in which two kinds of leadership are provided by the social structure—management and representative—it can be seen how they may be used by the group at different levels simultaneously. The diagram in Figure 1 represents different kinds of leadership in the reality-irreal dimension.

Whichever way the workers in the Line Shop turned in their attempts to find solutions to their current problems, they were brought face to face with their basic insecurity and with their inability to extricate themselves from the consequent dilemma in which they found themselves. They wanted the problems solved, but they also wanted them to remain unsolved so that they might feel justified in their choice of scapegoats and have readily available means of expressing feelings which caused them so much discomfort. By first taking up and keeping alive the problems which emerged as symptoms of the growing