

## MANAGEMENT AND RESEARCH

THE theme of the annual conference of the British Institute of Management, which was attended by 620 top managers during November 6-8 at Bournemouth, was set in the opening address by the Right Hon. Viscount Monckton of Brenchley. Introducing research as a signpost to better management, Lord Monckton showed that as a nation we are devoting roughly two per cent of our national income to research of all kinds. This appears to be a similar proportion to that for the United States, but our research effort seems to be more dominated by defence requirements, particularly in the fields of aircraft, electronics and atomic energy, than is that of the United States. Partly, if not wholly for this reason, a larger share of the financial burden in Great Britain is carried on the shoulders of the Government. The expenditure of the United Kingdom Government on research and development in the year 1955-56 amounted to more than £200 million, of which only about one-sixth was accounted for by expenditure on civil research. Lord Monckton paid tribute to the important contribution to industrial efficiency which is made by the research activities of business undertakings within their own organizations—activities entailing expenditure many times greater than that of the Government on industrial research—and also raised the basic question of whether, in principle, the consumer of the current products of industry should be called upon to cover the cost of research designed to produce better and cheaper articles for his successors, or whether such ventures should be properly financed by the shareholder by way of lower dividends or by the direct provision of new capital.

Giving pointers for future research, Lord Monckton suggested that "it might be worth while for some internal research to be done on the actual effects upon particular branches of business of changes in rates of purchase tax". Research of this kind might yield results of value in shaping the processes of national economic policy in such a way that full regard is paid to its more remote and long-distance consequences as well as its immediate and direct effects. Another field would be research into "the true causes of breakdowns in employer-workers relations".

The remainder of the Conference was a model of how large national conferences should be organized to give all participants opportunities of obtaining information and discussing matters in which they are particularly concerned or interested. In twenty-five sectional meetings topics ranged from electronic data processing to market research; from operational research to case-studies of successful new companies; from economic research to means of evaluating performance in the sales force; from the use made by industry of research organizations to budgetary control.

One of the liveliest of these sectional meetings was concerned with psychological factors in group relations. The speaker was Dr. A. T. M. Wilson, of the Tavistock Institute of Human Relations, who indicated the main types of investigations which have been made into group relations. By the use of experimental discussion groups, two styles of group leadership were contrasted: the highly directed and the 'actively integrative'. The investigator concluded

that the integrative style leads to a more appropriate group atmosphere, to greater group satisfaction with the performance of members, and to greater member satisfaction with group solutions of problems.

Another type of research into group relations has been the descriptive analysis of group relations exemplified by the studies of Woodward and her colleagues with Manchester dock workers, and Scott and his colleagues at the University of Liverpool on the effects of changing methods of steel manufacture on the social structure and group relations in a mill. Similar work has been done by Trent and Bamforth, who, in a study of the longwall system of mining, have presented one of the most detailed analyses yet available of group relations in a production system; Burns has recently examined cliques and cabals in industrial firms, while Mackenzie has discussed the relationship between production and inspection groups.

Studies of the kinds described are adding to our knowledge of group relations in actual working situations beyond the superficial level at which they have often been described and considered in the past. More important, they illustrate how knowledge can be deepened by the use of a systematic framework derived from the social sciences. The full value of such studies will not be easy to assess until it is possible to see their results in the new generations of managers whose training has in part been based on discussion of such research and its implications.

A different kind of study has been made with the experimental reorganization of working groups in actual industrial situations. One of the best-known is that of Rice, who, in an Indian textile factory, had an opportunity to initiate an experiment in complete reorganization of a working team, first in an automatic and later in an ordinary weaving shed. With the agreement of management and trade unions, and with the collaboration of the workers concerned, he was able to reconsider the whole basis of dividing up the activities needed to service the working looms. In the automatic weaving shed he reduced the twelve categories of job to three and completely altered the supervisory pattern. The results were to increase efficiency by about fifteen per cent. A completely reorganized managerial system emerged.

One extremely important finding of this work can be expressed as follows: the technological character of a particular production system does not completely determine the structure of the working team by which any such system is operated. The studies which Rice has published demonstrate the possibility that there may be much to be gained from a consideration, first, of the objectives of a particular production team and, secondly, various possible forms of team structure.

Studies of communication in small working groups have also been made and clearly showed that communications are particularly vulnerable to the creation of informal procedures, and the creation of 'by-pass channels', and that the existence of informal procedures can serve as a signal to the investigator to look for discontent originating in circumstances perhaps quite unrelated to communications themselves.

There have been many experimental training conferences in group relations, and these have varied patterns of component activities. Wilson also described the use of groups; theory sessions: role-playing; and short projects to illustrate the project method of teaching.

In the ensuing discussion it was made clear by management representatives that useful research findings in group relations would continue to be unused until their interpreters were able to free themselves from unnatural jargon and obscurantism.

Confusions about productivity and profits were analysed by R. J. Brech (Unilever Ltd.), who showed that productivity is of little value in assessing the current operations of a firm.

Productivity is simply an arithmetic ratio expressing a technical concept. It describes the relative change in output from a given change in input. If output goes up or down more than proportionately with the increase or decline in input, then productivity increases or declines. As a technical concept it has its value, since once it is known, changes in output can be predicted for given changes in input. But from a management point of view, such a concept has little significance. A manager, if he is to run his business intelligently, has to use economic concepts rather than technical ones. The difference between an economic and technical concept is still not fully appreciated by the business community. The essence of business is the ability and willingness to take a risk, and profits are the legitimate return for risk-taking. Profits are based on relative prices and costs—on economic considerations and not technical ones.

How far does the concept of productivity help the manager to maximize his profits? Productivity ratios can be (and perhaps should be) worked out for all significant factors of production used in any particular process—labour, materials, machinery, floor space and so on. But the ratios themselves are of little value, since they cannot be compared against a standard. A more significant feature is the change and the rate of change in the ratios over time. But when all these ratios and changes in ratios have been worked out, how do they help the manager to maximize his profits? If the manager can legitimately assume that relative prices are unchanged, then an increase in productivity of any factor of production will mean a decline in cost per unit of output. Productivity as a concept is only helpful as a step in calculating changes in costs; and even then it can be misleading since it turns attention away from the real problem confronting management—namely, the provision and use of proper information.

The basic information necessary for taking management decisions is the normal accounting and statistical data, and these should be designed in such a way that they can be used for most, if not all, management decisions. Unfortunately, most accounting data are usually presented in such a form and so late as to be of little value to the manager in taking current decisions or in looking to the future. Accountants have had to concentrate much more on form and presentation of data rather than on the content and on the concepts on which the data are based. A manager, however, is an 'operational economist': all his decisions are basically those connected with economic problems in the sense that they are concerned with relative prices. Any accounting information intended to help management to take the right decisions must be based on economic principles.

A sectional meeting which attracted considerable interest was one concerned with a woman's approach to management. The speaker was Elizabeth Barling (John Lewis Partnership), who suggested that in some civilizations men enjoy much more freedom than women. In Western countries, however, men enjoy considerably less freedom and are inured to considerably more discipline.

Most men have wives and families to support and think about. Most career women either have husbands who have jobs or are unmarried and, economically, have only themselves to think about. Men have to play safer, so far as their jobs are concerned, than women. Women will not stay in jobs they do not enjoy. Men mostly will—if security and perhaps pensions depend on their doing so. Creativity is essentially a product of freedom. Staying in a job that is disliked or playing safe in a job that is disliked are not the conditions in which creativity flourishes. If women are less inured to discipline—and if industry wants their ideas—then industry must recognize that their creativity may depend on conditions of freedom and do what it can to foster those conditions.

It is incompetence in dealings with people that holds British industry back. How to get people to work effectively together? Where to find an incentive that really lasts? How to remove the traditional suspicions and fears that prevent workers from going all out to increase national productivity and their own standard of living? How to turn not just virtues but the weaknesses in human nature to good account in the interest of the firm and of the country? These are the real problems of to-day and women have a part to play in their solution.

The implications of budgetary control for financial research were considered by A. E. Tunley (Harris Lebus Ltd.). The kind of research into the completed budget would raise such questions as:

(1) Is the estimated profit up or down compared with previous years, and is this in keeping with the trend in industry generally and in the particular industry in which the organization operates? Does the profit appear in general to reflect a comparable achievement to that of its chief competitors?

(2) Does the estimated profit in relation to the estimated capital employed show an improvement or a deterioration over previous periods, and do these variations reflect a general trend in the industry or are they peculiar to the organization? If not, are they temporary and a part of a deliberate policy of long-term improvement?

(3) Of equal importance in testing the efficiency of an organization is to see that the rate of profit earned on profits retained in the business is at least equal to the profitability of the original capital—the true test of the growth of a company.

A change in the profitability of capital employed can arise from several causes, and it is desirable to investigate which of these operated. It may be that costs as budgeted have increased, and it is not thought possible to pass this on to customers. It is important to consider why costs have increased and whether the increase is avoidable. Various ratios and indices of measurement will lead to further investigations, such as:

(i) the elements of manufacturing, distribution and selling costs expressed in terms of a suitable unit which eliminates the price element (that is, a productivity unit or a selling unit) to indicate trends by comparisons with previous years.

(ii) comparisons of labour efficiency as projected in the budget compared with past records.

A fall in profitability of capital employed could be due to a slowing down in turnover in capital. A breakdown of the elements of capital employed in relation to volumes of sales should give a lead as to where the slow-down is occurring. The fall in profit in total and in relation to capital employed may be due to a fall in turnover. If, however, the problem has remained intractable, and the shrinkage in turnover seems to be progressive over a long term, it must mean that there is either a developing shrinkage in the market for the company's products or that the company itself is becoming progressively uncompetitive.

If the problem is the former one, then the company must consider some more profitable use of capital.

If the problem seems to be one of competition, the company must discover whether the reason is price—which may be due to: inefficiency in direct cost; too high an overhead burden; an attempt to obtain too high a margin.

All these tests—and others—applied to the trend of an organization's figures in the final budget will indicate how a business is progressing in relation to its own standards. The question still remains whether it is improving its position in relation to its competitors and in relation to industry generally; whether it is better or less than average; whether it is showing sound incipient strengths that could well be exploited. It is difficult to establish these facts unless there is some established method of comparison between firms. These take the form of detailed exchange of cost information on a common costing method or financial ratios.

The part the universities could play in management research was discussed by Prof. N. C. Hunt (University of Edinburgh), who suggested that many apparent personality problems in industry are, in fact, organizational problems. Given that organization, people would react similarly however well trained and well

chosen they might be. They create situations in which workers who have been educated to be active, independent adults with real abilities are required to behave more and more like infants—dependent, subordinate and passive—even though they may be well paid for it and well treated. This must tend to frustrations which in turn lead to an increase of aggression and a reduction of efficiency. In this situation managers are asked to do the impossible. Whether they are autocratic or democratic, optimum results are persistently elusive.

Much could be gained by researchers going into businesses without a detailed frame of reference to investigate a particular problem. Free to follow their own devices they might well stumble upon important discoveries which might have been missed had a definite course been set. University researchers must keep themselves free to tackle problems in their own way, however 'practical' these problems may be. The business world would do well to make it possible for them to investigate problems which are not obviously practical and which may seem irrelevant.

Research in management must be a co-operative venture between the universities and the business community. It cannot be undertaken on any scale by business men immersed in the day-to-day problems of management. Neither can it be done by academics confined to laboratories and libraries.

Besides the sectional meetings, twenty-six discussion groups were arranged concerned with subjects varying from management ratios in the small firm to research in labour turnover; from research into industrial markets to ways in which management can be kept informed of scientific development and research findings. The groups led to extensive shaping of experience which should prove to be of considerable value to British industry.

The Conference was also addressed by Dr. A. King, deputy director of the European Productivity Agency, who illustrated the value of research as an investment.

T. H. HAWKINS

## OBITUARIES

### Sir Ernest Kennaway, F.R.S.

THROUGH the death of Sir Ernest Kennaway, which took place on January 1 (peacefully in his sleep, at St. Bartholomew's Hospital), cancer research in Britain has lost its *doyen*, and experimental pathology one of its greatest figures.

Ernest Laurence Kennaway was born on May 23, 1881, the son of Laurence James Kennaway, of Exeter. As a scholar of New College, Oxford, he took a first-class in the final honours school of natural science in 1903. Proceeding to the Middlesex Hospital with a university scholarship, he graduated B.M., B.Ch., in 1907, and D.M. in 1911. After working for short periods at the Lister Institute and at University College, London, he then successively became demonstrator of physiology at St. Thomas's Hospital (1908), Hulme research student at Brasenose College, Oxford (1909), and demonstrator of physiology at Guy's Hospital (1909–14). In 1911, he was awarded a Radcliffe travelling fellowship by the University of Oxford, and studied at Heidelberg and

at Munich. In 1915, he obtained the D.Sc. of the University of London.

He joined the staff of the Cancer Hospital in London as physiological chemist in 1921, and in due course became director of its Research Institute (now the Chester Beatty Research Institute), in succession to Dr. Archibald Leitch; and was also elected professor of experimental pathology in the University of London. He retired from the staff of the Royal Cancer Hospital in 1946, becoming professor emeritus, and continued his researches at St. Bartholomew's Hospital. In a long life he accumulated many honours—the William Julius Mickle fellowship of the University of London, the first award of the Anna Fuller Memorial Prize (jointly), the Garton Prize of the British Empire Cancer Campaign, the Walker Prize of the Royal College of Surgeons of England, the Baly Medal of the Royal College of Physicians of London, the Osler Memorial Medal of the University of Oxford, and an honorary fellowship of New College—among others. He was elected Fellow of the Royal Society in 1934 (and a Royal Medallist in 1941),