HEALTH AND THE SOIL

BY

G. T. WRENCH, M.D.

The present era is one that has placed its wisdom at the periphery, and has, through the ingenuity and skill of its experts, expanded that periphery enormously.

A Modern Danger

This concentration at the periphery has led to a neglect of the centre, so that, while the number and public importance of the experts multiply, the philosophers, who strive to review and concatenate all sections of knowledge, continue to recede until they have almost reached the vanishing-point. Our problems, consequently, are no longer studied as a whole, but are split up, departmentalized, and confined to the experts most conversant with the particular knowledge amidst which a problem has appeared. An attempt is then made severally to solve it. If the problem is a localized one this attempt is successful. If on the other hand it spreads over several sections of knowledge, something vital is omitted and the attempt fails. The knowledge of the experts is too confined, too particular, too separate to produce a lasting solution.

No one foresaw this modern danger more vividly than the great Goethe, who uttered this warning in his *Wahlverwandschaften*: "Every evil shall be healed upon the spot, where it shows itself, and no one concerns himself about the place, where it really takes origin, whence it works its effects. For this reason it is difficult to take counsel." These words apply to all sections of knowledge of modern civilization, including that of the healing art. In knowledge of separate diseases and of certain immediate causes of each disease we have during the scientific-industrial era made marvellous advances. But in the central matter of health as the possession of the people as a whole, with the abolition of the bulk of weaknesses, ailments, and illnesses, we have advanced very little. Recently, however, we have made a definite advance.

This advance which we have made is the discovery—for so it may be termed, in spite of what now seems its obviousness—that imperfection of our food leads to so many minor and major phases of ill-health that some are beginning to regard it as the primary basic cause of the departure from health into disease.

Nature and Health

In devising life, Nature surely devised health with it—health of the soil, health of the river and sea, health of the plants, animals, and man. Are these separate healths, or are they really so interdependent that they form a whole, fulfilling the meaning of health as whole? There always has been, of course, a general belief that there is an intimate connexion between these healths, but this connexion has not been sufficiently studied. It cannot be demonstrated by research into disease and its causes; it can only be demonstrated by a study of it itself where it occurs. But research into healths has very few followers. Consequently not much is known.

The most notable studies of associated healths are those of soil, vegetables, and animals carried out by Sir Albert Howard and his assistants by the adaptation of a Far-Eastern form of soil nutrition at Indore. As a result, so notable was the health of the vegetables that Sir Albert concludes that the true role of insects, fungi, etc., "in agriculture is that of censors for pointing out the crops that are imperfectly nourished"; and of the animals fed upon these products he states: "I was able to study the reaction of well-fed animals to epidemic diseases, such as rinderpest, foot-and-mouth disease, septicaemia, and so forth, which frequently devastated the countryside. None of my animals were segregated; none were inoculated; they frequently came into contact with diseased stock.

No case of infectious disease occurred. The reward of well-nourished protoplasm was a very high degree of disease resistance, which might even be described as immunity." Dr. Ehrenfried Pfeiffer, by a like care of the nutrition of the soil, has achieved very similar results. As a result of these studies of associated healths, farmers in Britain, on the Continent, in India, Africa, and elsewhere are finding that, by the careful composting of all that once took life from the soil and returning it to the soil for its food, they get an altogether unexpected health upon their farms. Further, Sir Robert McCarrison singled out the Hunza people of North-Western India in these words: "These people are unsurpassed by any Indian race in perfection of physique; they are long-lived, vigorous in youth and age, capable of great endurance, and enjoy a remarkable freedom from disease in general." The Hunza, I found, have for long followed out with the most meticulous care the principles of the nutrition of the soil which have had such favourable results under Sir Albert Howard and others. In brief, it seems that health is a consecutive process starting from the dieting and nutrition of the soil itself.

Principles of Soil Nutrition

Now the principles of this nutrition have been as much neglected under industrial civilization as have those of man. This neglect has given rise to the following powerful anathema by the late Professor F. H. King, at one time Chief of Soil Management, Department of Agriculture, U.S.A.: "Man is the most extravagant accelerator of waste the world has ever endured. His withering blight has fallen upon every living thing within his reach, himself not excepted; and his besom of destruction has swept into the sea soil-fertility which is the substratum of all that is living. It must be recognized that the phosphate deposits which we are beginning to return to our fields are but the measures of fertility lost from older soils, and indices of processes still in progress. The rivers of North America are estimated to carry to the sea more than 500 tons of phosphorus with each cubic mile of water. To such loss modern civilization is adding that of hydraulic sewage disposal, through which the waste of 500 million people might be more than 194,300 tons of phosphorus annually, a waste which could not be replaced by 1,295,000 tons of rock phosphate 75 per cent. pure. The Mongolian races, with a population now approaching the figure named, occupying an area little more than half of the United States, tilling less than 800,000 square miles of land, and much of this twenty, thirty, or perhaps forty centuries, unable to avail themselves of mineral fertilizers, could not tolerate such waste and survive."

Wastage of the Soil

Not only are the soil's natural foods extravagantly wasted, but the soil itself is being wasted and lost on a prodigious scale. One who has read official papers on this wastage can but be amazed that this age is sometimes spoken of as "the age of plenty" so witless is it at the centre. Messrs. Bennett and Chapline, in Circular No. 33 of the Department of Agriculture, U.S.A., give a truly terrific picture of the waste of the soil of the United States, due to man's wisdom being concentrated on the periphery and absent at the centre. Mr. Ratcliffe, in Pamphlet No. 64 of the Council for Scientific and Industrial Research of the Commonwealth of Australia, presents a similar terrifying picture of the dying soil of much of Australia under the onslaughts of man's search for fortune. Messrs. Jacks and Whyte, in Technical Communication No. 36 of our own Imperial Bureau of Soil Science, survey the dolorous stories they have received from the major part of the agricultural world.

The Medical Profession and Whole Health

If health is a whole, if it is a quality carried from the well-sheltered and well-nourished soil to the plants, the animals, and man, can one wonder that with a start so

injured our domestic plants and animals, which are the link between us and the soil, are subject to a great bulk of disease like ourselves? There seems, then, great need for our profession to enlarge its scope and get a conception of health and disease which is not limited to the human section of them, in which we work. If we do not do so, we may find that our discussions on malnutrition, invaluable as they have been up to the present, are in danger of becoming scientific superfluities. We may become a shut-in profession, suffering, as we even do to some degree already, from public devaluation, owing to our failure to reduce the bulk of illness and the increasing cost which accompanies it.

The difficulties of approach to whole health are undeniably very great, particularly in our own land, where agriculture has been caused to sink so low. But the attainment of whole health is an accomplished fact in secluded areas of the present earth, and what is done can become practical elsewhere when it fires the imagination of men. What men can do when their imaginations inspire them to achievement the modern power-world shows. But they have expanded that world so rapidly that they have almost lost their vision of the centre from which life springs—the living soil.

CHILD GUIDANCE

CONFERENCE OF CLINIC WORKERS

The fourth biennial Child Guidance Inter-Clinic Conference was held at the House of the British Medical Association in London on January 27 and 28. Those who attended, to the number of between two and three hundred, included professional members of staffs of clinics, directors of education, school medical officers, and others interested from all parts of the country. The conference was opened by Lord BLANESBURGH, president of the Child Guidance Council, who remarked that the ten years' work of that body had fully demonstrated that child guidance was no longer to be regarded, as it was at the beginning, as an experimental curiosity.

Treatment of Parents

On the first day of the conference discussions took place on the treatment of parents and on juvenile delinquency, and on the second day simultaneous sessions were held for psychiatrists, psychologists, psychiatric social workers, and administrative representatives. Sir WALTER LANGDON-BROWN, presiding over the discussion on the treatment of parents, said that it was abundantly clear to anyone who worked among cases of psychoneuroses that most of these cases had their origin quite early in life, and that extraordinary mishandling by parents, whether in the direction of "spoiling" or the reverse, was very often the cause of the trouble. Nor could great improvement be expected until a generation of properly guided children had grown up to be properly guiding parents. Miss R. S. ADDIS, who opened the discussion, spoke of the frequency with which a family neurosis was found, parent and child being involved in the same vicious circle. Under treatment improvement in the child might coincide with improvement in the parent, or, on the other hand, when the child got better the parent might collapse. The approach to treatment was through the child, but if it was suggested that the problem really lay with the parent this might lead on the parent's part to co-operation or, equally, to resistance. Both were possible bases for treatment. Dr. M. S. M. FORDHAM said that the advantages of treating parents were not only the possibility of a real cure of parent and child but a benefit to other members of the family as well. In the treatment of parents it was important not to identify with the child, for it was the parent and not the child who was the patient. Generally it was the child in the parent that required treatment, and, as children were allowed to behave

badly and get benefit from it, it was important not to work against the child in the parent, who could also gain benefit from behaving badly.

Juvenile Delinquency

LORD ALNESS, who presided over the second session, said that as a judge in Scotland he had seen only too many cases of the deplorable effects of a savage sentence pronounced upon a juvenile delinquent. Informed public opinion was now adopting a completely different attitude towards the problem of juvenile delinquency from that which at one time prevailed. Nevertheless the problem continued urgent and menacing, judging from the latest figures.

Dr. DENIS CARROLL, director of the Institute for the Scientific Treatment of Delinquents, discussed the part played by psychotherapy in the prevention of delinquency. Delinquency was usually caused by a group of factors, some of them constitutional, others environmental, both early and late. They might be grouped into primary and secondary, the former usually necessitating skilled and often prolonged medico-psychological and possibly institutional care, while the secondary factors could often be adequately dealt with by simpler measures, especially those of a sociological kind. Such psychotherapy as was required for dealing with these secondary factors was usually indirect and might be applied by others besides medically trained workers. He considered that many advantages were to be gained by the training of probation officers in psychiatric social work and in the principles and needs of the psychotherapeutic approach. On the other hand, the doctor should have greater understanding of the methods and requirements of the court. He instanced the psychological methods in use and gave illustrations of the type of case to which they were usually applied. Professor A. M. CARR-SAUNDERS mentioned the Home Office inquiry into the causes of juvenile delinquency now being carried out under his direction. Two thousand boys from large cities who had been found guilty of indictable offences are being compared with the same number of boys of a like age from the same schools who have never been in conflict with authority. He said that in the questionnaire which had been prepared there were nearly sixty headings, and that no such comprehensive investigation had previously been attempted. Miss MADELEINE SYMONDS described the use made at London juvenile courts of the services of medical psychiatrists.

Personality Deviations

In the session for psychiatrists Dr. E. M. CREAK opened a discussion on personality deviations and diagnosis of psychoses. She said that the manifestations of psychosis in children were seen in certain examples of gross deterioration, such as Schilder's disease and congenital G.P.I. Here the personality changes were rapidly masked by organic features and tended to be overlooked, but they were often present in the early stages. Could they be regarded as showing anything in common with the psychotic manifestations which were never, or only very slowly, superseded by gross psychical degeneration? Instances of these were excessive "mood swing" or a labile affectivity bearing little relation to the world of reality, outbursts of excessive rage and grief, and alterations in the mechanics of behaviour, such as sleep and appetite. These appeared to undergo disturbance before any demonstrable organic change, and early in the illness might appear stereotypy, phases of motor excitement, and curious manifestations in the form of tics or repeated gestures, all preceding the ultimate development of what appeared to be a mechanical level of behaviour. The great difficulty in early diagnosis was in the very young case where, retrospectively taken, the history of infancy might be inaccurate. The late clinical picture included so much mental deterioration that it was liable to be mistaken for a congenital defective condition.