**Elton Mayo**



**Background and career**

An Australian by birth, Mayo read psychology at Adelaide University and, in 1911, was appointed lecturer in Logic, Ethics and Psychology (and later Professor of Philosophy), at the University of Queensland.

Anxious to move to the USA for professional reasons, he took a post at Pennsylvania University in 1923. Here, he became involved in one of the investigations which seemed to act as a dry-run for Hawthorne. In one department at a spinning mill in Philadelphia, labour turnover was 250% compared with an average of 6% in other departments of the company. A series of experimental changes in working conditions was introduced in the department, most notably rest pauses. These changes led to successive increases in productivity and the raising of morale. After one year, labour turnover was down to the average level for the company as a whole. It was assumed that the explanation for this improvement was the introduction and modification of rest pauses; this explanation was to undergo substantial modification as a result of Hawthorne.

The Hawthorne Experiments began in 1924, Mayo's involvement in them in 1928, after he had moved to the Harvard University School of Business Administration as Associate Professor of Industrial Research.

**Hawthorne**

The Hawthorne plant of Western Electric was located in Chicago. It had some 29,000 employees and manufactured telephones and telephone equipment, principally for AT & T. The company had a reputation for advanced personnel policies and had welcomed a research study by the National Research Council into the relationship between work-place lighting and individual efficiency.

**The Experiments**

The study began in 1924 by isolating two groups of workers in order to experiment with the impact of various incentives on their productivity. Improvements to levels of lighting produced increases in productivity, but so too did reversion to standard lighting and even below-standard lighting in both groups. The initial assumption therefore was that increased output stemmed from variation alone.

Other incentives - including payment incentives and rest pauses - were manipulated at regular intervals, and although output levels varied, the trend was inexorably upwards. Whatever experimentation was applied, output went up. Although it had been fairly conclusively determined that lighting had little or nothing to do with output levels, the Assistant Works Manager (George Pennock) agreed that something peculiar was going on and that experimentation should continue.

**Early deductions - Supervision and Employee attitudes**

In the winter of 1927, Pennock invited Clair Turner, Professor of Biology and Public Health at MIT, to consult. Turner quickly resolved that rest pauses in themselves were not the cause for increased output, although it was observed that longer rest pauses gave rise to more social interaction, which in turn impacted on mental attitudes. Turner attributed the rise in output to: the small group; the type of supervision; earnings; the novelty of the experiment, and the increased attention to the experimentees generated by the experiment itself.

Pennock had been among the first to note that supervisory style was important. The supervisor involved in the illumination experiment had been relaxed and friendly; he got to know the operators well and was not too worried about company policies and procedures. Discipline was secured through enlightened leadership and understanding, and an esprit de corps grew up within the group. This was in stark contrast to standard practice before the experiment.

When Pennock invited Turner to participate, he also invited Mayo (although it is unknown whether this was as a result of Mayo's achievements at the Philadelphian Spinning Mill, or because of a desire to involve Harvard). Visits in 1929 and 1930 indicated to Mayo 'a remarkable change of attitude in the group'. Mayo's view was that the Test Room Workers had turned into a social unit, enjoyed all the attention they were getting, and had developed a sense of participation in the project.

In order to understand this further Mayo instituted a series of interviews. These provided the workers with an opportunity to express their views and let off steam. It emerged that they would feel better for discussing a situation even if it did not change. Further exploration into worker complaints revealed that some had little or no basis in fact but were actually symptoms or indicators of personal situations causing distress.

By focusing on a more open, conversational, listening and caring interview approach, Mayo had struck a key which linked the style of supervision and the level of morale to levels of productivity.

**Further research - Social Groups**

A third stage in the Research programme took place in the Bank Wiring Room with a similar application of incentives to productivity. Here it emerged that:

* output was restricted - the group had a standard for output which was respected by individuals in the group;
* the group was indifferent to the employer's financial incentive scheme;
* the group developed a code of behaviour of its own based on solidarity in opposition to the management, and
* output was determined by informal social groups rather than by management.

Mayo had read the work of FW Taylor who had already established that social groups were capable of exercising very strong control over the work behaviour of individual members (Taylor had called it 'systematic soldiering'). The interesting evelopment which Mayo noted, however, was that whereas in the first set of experiments productivity went up as the experiments progressed, in the other - the Bank Wiring Room - productivity was restricted.

In *The Human Problems of an Industrial Civilisation*, Mayo wrote:

'Human collaboration in work, in primitive and developed societies, has always depended for its perpetuation upon the evolution of a non-logical social code which regulates the relations between persons and their attitudes to one another. Insistence upon a merely economic logic of production...interferes with the development of such a code and consequently gives rise in the group to a sense of human defeat. This... results in the formation of a social code at a lower level and in opposition to the economic logic. One of its symptoms is 'restriction'.'

The question which needed to be asked, therefore, was 'What was different between the two groups?' . The answer was found to lie with the attitude of the observer - where the observer encouraged participation and took the workers into his confidence, productivity went up; where the observer merely watched and adopted the trappings of traditional supervisory practice, output was restricted.

Interpreting Hawthorne

For industry to benefit from the experiments at Hawthorne, Mayo first concluded that supervisors needed training in understanding the personal problems of workers, and also in listening and interviewing techniques. He held that the new supervisor should be less aloof, more people-oriented, more concerned, and skilled in handling personal and social situations.

It was only later, after a period of reflection, that Mayo was able to conclude that:

* job satisfaction increased as workers were given more freedom to determine the conditions of their working environment and to set their own standards of output;
* intensified interaction and cooperation created a high level of group cohesion;
* job satisfaction and output depended more on cooperation and a feeling of worth than on physical working conditions.

In Mayo's view, workers had been unable to find satisfactory outlets for expressing personal problems and dissatisfactions in their work life. The problem, as Mayo perceived it, was that managers thought the answers to industrial problems resided in technical efficiency, when actually the answer was a human and social one.

Mayo's contribution lies in recognising from the Hawthorne experiments that the formality of strict rules and procedures spawns informal approaches and groups with their base in human emotions, sentiments, problems and interactions. The manager, therefore, should strive for an equilibrium between the technical organisation and the human one and hence should develop skills in handling human relations and situations. These include diagnostic skills in understanding human behaviour and interpersonal skills in counselling, motivating, leading and communicating.