Turning to the cultivation of the gonococcus the committee notes that the number and diversity of the culture media employed appear to be an index of the difficulty of cultivating the organisms and the dissatisfaction which the authors have felt with the media devised by others. A series of comparative tests was carried out by Captain David Thomson at the Rochester Row Military Hospital, the three most satisfactory media being Thomson's human plasma-glucose agar, Cole's tryptic blood agar, and Gordon and Hine's trypsinized pea extract agar, of which the methods of preparation are given in an appendix. With regard to the production of a focal gonococcal reaction, caution is recommended in the adoption of this procedure, owing to the danger, for instance, of lighting up a latent iritis or salpingitis.

Since the conscientious examination of a case of suspected chronic gonorrhoea may develop into a lengthy process, needing repeated attendance of the patient and examination by trained specialists, some test is needed which will more simply indicate the presence of the gonococcus in chronic disease. The complement fixation test, like the Wassermann test, has a delicate and precise technique, and satisfactory results are only obtained by those with adequate training in serological methods. It has been extensively employed in the United States, but not as yet in this country. The American literature shows, on the whole, a striking uniformity in the results obtained. The advantages and disadvantages of this indirect method of diagnosis are contrasted by the committee, and the conclusion is drawn that while it cannot replace other methods of diagnosis it may, in certain cases, be the only laboratory means by which a gonococcal infection may be diagnosed. It is most likely to be of value in cases of metastatic infection, where the gonococcus is hard to demonstrate directly. As in the case of the Wassermann reaction, the committee cannot at present recommend any one standard technique for complement fixation, but the methods of four careful observers are appended, and workers in this country are invited to report their results and suggest improvements. It is recommended that steps should be taken to secure the provision of an official standard polyvalent antigen; that in tests made for official returns the method employed should be clearly stated; and that the laboratories in which such tests are performed for the public services should be few rather than many, those selected for Wassermann tests being utilized for this purpose, and reports being accepted only from pathologists thoroughly trained in the technique.

The Detection of Spirochaetes.

In the second report the committee brings together its conclusions as to the most satisfactory methods for the microscopic detection of *Spirochaeta pallidum*—that being the name recommended for the organism of syphilis in a note on nomenclature by Mr. Clifford Dobell, F.R.S., printed in the appendix. The committee lays the greatest emphasis upon the importance of the detection of the *spirochaeta* as affording the earliest means of diagnosis at a period when clinically a definite decision cannot otherwise be formed. "Treatment undertaken in the early primary stage is relatively simple and assured, and is a matter of weeks; after the infection has become generalized, with development of a positive Wassermann reaction or secondary lesions, it is prolonged, uncertain, and a matter of months. It is bad practice to defer diagnosis and treatment until the typical chancre has developed." Every localized lesion, however small and atypical, must therefore be suspected, for a simple papule tending to ulcerate may appear within a few days after infection. The rule should be: Examine every such eruption for spirochaetes, and if these are not found at first—try, try again.

Practical directions are given for the collection of material for diagnosis and for the demonstration of the spirochaetes, and an authoritative description by Mr. J. Edwin Barnard, president of the Royal Microscopical Society, of the detailed technique of dark ground illumination is embodied in the report. A list of Fellows of the Royal Microscopical Society is being prepared, to whom reference may be made for assistance in this matter, or for help in setting up and adjusting microscopic apparatus. Inquiries should be addressed to the Secretary of the Society, 20, Hanover Square, W., or to the Medical Research Committee.

Concerning the technique as a whole, the committee makes the following positive statement: "The most reliable methods of detection are so simple and expeditious that there is no excuse for neglect to utilize them."

Lastly, the committee finds no sufficient evidence that what is clinically known as "soft chancre" or "soft sore" is a specific disease induced by a single species of micro-organisms. It is recommended, therefore, that a diagnosis of soft chancre be founded on clinical evidence, and this only after syphilis has been excluded by observation extending over a period of twelve weeks. A similar recommendation is made with reference to conditions of balanitis.

THE FUTURE OF THE MEDICAL PROFESSION.

BY

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SAUL among the prophets was not, perhaps, a more conspicuous figure than Major-General Sir Bertrand Dawson among medical reformers. Much longer than I remember, and my memory is not short, medical men have been trying to reform themselves or the public, with more or less indifferent results. I am indebted to Sir Bertrand Dawson for the somewhat inappropriate heading of this article, which, however, will serve. It seems to me a very inopportune time for reforming anything when the best brains of the country are busily engaged in the prosecution of the war. However, I suppose the fifth and sixth-rate politicians find this a favourable opportunity to assert themselves, and busily occupy their mediocre intellects with educational and medical reforms. We are told that these reforms will not wait, which means that politicians will not allow them to wait, but it is to be hoped that the comrades of the great war will soon relegate these reformers who have, in the absence of better men, acquired place and power, to that obscurity from which they should never have emerged.

In all these medical reforms the general practitioners are the pawns in the game, and they will only have themselves to thank if they again allow themselves to fall into the wily fowler's snare. So far as I am personally concerned, I must at once candidly confess that I am more interested in the future of the British race than I am in that of the medical profession, and it is because I foresee that the proposed reforms will lead to the deterioration or weakening of the mental, moral, and physical fibre of the nation that I am opposed to them. The medical profession exists for the benefit of the public—an axiom which medical men are sometimes apt to forget—and no doubt the law of supply and demand will always provide such medical men as the public deserve. A highly intelligent race would demand and secure an intellectual and well-educated profession, but I am afraid that, as Karl Pearson says, we are not breeding intelligence nowadays as we did one hundred or more years ago. I sometimes wonder whether this old country will be in the hands of a race of degenerates long before the coal supply gives out. Our reformers would readily promise us a new heaven and a new earth by the time the war is over, but I am afraid the millennium is not yet, and it would be very rash to assume that it is.

At the annual meeting of the Institute of Public Health in 1907 I gave the address on preventive medicine, which at the time attracted much public attention. In 1911, at the annual meeting of the Canadian Medical Association, I gave the address on medicine ("On preventive medicine, the medicine of the future"), and I followed up the same line of thoughts in my presidential address to the British Medical Association in 1912, so I can claim that my present views are not of recent development.

My antipathy to the so-called National Health Insurance Act, which has no more to do with health than the man in the moon, was based on my belief, stronger now than ever, that it was and is a retrograde step fraught with danger to the public. Those medical men who took my advice and stood from under the Act are those who have maintained their own self-respect and retained that of the public. I do not know one who has regretted his action, but I know scores who have not a good word to say for the Act which they are helping to administer.

I would like now to warn general practitioners to be careful before they allow themselves to be ensnared by this proposed Ministry of Health, which at present looks more like a Ministry of Disease. I have no intention of following the winding paths of Sir Bertrand Dawson's very interesting address, but would refer to some of his team work. I have no objection to teams; in fact, I strongly approve of such work when there is a good driver. I have never myself worked in a team, though I have made free use of the work of others, always with due acknowledgement. I know a distinguished Fellow of the Royal Society who says that he has never collaborated because he can do his own lying, but I know no Fellow of that august body who has been more actively engaged in the pursuit of truth, and no one who has attained more practical results. There is not a trace of pragmatism in his composition.

For the diagnosis of phthisis Sir Bertrand Dawson turns on the clinician, the bacteriologist, and radiographer. I am inclined to think that there must be some bungling and valuable time lost when the diagnosis has to be clinched by the radiologist. I do not in the least undervalue his work; the x rays afford a valuable exposition of existing facts, and in chest diseases have their negative as well as positive value. A distinguished radiologist recently told me about a physician at the front who had diagnosed a large number of cases of pneumothorax, but the x rays showed up the physician as well as the absence of air in the pleural cavity.

But what has all this got to do with prevention of tuberculosis or the health of the nation? Prevention is better than cure, and it is a poor way of improving the health by simply diagnosing and curing disease. For the last seventy years, and up to seven or eight years ago, there was a steady fall in the incidence and death-rate from phthisis, and a corresponding rise in the insane rate. Since 1911 there has been a gradual rise in the incidence of tuberculosis. I do not attribute this to team work, but it is certainly associated with the erroneous doctrine that heredity plays no part in tuberculosis. Very many years ago I met a highly intelligent man who was on a visit to an asylum to see his young daughter who was suffering from dementia præcox. He could not understand it, as he said there was not a trace of insanity on either side of his house. I pointed out that the closely allied condition of tuberculosis was prominent, and that he himself had spent the early years of his adult life abroad on account of phthisis.

Dr. D. W. Hunter, whose name I deeply regretted to see in a recent casualty list, said:

The death-rate among idiots is about ten times that of the normal population at the same age. Further, of deaths of idiots about 80 per cent. are due to tuberculosis. Now an idiot has not even the resisting power necessary to die of phthisis; he dies of acute tuberculosis, death taking place in from three to six weeks from the onset of the illness. Surely here there is some inherited lowering of the soil. There are some 150,000 (estimated) of these defectives in England and Wales, and for every defective there are from six to a dozen of his relatives only a shade better than himself. Practically the same holds for insanity, yet we are asked to believe that a man cannot inherit a soil which will remain during his lifetime permanently below the average in resisting power.

Until we have some restriction in the marriage of undesirable the elimination of the tubercle bacillus is not worth aiming at. It forms a rough, but on the whole very serviceable check, on the survival and propagation of the unfit. This world is not a hothouse; a race which owed its survival to the fact that the tubercle bacillus had ceased to exist would, on the whole, be a race hardly worth surviving. Personally, I am of opinion—and I think such opinion will be shared by most medical men who have been behind the scenes and have not allowed their sentiments to blind them—that if to-morrow the tubercle bacillus were non-existent, it would be nothing short of a national calamity. We are not yet ready for its disappearance.

When the Mental Deficiency Act was passed I prophesied that it would not reduce the output of mental defectives by 5 per cent., and my prophecy has come true, in fact more than true, as the physically and mentally fit are carrying on the war, while the derelicts are carrying on the race. The lowest fourth of the population are producing more than half of the next generation, and this they are encouraged to do by sentimental cranks. The honest hard-working men have not only to support their own families, but also those of knaves, fools, paupers, and wastrels of every description. We hear the constant cry:

Preserve the babies, good, bad, and indifferent—the innocent little things, if brought up in a proper environment, will be, we are told, the flower of the nation. There is no equality in nature among children nor among adults, and if there is to be a much-needed improvement in the race we must breed from the physically, morally, and intellectually fit. The higher the intellectual evolution the greater the number of geniuses that are likely to be produced. There must be inherited innate qualities capable of development; a favourable environment will contribute to such development, but it can never create a genius. You cannot gather grapes from thorns, nor figs from thistles.

In 1912 and previously I stated that intelligence, physique, health, and longevity are innate and heritable qualities, but that morality is largely, if not entirely, an acquired and traditional characteristic. Dr. Mercier says, and says truly in the strict acceptance of the term cause, that heredity is not a cause of anything, but it is the favouring condition which led to the evolution of his brilliant intellect, and no other condition counts so highly for good and evil in the evolution of the race.

This war has shown that there is still in this country—and now largely in France—plenty of vigour and intelligence capable of producing a very high civilization, and it is to be hoped that when the war is over our comrades will clear away the forces of disintegration which are at present insidiously at work.

Recently there was an acrimonious discussion in the pages of the BRITISH MEDICAL JOURNAL concerning a supposed new patent that heredity and adaptation depend on the endocrine glands. The disputants seemed to fail to recognize that this is merely a modification of the doctrine that function precedes differentiation of structure, which, though not as old as the hills, certainly preceded Darwin and all ideas of evolution. I know a large number of intellectual Jews who present all the outward and visible signs of defective pituitary action; therefore I am inclined to think that the pituitary, unlike the thyroid gland, is not concerned with intelligence. The optimum action of any gland, of course, depends on what function it has to perform. As society is very composite, it is well that every one should not be cast in the same mould, and that there should be as great a variety as possible—for example, you could not make a good stalwart policeman out of one with defective action of his pituitary, and one with over-action of his thyroid makes a poor, neurotic, palpitating soldier, and does not require to be doped with "heart pills" when he is to appear before a medical board.

Post-nasal adenoids, with consequent narrow nostrils, highly arched palate, small pharynx, narrow contracted chest, and rounded shoulders, is one of those diseases which has been under numerous teams of inspectors, clinicians, and surgeons; what have they done except wait till the disease is well established? Then the surgeon's practised hand comes in to scoop out the adenoids, usually after irreparable mischief has been done. This disease is due to an imperfect natural attempt to compensate for defective thyroid action. Its prevention depends on intelligent and early recognition of the condition of the thyroid gland, the use of small doses of thyroid to compensate for its defective function, and a mixture of calcium iodide and tincture of iodine to stimulate its action. It does not require a team of medical men to carry this out; all that is required is an intelligent nurse with medical supervision.

One of the greatest curses of the medical profession is turning a lot of teams into blind alleys: it lowers their ambition and contracts their outlook, so that they are never able to get out of the rut.

Look at the enormous amount of money which has been spent on special lighting of schools, shape of the desks, etc., in order to prevent or cure myopia, as if any such devices would alter the length of the eyeball. Many years ago I advised, and I do not doubt others did the same, that two myopic individuals should not mate; they should try as far as possible to eliminate and not to transmit their defects to their offspring. One poetic critic devoted a few verses to me, and finally excused himself—that love is blind.

We have a powerful heart team working at the so-called *effort syndrome*, which seems to consist of a conglomeration of symptoms which exist in various combinations in different cases, and have no necessary connexion with one

another. Causation is a matter for future consideration, and Newton's dictum is not even dreamt of. The work of this team is backed by a committee of eminent men in whom the critical faculty is not highly evolved. It has been interesting and amusing to see this team bowled out on the so-called "buffer salts" by Benjamin Moore's team, and this in turn capsized by the individual, Professor Bayliss. Dr. Moore has now returned to the arena, but without his team.

I have no wish to minimize in the least the valuable work which this heart team is carrying on, but still I think a little healthy criticism on a few points will do them no harm; it may help to show that they do not hold a monopoly of wisdom, and it might be well to pay a little attention to the work of others which, so far, they seem pleased to ignore. We are told that this *effort syndrome* is to be found in early heart disease, in early phthisis, and in exophthalmic goitre, but in those cases of irritable heart in soldiers with which they are dealing, the action of the thyroid is discounted.

The question of hyperthyroidism is capable of a direct test—namely, the tolerance or intolerance of these patients to thyroid administration. A large number of observations have been conducted from this point of view, others are in progress. So far as they have been taken they are opposed to the view that there is an unusual intolerance to extract of thyroid.

There is not one word about the dose or the quality of the thyroid, or its iodine content. Yet this bold statement is made in the face of the history of doping with "heart pills," and in face of the fact that their "effort syndrome" exists in cases of exophthalmic goitre; and the conglomeration of symptoms can be brought on in perfectly healthy individuals by large and repeated doses of physiologically active thyroid. An eminent man told me recently that he could not take more than one and a half grains without making his hand tremble. In 1904 I recorded two cases of exophthalmic goitre produced by the too free and prolonged use of tincture of iodine. These cases were rapidly cured by the removal of the cause, and the administration of lime salts.

The misleading term "capillary leucocytosis" might induce one to infer that there was an increase of the leucocytes in the blood circulating in the capillaries, but it is highly probable that the increase was in a mixture of blood and lymph, as there is no evidence that any means were adopted to get rid of the lymph in the capillary area from which the blood was withdrawn. This view is strengthened by the fact that the increase was chiefly in the lymphocytes. In the so-called digestion leucocytosis, which is undoubtedly a mixture of blood and lymph, the increase is also in the lymphocytes; moreover, with the increase in the leucocytes there is a corresponding decrease in the erythrocytes, but in these observations we have no such relative counts to guide us. The epoch-making work of the late George Oliver on "Tissue lymph circulation" was carried out by himself—if it had been left to a modern team it would not have been done yet, and not one of this team seems to know anything about his work. The study of at least modern medical history is worth cultivating. Karl Pearson says:

It is a very uphill battle to contest one after another the various dogmatic statements made by a small section of the younger medical men on the basis of statistics which are hopelessly inadequate, if they are not misread or perverted.

This conglomeration of symptoms, "effort syndrome," is associated with or induced by effort and cured by effort. *similia similibus curantur*, without any trouble about infinitesimal doses. No one could wish for anything more conveniently simple; Newton's dictum on causation and the laws of gravitation are not in it with this simple equation. Pawlow says: "It is only when the full etiology of disease is known that the medicine of our day can become the medicine of the future—that is to say, Hygiene in its widest sense." Why did Pawlow trouble his brain about causation, when teams of medical men are independent of such trifles?

I feel I must sincerely congratulate this team for having not only imposed their work on an eminent, even if hypo-critical, committee, but also for having superimposed it on the War Office, so that already some lieutenant-colonels are set apart to see that this treatment is carried out. "Set apart" is, I think, an apt terminological exactitude for the position of men who are not supposed to have a soul of their own, or who are so imbued with the value of this treatment as to have no misgivings

in its employment. I am not now in any way detracting from the value of the drill sergeant, in fact I have always been a strong advocate of physical training. The active existence of many apparently hopeless cases of heart and lung diseases has been often much prolonged by the Oertel treatment, but Oertel devoted his attention to drink and food as well as exercise. Men with a vital capacity of only 80 cubic inches accomplished much greater feats than any described in this report on the "effort syndrome."

On the question of venereal diseases, Sir Bertrand Dawson closely approaches the truth when he says: "Prevention would be more closely allied with cure but for the fact that our pastors and masters are not endowed with grace, wisdom, and understanding." He does not grasp the nettle with sufficient vigour. My patience is sorely tried when I see a lot of married men who have never practised self-abnegation stumping the country and preaching a man-made standard of sexual morality to virile soldiers. The unctuous guid compound for sins they are inclined to by damning those they have no mind to. The soldiers are told not to have sexual connexion and they will not get venereal disease; but if, notwithstanding, they fall, then they are directed to come round the corner, where they will be treated and made whole men again. The lecturers do not even give the good advice of the sergeant-major, who told his men, "If you can't be good be careful." It is to me very deplorable that in the present day the only men who are trying to prevent venereal diseases are chemists who are selling a more or less perfect or imperfect antivenereal outfit. My method of preventing the spread of venereal diseases—and this is more applicable to peace than war times—is to encourage early matrimony among the healthy, not necessarily large families. Give the picked services of the country—the navy, the army, and the air forces, officers and men—sufficient pay to maintain themselves, their wives and families in comfort. In this way you would encourage the evolution of a healthy, vigorous, and intellectual breed. Do not waste all your money on degenerates; they are prolific enough without any encouragement.

With heart affections, again, the usual method is to start at the wrong end, to wait till the disease is established, and then begin to prevent or cure it by "an ordered régime in the open air with graduated exercises and amusements, which serve to tone up the body, of which the heart is part, to remove the heart from the realm of the patient's consciousness and restore confidence in his mental outlook." A functionally disturbed or diseased heart cannot be removed from the realm of consciousness by telling the patient that there is nothing the matter with it. A good many sudden deaths occur from such advice. In my experience patients are not intimidated by getting an honest statement as to what is the matter with them. Chronic diseases of the heart practically always arise from causes acting on the periphery, and are usually more easily prevented than cured. There are a few exceptions such as pericardial adhesions, but even here pericarditis arises in the periphery of the coronary circulation, and the general periphery should not be neglected in treatment.

Again, we are told of gastro-intestinal maladies that "such may need the clinical physician, the radiographer, the bacteriologist, the chemist, and the surgeon." Not a doubt about it, but what a rich harvest the surgeons have reaped from the ignorance of physicians and practitioners. Is this to be the millennium? It was said of an Edinburgh surgeon that his idea of heaven was a place where the blessed were continually cutting the damned for stone.

I frequently see cases of colitis with spasm where the practitioner is anxious to have the appendix removed. All that is required, as a rule, is to stop the milk diet and all those milk products such as sanatogen, and prescribe a decalcifying agent.

When the Insurance Act was brought out it was claimed that it would improve the health of the nation, Germanize it, and lessen the poor rate. Now a similar claim is trotted out for this Ministry of Health, or what I call a Ministry of Disease. Did ever an Act of Parliament reduce the expenses of any other department? The poor do not get a tithe of the poor rate.

Reforms are crowding thick and fast upon us. The Board of Education has issued a very instructive pamphlet on medical education by Sir George Newman. I have read it with much interest and appreciation from beginning.

to end. He deals with the past, the present, and the future. He has evolved an excellent scheme—no better has ever been propounded—for the preservation of the unfit, and if carried out will provide work—I will not say adequate emoluments—for generations yet unborn of medical men, who will require to multiply in geometrical progression. This is to be the millennium, and yet I cannot recommend medical men to tumble into such a heaven. What will happen to the country when a moiety of the adult population will be Government officials supported with their wives and families by the other half, who will also have to bear the expenses of the war?

If this nation is to progress we must raise up a race of stalwarts, the highest and best forms of individualism must be encouraged in every walk of life. The vaunted rise in the expectancy of life is more largely due to the much decied fall in the birth-rate than to Sir George Newman and his satellites. A man's life should be measured by his work and efficiency rather than by years. Under Sir George Newman's scheme it is possible that there might still be a small rise in the expectancy of life, but the probabilities are strongly the other way. With an increase in a degenerate population, which is being encouraged, the death-rate is certain to rise, just as is happening in the present day in cases of tuberculosis. So much for the boasted conquest of consumption. Nature is not going to be entirely thwarted by an inept and expensive art. Many of our most valuable citizens owe their continued existence and efficiency more to their parents than to the medical profession.

When I heard Mr. Justice Bailhache sympathizing about an old criminal who had spent over fifty years of his existence in prison, I told him that a life of crime was not necessarily a short one, and if this man had been honest and hard working he would probably have been dead long ago. Every one might be reasonably expected to furnish some evidence in support of his continued existence. Under such a system a large number of Government officials would succumb. When will it be possible to instil a little common sense into our Legislature? We want a large infusion of the colonial spirit much more than the university spirit. We want a real manhood, leaders of men and not decrepit teachers, either in universities or elsewhere, who cannot take a broad and healthy outlook in life.

Sir George Newman's proposals may amount to a health-giving scheme if health simply consists in curing disease and in the prevention of grave mischief among the degenerate. A truly healthy race would not require his placebos. We have to a large extent abolished a selective death-rate—Nature's method of improving the race—but we seem as far off as ever from establishing a selective birth-rate, and there is no encouragement from Sir George Newman to do so. It is true that he mentions the word eugenics in two or three places, but apparently merely to show that nothing has been omitted in his comprehensive scheme. Personally, I cannot see that any betterment to the British race is ever likely to accrue from a scheme which neglects the very fundamentals of health, and is soaked in Lamarckian doctrines from beginning to end.

He is very conciliatory, especially to general practitioners, without whom his scheme will not work. He has many soft platitudes, and is often even laudatory in his remarks, but it is to be hoped that in vain is the net spread in the sight of any bird. Soft words butter no parsnips, and the medical profession will be very stupid if caught in such a trap, alluring though it be.

Many times during the last twelve years I have said that there is not a medical school in the kingdom where preventive medicine is taught as it should be taught, so I am quite ready to agree with Sir George Newman that there is room for improvement, though we may differ materially as to how the improvement should be effected. At the same time I am not blind to the great evolution which has taken and is taking place. I believe in evolution, not in revolution, and I am inclined to think that the medical schools will work out their own salvation if left alone. He is very strong on what he calls the university standard of work, yet I daresay he would allow that all the work of the ancient philosophers, some of whom he mentions, was up to the university standard. The staff of a university is not necessarily a homogeneous body; it is rarely endowed with worldly wisdom, and only acts simultaneously when emoluments are in danger. The

attractions are not sufficiently powerful to make an intellectual giant remain on the permanent teaching staff unless he be relieved of the drudgery of teaching; no doubt some do so remain from the love of a life of comparative ease and pleasure, and others from the lack of means or power of adaptation to a more useful, even if more strenuous, mode of existence.

He is also very strong on research work, which is no doubt an excellent mode of training the student, but there is not one student in a hundred capable of independent research. The public should not be troubled with records of research work unless their accuracy and value are vouched for by the professor. No great work has been accomplished by any man whose time has been largely occupied in teaching students. Kelvin did not waste much time over his class: he was soaring and dreaming above them. I am strongly in favour of research work of all kinds when the students are taught and know their limitations. The advice of Prior, "Let him be kept from paper, pen, and ink so that he may cease to write and learn to think," is applicable to a great deal of the education in the present day. I can warmly recommend to teachers of all kinds the admirable work of J. G. Legge, Director of Education in the city of Liverpool, on *The Thinking Hand*.

I would ask any intelligent being to study Sir George Newman's pamphlet carefully, see what is required of the medical student, recognize the fact, acknowledged by Sir George Newman, that when the student is newly fledged with his degree he is, to a large extent, only in a position to begin to learn his life work, and then take a dispassionate survey of his prospects under the National Insurance Act, and other proposed extensions in the same direction, and finally answer the question, Could you honestly recommend any intellectual young man to enter the medical profession? As I said before, the public will just get the kind of medical men which they merit, no better and no worse.

Twenty years or more ago I tried to induce a prominent member of the House of Commons to take up the question of physical training in elementary schools, but I was met at once by a *non possumus*. It cannot be done, we want another generation of teachers; and he advised me, if I doubted his opinion, to attend the next conference of school teachers. So with medical education; while Sir George Newman is training his new team let us get on with the war, and, when that is finished, if we are not content with evolution by all means let us have a revolution, and a deadly war against all effete government departments—their name is legion. I now say to general practitioners: Perfect your own education, you have the means at hand; teach your patients the laws of health, which is the most valuable asset of the nation. In my presidential address in 1912 I said:

In my opinion the future of medicine will rest with enlightened and highly educated general practitioners—men who will look after the health of the community, who will see that mechanism of a high order is produced, and who will see that the machinery of the individual is properly lubricated, and not subjected to any unnecessary friction or strain. The enlightened public will look to their medical attendants as guides, philosophers, and friends both in health and disease.

The Insurance Act was not then in operation.

Medical men should become health specialists, the field is not at present overrun. I do not place medical officers of health in this category; their work consists largely in the preservation of the unfit. I am well aware that the public generally only pay for the treatment of disease, and not for the preservation of health, but still I think the more intelligent could be easily tuned up to concert pitch. You would have to let the public know that the work cannot be done on the tariff of the National Insurance Act. I had a visit the other day from a gentleman who travelled fifty miles, and spent the night in Liverpool, to tell me that he did not think there was much the matter with him, but he wished my opinion. I agreed with him, but, like myself, I thought he was taking too much out of the machinery. He asked me how he could help it, when his firm, of which he is the senior partner, are extending their factory to the tune of three-quarters of a million for work of very great national importance, otherwise they would not be allowed to spend the money. Under normal conditions he might be inclined to cut the painter, but it is difficult to be sure, as circumstances alter cases, and the love of work is a powerful factor in man's destiny.