

INDUSTRY AND THE INDIVIDUAL

THERE has been at least one remarkable change in British industry since the Second World War: that is the changed attitude towards the individual. Thirty years ago those discharged because of shortage of work were given short shrift; to-day, those unfortunate enough to be declared redundant are treated, in general, as individuals deserving sympathy, encouragement and help until they can become re-established.

To bring about this change in attitude has been one of the major pre-occupations of the Institute of Personnel Management, the membership of which has grown steadily in quantity and quality since the War. At Harrogate during October 10-12, the Institute held its most successful annual conference, which was attended by more than nine hundred representatives drawn from industrial organizations throughout the world.

The opening speaker was Sir Walter Puckey, chairman of Management Selection, Ltd., who argued that, of the many major industrial problems confronting us to-day, the four most pertinent are: the development of new 'machine' technologies; the development of new 'man' technologies; the development of men in the new machine age; the responsibility of the individual to the group and the group to society.

The State, backed by modern industry, is sponsoring more research per head per year than can be used economically, accepted socially, or desired militarily. This technological pressure is creating other pressures and problems, such as the financing of new projects, the need to double the numbers of technologists in ten years, the desirability of introducing more science into education, the greater need to humanize science, and the need to produce better political understanding in the face of a nuclear technological threat. Great success will attend those who encourage more laymen, arts men, workers, managers and scientists themselves to learn more of science and technology and so gaze with stimulated imagination and curiosity over the wider vista beyond.

Man is starting on a scientific exploration of himself, and recent years have seen an accelerated programme of research in physiology, psychology, neurology and sociology. Many leading industrialists are now convinced that an important field of research exists into individual man himself and his group relationships.

The better group objectives are organized the more likely is one to satisfy individual men within the group, but one should never be so committed to scientific method that one works towards, or desires, complete conformity. The better group management is, the more time and opportunity should be given to exceptional people and problems, remembering that while most men will conform most of the time, every man can and should be exceptional some of the time.

The development of social sciences and technologies is very important, but the greater use of the scientific approach to man and man-management will require better personnel management.

Thousands of skilled managers and millions of sensible workers have established in Britain a reasonable understanding with the machines of the first Industrial Revolution. We now have to estab-

lish a modified machine/man relationship in the second Industrial Revolution, where the machine will be more a machine of the brain than of the muscle. The brain machines may influence different groups of men, and their reactions may be even more critical than those of men in the first machine age.

The new machines will demand special skills which will be developed in, and used more by, the controlling or supervisory section of the working force. There has been a great invasion of offices by machines, and this will continue. We have seen the beginning of the impact of new machines and systems on control and communication activities, and their effect on organizational principles and practices. Since its birth, personnel management has been more concerned with blue or brown overalls than with white. The future may see a changing emphasis, with no less troubles in the first category but with added troubles in the second.

One important gap in the current research programmes will be filled when greater attention is paid to the problems of organizing men in the new machine environment. The installation and possibilities of a computer, for example, show how modern man can meet modern machines in a new and better relationship. There are far too many frustrations arising from poor organizational practices, and organization urgently calls for a more scientific approach. One way of judging a manager's effectiveness is his ability to delegate to other men. In the second Industrial Revolution one can also add his capacity to delegate to machines; this new man/machine delegation can create quite new organizational possibilities and problems.

The individual in the group and the group in society present two separate yet complementary problems. Individual recognition has been accorded to an increasing extent, from the level of Sir Winston Churchill to the growing number of occasions where individuality is recognized by placing names on badges at conferences, on desk signs in banks, stations, hotels and personnel offices.

Every indication of greater group power seems to be balanced by equal and opposite individual recognition. Currently, the technological developments in nuclear energy and automation are examples of this balancing factor.

As much attention has been given to human problems of safety in a nuclear age, and personal problems of living in an electronic brain age, as to the new technical problems themselves. It is significant that more books and major articles have been written on the Dead Sea Scrolls than on automation.

The problem of responsibility and efficiency in a nationalized industry was examined by Sir Harold Smith, chairman of the Gas Council.

The structure established by the Gas Act (1948) led to the setting up of twelve autonomous area boards. These are independent bodies for finance and tariffs, and are charged with the duties of developing and maintaining an efficient, co-ordinated and economical system of gas supply, and meeting, where economically possible, all reasonable demands for gas. The Gas Act also established the Gas Council, of which each area board chairman is a member. The Gas Council has a largely advisory relationship,

not only with the Minister but also with each area board, and is charged with four specific duties relating to finance, research, training and education and industrial relations.

Through their association on the Gas Council, area boards are able to pool their specialized knowledge, skill and experience. As an example, research into the high-pressure gasification of small coals carried out at Solihull is to be developed commercially by the North Western Gas Board for the benefit of the whole industry.

In a public service industry, which has to maintain a continuous supply, it is essential to avoid stoppages through industrial disputes. There never has been a serious stoppage in supply. This is due to the co-operation of both employers and employees, fostered by the system of industrial relations in the industry. Both the employers and the trade unions concerned made an immediate response to the recommendations of the Whitley Committee, and the National Joint Industrial Council for the Gas Industry, together with its Regional (later Area) Joint Industrial Councils, dates from 1919.

The National Joint Industrial Council is still in existence, and the tradition of collective bargaining within the industry has been gradually extended by the creation of negotiating machinery to cover clerical staff, maintenance craftsmen, building trade workers, and ultimately all remaining groups of employees.

The statutory obligations imposed on the Gas Council and area boards, so far as industrial relations were concerned, were met largely by continuing the pre-vesting organization.

Joint consultation was encouraged in the industry before nationalization, and the National Joint Industrial Council had worked out a model constitution for works committees. The trade unions promised their support for the establishment of joint consultative committees at a joint conference on efficiency held in 1953, and such committees are now widely spread throughout the industry.

Improved efficiency since nationalization is shown by the use of fewer tons of coal to produce the same output. Additional costs including heavy capital charges have not been met by correspondingly increased revenue, the difference being absorbed by integration and higher efficiency.

Efficient organization is created largely through the individual efforts of its members. In the gas industry, the traditionally good industrial relations, and the emphasis on decentralization, encourage full participation by all employees.

The role of the trade unionist in relation to productivity and the rights of the individual were considered by W. J. Carron, president of the Amalgamated Engineering Union, who suggested that, although there have been isolated examples of 'go-slow' and other forms of direct action which have brought about alterations in the tempo and a retarding of productivity, ranging from restricted output, or service, to the extreme limit of total stoppage, at no time has trade unionism opposed or sought to obstruct productivity. The 'strike', the 'go-slow', the 'working to rule', or the 'overtime embargo' is merely the outcome of dissatisfaction with conditions of employment, a defence of the rights of an individual or group of individuals.

What are the rights of an individual when examined through the eyes of an industrialist as distinct from the objective approach of a social reformer? It is difficult to segregate these two lines of theory because

our social lives are inextricably interwoven with our industrial existence. The 'rights' of a modern worker in industry are not really 'rights' at all. They are mostly compulsory regulations laid down in the Factory Acts and similar statutory requirements which govern the employment of work-people. The remainder are to be found in agreements between trade unions and employers' organizations, both of which maintain a jealous watchfulness over the permissive and non-permissive clauses contained therein.

The formal establishment of an industrial 'right' dispossesses the individual in so far as that 'right' becomes the property of the nation or, to a less degree, of the particular pressure group that has succeeded in forcing its acceptance. The 'right' then stands every chance of becoming a 'must' and the individual has gained an industrial victory at the expense of industrial freedom.

There is no inconsistency in the desire of trade unions and trade unionists to make the closed shop more effective.

In highly complex industrialized societies it is necessary that certain personal freedoms must be limited to provide the greatest good for the greatest number. The character of our industrial pattern is such that there would be extreme difficulty in operating in a highly industrialized society without collective bargaining. For the maintenance of standards consistent with the rights of human beings it has been shown that trade unions are a necessary part of an advanced society. There is a distinct and direct charge upon individuals to sustain those institutions which provide not only for their welfare but for their existence. It is morally wrong that individuals should obtain both directly and indirectly the benefit of trade unions while completely evading their obligations.

There is an obligation upon employers to take some interest in this question. The theory by employers that membership of trade unions is no business of theirs is an outmoded thought and an evasion of responsibilities.

The trade unions are constantly faced with the problem of what will happen to the people displaced if completely automated forms of production become more widely adopted.

The major right of work-people in a time of technological change is security through continued employment.

All other demands of work-people are conditional upon the fundamental requirement of employment and fair wages. Among them is the strong ambition to have some voice in the practical administration of the aims and purpose of the employing organization.

During the War, production committees were formed; many have disappeared. Much could be done to expand the nature and the beneficial influence of such committees, to create a greater understanding of the difficulties and mutual problems affecting both sides of worker/management relationship.

As workers and citizens, trade unionists demand the right to industries equipped with modern methods of applied technology in production at least commensurate with those of international competitors. Trade unionists also demand the right to produce adequately trained personnel, who are able to justify the setting up of this modernized equipment. Trade unionists demand the right to see industries linked firmly and securely to universities, not only in terms of technical

education but also for industrial research. The right of an individual to expect advances in his living standards, or even to expect to maintain them at their present level, must depend upon his willingness to co-operate in productivity.

Besides the main addresses at the Conference a number of sectional meetings were held to discuss topics like the closed shop, the development of sandwich courses, liberal education and technical training, the recruitment and training of young workers and the cost and changing place of fringe benefits in salary and wage agreements. The latter was addressed by J. Simons, a director of the Package Sealing Co. (Export) Ltd., who showed how the term 'fringe benefits' is one that has crept into industrial jargon in recent years to describe all those items other than hard cash in the pay packet which are of tangible value to employees, whether they cost real money or not to the employer. Two main factors which have brought about this situation are: the influence of taxation on earnings, and competition for labour in the period of full employment that has existed since the War. The first factor has had particular effect on the value of benefits attached to appointments at high executive level where tax becomes heavy. At these levels the provision of supplementary or 'top hat' pension schemes, substantial life assurance, education grants, and even the provision of housing, become important items in the total assessment. The second factor, competition for labour, accounts for the fact that initiative to add to fringe benefits has tended to come from management, rather than from trade unions, though the latter have brought pressure to bear on a number of factors, particularly holidays with pay, compensation for redundancy, guaranteed work-week, and in more recent years, pensions.

Though the provision of fringe benefits has grown in the past twenty years, it is still seldom that one finds them mentioned specifically in employment agreements as part of the contract of employment, even for executive appointments, and still less at operative-levels. Items within the field of fringe benefits are beginning to feature more and more in negotiated agreements between unions and selected industries.

In examining the costs of fringe benefits a number of aspects have to be considered. No clear picture has yet emerged on the correlation between the size of

the company and the cash value per employee of the benefits provided; there is, however, some indication that the larger the industrial unit the greater is the range—and hence the cost per employee—of the benefits available.

One survey covered some sixty companies of varying size. It directed attention to the wide variation in the cost of certain items (pension, sick pay, life insurance, canteen subsidies and travelling allowances). For these items, the variation in cost among the companies covered by the survey was as follows:

Percentage of companies covered by the survey	Cost of all fringe benefits as per cent of total pay-roll
9	under 2½
14	2½-5
28	5-10
18	10-20
12	20-30
3	over 30
16	not disclosed

A more recent survey covering some fifty companies showed that the total cost of benefits varies between 12 and 25 per cent of the total employee remuneration—the median being just under 15 per cent.

In those cases where the cost is high, the biggest single item is usually pension contributions; it is here that many companies could secure better value for their money than they do. Those concerns that have made a close study of the provision of pensions, and have established internal funds with wide investment powers, are better placed to keep pace with inflation than those with insured schemes, and usually at lower cost.

The way to control 'fringe benefit' costs might be to predetermine an overall cost factor expressed as a percentage of the pay-roll, and from the proceeds to cover the costs of those benefits which the company, as a matter of good business policy, would wish to provide, leaving the residue to be used on additional benefits of the employees' own choice. It would have the merit of creating in the minds of both employers and employees a greater awareness that the provision of benefits costs money and that such costs require to be controlled. Such an arrangement would have the merit of controlling the costs of benefits in the simplest possible way; it would take them out of the realm of miscellaneous overheads and enable them to be treated as a definite cost item in the same way as wages and salaries.

MEASUREMENT AND CONTROL IN ELECTRICAL ENGINEERING

THE ever-widening interests and knowledge of electrical engineers as a body have their effects on the organization and division of the activities of the Institution of Electrical Engineers. Originally founded as the Society of Telegraph Engineers in 1871, it soon became necessary to indicate its wider interests by a change of name, first to the Society of Telegraph Engineers and Electricians in 1880 and then in 1888 to the Institution of Electrical Engineers.

Later it became necessary to make administrative provision for the presentation of specialist papers, and the Meter and Instrument Section came into being in 1928. Like its parent body, the interests of this specialized Section widened year by year, and its name was changed first to the Measurement Section and later to the Measurement and Control Section.

The most recent change is the institution of five panels concerned with particular aspects of the activities of this Section. Mr. J. K. Webb, in his address as chairman of the Section, delivered at the Institution on October 4, has most appropriately directed attention to recent technical advances in the branches of knowledge covered by the separate panels.

The first panel is concerned with fundamentals, standards and laboratory measurements, and Mr. Webb pays his tribute to the m.k.s. system while skilfully avoiding the more controversial aspects of the subject. The accuracy of definition of the fundamental units of mass, length and time has now been brought to about one part in 10^9 for mass, one part in 10^8 for length and one part in 10^{11} or better for time. Enthusiasts for new systems of units who