British Medical Association.

NINETY-FIFTH ANNUAL MEETING, EDINBURGH, 1927.

President's Address

ON

THE STRATEGIC FRONT OF MEDICINE TO-DAY.

BY

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THIS is not the first time that the British Medical Association has come to Edinburgh. The city has been honoured as its meeting place on three previous occasions—in 1858, in 1875, and in 1898. In 1858 the meeting was presided over by Dr. William Pulteney Allison, professor of medicine in the University of Edinburgh. The number of members attending the meeting is recorded as 170. In 1875 the President was Sir Robert Christison, professor of materia medica in the University of Edinburgh. The number of members attending the meeting is recorded as 1,003. In 1898 the meeting was presided over by Sir Thomas Grainger Stewart, professor of medicine in the University of Edinburgh. The number of members attending the meeting is recorded at 1,915 (including 64 foreign guests and visitors).

To-night, on the occasion of this reassemblage, there falls to me the privilege of offering to the Association, and to its distinguished guests from all parts of the world, a very hearty welcome on behalf of the profession and the citizens of Edinburgh and the surrounding country. Most of you are familiar with the name of the ancient city. Some of you have been drawn to the meeting by the fame of her university and medical school. Many have returned with filial longings to the kindly mother—still going strong, notwithstanding the 345 summers she has seen—and will revisit the old school and its pleasant byways. Some of you are here because of the romance of her history and the lure of her streets and wynds. We trust that all of you will feel at home and enjoy one of the times of your life. In bidding you welcome, it is likewise my dutiful wish to tender to the members of the Association, and particularly to colleagues in the Edinburgh area, grateful and respectful thanks for their graciousness in inviting me to occupy this chair. The presidentship carries with it not only honour, but responsibilities. I should gladly have seen those borne by shoulders more worthy of both. As it is, I thank you from the bottom of my heart.

B.M.A. Links with Edinburgh: Charles Hastings.

The past meetings are far from constituting the sole links between the Association and the city. Throughout the ninety-five years which have passed since the foundation of the Association in 1832, Edinburgh has drawn on the resources of the Association in many directions, and, in turn, has contributed a goodly quota of members and office-bearers of all ranks. The mutual relationships have been pleasant and stimulating. Will it be thought fanciful if I suggest a relationship of an earlier and closer sort between the Association and Edinburgh—a link which may be called ancestral?

One hundred and twelve years ago—in the year of the battle of Waterloo—there came to Edinburgh from the city of Worcester, as a student of medicine, one Charles Hastings. The young man was not, even then, an unknown quantity. For previous to matriculation at Edinburgh Charles Hastings had served an honourable apprenticeship with Dr. Wilson Philip, Fellow of the Royal College of

Physicians of London, a man of high repute in Worcester, and an investigator in experimental medicine.

Young Hastings reached Edinburgh imbued with the traditions of scientific medicine and with a flair for culture and sport. He was fond of shooting, hunting, and racing. By happy introduction to members of the *Senatus* he was thrown into the social life of the university and the city. And what a brilliant period it was! Lord Cockburn says that Edinburgh society "had never been better, or indeed so good" since he knew it. "Its brilliancy was owing to a variety of peculiar circumstances which only operated during this period. The principal of these were—the survival of several of the eminent men of the preceding age, and of curious old habits which the modern flood had not yet obliterated; the rise of a powerful community of young men of ability; the exclusion of the British from the Continent, which made this place, both for education and for residence, a favourite resort of strangers; the war, which maintained a constant excitement of military preparation, and of military idleness; the blaze of that popular literature which made this the second city in the empire for learning and science; and the extent, and the ease, with which literature and society embellished each other, without rivalry, and without pedantry."

Waverley had just been published, and the enigma of its authorship was tickling literary curiosity. Our morning paper, the *Scotsman*, made its first appearance in January, 1817. A walk along High Street or Princes Street meant, perhaps, to meet Walter Scott, unmistakable in feature and carriage, "graced by gaiety, simplicity, and kindness," Henry Cockburn, Francis Jeffrey, James Gregory, Andrew Duncan, John Barclay, Thomas Chalmers, Francis Horner, Henry Mackenzie, Dugald Stewart, or other celebrity.

Hastings's medical teachers included Andrew Duncan, Gregory, Hamilton, Hope, Monro, and Daniel Rutherford. Christison and Syme were students about the same time. Conspicuous among his undergraduate activities was his attachment to the Royal Medical Society—that venerable institution "with the excellent and laudable object of advancing medicine" which received its Royal Charter from King George III (1778), and which has stood for untrammelled discussion of things medical on the part of students and young graduates. It is interesting to note that in the Royal Charter, two of the four Presidents named are James Melliart, Somerset, and Caleb Parry, Gloucester. Speaking of the Society at that date, Sir Robert Christison says: "Of its four Presidents, chosen annually in the main for their popularity in debate, very few have failed to distinguish themselves in professional life, either as successful physicians, or in the walks of the medical sciences." Hastings took a lively part in the proceedings of the Society, and was elected President in 1817 while still an undergraduate.

The following year he returned to Worcester, and was elected physician to the hospital at the early age of 24. Successful in practice, he yearned for something more—a larger intellectual life. Does it seem far-fetched to suppose that recollections of the cultured life he enjoyed in Edinburgh, and particularly the friendly association with fellow

students and the free exchange of opinions at the Royal Medical Society, played a considerable part in the longing which culminated in the establishment of the Midland Medical and Surgical Reporter and the subsequent foundation, in 1832, of the Provincial Medical and Surgical Association, which presently—in 1856—was re-baptized the British Medical Association, whose ninety-fifth Annual Meeting has this day been constituted?

It is pleasant to imagine that the youngster who, as a student, saw the beginnings of the new town of Edinburgh, and probably danced on some of its floors, and brought down a pheasant in the neighbouring woods of Drumsheugh (now Drumsheugh Gardens) did imbibe here some of the lessons of comradeship in medical science which inspired his vision of an Association for the diffusion and increase of medical knowledge, and the maintenance of the honour and respectability of the profession, by promoting friendly intercourse among its members, and by establishing among them harmony and good feeling.

Meeting at Edinburgh, 1875: Joseph Lister.

Without pressing the plea for Edinburgh as the spiritual home of the Association, let me ask you to place yourselves in the city fifty years ago, and reconstitute some of the features of the meeting in 1875—the stir of which I can just recall.

There sat in the presidential chair of the Section of Surgery a man whose genius was already remodelling the face of surgery, and who was destined to impress his plastic touch on the wider lineaments of medicine. I cannot trace whether Joseph Lister attended the 1858 meeting. He may well have done so, for he was admitted a member of the Harveian Society of Edinburgh in the year 1856, and was appointed assistant surgeon to the Royal Infirmary in October of that year. Whether present or not, he was already a vital force. Thirty-one years of age, he had overtaken extensive histological researches on the contractile tissue of the eyes, muscular tissue of the skin, involuntary muscular fibre, relation of the nervous system to contraction of the arteries, causes of coagulation of the blood in diseases of the blood vessels, function of the visceral nerves, and other subjects. In June, 1857, he had read to the Royal Society his classic monograph on "The early stages of inflammation." The last has "formed the basis of all subsequent discoveries, and the conclusions drawn are as valid to-day as they were then."

The interval between the 1858 and the 1875 meetings was synchronous with the conception and elaboration of his larger enterprise—the antiseptic system. Much regarding that is known to this audience. At this meeting, which coincides with the centenary of his birth, there will be occasions when the successive stages in the development of that mighty work will be underlined by those who, from intimate association with Lord Lister, or with the department he served, are entitled to speak with authority. The present generation, accustomed to the freedom with which every portion of the human frame is handled by the surgeon of to-day, can but dimly realize the state of things which prevailed prior to the renaissance which Lister inaugurated, or the difficulties that had to be overcome before the final success.

While there were giants in surgery before Lister, and remarkable development of resource and technique, the possibilities of the greatest were limited by the attendant risks of inflammation and putrefaction. Prolonged delay in the healing process was apt to be associated with the occurrence of pyaemia, septicaemia, and hospital gangrene. For the patient the prospective risks were formidable, including protracted illness, prostration, imperfect recovery, and, too frequently, death. Notwithstanding the exclusion of pain by anaesthesia, "patients, no matter how critical their need, dreaded the very name of hospital, and the most skilful surgeons distrusted their craft." The practice of surgery was restricted largely to urgent conditions. The skilled surgeon, to whom technically all things were possible, had his venturesome spirit curbed by the ever present menace. Cockburn, writing of 1847, says: "The whole paying surgical practice of Scotland would scarcely keep one gentleman-like scalpel going."

Homage to Pasteur.

The mystery of putrefaction haunted Lister's imagination. Impelled by an irresistible call, he groped his way dimly until 1865, when, as professor of surgery at Glasgow, he was directed by a colleague to the researches of Pasteur. The field of vision became illuminated. In his own words: "When it had been shown by the researches of Pasteur that the septic property of the atmosphere depended, not on the oxygen or any gaseous constituent, but on minute organisms suspended in it, which owed their energy to their vitality, it occurred to me that decomposition in the injured part might be avoided without excluding the air, by applying as a dressing some material capable of destroying the life of the floating particles." On that principle he proceeded to base his practice. Thenceforward each move was directed by inspired purpose. The realm of surgery was bathed in light. Lister's vision unfolded itself in real life.

In the Address on Surgery delivered before the British Medical Association at Plymouth in 1871 he told the story of the revolution simply and forcibly. "Wards (in Glasgow) once among the most unhealthy in the kingdom, were converted into models of healthiness, simply as the result of antiseptic treatment. And during the whole of my Edinburgh period—now almost two years—in wards containing nearly sixty beds, we have not had a solitary case of pyaemia, whilst we are also entirely free from hospital gangrene and from erysipelas." He was able to quote similar records from British and Continental hospitals. Then, recalling the apathy of many of his surgical colleagues, he asked, in the language of Macbeth:

Can such things be,
And overcome us like a summer's cloud
Without our special wonder?

As President (for the second time) of the Section of Surgery at the Meeting of the Association at Edinburgh in 1875, Lister gave an address on "The effect of the antiseptic treatment upon the general salubrity of surgical hospitals." In support of the claim, and in illustration of the extraordinary change that had been wrought, a remarkable mass of evidence was submitted from leading Continental surgeons of the period. In the words of Professor Saxtorph of Copenhagen: "If you ask me what I have observed respecting the effects of antiseptic treatment, I may say that it has not modified, but completely changed my principles of pathology and my surgical practice. . . . The word, *hospitalism*, which some years ago found its way from Edinburgh to the Continent, no longer terrifies us; it no longer keeps us from performing operations in the infirmary, and you seldom meet with a case that could be called a case of hospital disease. . . . In short, I think I am right in saying that patients very seldom die from an operation." As Trendelenburg put it later: surgical practice "had become changed from the very bottom."

Ave Triumphans.

Thus by process of peaceful penetration—not, indeed, unopposed—congenial to the man of visage "benign and proud and shy" . . . "of faultless patience and unyielding will, beautiful gentleness and splendid skill," there was effected a revolution touching mankind universally—a revolution whose reverberations, audible to the sympathetic listener in all over the world, have not yet been exhausted. Lister's personality was the paramount factor. If inborn quality and family circumstances gave him a good start, the crowning success was due to unwearying patience as a seeker after truth, constant questioning of nature, unflinching purpose, and unswerving devotion to his fellows. For

he preserved from chance control
The fortress of his 'stablish'd soul;
In all things sought to see the Whole;
Brook'd no disguise;
And set his heart upon the goal,
Not on the prize.
With those Elect he shall survive
Who seem not to compete or strive,
Yet with the foremost still arrive,
Prevailing still:
Spirits with whom the stars connive
To work their will.

Parallel Advances in other Fields.

If Listerism embodied the fruitful protest of a master mind before the hecatombs which desecrated surgical practice in his time, Listerism did not stand alone. Other influences were at work making for the betterment of national health. Lister was a mighty pioneer. He was at the same time the expression of his age. Side by side with the development of the revolution in surgery there were indications of the coming wave of preventive medicine which, reinforced by Listerism, was destined to advance with the certainty of a tide.

Grim Features of Communal Life.

In the first half of the nineteenth century health conditions throughout the country afford in the wider sphere a striking parallel to the grim condition of hospitalism which Lister found himself up against.

Many pictures might be drawn from town and country. The state of matters in the metropolitan area about the time of Queen Victoria's accession may be described in the words of Dr. Southwood Smith, physician to the London Fever Hospital. Writing of the year which ended March 20th, 1838, and of the districts inhabited by the poorer classes, he says: "Such is the filthy, close, and crowded state of the houses, and the poisonous condition of the localities in which the greater part of the houses are situated, from the total want of drainage, and the masses of putrefying matters of all sorts which are allowed to remain and accumulate indefinitely, that, during the last year, in several of the parishes, both relieving officers and medical men lost their lives in consequence of the brief stay in these places which they were obliged to make in the performance of their duties. Yet in these pestilential places the industrious poor are obliged to take up their abode; they have no choice; they must live in what houses they can get nearest the places where they find employment. By no prudence or forethought on their part can they avoid the dreadful evils to which they are thus exposed. No returns can show the amount of suffering which they have had to endure from causes of this kind during the last year; but the present returns indicate some of the final results of that suffering; they show that, out of 77,000 persons, 14,000 have been attacked with fever, one-fifth part of the whole; and that, out of the 14,000 attacked, nearly 1,300 have died. . . . It is notorious that this disease has been very prevalent during the last year among the industrious classes who have never received parochial relief, and that it has found its way even into the dwellings of the rich, where it has proved extremely mortal. Generated in Bethnal Green, in Whitechapel, in St. George-the-Martyr, in Lambeth, in Holborn, etc., it has spread to the better streets in the immediate neighbourhood of these and similar places, and thence to still wider and more airy streets at a greater distance, and ultimately to the most remote streets and the great squares."

Chadwick's Reconnaissance.

It was amid such surroundings that the sanitary conscience was awakened within the breast of Edwin Chadwick, who stands related to the development of public health somewhat as Lister is to the renaissance of surgery. To Chadwick's healthy, sane mind the world seemed a "lazar-house, wherein were laid numbers of all diseased." Environmental conditions made healthy life impossible. There was no escape, save by reorientation and reform. Queen Victoria had just been crowned, Lister was 10 years of age, and Chadwick 37. Yet Britain was apparently spending little more than £2,000 per annum towards everything that concerned public health.

Thence onwards, throughout a long life, Chadwick's thought and energy were constantly directed towards the recovery of the nation from the inevitable consequences of blindness and inaction. His secret "lay in the conception that the life of man is so entirely influenced and affected by its surroundings, that by a perfected sanitary code the death rates may be made, practically, whatever we like to make them, until we arrive at that natural duration of human existence which is bounded by anatomical or physiological law."

Impelled by such considerations Chadwick began his insistent inquiries into the condition of London and the health of the labouring classes of other parts of England and Wales, which led to the appointment of the Sanitary Commission in 1844, and the formation in 1848 of the short-lived first Board of Health, of which Chadwick was one of four commissioners. Thereafter his labours—in chief part unofficial—were unceasing in relation to every aspect of sanitation in Britain and elsewhere. He was recognized widely outside Britain as one of the great master spirits, one of the first to awaken the careless public all over the world to the dangers they were creating for themselves. In France, towards the end of his life, he was described as "une des gloires de l'Angleterre."

Even if temperamentally he was not of the kind who drew all men unto him, Chadwick did not stand alone. He had close colleagues and keen fellow workers. Among those may be named especially Dr. Southwood Smith, Dr. Kay, and two men having special connexions with Edinburgh—namely, Dr. Neil Arnott and Professor W. P. Allison, who occupied this Chair at the 1858 meeting, and of laymen, Lord Shaftesbury, Charles Kingsley, and Florence Nightingale.

Dawn of Preventive Medicine.

From 1840—when, thanks to William Farr, our system of registration began to have value—up to 1870, the death rate of England remained uniformly high—over 22 per 1,000 of the population. In 1869 the Royal Sanitary Commission was appointed "to inquire into and report upon the operation of the various laws then in force for promoting the public health and preventing epidemic diseases; and into and upon the administration of those laws, including the constitution of the administrative authorities, central and local, and the formation of areas proper to be controlled by local authorities; and into and upon the operation of the registration system in respect of certificates of causes of death; and the Commission was to suggest improvements in all or any of those matters, with the means for carrying such improvements into effect."

It is significant that the Royal Commission of 1869 followed the submission of a memorial to the Government by a joint committee appointed by the British Medical Association and the Social Science Association "to promote a better administration of the laws relating to registration, medico-legal inquiries, and the improvement of the public health."

Report of Royal Commission.

The Commissioners reported in 1871, and their recommendations, which have a remarkably fresh ring, included the following: "The present fragmentary and confused sanitary legislation should be consolidated; the administration of sanitary law should be made uniform, universal and imperative throughout the kingdom; all powers requisite for the health of towns and country should in every place be possessed by one responsible local authority, kept in action and assisted by a superior authority; there should be one local authority for all public health purposes in every place, so that no area should be without such an authority, or have more than one; the administration of the laws concerning the public health and the relief of the poor should be presided over by one minister . . . whose title should clearly signify that he has charge of both departments; the central authority . . . charged in one of its departments with the superintendence of all sanitary authorities, and equipped with a sufficient staff of officers . . . must nevertheless avoid taking to itself the actual work of local government; we would leave *direction* only in the central power. . . . The new department will have to keep all local authorities and their officers in the active exercise of their own legally imposed and responsible functions; to make itself acquainted with any default and to remedy it; it will have also to discharge to a much greater extent its present duties . . . namely, to direct inquiries, medical or otherwise, to give advice and new plans when required, to sanction some of the larger proceedings of the local authorities, to issue provisional orders subject to parliamentary confirmation, to receive complaints and appeals, to issue medical regulations on

emergencies, and to collect medical reports; every local authority should have at least one officer of health, being a legally qualified medical practitioner, or possessing such other qualification in medical science as shall be declared by the central authority to be satisfactory."

State Assumes Responsibility.

The recommendations of the Commission were accepted in 1871 by Parliament. The Local Government Board—one for each division of Britain—was established. This constituted an initial step of first importance in the sphere of health. The State and Legislature now recognized as never before the meaning and value of the health of the people, assumed responsibility for its maintenance, and began to shape machinery on a national scale for its preservation and improvement.

The establishment of the Local Government Board, so far as it concerned health, implied (a) central guidance and direction, and (b) peripheral (local) interest and activity. It fell to the President of the Local Government Board, supported by eight ministerial colleagues and expert advisers, to consider matters affecting communal health and demands made by the quickened intelligence of the nation. Even if the Local Government Board seldom or never met, it devolved on the President to keep in close organic touch with 1,809 local councils or boards which constituted the system. To those local bodies were assigned duties and responsibilities. Thus, the appointment by each sanitary area of a medical officer of health and a sanitary inspector was enjoined by statute. All this meant a very practical awakening throughout the land.

Sanitas Sanitatum, Omnia Sanitas.

It was on April 3rd, 1872, at a great meeting in Manchester, in a speech which held "an enthusiastic audience with unflagging spirit for three hours and a quarter," that Disraeli recalled a suggestion he had made eight years before at Aylesbury—namely, that the words attributed to the wisest of mankind, "*Vanitas vanitatum, omnia vanitas*," must have been a misquotation, and that the words of the wise king were "*Sanitas sanitatum, omnia sanitas*," and that, if so, they constituted one of his best claims to be considered the wisest of mankind; and Disraeli concluded with the words, "After all, the first consideration of a Minister should be the health of the people."

1875-1927.

Thus far it has been my endeavour to show how, on the one hand, Lister was a forerunner in relation to preventive medicine, and how, on the other, his work reflected and reinforced the trend of thought and effort of his time.

It may be convenient to recall some of the features of medical life round about the 1875 Meeting, and compare them with the present day. A glance at the Calendar of Edinburgh University for 1875 and at the record of the Meeting is enlightening.

In 1875 the Medical Faculty of the University comprised 12 professors and 14 assistants, while the current (1927) list comprises 18 professors, 79 lecturers, and 38 assistants. At the 1875 Meeting of the Association the separate Sections numbered 6, while on the present occasion—after scrupulous pruning by the Arrangements Committee—they number 21. Reference to the titles of discussions and papers in 1875 emphasizes the striking difference of outlook. The principles of preventive medicine, as understood to-day, were little in evidence. Of the numerous papers and subjects under discussion the only allusion to prevention occurs in connexion with scarlet fever, puerperal fever, and miscarriages. The relation of disease to micro-organismal life hardly emerges, apart from Lister's opening address. Bacteriology had not come into being. In 1875, for the first time, there was a Section of Public Health, presided over by the Right Hon. Lyon Playfair, M.P. Yet it is to be observed that the subjects brought before the Section included for the most part topics bearing on ventilation, drainage, vital statistics, the meteorological relationships of disease, etc., with little indication of the preventive outlook in the modern sense.

Has the Practice of Medicine Advanced since Hippocrates?

At the Meeting in 1875 the Address in Medicine was delivered by one of the most thoughtful physicians of his age, Dr. James Warburton Begbie. He took for his subject "Ancient and Modern Practice of Medicine," and by way of preface quoted a remarkable question asked in 1852 by Sir William Hamilton, who was long the distinguished exponent of philosophy at Edinburgh: "Has the practice of medicine made a single step since Hippocrates?"

Sir William Hamilton's rather negative answer to the question was traversed by Dr. Warburton Begbie in an historical review which, even to-day, the student of medicine will find interesting, and by the citation of recent advances in treatment to which, at that date, Dr. Begbie thought reference was especially due. If the champion of medicine in 1875 was able to rebut effectually the reproach implied in the question, how much easier would be the task to-day! It is not my purpose to advance a studied defence. Progress in the practice of medicine during the past fifty years has been phenomenal. Countless illustrations will occur to everyone who is familiar with the developments of the past half-century.

The great wave that was initiated by the genius of Pasteur and reinforced by the originality of von Behring has refreshed the brain of medicine and directed its energies into channels of amazing width. Need I cite the complete revision of outlook and practice in the ever-widening group of infective processes? The adaptation of the principles of scientific cleanliness and the utilization of the elemental properties of air and light, as notably in tuberculosis, have got deep down to the root of things, and given promise in the realm of medicine no less extensive than has been realized by the acceptance of Listerism in the realm of surgery. What more thrilling romance than the story of tropical diseases which, fifty years ago, constituted a *terra incognita* shrouded in mystery and tragedy? Recall the triumphs in relation to cholera, malaria, dysentery, enteric fever, sleeping sickness, and others. Incidentally, I may remind you that it was at the last Meeting of the Association at Edinburgh in 1898 that Sir Patrick Manson revealed to a thrilled audience the demonstration of the transmission of malaria by mosquitos.

Recall the extending list of diseases which have been traced to intoxications and to parasites. The murky, malodorous fog which enveloped venereal disease has been largely dispelled. Syphilis and gonorrhoea are handled openly and scientifically throughout the land.

Recall the great vista opened up by clinical observations and experimental investigation on the ductless glands, which has resulted in a reconception of glandular values and the constitution of a new department of medicine—endocrinology. Recall our present attitude to the nervous system. While the teaching of the nervous system given to undergraduates fifty years ago covered the broad lines of structure, function, and pathological disturbance, the gap is indescribable between that and the precision of to-day, whereby lesions of very varying character can be differentiated and localized almost with the certainty of the physical laboratory. A department of neurology has been constituted, and the practice of psychiatry has become scientific. The old asylum as a house of detention with sombre portal (Abandon hope, all ye who enter here) has become transfigured by the spirit of the age into a home of prevention and a tabernacle of hope.

Diseases of the circulation were well understood fifty years ago. In no department had British medicine rendered more conspicuous service since the days of William Harvey. But think of the increase of knowledge and application of exact methods which the present generation has witnessed. The problem of the circulatory mechanism has been linked with that of the circulating fluid. The secret of blood changes as cause of disease and as expression of disease has been gradually unfolded by patient, original investigations. Cardiology and haematology now form departments of their own.

Similar references might be made to advances in relation to diseases of respiration, digestion, excretion. By the application to medicine of biological principles and chemical and physiological procedure, the physician is throwing

light on the meaning of symptoms and changes previously obscure, and the department of bio-chemistry has emerged.

The natural history of diseases is being followed from the beginning, step by step, through successive stages which almost certainly develop unless the chain of events be broken by other influence. With what remarkable *éclat* this succession of events can be interrupted was dramatically illustrated in the discovery of insulin, which, whatever its ultimate place in the armamentarium of medicine, has effected changes in the life and outlook of a large group of human sufferers such as was hardly conceived possible a few years ago.

Other such therapeutic conquests occur to us all. I am little concerned for the moment with cataloguing their number. My purpose is rather to underline the statement that, within recent years, truly marvellous advances have occurred in the practice of medicine. These have been partly the natural development of lines of observation, long continued, at the bedside and in the *post-mortem* room. In considerable part they have resulted from the absorption into medicine of advances in the basal sciences of biology, physics, chemistry, anatomy, and physiology.

Those illustrations have been culled at random from the field of medicine, in view of Hamilton's question. Examples might have been found no less abundantly in relation to surgery. The point has already been developed in speaking of Lord Lister. Anaesthesia and asepsis paved the way for a sure and rapid development of surgical procedure. Technique became quickly refined and surgery bounded ahead. With the limitless opportunities tragically offered by the war and the urgency of peril which justified the knife as never before, there came the occasion of enterprise to many capable men who otherwise would not have had the chance. Whether the spirit of adventure has carried some of them too far it is not my present purpose to consider.

Most of the so-called specialties have reared their heads since 1875. Many have become lusty growths, scientifically based, beneficent to the sufferer, and not unkindly to the labourer who is worthy of his hire. If the critic speak lightly of the specialist, it is often through ignorance of what specialization in the proper sense means, and the scientific advances it implies. In his turn the specialist will be watchful, lest limitation of the scientific spirit and the presence of other motives give point to the captiousness of the cynic who, ignorant of the verities, is apt to interpret action according to his own standard.

Extension of Front Line.

It is to more general indications of change that I now ask your attention. From the side of the State, following the creation of local government boards, came the gradual development of machinery, both central and peripheral. This was a difficult and delicate matter. The necessary adjustments at both ends required time and patience. Yet, as Sir John Simon says, "the fact that the medical profession had been brought into statutory relations with the local government of the kingdom, even though the relations were yet of rude kind, was obviously in principle a fact of good sanitary promise. . . . The medical profession being of such spirit as it happily is, those who knew it could feel sure that by many of its members who had become officers of health under conditions most disadvantageous and discouraging great exertions would be made, great disinterestedness be shown, in trying to make their individual appointments bear fruit."

An obvious difficulty lay in the fact that local authorities were not all willing to do their part, and, even when they were willing, their knowledge and vision were limited. Time and education were required. It is impossible on the present occasion to follow closely the stages in the evolution of the boards' activities, which included not merely administration, but scientific inquiry and investigation. We must look rather at the outcome of these developments.

The passing of successive Public Health Acts, the National Health Insurance Act, and the Education Act, have stereotyped progressive advances and afforded fresh avenues of thought and effort.

Outward symbols of change are to be found in notifica-

tion of certain infections, the segregation of fevers and other cases in special hospitals under expert direction, the creation of bodies of medical officers concerned with tuberculosis, maternity, and child welfare, venereal diseases, inspection of school children, etc. Other evidence is yielded in the institution by the universities and licensing bodies of degrees and diplomas in public health, and, in connexion therewith, a special curriculum of training recently revised and extended by the General Medical Council. In Edinburgh University, for example, there was established in 1898 a chair in public health, and about the same time a special institute for the study of preventive medicine; also in 1898 a lectureship on diseases of tropical climates, in 1904 a lectureship on infective fevers, in 1913 a chair in bacteriology, in 1917 a chair in tuberculosis, and in 1919 a lectureship on venereal diseases, all of which have intimate relationships with the problems of prevention, immediate and ultimate. One of the latest outward expressions of the advancing tide is the munificent gift to the nation by the Rockefeller Foundation of £400,000, for the purpose of erecting the London School of Hygiene and Tropical Diseases.

On the eve of the last Edinburgh meeting (1898) it fell to me to publish in the *BRITISH MEDICAL JOURNAL* an address on the universal applicability of the open-air treatment of pulmonary tuberculosis. At that date there were not more than two or three sanatoriums in Great Britain. To-day there exist in England, Wales, and Scotland, under the control of the State, no fewer than 307 sanatoriums, excluding general hospitals receiving cases of tuberculosis, and 151 voluntary or proprietary sanatoriums. At the date of last meeting there was one tuberculosis dispensary. To-day there are in England, Wales, and Scotland, under the direction of the State, 515 dispensaries, and similar institutions have been established in most countries of the world.

In 1875 the mortality from all forms of tuberculosis in Scotland was 361 per 100,000, while in 1925 it was 110. In 1875 the mortality from pulmonary tuberculosis in Scotland was 252 per 100,000, while in 1925 it was 76. In other words, during the fifty years there has occurred in each case a total drop in mortality of over two-thirds. This is something more than part expression of the reduction of the general death rate of the country, in which the fall during the same period amounted to less than one-half. The relative fall is illustrated by the fact that, while in 1875 deaths from pulmonary tuberculosis constituted 10.6 per cent. of deaths from all causes, in 1925 they constituted only 5.7 per cent.

If in England, Wales, and Scotland the death rate of 1875 had continued there might have been expected in 1925, with the increased population, 107,999 deaths, whereas actually only 36,116 deaths occurred. In other words, there was a saving of 71,883 lives during the year—that is, over 66.5 per cent.

Having regard to the natural history of the disease and the possibilities of well concerted warfare, I ventured in 1910 to prophesy, when speaking of the adoption in New York State of a co-ordinated tuberculosis scheme like that adopted by Britain three years later, that, granted the serious prosecution of the scheme, and special attention to the child as potential tuberculosis seedling, the practical disappearance of tuberculosis might be expected by 1950-55. To-day, in spite of the interruption and difficulties introduced by the war, I am prepared, on the necessary assumption that the methods are vigorously pressed, to believe that my successor at the next Edinburgh meeting—say, thirty years hence—will speak of tuberculosis in this country as largely a memory of the past.

By the passage of the Act which established the Ministry of Health (England) and the Board of Health (Scotland) the State has even more definitely—if language implies anything—shouldered her responsibility in relation to preventive medicine. A beginning has been made towards the inclusion and co-ordination under a common head of administrative departments concerned with health matters. It is not my purpose to discuss the completeness of the provision or the sufficiency of details. There has been a good deal of stumbling and muddling which seems characteristic of progress in England, but the machine, even if

cumbrous and creaking, is functioning throughout the land. I am content for the moment to underline what I believe to be unchallengeable, that Britain possesses the amplest machinery to be found anywhere for the prevention of disease—machinery which, by reason of its completeness from centre to periphery, and its uniformity of operation, is justly the envy of the world.

Widening Objective.

If the present position is relatively good, it has been the outcome of continuous striving after ideals inspired in the earlier days by individual thinkers and workers. But we are far from the last lap in the race.

One thing is clear. Things will not rest where they are. What is to be the line of further advance? The manpower of medicine is vast—greater than ever. The field forces are distributed in instructed groups. They are well officered, and there is abundance of consultative and advisory bodies to whom debatable points may be referred. What is to be the objective of this mighty army? What is the strategic front of medicine to-day?

Medicine has been described as the science and art of healing. Throughout the ages she has been the champion of man against disease and death. Her sacred mission has been expressed variously in successive centuries. Her triumphs have been great.

It has been my endeavour to show that some eighty years ago there began to be evident a great turning movement. The vision of medicine became enlarged and the objective correspondingly altered. Without passing from the care of the individual sick man, for whom Medicine will always have earnest solicitude, she has gradually begun to think in terms of groups and communities. In Britain this change of outlook has been hastened by the great wave of urbanization which has passed over the country—a transfer within less than a century from 75 to 25 per cent. rural population, and from 25 to 75 per cent. urban population. This has inevitably directed thought towards common causal factors of disease—environmental influences which, significant as they are in the individual case, can be studied and interpreted best among the aggregations of men. This has insensibly determined inquiry towards the prevention of disease. This, in turn, has impelled consideration of the early manifestations of disease. Medicine has ceased to be merely the healing art.

Communal Effort: Group Practice.

The fact of illness means much to the sick man, and has a first place in his doctor's mind. Yet from another point of view the treatment of the individual becomes an incident in a larger enterprise. Individual illness means more than it used to do. Its occurrence raises far-reaching questions of cause and of remedy, the solution of which will lead to the prevention of similar occurrence in persons similarly disposed all over the country. Those considerations are of particular significance in relation to widely prevalent diseases, such as cancer, tuberculosis, rheumatism, occupational disorders, etc. Such affections take time to develop. Yet for the most part they are well established before they come under review by the doctor. If medicine is to be effective in respect of those conditions, it can only be by an alteration in the attitude both of doctor and of patient.

The doctor is sometimes called the family adviser. To what extent is the relationship which that term connotes realized? To what extent is it realized in family practice? To what extent is it realized in group practice? The introduction of panel practice—whatever objection may be taken to the particular model established by the statute—has opened great possibilities. The panel doctor, retained as medical adviser, continues to treat illness and accident as before, but he has a potential in relation to persons on his panel which, if thoughtfully used, may make for prevention on a large scale. In view of the form of contract, it is indeed to the selfish interest of the doctor to consider and anticipate environmental conditions likely to prejudice his clientele. It will be to the mutual advantage of patient and doctor that he should become a pre-

ventive agent; and the health of the community will be correspondingly advanced.

The principle is readily applicable in all group practice and might advantageously be extended to what is generally known as private practice. What is wanted is a scheme of intelligent protection against illness. Why should not private contracts be arranged on the oriental line of payment for keeping the client well? At least there should be between doctors and patients common agreement as to the advisability of periodic physical examination, on the lines of inspection for recruitment or life insurance, so that morbid tendencies or threatenings of disease may be nipped in the bud.

A number of years ago, when consulted by large employers of labour regarding the frequency of tuberculosis among their workers, it seemed to me right to advise them that "in the light of present-day knowledge, the occurrence of tuberculous disease in a certain number of workers may be interpreted as, in part at least, one of the penalties of industrial life. . . . On economic no less than on scientific grounds there is much to be said for the institution of a method which would insure that every newcomer to a given industry is, prior to admission, specially examined for the presence of tuberculosis—more especially pulmonary tuberculosis—and, if accepted, is thereafter examined, from the same point of view, every four to six months, especially during the first few years." Such a scheme would assure advantage to the individual concerned, to his fellow workmen, and to the employer alike. Some of the great insurance companies across the Atlantic have thought it worth while to arrange for the periodic examination of their policyholders. I have been assured by representatives of one company that from their point of view this is a good business proposition: Prevent serious illness and postpone death. Thereby maintain the annual income of the company though premiums and defer the ultimate payment to the policyholder, who is not likely to complain of the advantage which thus accrues to the company.

Why should such a system of medical examination not become general, and the family adviser be enabled to play his proper part in the prevention of disease? An approach to the method is already in vogue with the dentist, who enjoins his clients to submit to a periodic dental review, to which the client, with experience of pains and penalties, commonly accedes. If the owner of a valuable car thinks it sound economy to send it from time to time to be overhauled at the garage, why should expert overhauling of the human machinery seem less desirable?

Outflanking Movement.

The further disposition of the forces calls for a wider orientation of the field. The ultimate goal is something beyond mere prevention of disease, as commonly understood. The negative attitude is too restrictive. It is scientifically insufficient and unsatisfying. The final triumph of medicine will consist not in the exclusion of disease, but in the restoration to man of perfect form and natural function—the attainment of smooth activity of body, mind, and soul. Biology—anatomy and physiology—must be relied on to carry us further than pathology and therapeutics, as commonly understood. Medicine, thus enlarged, becomes a department of biology and constitutes, *pro tanto*, the science of human life.

Our pathological museums will then serve as agents of preventive medicine. I foresee a time when the bottled preparations—the "beautiful" specimens of to-day—will figure in large part as do ancient manuscripts in our libraries, or as the crude relics of the dark ages in an antiquarian museum. They will stereotype to all time some of the vicious by-products of partial civilization—of imperfect adaptation to environment—and afford cogent stimulus towards prevision. Further recurrence of the conditions they illustrate will come to be regarded as little short of criminal.

Unity of Purpose: Collaborative Effort.

If the larger objective is to be reached there must be unification of purpose and solidarity throughout the forces engaged on the long strategic front. This involves

considerations as to the training of students of medicine, and of candidates qualifying for special diplomas and for the nursing profession. It involves the direction and scope of medical research. It involves questions regarding the utilization and co-ordination of different grades of hospitals and other medical institutions. It involves the relationships of various groups of medical practitioners to one another, and the relationship of the general body of medicine to various departments of the public health service. It involves the mutual relations of medicine and the general public, and the methods for securing trust and compliance. It orients afresh the connexion of medicine with the State. It makes insistent call for international goodwill and co-operation.

Menacing Records.

An unanswerable plea for a reconception—something more than a mere readjustment—of the ordinary medical curriculum is to be found in the report upon the physical examination of men of military age by national service medical boards from November 1st, 1917, to October 1st, 1918, which constitutes "the only survey of the physical fitness of the male population of military age in the history of our country. . . . It seems probable that the men examined during the year under review may be regarded in the aggregate as fairly representing the manhood of military age of the country in the early part of the twentieth century from the standpoint of health and physique, and that deductions founded upon the observations made at the medical examination of these men may legitimately be looked upon as a trustworthy criterion of the national health of this period."

Summarizing briefly the results obtained, the report showed "that, of every nine men of military age in Great Britain, on the average three were perfectly fit and healthy; two were upon a definitely infirm plane of health and strength, whether from some disability or some failure in development; three were incapable of undergoing more than a very moderate degree of physical exertion and could almost (in view of their age) be described with justice as physical wrecks; and the remaining man as a chronic invalid with a precarious hold upon life." An analysis of 10,000 recruit examinations in Scotland between August, 1916, and May, 1917, went to show "that only some 20 per cent. of the male population between 18 and 41 years of age are found free from noteworthy physical defect; so that in time of peace, when the army can afford to choose none but the physically perfect, only about one-fifth would be available for recruiting into the army."

Biology Points the Way.

The system of medical training which allows such findings to be possible lays itself open to the criticism that there is something wrong somewhere. The eye of the doctor has been insufficiently directed towards the biological problem. Health is born and should be expected. Disease is, for the most part, made and should be excluded. The starting point of medical observation and the ideal of medicine must be health. Were students trained to think biologically throughout the entire course, early departures from perfect form or function would quickly arrest attention and demand explanation.

Medicine is an art
Which does mend Nature, change it rather, but
The art itself is Nature.

At present a hiatus exists between the student's earlier study of biology, physics, chemistry, anatomy, and physiology and his study of disease. There tends to be an abrupt shunting from the consideration of normal processes to that of disease. Disease is apt to be conceived as a definite entity, something to be sought for and labelled in terms of a system of nomenclature. This is unscientific and disastrous. The interrelations of health and disease—and the beginnings of the latter, it may be, in some slight disturbance of the physiological balance—are lost from view. Disease is stereotyped usually in gross form before the aberration from health—determinable earlier—is admitted.

At every point in the curriculum there is call to hark back on the biological scent. George Meredith portrays

the proper flair when, after citing some of the revelations of Nature in the life of plant and animal, he proceeds:

The good physician Melampus, loving them all,
Among them walked, as a scholar who reads a book.
For him the woods were a home and gave him the key
Of knowledge, thirst for their treasures in herbs and flowers
The secrets held by the creatures nearer than we
To earth he sought, and the link of their life with ours.

Divinely thrilled was the man, exultingly full,
As quick well-waters that come of the heart of earth.

Where others hear but a hum and see but a beam,
The tongue and eye of the fountain of life he knew.

Our medical schools must turn out observers and thinkers on biological lines who will thereby be rich in suggestion and resource. The degeneration of our medical schools to mere training workshops must be stayed at all costs.

Inspiration of Research.

The obvious nurseries of medical research are the medical schools—university or other—which exist and are increasing throughout Britain and the Dominions. There the made roads and beaten tracks are familiar ground, and the heads of departments are feeling their way beyond. Unhappy is the plight of the teacher who, occupying the vantage ground of scientific experience and in frequent contact with developing youth, fails to emit the spark that is transmuted into reproductive energy. Unfortunate is the undergraduate whose spirit of inquiry is not roused by contact with one or other Melampus-like leader.

The natural locus of observation and research is the worker's chosen sphere of activity, whether in the laboratory or at the bedside. It is there, as the days go by, that he finds material for inquiry and investigation. The most fruitful researches in medicine have developed commonly from the everyday problem with which the physician or surgeon or practitioner has been faced. The questions which call insistently for an answer emerge often at the beginning of a man's career, when fancy is free and the soul untrammelled. The questions which stirred in the minds of Simpson and Lister were the offspring of recurrent, thoughtful activity in their respective spheres.

The clinical worker may, or may not, happen to be attached to a well equipped laboratory. The uncontrollable natus towards the light will find ways and means. Lister's researches were conducted for the most part in his own house in Edinburgh and Glasgow, and elaborated as he walked through parks and gardens. Simpson's experiments on anaesthetics were carried out in the dining room at 52, Queen Street. James Mackenzie's work began at the patient's bedside, and in the consulting room of a general practitioner.

The opportunities for observation and investigation in medicine are more abundant than is the number of likely observers. The slogan of original research, which was at one time needed, has been rather overdone and is getting stale. Subjects are often handled in loose and hasty fashion by workers whose preparation for the task has been insufficient. It is growingly more difficult to separate the grain from the chaff. Sound research cannot be contracted for by formal order, however powerful or rich the authority that bids the work, or however complete the equipment of laboratories erected for the purpose.

Lavish hosts, ye make
Elaborate preparation to receive
A shy and simple guest, who, warned of all
The ceremony and circumstance wherewith
Ye mean to entertain her, will not come.

Reorientation of Medical Needs.

The provision of well equipped hospitals for the sick is one of the satisfying aspects of our civilization. At first their foundation was for the most part voluntary. The inspiration was humanitarian and Christian. And long may the inspiration continue! The good Samaritan was a voluntary worker, unofficial, neither levite nor pharisee. The immediate object of the hospital, like that of early medicine, was relief of the individual sufferer. This outlook largely continues.

Now that the nation has shouldered the wide responsibility of both treatment and prevention, a reorientation

of medical provision is necessary. The supply of hospital beds for persons who are seriously sick and in need of skilled care must be adequate in extent and fair in distribution throughout the country. But if hospitals are to have effective value in the larger field of prevention, there must be developed fuller possibilities for scientific investigation, and a completer follow-up service in relation to individual patients and their environment. The significance of this last point was pressed by me conspicuously in relation to tuberculosis, and formed a main plank in the programme of the tuberculosis dispensary as originally conceived forty years ago. As to its value when properly conducted, there cannot be two opinions. The difficulty lies in the co-ordination of effective agencies.

The natural agent in the follow-up is the family doctor, whether private or panel practitioner. In proportion as he is able to develop the preventive outlook, things will go well. When such natural provision is absent, or insufficient, there falls to someone else the delicate task of projecting the benefit obtained in hospital throughout the life of the patient at home and at work. This has become the field of the almoner or health visitor. Satisfactory fulfilment of the mission calls for wisdom and prudence in high degree. Within the field there are rich opportunities for scientific and social investigation.

In addition to the extension of service rendered by the individual hospital, there is great need to link up and co-ordinate the various types of hospitals. The different elements in the hospital network must be more or less united—loyal to the common cause and to each other. The élite within the group must lay less stress on *amour propre* and more on *esprit de corps*: *Noblesse oblige*. The better equipped hospitals and medical schools might do much to help smaller institutions and the great body of practitioners by sending out members of the staffs to co-operate with, and keep up to date, men who are stationed in the periphery.

The attitude of the Central Health Authority to the hospital question should be: Give us assurance that an adequate number of beds is available for the needs of the country, and that these are justly distributed in respect of the various areas and the various groups of diseases, and that their links with each other and with ancillary services are sufficient; it matters not to us whether the hospitals are maintained by voluntary effort or by the rates, or by such other machinery as may be found serviceable to the end. The fundamental requirement is that the Central Health Authority should have guarantee from the Local Authority that the provision of beds is adequate to the needs of its area, and that a jealous outlook is maintained in the direction of prevention.

Unification of Command.

As a preliminary to this, it is essential that responsibilities and powers relating to everything that concerns national health be vested centrally in one supreme Health Authority in the several portions of the kingdom, and peripherally in the various Local Health Authorities acting under the Central Authority towards the common end. This means the inclusion in the Department of Health of a number of activities which are presently outwith the department. The exclusion hampers procedure and development. Thus, in respect of hospital accommodation, there is everything to be said for the transference to the Health Department of the responsibility for medical treatment and care which is presently exercised by Poor Law authorities. All hospitals for the treatment of the sick should be included as component parts of a more or less uniform system applicable throughout the country. The legend over the door of the Royal Infirmary of Edinburgh—*Patet omnibus*—must inspire the nation's policy in matters of health. The advantages that would accrue to such transfer and combination are obvious in respect of the output of the collective group of hospitals, whether we consider that in terms of the treatment of the sick, the training of students and nurses, or the advance of medicine by observation and research. Let us hope that within a very short time the rearrangement will be secured by Act of Parliament.

Economic Alignment.

In connexion with the provision of hospitals, it is to be borne in mind that, in proportion as the preventive attitude is assumed by the medical profession, unofficial as well as official, the need for certain classes of hospital will grow less. This will bring economic advantage. Thus, when the truth of the dictum comes to be adequately accepted that "the tuberculosis of a people begins in the nursery and school room, and that it is to the nursery and school room that observation and effort must be directed if measures for the eradication of tuberculosis are to be fundamentally sound and practically effective," the need for the provision of hospitals for advanced stages of visceral disease and for crippled frames will progressively diminish. The time will come when hospitals for advanced disease and settlements for tuberculous wrecks will be regarded as anachronisms. In proportion as it is recognized that tuberculosis may be prevented or, at least, that the worse consequence of infection may be anticipated and averted, the scheme of remedial institutions which are immediately necessary because of the ignorance and neglect of the past will undergo progressive modification and curtailment.

With widening vision regarding hospital and ancillary services the relation between different sections of the profession will become simpler. Attachment to hospital and other medical institutions will become more general in the medical ranks. The medical corps throughout the land—official and unofficial—will be welded by the common aim to conserve the health of the nation. The result of the effort will depend ultimately on the general practitioner. It is to the family doctor, who is the effective embodiment of the spirit of the profession, that the nation must look for the development of the turning movement towards health. The family doctor, to whom the home in all its health interests should be no less open than the sick room, can contribute most to complete the success of the new strategy. The resources of medicine must be pooled. If there be community of purpose and knowledge, the tactics of the new advance are not beyond the wit and power of the profession. It is up to each arm to do its part.

Eighty-seven years ago Charles Wilson, a Scottish country practitioner, summed up the results of his observations on the health of the labouring population of the border town of Kelso as follows:

"When man shall be brought to acknowledge (as truth must finally constrain him to acknowledge) that it is by his own hand, through his neglect of a few obvious rules, that the seeds of disease are most lavishly sown within his frame and diffused over communities; when he shall have required of medical science to occupy itself rather with the prevention of maladies than with their cure; when Governments shall be induced to consider the preservation of a nation's health an object as important as the promotion of its commerce or the maintenance of its conquests, we may hope then to see the approach of those times when, after a life spent almost without sickness, we shall close the term of an unharassed existence by a peaceful euthanasia."

Most remarkable words, you will agree with me, for the year of grace 1840.

Intelligence Department.

The ordinary citizen needs to be educated. He is even now clamouring for knowledge. The lesson of health should begin in the school. Having regard to the marvellous heritage of health to which most individuals fall heirs at birth, it seems incredible that no systematic attempt has been made to instruct the entrant into life regarding its preservation. We must press for the more general inclusion within ordinary school teaching of training in the principles of health—not instruction regarding disease or a system of hygiene. What we want to ensure is, that the growing individual has a working knowledge of the make-up of his own body and its functions, and can appreciate beauty of form and know when smooth activity is disturbed. He must get to understand the close dependence of health on environment. The recent appointment at one of our public schools of a doctor as head master is an interesting experiment in the forward direction which seems to me commendable. The result will be followed with interest. It remains to be seen how the doctor compares with the clergyman and with the scholar in charge of

developing boys. With youth sensibly trained about the machine which is peculiarly his own, it may be anticipated that within a generation the attitude of the nation to health questions will be completely changed.

Meantime, existing ignorance and post-war restlessness must be faced. There is need of popular education in the wider sense, and the dissemination of sound knowledge regarding health and the factors which make for disease. It must be insistently urged that, *the causes of disease being withdrawn, health is restored.*

To avoid the difficulties and pitfalls attendant on sporadic propaganda by individual members of the profession there should be an ordered attempt to use legitimate means to achieve the purpose. Medicine must roll out "the song seraphically free of taint of personality." Why should not the British Medical Association, through its network of Branches, serve as chief voice? Within recent times the Council of the Association has been consulted by, and has been accorded entrée to, the Ministry of Health regarding debatable subjects. Why should not each Branch similarly form an accredited medium of communication with the corresponding local authority by means of reports on matters affecting the health of the area, and with the larger public by the press, through authoritative contributions on questions of living interest? The press is a great educator; *the university of the map in the street.* Medicine must court its alliance and contribute her best to abet its efforts.

I have long pleaded that, as part of the local machinery of health administration in each sufficiently large area, an advisory medical committee should be erected which would be available to the local health committee and to the medical officer of health for consultation and guidance. The arrangement would constitute a tactical procedure of much importance on the present strategic front. It would have permanent and growing value as compared with the occasional lecture which, like a brilliant firework, is apt to vanish in smoke.

Other natural channels suggest themselves as serviceable towards the common end. I would name especially the branches of the British Red Cross Society, which, in virtue of the Supplemental Charter granted by King George V on December 12th, 1919, includes among "its objects and purposes" the "improvement of health and the prevention of disease." Similarly the Scout and Guide movements are pregnant with promise for the future of the race.

Munus Apolline Dignum.

The quest of health for the world is a great adventure. It is up to Medicine to lead the way and sustain the brunt of front line combat. If Medicine step into the breach she will recover her place of direction in matters

affecting the human machine and national policy relative thereto, as these affect education, housing, industrial life, town planning, etc. Medicine is too apt to remain passive and silent in presence of issues which touch her vitally. She must free herself from the reproach implied in the poet's words: "*Mussabat tacito Medicina timore.*" If Medicine is to remain worthy of her divine origin she must flash the light from the car of Phoebus. Medicine must anticipate, inspire, and guide policy, and not rest content merely to carry out instructions imposed on her. Her chartered institutions, Colleges, Faculties, this powerful Association, and other collective groups, must not limit themselves as they commonly do to criticisms of proposals which reach them from without, and to grumbling at the terms of statute and regulation to which they are asked to conform. They must envisage and mould the developments of the future.

The aspirations of Medicine are not limited by geographical boundary or national policy. The study of health as a department of the science of life leads its devotees to observations and investigations in every clime. Nothing that influences human life is foreign to its purview. With mankind as its sphere, its aims and relations are world-wide. They are frankly international. Concerned with matters common to the race, Medicine will add to its triumphs in proportion as combination and collaboration of forces is secured throughout the globe. Towards this end much may be expected from fuller collation of the findings of individual workers and scattered groups in different countries—for example, by authoritative reports and conferences such as have been fostered by international associations, the League of Red Cross Societies, and the Health Bureau of the League of Nations. This widening evolution of medicine cannot fail to weave bonds making for solidarity among the nations. Already the tropics have been made habitable, and success in the completer adaptation of the planet for the life and health of man is only a matter of time.

Of all the attributes attaching to Medicine since the days of Hippocrates none has carried her further than her self-forgetting humanity. She is "humble because of knowledge, mighty by sacrifice." Pace the cynic, without the camp, and within it, that quality has inspired, and continues to inspire, her greatest adventures. With mind and eye fixed on perfection of form and function as the ultimate goal, the doctor's increasing purpose as the years roll on is the physical betterment of the race. We read that in the beginning man was created in the image of God, and that the Creator breathed into his nostrils the breath of life, and that he was placed in the Garden of Eden. Those biological attributes and relationships Medicine must recapture for mankind.

SOME REMARKS ON OUR PRESENT HOSPITAL SYSTEM.*

BY

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[AFTER a description of a motor tour through France and Spain to attend the meeting of the (British) Chirurgical Club in Madrid shortly after Easter, and a brief account of what the members saw, including some details of the working of the institution for the treatment and re-education of injured workmen, Professor Hey Groves continued as follows.]

It is the fashion now for all speakers and writers on our present hospital system to begin by assuming that there is something sacrosanct about the voluntary hospital system, and that it is our first duty to save this at all costs. Now I would begin by challenging the truth of this assumption. I should like to say boldly that the voluntary hospital system is dead. For there is something dignified and final about death—an honoured memory—a solemn requiem and a fitting monument and memorial. But unhappily there is neither dignity nor finality about the present condition.

* Being the presidential address delivered to the Bath and Bristol Branch of the British Medical Association at the Bristol University, June, 1927.

The system is not dead, but moribund, and its laboured life is kept going by stimulants and artificial respiration. Originally, and up to the beginning of the present generation, it may fairly be claimed that the voluntary hospital system did fully meet the needs of the time, and that it compared very favourably with the hospital system of any foreign country. In those days the situation was very much simpler than at present. It was only necessary to provide board, lodging, and nursing for the sick, with provision for emergencies such as surgical operations, which were then quite infrequent. The treatment of severe illness in those days was largely expectant, and the medical men who undertook hospital practice were the ordinary general practitioners of the town.

When I was a student there was only one general operating theatre at St. Bartholomew's Hospital, and at the General Hospital here in Bristol all the routine operations were performed on one afternoon in the week, the various members of the staff operating in turn with the others as spectators. Again, in those old days the voluntary hospitals were the only places where collective study and treatment of disease was undertaken. If a person had a comfortable home of his own then in times of sickness he stayed at home, and either medical or surgical treatment was carried out there. Treatment was so simple that everything needful could be done in a patient's own house. The hospital originally was