salicyl ions, is useful, as it combines both these effects. A qualified physiotherapist can sometimes be found to give this treatment at home if a physiotherapy clinic is not available. Short-wave diathermy is widely used for the relief of pain, especially in the hip and back, and is more useful in these joints because of its deep effect. X-ray therapy is sometimes used for the relief of pain in the hip or back, but is less effective than in ankylosing spondylitis.

Injection Treatment

A method which has recently come into vogue is injection into the joint cavity. It was first used with sodium acid phosphate and later with lactic acid, but procaine has been found to give equal relief from pain, though possibly not the other results which are claimed to occur—namely, the formation of a layer of dense fibrous tissue in place of the destroyed cartilage, arresting in some degree the degenerative process. The treatment must be followed by passive movements, manipulation, and exercises. Much skill is required to ensure that the needle enters the joint, which may be more difficult because of the thickening of the capsule, and if this is not achieved the result may fall short of expectations. The injections should be repeated at intervals, but unless relief is experienced they should not be continued.

Another method which is sometimes effective and calls for less expert skill is the injection of iodine in oil in the vicinity of the joint. It was first practised in France, lipiodol being the preparation used; English equivalents such as "iodatol" are now available. I have used this method in suitable cases, especially those in which periarticular thickening gives rise to pain and stiffness before there is much bony change, and good effects have been obtained; some cases have been under observation for as long as fifteen years and have retained a fair degree of mobility. The injection gives relief from pain and stiffness for three or four weeks, when it may be repeated, the intervals being gradually increased. The procedure is simple: the oil, which is viscous, is warmed and 2 or 3 ml. is injected deeply into the buttock in the region of the joint, with the usual precautions. Absorption is slow, and it is probable that the administration of iodine in this way is the best means of securing its systemic action, which is believed, especially by French authorities, to be of value.

Other Measures

Drugs by the oral route are of little value except for the temporary relief of pain and stiffness, aspirin alone or with phenacetin or codeine may be taken, but opiates should be avoided as they are apt to cause constipation and are habit-forming. Iodine in the form of the tincture, the iodide of potash, or one of the proprietary preparations may be useful, but it is difficult to assess its value.

Diet does not call for consideration except in patients who are overweight, and since weight-bearing is an important contributory factor this should receive attention. Salt may be reduced with advantage in such cases to lessen water retention.

Surgery may be called for when pain is severe or deformity serious, and if it is to be considered the earlier it is undertaken the better the results are likely to be. It is a matter for an orthopaedic surgeon to determine the form it should take, but the results are often disappointing; to remain in hospital in splints for a long period is a serious matter. The principal procedures now in vogue are neurectomy of the obturator nerve and the articular branches of the anterior crural and sciatic nerves; arthroplasty,

inserting a metal cap (vitalium) between the head of the femur and the acetabulum; and excision of the head of the femur in order to form a false joint.

Early treatment, rest for the affected joints by attention to occupation, splints, and supports, appropriate exercise to cope with the threatening limitation of movement, combined with a courageous and persevering attitude on the part of the patient, will give worth-while results.

MEN AT WORK*

BY

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These remarks deal with some problems of men at work in general, and with those of one man at work in particular—the industrial medical officer.

Our Present Situation

To-day we have full employment. A greater number of people are employed, output for every man employed is higher in almost every industry, and our total production is greater than ever before in peacetime. And yet output still falls short of our needs. In fact, our balance is so precarious that unless we do produce more, and more cheaply, we may find ourselves short of raw materials, and facing unemployment, lower standards of living, and a threat to the whole structure of the welfare State.

The question is: "How are we to produce more?" It may be answered in many different ways. Economics, long ago called the "dismal science," has various solutions to offer, including a "healthy dose" of unemployment. More realistically, economists favour the wider adoption of payment by results, at present restricted to a minority of wage-earners. This would undoubtedly be a useful measure in the struggle against inflation and might in many industries help to raise output, but it could hardly be an adequate answer to our problem. During the war we progressed far towards achieving a true harmony between individual purpose and social purpose. To-day there appears to be a serious discrepancy between what the community needs and what its individuals in their various groups are able or prepared to contribute. And it is doubtful whether such a social malaise can be cured in terms of wage-packages or fear of the "sack." This problem of "incentives" demands some hard thinking, in terms of man and work, industry and community.

The Standard of Living.—The basic objective of work is to provide the worker and his family with necessities and amenities as dictated by individual and class standards. We have lived for long in an expanding economy in which yesterday's luxuries became to-day's necessities. Many of these necessities (including expensive "indulgences," holidays, and some saving) are not now being at all easily provided; the population to-day at most levels of income, on the standards it at present wants, is in fact "broke." This makes our predicament all the more incongruous: the community requires more than its individuals are prepared to contribute; its individuals require more than the community can at present provide. The issue is clearly not

*From an address to the Association of Industrial Medical Officers, January 27, 1950.

one of economics alone. It may be that the need for leisure is becoming dominant, since work in many cases is felt to be so frustrating.

Some Facts and Theories

Can medicine, and in particular industrial medicine, help? Medicine is concerned with human beings, and if production is related to their health and happiness it is medicine's affair. The more we learn of people the clearer it becomes that work is in fact very much related to health and happiness—our work affects our health, and how healthy we are affects our work. We may therefore, by drawing on our own ideas and on the experience of the other social sciences, begin to formulate a working philosophy for those of us who practise industrial medicine. Here, in brief, are a few chapter headings.

"Work is the Inevitable Condition of Human Life."—This is surely obvious enough; and now psychiatry is increasingly emphasizing the significance of work for human motivation and in expressing fundamental drives, considering it next in importance only to the family. But while the family, in our time, represents the main source of happiness, work only too often seems to be a major frustration.

The Physiological Requirements.—By now industrial medicine and its allies have acquired a great deal of knowledge of the physical environment in relation to health at work, though much of what we know is not being applied. It still comes as a shock to find, on visiting factories, how even the elementary physiological requirements are so often ignored. Too many of our factories, and not only the smallest, are too slummy. Even less are many advances of machine design and those from the psychology laboratories being applied. Are we, who are so interested in efficiency and economy of effort, doing all we can to educate management? Conditions at work are our first responsibility, and this means much more than the prevention of recognized hazards and the watch for new ones.

Welfare.—Similarly, in welfare and the provision of amenities we have much leeway to make up. Fortunately, the shortage of man-power is stimulating many management men who otherwise would not have had the good sense to act. Industrial medicine is already deeply committed here. How distinct, in fact, the medical, welfare, and personnel departments should be is one of the great questions for to-morrow. We must, however, already go forward from these well-defined physical and psychological requirements and from the limitations of the "welfare" outlook. As has been shown so clearly in the undermanned industries, improvement of conditions of work and pay is not enough.

Work Satisfaction.—Vocational guidance, job analysis, and placement examinations are helping us to provide people with jobs that suit them. But work involves very much more than is yet comprised by these techniques. Studies are now required, on the one hand, of the emotional and social "needs" that men bring to their work to-day, and on the other of what might be called the relevant "properties" of different jobs. So far we have only rather sketchy ideas of what these "needs" are, but we regard them as deriving from basic human instinctual drives, modified in the long history of our society. What are they to-day? Security, approval, status, authority, responsibility, achievement, the "instinct of workmanship"? And service? What happens to such needs in mass-production industry? Can they be satisfied in the blackcoated jobs or in the lower managerial posts? How

do the professions compare with the trades and with unskilled labour? What balance of satisfaction and frustration are men achieving in the work itself, and in its social relations? Have we reached a situation where for many the main satisfactions of the job must come from the human contacts and relationships incidental to the work? And, if so, can we any longer afford to consider them incidental?

Living in Groups.—By now we all recognize that the social life is as "natural" as the private; that "belonging" to a group is a rich source of emotional security. None of the statistical indices of industrial health are at all perfect, but we know that in civil as much as in military life there are happy and unhappy groups, well and sick, integrated and anarchic, effective and ineffective, productive and less productive; and that individual health depends much on the groups of which one is a member. Unfortunately, we know less of the factors making for good morale and the development of healthy well-knit groups than of the conditions leading to hostility, frustration, and anarchism. We have, for instance, little more than intuition to guide us in dealing with problems of leadership and its functions at the different levels of industry.

Democracy in Industry.—To-day we have political but little industrial democracy. It is conceivable that there can be healthy and effective small groups in a factory, whose members take no further part in its affairs. But it is unlikely that with such an artificial brake on spontaneity there can be any real identification with the purposes of the factory as a whole. And it is unlikely that to-day's divergence of purpose between the community and its individuals can be bridged unless people feel personally involved in what happens at the levels between the group of mates on the shop floor and the big society of the industry and community as a whole, so often misunderstood as the hostile and impersonal "they." Unfortunately, no generally effective means have yet been devised to meet this exceedingly difficult problem, either in private or in nationalized industry. Is this our business? Surely it is. With the fragmentation of so much of our social life, "joint consultation" and similar movements have become as crucial to health as they are to production. They could help men to make use of their abilities; to grow to maturity, adulthood, and responsibility; to co-operate in service; and to develop stronger bonds between the individual and his society by breaking down isolation and promoting community spirit.

Summing Up.—Our experience—or is it our faith?—suggests that mature human beings, physically healthy, secure in well-integrated groups and living fully in a democratic society which appreciates the worth of work, will be productive in as "natural" a way as men appear to be in primitive societies; will contribute what the community needs and expect only what society can provide; and will forget past grievances. The hope is that, with everyone taking part in the choice of means as well as ends, we may one day combine the advantages of both modern and primitive communities. So far, no expanding and mobile society such as ours has ever achieved such conditions, nor will they be brought about by the welfare State of itself, though its very survival depends on our discovering a new ethic of work and dynamic of efficiency. We must therefore be prepared for as great changes in the social structure of industry, to promote social health, as have already been necessary in its physical aspects, so that physical health can thrive and work can be done efficiently. So far the changes have been largely confined to administrative control.

The I.M.O. and the Production Drive

These remarks are largely theory ; such facts as we possess have mostly been demonstrated in other countries and are not necessarily true of ours. We cannot yet formulate a coherent and immediate policy which will contribute to production ; in emphasizing immensely complicated human relationships we cannot provide such concrete answers as unemployment or bonuses—the whip or the carrot. In fact, we are answering the question, “How can industrial medicine help in production ?” by asking another, “What can we do to promote mental and social—as well as physical—health in industry ?” We must always remember that as doctors our first charge is the well-being of the men at work. But we must not forget the cost at which the greatest increase in production was achieved in the nineteenth century and the legacy with which we are left, nor indeed that the modern movement in industrial medicine derives from the disregard of such things in the first world war.

Three Errors of Industrial Medicine

The I.M.O.'s method is the doctor's method—to investigate and treat, to teach and guide. With this method in mind, review of our problems suggests that there are at least three common errors in industrial medicine—errors to-day, but, I fancy, to-morrow's heresies.

1. *Prevention—or Prevention and Treatment.*—We are agreed that the function of industrial medicine is to prevent illness and accident and to promote health as best we know how ; but, because treatment is thought of only in individual terms and we must not duplicate the work of the G.P. or the hospital, the error is common of soft-peddalling the therapeutic function of the I.M.O. and restricting it so far as possible to first aid and rehabilitation. Treatment, however, will become as much interpersonal and social as individual, and the I.M.O. of to-morrow will have to practise therapy as conscientiously as to-day he avoids it. But it will be *social* therapy, not physical and individual, and will deal with difficulties of human relationships, with emotional problems (for these always have social implications), with stress in groups and between groups and individuals, inadequate leadership, poor morale, and so on. The I.M.O. indeed often already fulfils this function most usefully without being aware of it. To-morrow, if he doesn't do it, other workers will be brought in for this purpose—who will be without our advantages and may have less than our wisdom.

2. *“Function of Management”—or Social Service.*—The purpose of words is surely to convey meaning and to help us in our thinking. Industrial medicine is so much more than a function of management that it is strange that so many of us stick to so inaccurate a definition. The industrial health service is usually paid for by industry (that is, workers, capital, management) to promote the well-being of those in industry and, to a smaller degree, of their families. In fact, it is a public, a community, a *social* service which is being pioneered in one of our typically British ways. It is time we so regarded and declared ourselves. If we continue to align ourselves with management our future as social therapists will be difficult indeed, as part of our strength lies in our neutrality.

3. *Specialist—or Wholist.*—Industrial medicine is a specialty, it is commonly said. This is an error not only because it confuses the specialist with the expert, which doesn't matter, but because it misses the important point that industrial medicine belongs to an era in medicine that has come *after* the rise of specialism. We need specialists

of all kinds, but we now recognize that specialization is not enough ; that is why medicine is now beginning to develop along new lines. We have found that we also need a new type of doctor who can see things in the round, who tries to understand the human being as a person in his environment, who is interested in the psychological as well as the physical, in groups as well as in individuals—because all these make us what we are. Of course, it is desirable that all doctors, even specialists, should practise something of such comprehensive, social medicine, and in time we hope that all will ; but for the I.M.O. it is already an inescapable duty. The I.M.O., like the modern paediatrician, for example, should be defined not by any specialism or technique, but in terms of his versatility, the breadth of his interests, the depth of his understanding. This is going to be a hard job, because we have none of us been educated that way.

Industrial medicine arose in response to a social need. If it can develop and respond to the new and rapidly changing needs of our time its future as a constructive element in the community is assured.

ASSOCIATION OF SEA AND AIR PORT HEALTH AUTHORITIES

51st ANNUAL MEETING

The Association of Sea and Air Port Health Authorities of the British Isles held its fifty-first annual meeting at Grimsby on June 7, 8, and 9 under the presidency of Councillor A. E. KELHAM, chairman of the Grimsby Port Health Committee. Alderman T. F. Regan, of Manchester Airport, was elected president for the year 1950-1, Dr. H. C. Maurice Williams, O.B.E., was re-elected honorary secretary, and Dr. W. M. Frazer, O.B.E., was re-elected honorary treasurer.

Councillor KELHAM, in his presidential address, reviewed the activities of the association during the past year. He referred to the efforts that had been made to unify the procedure on food inspection of crew's provisions. He mentioned the representations that had been made to the Ministry of Health in connexion with vaccination against smallpox for passengers arriving in this country from epidemic areas. Another important matter dealt with was the recommendation submitted to the Minister of Food about the control of inedible fats. Consideration was also given to the draft regulations in connexion with the Sea Fish Industries Bill, the Milk (Special Designations) Regulations, the Metallic Contamination of Food, the Whalemeat Regulations, the Hygiene of Ships, and the tracing of Tuberculosis Contacts.

Dr. L. THOMAS, senior medical officer, London Airport, followed with a paper entitled “The Medical Procedure at Northolt Aerodrome, with Special Reference to the Aircraft Regulations, 1950.” Dr. Thomas emphasized the difficulties of health control because of the speed of travel. Passengers generally arrived in this country from areas where major infections such as smallpox, typhus, cholera, yellow fever, and plague are rife. A total of 46,097 passengers, or over 12% arriving in this country from overseas, come from or through areas where these major infectious diseases are endemic. The health control procedure was closely integrated with the examination of passengers by the immigration and customs authorities. He described the revised procedure under the Western Union Agreement whereby medical inspection is limited to the first port of entry within the Union.

Mr. J. D. SYME, chief port health inspector, Grimsby, spoke on the unsatisfactory nature of existing legislation on crew accommodation on merchant vessels. He was followed by Mr. H. W. WILSON, who gave a comprehensive account of the fishing activities in the port of Grimsby, where over a quarter of a million tons of fish are dealt with annually.

Dr. ANDREW SEMPLE, deputy medical officer of health, Liverpool, drew attention to the difficulties of the ship's surgeon in