

SECTION A.—SANITARY SCIENCE AND PREVENTIVE MEDICINE.

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DURING the latter half of the 19th Century the attitude of the public towards things medical underwent a remarkable change. Sanitary Science, in spite of the intensely practical outlook of the Anglo-Saxon, had certainly not yet come to its own, though, fortunately, the Mosaic laws regarding personal and general hygiene began to make a strong appeal to the few interested in Public Health or the health of the people, individually and collectively. The need for 'fresh air' was beginning to make itself felt, but that this connoted proper ventilation was not appreciated. It was recognised that pure water and good food were essential for the maintenance of the health of the growing and working body, but these were called for as by men crying in the wilderness or groped for in the dark as also were better drainage and sewage disposal, care of the nursing mother and her young child, better conditions for school children, better homes, more healthy working surroundings. The thoughtful few were convinced that too long hours and too continuous work, without definite periods of rest and relaxation, were not only injurious to the health of the worker but, and this was beginning to provide them with a very powerful lever, that they interfered with the quality of his work. Some indeed realised that these conditions exerted a more pernicious effect on the developing, growing child, even than on the adult, but the child, apparently, was not such a valuable asset as the working adult and conversion to care for child welfare was slow to come. "If disease is preventible why not prevent it?" has long been a popular cry, but how often has it been lost in the louder cry of "How far is it going to pay?" Through all this time disease has been looked upon as a kind of entity, entangled in some way or other with the personality of the patient. Consequently the study of the 'cure' of the individual has, in the eye of the public and even in the mind of the medical man, bulked far larger than the need for the removal of the conditions unfavourable to the proper manifestation and performance of the functions and duties of life.

We have been roused from any lethargy that persisted by the War; the value of the individual to the State has been appreciated, the importance of co-operation has been brought home to us. The dependence of each upon all and of all upon each has been demonstrated, and, recovering from the fatigue and strain involved in so great a struggle, we are gradually coming to view things in their proper perspective. All this will bear fruit.

We have learnt many lessons from the war; we are learning others; we have still many to learn. In spite of the fact that we were so satisfied

40 *Address—Sanitary Science and Preventive Medicine.*

with ourselves and our methods, nay, perhaps, for this very reason, we failed to do ourselves justice in our own eyes, and certainly in the eyes of the world. Though many relied too much on the opinions of the pessimists, we have now realised (the whole weight of physical and mental energy of the nation being thrown into the War, backed as these have been by material wealth and by spiritual and moral force) that we are a much greater power in the world than our pessimists would allow. We are not a degenerate race, but we must confess that we have not made the most of ourselves. In no war in history have brains and moral played such a part as in that just brought to a close and in no country and amongst no peoples have these been more in evidence or more utilised than amongst the agglomeration of peoples known as the British Empire. On a sound foundation has been built up an extemporised superstructure but one of magnificent proportions. The armaments of war and the means of destruction have been so increased in power, and the arts and crafts of Peace so effectively diverted to the production of the mechanism and instruments of destruction, that war, in the future, has been rendered almost unthinkable. Withal we have learnt much as to the possibilities of saving life. Hitherto our allies, the Japanese, had been the greatest pioneers in the application of preventive measures against disease, in minimising the effects of wounds. They had utilised the peace-time investigations and discoveries of the whole scientific world and had applied them to the waging of war with marvellously successful results. Following closely on the footsteps of the Japanese and then out-distancing them, our Army Medical Service (to which have been recruited experienced civil practitioners, researchers and teachers skilled in Administrative work and in the science of Medicine as applied to war), was supplemented by the experience and practice gained in our hospitals, laboratories and medical schools. To this Service was thus recruited a host of well-trained practitioners who for years have been working quietly in our midst, often with little recognition, and a number of Medical Officers of Health who, in spite of recent lay press criticism, have, in recent years, done such magnificent work. So much for the Army. The State is also gradually becoming alive to its duties and responsibilities in Civil life. During the last few years it has contributed, still parsimoniously no doubt, but more generously than of yore, a sum which can be devoted to research, but a sum that would avail little had there been no private enterprise or men trained in our Medical Schools and Hospitals, and had the teachers and practitioners, young and old, often receiving very inadequate remuneration, not been animated by a love of their work, and supported by the consciousness of its supreme importance.

Those associated with the conduct of recent 'intensive' research are naturally deeply impressed by the results obtained in so short a time during the War, but many do not appear to realise, as indeed they cannot, how prolonged has been the process of training, how patient the building up of

experience and Schools and how careful the selection of men, that have made possible the carrying out of the splendid work done during the last four or five years.

When the State realises this and evinces a desire to know how workers can best be helped and progress accelerated, it may well fall in with the suggestion that greater facilities than those now existing may be offered to those taking up a career of teaching and research, a career with many compensations, but usually so inadequately rewarded that those engaged thereon are heavily handicapped when they come to provide their children with education and means of culture suited to their abilities, and afterwards to place them in life. This lack of financial recognition and encouragement during times of Peace involves loss to the State, in so far that the worker lacks incentive to give of his best ; further, when that best is given, the opinion and advice of the inadequately paid are usually valued according to the standard of pay and not according to the knowledge and skill of the giver of the advice. In contrast to this state of affairs in Peace time, few things during the recent war have been more remarkable than the almost complete and abject dependence of those engaged in the guidance of our national services upon the work and advice of trained minds in every branch of law, science and industry, and the utter helplessness of some of our public men during times of stress and strain. Many of them, unaccustomed to rely and act upon the advice of experts "in the minor matters of the law," have been completely nonplussed when larger questions have had to be decided and action taken. A few endowed with great driving power have managed to push things through, but the amount of obstruction presented by men trained in routine only, men often lacking in initiative and imagination, would be almost inconceivable had we not had almost daily evidence of its existence. Unable to direct streams of effort into well-planned and properly constructed channels, they have been overwhelmed by floods which, dammed up until they have become irresistible, have swept away all barriers. Under these conditions we must expect waste and destruction ; these have followed as naturally as night follows upon the day. I say this in no spirit of carping criticism. We all recognise that we are going through a period of unfair recrimination, we are blaming people for what we ourselves are responsible for, but acknowledging this with all frankness, we must remember that experience, to be of value, must be acted upon, that lessons not learnt and taken to heart will never ensure a better Empire, not to speak of a better world. We may be sure, however, that whether *we* profit by them or not, others will make shift to do so and at our expense.

We have learnt that an army must not be an Army of ' bayonets ' only, there must be Officers skilled in the science and art of war, who can lead, and in whom their followers have confidence. The Labour Corps has its place, the Army Service Corps, the Engineers in their various grades, the

42 *Address—Sanitary Science and Preventive Medicine.*

Gunners with their science and practice, the Army Medical Service working in the field, at the Clearing stations, in hospitals and in the laboratories, and taking part in the subsequent building up and training of men damaged in the fight. A seven or eight hours' day has never entered into the thoughts of these men or of those behind the lines, working in the preparation of guns, ships, munitions, supplies, etc. Production, whether in long time or short, and production of material of the highest quality has been aimed at, and usually attained; there has been grouching and grumbling but the "goods have been delivered," and vast wealth has poured into many coffers. Our troops have been well fed and their health maintained; wonderful camaraderie has existed amongst them throughout; mistakes have been made, reputations have been gained and lost, but until victory was assured there was no relaxation of effort, no holding back on any side except, perhaps, by those who did not realise the danger that threatened our very existence. May we not now hope to realise that what applies in war is equally applicable to the affairs of peace. The Empire and other peoples must live, and to do this they, or their elements, must work. We may, of course, live a hand to mouth existence on a bare pittance, but to ensure the physical, scientific, moral and spiritual efficiency of our people equal to that we demand and obtain from our armies, we must utilise our resources to the full, to produce and maintain efficiency, to train our men, women and children, to feed them, to educate them, to make life pleasant and useful for them. Only so can we profit by the lessons and experience of our Armies in the Field, lessons not only for those whom we are sometimes pleased to call the workers, but for men and women in every rank of life, especially for those of whom we may speak as junior and non-commissioned officers. We as a Sanitary Institute are closely interested in this, both as medical men and laymen, for we include a large number of junior and non-commissioned officers of the Scientific and Engineering Corps. It is our duty not only to collect information but to sift it and to render it useful and easy of application. As Lord Moulton, and few men have played so great a part in applying scientific method and logical thinking to the winning of the war, said the other day: "The scientist is ready and anxious to unite with the workers to increase production. That is his offering to a world at peace. But he can do nothing by himself. If the workers will not enter into partnership with him, his studies, his researches, and experiments cannot benefit the world as they should. But if the masses of the people will frankly and cordially accept what he has to give, if they will rejoice in increasing production instead of dreading it, we can make the world a wealthy place."

What at one time were looked upon as matters for academic treatment and discussion have come to be the determining factors in the winning of the War and many of us are convinced that these same factors, so long relegated to the laboratory, the class room and the cloister and now in some danger of

being sent back to them, must remain in the open and hold the place in the winning of the golden age of health, prosperity, and peace, that they took in winning the war and ensuring the possibility of peace for the nations of the earth.

Most of the papers given in the several [Sections of this Congress will have a bearing on what we have learnt during the war. We are compelled to study what has gone on on so grand a scale. The individual in time of war comes into prominence, his strength and his weakness, but we also see that the community's failure to do its duty by him must recoil on the community.

As to their bearing on the work of the immediate future, the functions of Annual Conferences of the Sanitary Institute have always been consultative and educational rather than political and executive. It has, therefore, been possible to cover much more ground and to allow greater latitude of discussion than had it been our custom to press questions to a division and to advise as to administrative procedure. In Sanitary as in other matters, education should be in advance of, and prepare the way for, legislation, and although we may sometimes fret at certain restrictions and that things are left undone which might with advantage be put to the touchstone of practice, there can be little doubt that we owe the solid and permanent character of English legislative measures and action largely to our free preliminary discussion and to the co-operation of our observers, experimenters and scientific investigators with our legislators and administrators. In the programme before us are subjects for discussion which may be approached from very different directions and viewed from many points by those who are down to take part in our proceedings. We shall have ample opportunities of examining the diverse paths upon which it is possible for us to travel; food for reflection will be ample and varied, but I would ask you to remember that rumination and digestion are carried on much more completely and thoroughly in quiet and solitude than under the conditions in which a pabulum is ingested. The questions brought forward for discussion are so important that they will all have to be dealt with legislatively and executively, and the sooner this can be done the better; but bearing in mind the differences of opinion that exist, it will certainly be well that we should understand, and understand fully, the conditions with which we have to deal, the difficulties surrounding them, and, having heard all that can be put before us by the experts who consider the several questions (remembering that they have considered them from very different points of view) proceed quietly to determine what are the best methods of dealing with them and of drawing up and obtaining legislative measures on which administrative action may be taken. Steering this course our liability to make mistakes will be limited; departure from it may lead us into quagmires from which we may be able to extricate ourselves only with the greatest difficulty—if at all.