AN ADDRESS

ON

THE RELATIONS OF MEDICAL MEN TO
THE STATE.*Delivered at King's College, London.*

BY

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I AM sorry that it is now thirty-five years ago that I was a student of medicine in the sister college in Gower Street; but my feelings of sympathy for medical students have not deadened with age, and I can participate in your successes almost with the freshness of youth. Though I never qualified myself as a medical man, it is most agreeable to me to find, on occasions like this, that the medical profession keep up their fellowship with me. In fact, at the present time, I happen to be president of the section of State Medicine of the British Medical Association, which meets this year in Edinburgh, and, in this quasi-medical capacity, I propose to address you in reference to the benefits which the public may in future enjoy from the application of your knowledge to the purposes of the State. The connection of the State with medical men is very old, but it is strengthened as knowledge advances.

How different now is the position of medicine from its condition when governments applied to it for aid in former centuries! When the French kings consulted the medical faculty of Paris what they should do to stop the great plague which scourged France in the fourteenth century, the advice given was in these words: "If rain come during the day, a little fine treacle should be taken after dinner, and fat people should not sit in the sunshine." And long after that medicine was in a deplorable state, both as to the causes of disease, and necessarily, therefore, as to the remedies which should be used. Do you happen to recollect, even during a period rendered illustrious by the life of Sydenham, the scene round the deathbed of Charles II? Fourteen physicians signed his prescription, and their collective wisdom determined that the head of the poor dying monarch should be burned with red-hot irons, and they forced into his resisting mouth a loathsome volatile preparation distilled from human skulls. What was the origin of this slow progress and helplessness of ancient medicine? It was that, in no offensive sense, a doctor was an empiric, groping his way by trial and error, and having no sun of science to illumine him in his dismal path. And so it was long before he attained to the true dignity of his profession. I recollect, when I was a boy, that a regular character in almost every play and farce was a pompous physician with a gold-headed cane. He was the object of ridicule, which unfliningly appealed to the laughter of the vulgar. But this representation of the medical man has altogether disappeared from the stage, because now it would be incomprehensible. Its survival, I will presently show, remains among us in a different form. But science has cast her mantle over the physician, and clothed him with honour. There is not a single branch of medicine which is not now under the dominion of science; in fact, I know no class of men and no profession which has a more catholic kind of education than medical students. You are first obliged to show that you have received a liberal education by an examination before you begin your professional studies, and then you have a curriculum of abstract and applied sciences, the fault of which consists not in its narrowness, but possibly in its too great breadth. A medical man of the present generation cannot be a narrow man. His profession is too varied to render it possible for any member of it to see society only through monochromatic spectacles. And this renders the medical man both a power and a danger to society at large.

Perhaps even more than the priest, the medical attendant becomes a confidant of the inner circle. His wide education and general knowledge often make him a valuable counsellor and friend when disease weakens the judgment and impairs the faculties of the patient. But this renders him a danger, unless his conduct be guided by a high sense of honour. The code of honour which the profession has laid down for itself has been sufficient, with the rarest exceptions, to preserve it unstained in its relations with society. Nevertheless, a reaction against the medical man naturally arises, both in the discharge of his private and his public duties. The patient, who is doomed to passive obedience when

he is ill, is apt to show his independence, and sometimes a suspicion of his medical adviser, when he is comparatively well. This feeling, which has only a subdued expression in individuals, becomes magnified into positive dislike of the medical profession in its relations to the body politic; for the public officer of health has to deal with the body politic just as the private physician has to deal with the body of an individual. As the private doctor has to consider the hereditary transmission of disease to his patient, has to look to the conditions of his upbringing, and to the conditions, both physical and moral, to which he has been exposed, so must a public health officer look to all such conditions as affecting a community, for that represents the sum of all the moments of health of the individuals composing it; in fact, in a state each individual represents a single living particle in a man. Nutrition consists in the waste and restoration of particles; so, in a State, the death of an individual and the birth of another are strictly analogous to the waste and restoration of particles in individuals. When the rate of mortality is high in a community, disease is indicated, just as abnormal waste in an individual leads you to look for the causes of disease; and thus it happens that each community has been forced to appoint its own public officer of health just as each individual requires to have his own doctor. But the public officer of health comes into contact with the aggregate suspicion and resentment of the community of which I have spoken. He is too much a man of science to be treated with ridicule as in ancient times; but the survival of this antagonism between the strength of health and the weakness of disease still exists, and is vented on the public health officer in a manner which would be annoying, if it were not irritating. This is constantly seen in the House of Commons. Every bill relating to sanitary matters more and more throws power and responsibility on the public officers of health.

In some cases, as in the Bill for the Dwellings of the Poor, he is made the motor power of the whole measure. But each new confidence is bestowed under protest, and is yielded after much show of suspicion. If you were to believe the speeches which are made, medical men, instead of being the saviours of humanity, are the enemies of mankind. The country is determined not to be ruled by them, and yet is continually bestowing upon them increased powers. What does all this mean? Simply that communities are acting like individual patients. They try to resist the admission that they are in a state which requires an abnegation of their own will, and a submission to the orders of their medical advisers. They kick against the need, but yield while they kick. And so you find everywhere, very unequally, and with many misgivings, all communities appointing their own public doctors, just as individuals select their own private physicians. For the future, this will be a great field open to growing medical men. By prudence and honesty of purpose, they will overcome the prejudices which now exist to their public employment. Your education as private practitioners must, however, be supplemented by further knowledge for the discharge of public duties, because these require a special application of general knowledge, which is gradually methodising itself into a special division of medical practice. This has naturally been created by the unselfish labours of many medical men, even while engaged in the arduous duties of private practice. As an illustration of this fact, take the instance of Dr. Budd of Bristol, who has given to public health much valuable experience as to the conditions under which epidemics spread. As long ago as 1845, I made Dr. Budd's acquaintance, while examining into the state of Bristol, as a Royal Commissioner of Public Health, and ever since then followed with interest his many researches and memoirs on the origin and spread of epidemics. His own health unhappily broke down in his labours to promote the health of communities, just as that of Dr. Rumsey of Cheltenham has given way under like conditions of public usefulness. Surely such instances as these ought to be sufficient answers to the unreasoning suspicions of the influence of medical men on public affairs. Can there be an example of more unselfish labour than the effort of a medical man to extirpate disease, on the very existence of which his daily bread depends? And yet who is the man in each district who wars against filth, which forms the soil on which a large class of diseases take root? Sometimes there is a fine muscular Christian, such as Kingsley was, who uses his priestly influence to combat the filthy habits of his people, as a means of promoting health. Far more frequently it is the doctor, and not the priest of the parish, who has to incur the odium of reforming local abuses. Read Kingsley's novel called *Two Years Ago*, and you will find the fact excellently illustrated by himself. Every medical man, however much he may be engaged in private practice, can be a sanitary missionary, acting for the prevention as well as for the cure of disease.

The different methods of propagation of disease are becoming better studied, and unsuspected sources of diffusion are now known to be amongst the most common vehicles of transmission. Extensive epi-

demics, which in ancient times would have been attributed to occult influences, are now traced to polluted water and tainted milk. The great Sydenham, sagacious as he was, did not look around him, but beneath him, for the origin of epidemics. He thought that they emanated from the bowels of the earth, *interiora terra viscera*. But now we have learned by closer observation to find their origin in our immediate surroundings. The physician has two duties in each case of communicable disease. He has to cure his patient, trace the origin of the disease, and prevent its recurrence among others. This is a noble and an unselfish duty; and in its performance will disappear those relics of prejudice against the medical profession which still linger in society, and find its most obvious expression in his relations to the public service. Take an instance. What utter unreasonableness there is at the present moment in the manner of conducting the crusade against vivisection. That there has been unnecessary indifference to animal suffering in experiments made on living animals, especially in foreign countries, is no doubt true; and the truth justified attempts at legislation, so as to conduct experiments with the view of obtaining the scientific object of the investigation in the most humane manner. In concert with Darwin, Huxley, Burdon Sanderson, and others, I tried to frame a code of morals which might be accepted by physiologists as an example of the manner in which such experiments should be conducted; for I fully recognised the fact that the law would be powerless to restrain such operations, if it were so severe and unreasonable as to drive the operators to perform them in privacy. No system of inspection, no registration, would enable the law to discover individual experiments performed in private, if it were the interest of the experimenter to conceal them. If the law for restraint of cruelty is to be operative, it must be so fair and reasonable as to enlist the sympathies and co-operation of humane men of science. Without this, you might as well expect an experimentalist to publish the contortions of a frog under a scalpel, as you would suspect the keen fisherman to tell the Society for the Prevention of Cruelty to Animals how a frog writhed when placed on a hook, in order to catch a pike. But a reasonable law to regulate the conduct of such experiments would be accepted as a guide, and would find co-operators in the experimenters. It would do more, because the community of science is great; and a law which did not obstruct science, but still prevented cruelty in its pursuit, would soon be accepted by foreign nations.

The very power which we possess over the lower animals involves a responsibility in its exercise. It is no justification of the voluntary infliction of animal suffering that Nature itself is cruel, and that the support of life is incident to death and suffering. If Nature were far more red-handed than she is, if the suffering which we are compelled to inflict on animals daily and hourly were, as it probably is, a hundred or a thousand times greater than the physiologist ever perpetrates, that does not lessen his responsibility to avoid the deliberate infliction of pain in the prosecution of his researches. His very knowledge of the structure of animals is an additional reason for applying his skill to avoid the unnecessary production of pain by all the means which the progress of science gives him to carry out painless operations.

I need scarcely say that I do not agree with those who would prohibit vivisection, even for the purposes of scientific investigation. Medicine is no longer confined to the records of symptoms and to the trials of remedies to alleviate them. The investigation of vital phenomena by observation and experiment is rendering medicine a science which, like all other sciences, requires a direct and careful questioning of Nature. It would be disastrous to the progress of medicine if we were to restrict the means of research in the sciences of anatomy, physiology, or even chemistry by refusing to discoverers in these sciences the power to test their discoveries on living organisms. It is a mean view of scientific progress always to put the *cui bono* test to every experiment, though every discovery, however remote may appear its practical application, becomes ultimately beneficial to man.

Harvey had higher objects than the practice of medicine in discovering the circulation of the blood. Haller inquired into the nervous system, not with a view to the mere cure of disease, and was followed by Bell, Marshall Hall, Weber, Bernard, Brown Séquard, and many other physiologists in a spirit of abstract philosophical inquiry, though all their experiments have ultimately reflected great benefit on the human race. The suffering and death which they inflicted on the lower animals in their researches have, like the sacrifices of old, brought collateral benefits to humanity. It is not in the more direct application of such experiments to the cure of disease, as when Jenner vivisected animals to produce vaccination, that the benefit of such experiment is greatest. These are immediate and palpable benefits which come home to the vulgar; but the widening of the boundaries of knowledge always produces increased power and happiness to the human race.

It is right, in my opinion, that experiments leading to such important

results should be pursued, even at the sacrifice of a certain number of lower animals. But no suffering and no sacrifice should be made without justification. The very fact that the ultimate consequences of such researches lessen the amount of human suffering, by teaching us how to alleviate disease, renders it more imperative that all the resources which modern science has placed at our disposal for the mitigation of pain, should be used in experiments on the lower animals. It is fortunate, then, that in the agitation of the public mind on this subject, nothing precipitate has yet been done, and that a Royal Commission, which is likely to be presided over by Lord Cardwell, a very humane, but at the same time, a prudent and sagacious nobleman, who fully appreciates science, is appointed to inquire into the whole subject.

But I find that I have been giving you somewhat of a Parliamentary speech, so I must conclude. In taking leave of you, I congratulate all the students of this important medical school in the choice of their profession. It is one in which they may be eminently useful to their fellow men; and in this feeling of usefulness, through intelligent labour, they will find their highest and purest enjoyment. I have tried to show you that your knowledge may be made to extend benefit far beyond your immediate patients, for a physician should look upon medicine as a sort of religion, and on himself as a priest of humanity, bound to spread his sphere of usefulness to all within his range.

A CASE OF VARICOSE ANEURISM OF THE LEFT ORBIT, CURED BY LIGATURE OF THE DISEASED VESSELS.

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My patient, Mr. H., was wounded at the inner side of the left upper eyelid by the bursting of a soda-water bottle while he was in the act of stooping and opening a hamper. Being on the spot, I saw him at once. The wound penetrated the upper lid; it was about half an inch in length. The eyelids were distended to their utmost by effusion of blood into their cellular tissue, and an artery was jetting blood from the wound. I brought the edges of the wound together with a suture, which stopped the bleeding; and, in a few days, he was apparently well. In about six weeks, however, the eye gradually became prominent, the eyelids swollen, and the veins of the conjunctiva tortuous and distended. In a few weeks, a small pulsating tumour was discerned at the inner angle of the orbit, beneath the cicatrix of the old wound. There was a distinct murmur heard over this, as well as over the eye. The sight was perfect. Rest was enjoined, and remedies used to restrain the circulation. Pressure was applied to the little aneurism by means of a truss, hoping to compress it against the inner wall of the orbit; but, as this gave rise to much pain, and pressed the tumour into the orbit rather than arrested the pulsation, it was discontinued. About this time, he saw Mr. Bader and Mr. Higgins of Guy's Hospital; and, from the fact of the retinal veins being as dilated as the superficial veins, Mr. Bader considered it probable that there was an aneurism deep in the orbit, and advised ligature of the carotid. I preferred trying an exploratory operation. Accordingly, on February 18th, 1874, I cut down and opened up the old wound, exposing a small globular pulsating tumour, with a large tortuous vein coming off from the front of the sac, and passing to the back of the orbit. Between the eye and the aneurism, there were several smaller vessels going to and surrounding the sac, which made the operation tedious. Having found the feeding vessel, I placed a carbolised ligature on the cardiac and distal sides of the aneurism, and closed the wound. On the fourth day, the sac was discharged from the wound. In a week, the eye had returned nearly to its natural level, and my patient made a steady and complete recovery. Now, more than a year since the operation, no one could notice any difference in his eyes.

REMARKS.—I send this case, as showing that dilatation of the ophthalmic vein may simulate deep-seated aneurism in the orbit. Here a communication between the nasal artery and vein was sufficient to produce a considerable deformity. In its general characters, it appears to resemble the case brought before the Royal Medical and Chirurgical Society by Mr. Rivington (BRITISH MEDICAL JOURNAL, March 27th). I may say that, had the operation failed to cure, it was my intention to excise the globe, which, in my opinion, would be a much more satisfactory and a less hazardous operation than ligature of the carotid which should only be done as the last resort.