AN ADDRESS ON MEDICAL EDUCATION.

Delivered at the Opening of the St. George's Hospital Medical School.

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GENTLEMEN,—My colleagues have entrusted to me the high and honourable office of opening our medical session to-day; and it is only fitting and right that I should commence my task by thanking them for this fresh proof of their confidence and friendship—a friendship which has lightened all the labours of my long period of service in this hospital and school, and which it forms my chief pride to have received, however little I may have done to deserve it.

It is indeed always a great pleasure to me to make my appearance in this room, where so much of my active life in the work of St. George's Hospital School has been passed, and that pleasure is necessarily greater as the inevitable period approaches nearer when my career here will be finally closed. The time that remains to me is short, even if life and opportunity be given me to fulfil my allotted service; and although I hope frequently to meet the students in clinical lectures, it is very unlikely that I shall ever again have the honour of appearing before the whole assembled school, represented as it is to-day by teachers as well as students, and by many of my old pupils and contemporaries. It has, therefore, been a subject of anxious thought to me how I can best occupy the hour which your indulgence allows me; and I have come to the conclusion that I shall perform my task best by speaking of that which occupies my thoughts most at the present time, the position of our profession in regard to its high aims and objects, and in relation to the public, and the reforms which, as I conceive, it requires in order to fit it to attain those objects, and to serve the public as it ought.

I do not forget that a portion of my audience consists of students who are only to-day beginning their career; but I think that the subject I have named is appropriate to them also, and it is certainly one which must be always before those of you who are more advanced in your studies, still more those on whom the burden of practice and of teaching has already been imposed. The position of our profession, and the organisation of the institutions by which that position is to be maintained and advanced, is a matter which surely concerns us all—the youngest student who joins us to-day, as well as those who, like myself, have pretty well run our course, and who are looking forward in no long time to “seek the chimney-nook of ease,” and “there ruminate with sober thought on all we have seen and heard and wrought.”

I should be sorry, however, to turn to the topics which I propose to submit to the judgment of the senior members of my audience, without saying a few words of welcome and of encouragement to those who are joining us for the first time to-day. I need hardly say that I think you have made a wise choice of your future profession; for, though medicine is a hard mistress, insisting on the unremitting devotion of your whole energies, and, as Johnson said, involving “a continual interruption of rest and pleasure,” still, to those who devote themselves heart and soul to her entire service, she gives rewards far more satisfying than titles or money; though, even in respect of its material results, I do not join in the depreciation of our profession which we so often hear. A man who follows it with assiduity and a fair share of intelligence, and who avoids all dissipation, is nearly sure to make his living by it. And of what other profession can so much be said? Very large fortunes may not be amassed by medical men, but an honourable competence will not fail to accrue to anyone who has fair health and average good fortune, and who avoids the common imprudences of marrying before he can afford it, and burdening himself with speculative expenditure which his income does not justify. So much for money. As to titles, my own opinion is that we have enough of them. But if anyone thinks that it would be a proud day for medicine if some great medical man were raised to the peerage, I see no improbability in the event. The old monopoly of honours by the land, the law, and the sword is breaking down. Authors are being admitted into the Upper House, and medical men may get

there in due course. I doubt whether they, or we, will be much the better for it. But the real charm of the profession does not lie in the making of money, or in the shadowy prospect of honours; it lies in the endless variety of its objects, and in the unflinching interest of its everyday round. To a physician or surgeon worthy of the name, there is a double interest in every case he is called on to treat—the human interest which he feels in the patient, and the scientific interest which he feels in the disease. The interest in both is enthralling. No doubt, however, the human interest and the human affection which you cannot but feel for your fellow-creatures, as you watch them struggling with the direst calamities of life, must be the more ennobling; and it is on this chiefly that you will have to feed your mind. You will learn as you advance in your profession that happiness is not confined to the prosperous, nor heroism to the distinguished; that a poor ignorant man can face suffering and death with an equanimity which philosophers often fail to display; that people may be serenely happy and tranquil, though their existence is a monotony of pain, and that death is often looked on more as a friend than a terror. You will learn, I think, if you reflect well on what you see, to distrust the philosophy which teaches that the mind is a function of the body, and at any rate you will be convinced that pain is not the worst of evils, nor death the greatest of calamities. Mingled, no doubt, with much that is mean and pitiful, you will come across scenes of unostentatious courage and of devoted affection, which cannot fail to raise your opinion of men, and increase your love for your kind; and you will be repaid by the gratitude and affection of many to whom you have been serviceable, and will feel in your degree the happiness of the patriarch of old: “The blessing of him that was ready to perish came upon me, and I caused the widow's heart to sing for joy.”

And if, when looked at in its social aspect, the practice of medicine is so rich in the rewards it bestows, it is hardly less rich in scientific interest. No doubt, to the general public, it seems both barbarous and grotesque, to talk of the most repulsive infirmities and the most agonising sufferings as “very interesting cases;” yet no one can doubt the absorbing interest of the study of the processes of disease, or the still more intense anxiety with which we watch the success (or, alas, too often the failure) of our efforts to arrest them. In fact, apart from such interest, no one could labour amongst such agonising scenes and in such horrible surroundings. It is the peculiar glory of medicine that it adds to the delight which attaches to every branch of the scientific study of Nature the far higher delight of sympathy and charity.

The chief drawback to its pursuit is the labour which it entails, a labour never ending, and which leaves its victim no repose, literally, night or day; and under which men are apt to degenerate into mere business-machines, and to care for nothing except their profession. No doubt this is a less evil than the listlessness which follows on idleness, still it is an ignoble condition. It deprives a man of all power of companionship with the world at large, and shuts from his eyes many of the sweetest and loveliest things of life. It makes a man the slave of his business, instead of its master, and it confines his mental faculties to a groove, in which they wither, so that business itself soon becomes a dull routine. The best antidote to this tendency, is the cultivation of a taste for some worthy object, which can be trusted to assert itself even against the claims of business. The best of all such tastes seems to me that for literature, a taste which can be indulged in any circumstances, in any condition of health short of actual acute disease, and at any time of life, nay, which often becomes keener and stronger in age. I would also recommend you to cultivate the great and lasting possession of conversational power, which has its advantage over reading, in being more social and more unselfish. I believe the art of conversation is said to be decaying. The more the pity, for it is a grand art, as well as a most delightful accomplishment, and to a medical man, who has to associate with all kinds of persons, in all kinds of circumstances, is almost a necessity. But, whatever may be your taste—so that it is innocent and healthy—cultivate it when you are young, and it will help you to resist the pressure of business when you are old. I do not want you to waste your time as students; you have, in fact, not an hour to spare. But healthy recreation wastes no time. No one can study profitably without a large allowance of total rest and change; and in those happy hours it is well to mount your hobby, if only a tricycle, and drive him fearlessly along, forgetting that there is such a thing as anatomy or surgery. You will be none the worse anatomists and surgeons in the long run. I well remember that in my time at Cambridge, two successive senior wranglers were as prominent on the river as in the Senate House. A man who is nothing but a doctor, is not generally first rate at that.

Your younger students may well be congratulated on the position

which has been acquired by the profession on which they have now entered. We, who have lived through it all, hardly realise, without some effort of mind, the enormous progress which our art has made in the years comprised by the active professional life of men hardly beyond middle age. We talk of the wonders of electricity and steam, of the benefits bestowed on life by all the mechanical inventions of the day, and with reason. They have transformed our daily life, and familiarised the poorest with luxuries which before were out of the reach of monarchs. But all the wonders of mechanical science are poor compared to that of anaesthetics; and no luxuries which modern inventions have put into our power can for a moment be compared with the immense saving of human life, and diminution of human suffering, produced by the more rational and successful methods which have prevailed, and are still gradually extending themselves over the whole field of modern medicine and surgery. We who are surgeons, can perhaps best estimate this from the success of our operations in the present and in the past; and here most of us would be inclined to agree with my late friend, Mr. Callender, that the risk of the mere surgical procedure has diminished tenfold, so that operations which would have been scouted, in my younger days, as the follies of a madman, are now undertaken as matters of common every-day routine. But, fortunately, it is only a small minority of the human race who are exposed to the sufferings and dangers of the great operations of surgery. In medicine also a similar progress has been attained; not, I believe, nearly to so great a degree, for medicine has not been favoured by great discoveries, such as that of anaesthesia, or wide-reaching theories, like that of antiseptics. Still, the extended study of pathology and chemistry, and the more accurate knowledge of the functions of the body in health and disease, which modern physiology has given us, have placed our physicians in a position far different from their fathers, and have emancipated them from that bondage to imperfect theories and traditional practice which caused so great a havoc in old times. Still more important to the public, and still more peculiarly the property of modern times, is the growth of preventive medicine, by which already our great cities have been raised to a condition of healthiness such as the healthiest parts of the country could not boast in former days, and by which we may hope, in no very long period, that the great epidemics which still ravage the world, will be bridled, and, in civilised countries at least, gradually extinguished. On the whole, I do not doubt that if some future Buckle shall resume his predecessor's mighty task, and attempt to write again the history of modern civilisation, he will allot to medicine one of the foremost places among the progressive sciences; and will allow that the medical profession have established their claim to consideration as among the most active benefactors of the body politic. It is to such a profession that we welcome the new students of to-day, and it is to them, and such as they, that we commit its future, secure that the great work will not stand still, but that there will be even better men in the future than those who have left their mark on the past, and not without a hope that, as in the past, a good share of that progress will be attributed to the physicians and surgeons of the school which we love so well.

Let us now turn to consider the institutions by which the organic life of this great profession is carried on in England—the medical schools, the hospitals, and the corporate bodies which preside over our professional life. We shall find much to praise in all of these. How else could the progress which I have rapidly sketched have been attained? If I find much also that I, at least, would willingly see altered, I hope you will bear with me if I point it out freely. I shall do so in no depreciatory or sneering spirit, but with the good will of a man whose chief distinction has been that he has been thought worthy to bear his share in the government of institutions of all these three classes, and who earnestly wishes to increase their vigour and usefulness. I am, I hope, as far as possible from that foolish thirst for novelty which condemns an institution merely because it is old; but times change, and, if we try to stand still, we must be left behind. It is only by constant change that the England of to-day has been developed out of the polity of the Saxons and the Normans; and it is only by admitting such changes as are indispensable that institutions devised in the times of our forefathers can be adapted to the greatly changed position which, as I have shown you, modern medicine occupies. So much everyone allows, and perhaps you will call it a truism; but, when we come to apply it, and point out, here and there, where we think changes are necessary, I fear our unanimity will come to an end.

We will speak first of our schools; and here I will restrict myself to England, for I am not sufficiently familiar with the Scotch and Irish schools to speak with confidence of their organisation. The main excellence, as it seems to me, of these our hospital-schools is, that most of them are officered by men who have been brought up in them

together from their early years, who have derived their education from the same source, who have the same traditions, the same eponymous heroes, as the Greeks would say. Speaking of surgery only, it is no small thing that St. Bartholomew's should regard itself as the school of Abernethy and Lawrence; that Guy's should look to Cooper and Key; that St. George's should be associated with the undying names of Hunter and Brodie. These great traditions give a unity to the teaching, and an *esprit de corps* to the teachers, which we should look for in vain in a school presided over by a body of professors, however eminent, nominated by a central authority, and owning no ties to each other more tender than those which bind together the partners of a commercial firm. Such *esprit de corps* reacts on the students. Any man, worth the name, who enrolls himself here, feels that he is in his degree bound to support the traditions of the school. If he cannot imitate the profound research of Hunter, or the clinical acumen of Brodie, he can, at any rate, imitate in his humble way the perseverance which they did not think unworthy of their great genius; and he can remember, and so bear himself as to make others remember, that from our predecessors and from our own contemporaries we have inherited traditions of honour and self-respect which our youngest as well as our oldest members are equally bound to follow. I would point out to you, as an example of what I mean, the great surgeon who has lately passed away from us, full of years and honours, endeared to those who had the happiness of being his pupils by every tie of gratitude and affection, and revered by all who can appreciate stainless honour. Cesar Hawkins was rich in friends, who watched and tended the peaceful close of his long and brilliant career. They testify how well he bore Horace's test of a well spent life, "senior et melior sis accedente senectâ." The old words involuntarily occur to everyone who contemplates an old age so full of dignity and goodness: "The path of the just is as a shining light, which shineth more and more unto the perfect day."

It is, then, by private enterprise, by the association of colleagues and friends, that these great schools have been founded and maintained; and this seems to me to be their first and great excellence. I do not deny, however, that private enterprise has been carried to excess in the medical schools of London; and that, if the number of them were considerably diminished, it would be a benefit to medical education. The question which is to be sacrificed first is a delicate one, and obviously one which I cannot discuss here; but it will, I have no doubt, receive a solution from outside before many years are over. A good school requires many things which can hardly be furnished by an institution just struggling for existence. The means for teaching must be ample; the staff of teachers must be experienced and competent; the premises must be appropriate; but, above all other things, the supply of hospital-cases, and the opportunities given to the students for hospital-instruction, must be on the most liberal scale. There are many famous and flourishing institutions in other countries where this last and most necessary requirement is sadly overlooked. You meet some one returning, we will say, from some German school; for all the young men of the present day go to Germany, as those of our younger days did to Paris. He tells you of the profound discourses of Professor This, and the interesting demonstrations of Professor That; of the crowds that follow these eminent men through their wards, and the brilliant operations he has witnessed. If you ask him, "Did you ever watch the results of the treatment? Had you any share in the practice? Did you learn anything which will assist you in your every-day work when you take up your daily routine?"—you will often (of course I do not say always) find that the precious time, which should have been spent on acquiring a familiarity with every-day matters, has been wasted in theorising, or in watching other people do what the student himself will probably never have occasion to imitate. Many can describe accurately the steps of the operation for excising the pylorus or extirpating the larynx, who would make a horrible bungle in trying to reduce a hernia, and perhaps never passed a catheter in their lives. I am told that young men have ceased to read Milton. I am sorry if it is true, for there are few great authors so truly delightful; and to acquire an intimate knowledge of and love for the great authors of your own and other tongues in your youth is to provide "a perpetual feast of nectared sweets" for your old age. There are, at any rate, a few lines in *Paradise Lost* which, I hope, will remain in all our memories, and which might fitly be inscribed over the portal of every medical school in the kingdom:

"Not to know at large of things remote
From use, obscure and subtle, but to know
That which before us lies in daily life,
Is the prime wisdom. What is more is fume
Or emptiness, or fond impertinence,
And renders us in things which most concern
Unpractised, unprepared, and still to seek."

To our younger students I would say, "Judge of the merits of your school, not by the renown of its teachers, not by the excellence of their lectures, not by any thaumaturgic proceedings which you witness in the operating theatre, so much as by the opportunities given to you, if you choose to make use of them, to familiarise yourselves with the daily round of practice and to take your share in it." In this most essential particular, I venture to think that the schools of London stand foremost in the world, and I hope the one in which we are now assembled is not behind its fellows.

Having said so much of the merits which I claim for our London schools, may I say a word about what seem to me their defects? I think they may chiefly be summed up in these two particulars: first, that our teaching of the preliminary sciences—the bases of all medical knowledge—has of late tended to become too theoretical; and, second, that these sciences have been too far separated from the more strictly practical part of the teaching. This subject is intimately connected with the regulations of the examining bodies, a topic which I shall handle presently; but the result seems to me grievous. So occupied are most of our students in "cramming" for what, in the mock English of the present day, are called "exams.," that they appear to have forgotten that the subjects are matters of human knowledge—matters replete in themselves with the highest interest, and fit to form a part of the furniture of a man's mind for the whole of life. How rare it is now to hear a student talk of "learning" anything. He is "getting it up," and when he has got it up, and it has served its purpose, he drops it again just as rapidly, and a few months after he has passed a brilliant examination, knows almost as little of the matter as he did before he commenced his work on it. It is this that constitutes the difference between cramming and learning: that the first contemplates a temporary purpose, and the second a life-long use. There was, no doubt, much to be said against the old system of teaching, which prevailed in my day, and against the single examination at the end of the whole curriculum; but it had, at any rate, this merit, which the present method has sacrificed, that it presented the whole of medical education—what used to be called the Institutes of Medicine—as (what it really is) a single subject, no part of which ought to be separate from any other, and all of which ought to be present equally to the student's mind at the end of his career. I know not how to advise you to remedy this. The regulations of our schools and examining boards make it practically impossible to continue the active pursuit of anatomy and physiology after the primary examinations in those subjects are passed, except in the case of those few men who have more than the usual period to devote to their studies. The ultimate cause of the defect lies probably in the fact that the period of study is too short. I can only hope that this may some day be remedied, and that, when it is so, the examining-bodies may see their way to insist on a re-examination at each successive stage in all the subjects presented at a previous stage of the course. Till this is done the present perfunctory study of these great subjects must, I fear, continue to be the rule—a rule which will allow fewer and fewer exceptions to its monotonous tyranny as it becomes more firmly established.

From the school to the hospital is an easy step, and, fortunately, in London, at any rate, the two need never be separated by any zealous student. Practice—hospital-practice—should be the basis of all your studies, the source from which they flow, the test to which they are every day referred. No reading of books, however good the books may be, and however well you may read them, no listening to lectures or demonstrations, no matter how striking or eloquent, will make any one of you a competent physician or surgeon. Every line you read, every lecture you hear, should be tested by the living illustrations which our wards furnish to you in such abundance, and to provide such illustrations and such instruction is one of the chief functions of our great hospitals, and one of their most important public benefits. I had almost said absolutely their greatest. Hospitals are regarded by the public almost exclusively as places for the relief of the sick, and their function in medical education is usually passed over as "a doctor's question." No mistake can be more glaring. The relief of suffering, and the cure of disease is, of course, the primary object of a hospital, and in those hospitals which have no medical school attached, their only function; but consider for a moment how inferior in importance to the public, and to humanity in general, is the relief thus administered to individuals, compared to the saving of pain and of life involved in even one of the many discoveries made in our hospitals, and constantly propagated and enlarged by the improved teaching founded on them. What, for example, was the relief afforded to the individual sufferers from popliteal aneurysm in all the hospitals before Hunter's time, compared to the effect of the discovery which he made in this hospital with regard

to its treatment? The first ended with the individuals treated, the second has gone on continually improving the treatment of that formidable malady to an extent which Hunter himself could never have foreseen. I believe the public will get to see the truth of this in a little while, and will understand that the clinical investigation of the cases by the staff and the students is not only necessary, but is, in the highest degree, beneficial to the patient himself as well as to the public. It is to me pitiable to think of the mass of material for clinical instruction which is allowed to be wasted here in London, to say nothing of the country, and of the small period of their curriculum which our students pass in what ought to be their chief employment, work in the wards. Something of this is due to the separation, every way to be deplored, which accident has caused between the hospitals so-called, and the dispensaries and infirmaries. These latter ought to be dependent portions of the same institutions as the hospitals, and equally accessible to students, or rather, equally parts of their compulsory clinical instruction. Consider the difference which has been made in the education of a medical student by the abolition of the apprentice-system. A great number of them pass through their course and obtain the diploma without any personal familiarity with the management of a case. How can they come afterwards into practice without finding themselves, in Milton's words, "In the things that most concern, unpractised, unprepared, and still to seek"? How great an advantage would it not be, if time could be found for students, as a part of their curriculum, to take personal charge of dispensary and infirmary cases, under the supervision of the medical officers of those institutions! and so familiarise themselves with the routine-duties of actual practice, duties so important to the practitioner, so necessary for the patient, yet which hardly can be confided to the personal care of students in our hospitals as at present constituted.

I have spent much time and labour, hitherto in vain, in trying to persuade the public and the profession that our hospitals ought not to be isolated institutions as they are now, completely separated from the infirmaries and dispensaries, holding no communication with them, receiving no patients from them, and giving them no assistance; but that the hospitals ought to stand to the other medical institutions in somewhat the same relation as consulting practitioners do to the medical men of their neighbourhood, receiving some patients from them for opinion, others for treatment, and giving them, in return, all the assistance they require, amongst which the services of their medical students in visiting the patients, and taking charge of their cases, under the superintendence of the medical officers of each institution, would be one of the greatest usefulness to both parties. I am aware of the difficulties in the way of such a scheme, but I regard them all as subordinate to the great initial difficulty of the shortness of the present curriculum. If this could be extended, I see no reason why a part of the time so gained should not be given up to a properly regulated attendance on patients at their own homes, or in infirmaries. Another, and hardly a minor advantage of such a federation of our medical institutions, as I have hinted at, would be that it would almost necessarily entail the reform of our present out-patient system; but on this well worn topic I must not now detain you. My views upon it are well known to those who trouble themselves about them, and I do not care to feed you on *crambe repetita*. All I need say is that, at this hospital, we have, at any rate, so far succeeded in checking the tendency to indiscriminate reception of out-patients, that our assistant physicians and surgeons are able, without neglecting their duty to the patients, to use the abundant material which the out-patient room supplies, for the instruction of the students; and I need not tell those who know these gentlemen, as most of you do, that what they are able to do they do most heartily and efficiently, and that the student will pass some of the most valuable hours of his day in following the cases of the out-patients.

I wish I had time to treat of an important topic in regard to hospitals, and one to which, in medical circles, too little attention is paid. I mean their method of government. Happily, the matter is one which requires the less notice in this place, since the constitution under which we at St. George's live, seems to me perfect, and it would be invidious to illustrate its merits by reference to the misfortunes or errors of those of our neighbours who are less happily circumstanced. That constitution is a pure republic, where the lay and the medical men vote and debate equally and openly, and it has resulted in a condition of mutual goodwill and good offices between the hospital and school, which is of the highest advantage to both.

I need not say, gentlemen, that much of this happy result is due to the personal qualities of those who preside over the affairs of the hospital, and I am glad to see our worthy Treasurer here to-day, and to assure him, on behalf of my colleagues and myself, how fully we

appreciate the unfailing consideration and help which we receive from him, and from the Board of Governors, and how sincerely we thank them for it.

I now come to the third and the most difficult part of my subject—to the consideration of those great institutions through which chiefly the profession communicates with the public departments, and through which its internal regulation is or ought to be carried on, and by which the rules for our medical curriculum and examinations are settled; I mean the licensing bodies and the Medical Council. Now here I find myself in rather a peculiar position. I have served the College of Surgeons in various offices, and always with pride and affection. It is a great and noble institution, one that has done great things for the profession, and deserved nobly of it. Those who charge the College of Surgeons with selfish aims, and with administering the affairs of the profession with a view to the private interests of its own Council, do so in entire ignorance of the subject. Such charges may serve to spice a newspaper-article; but to those who are acquainted with the management of the affairs of the College, they are ridiculous. During the many years I have sat on the Council, I never knew any subject connected with the examinations, or the *personnel* of the examiners, debated or settled with reference to anything except the perfection, as far as possible, of the system; nor do I believe that any examination in the kingdom has made greater progress towards efficiency than that of the College of Surgeons has during the time that has elapsed since my student-days. I do indeed greatly deplore the cutting up of the examination into separate pieces. The separation of anatomy from physiology I consider a grievous mistake, both in theory and practice, and I resisted it as long and as vigorously as I could. I also think (as I said before) that the entire separation of the Primary from the Pass examination is a mistaken system; but I stand in a small minority in thus thinking. The Medical Council, the College of Physicians, and the great bulk of the authorities outside the College would have it so, and so for the present, at any rate, it must be. Leaving this aside, just consider for a moment the difference between the present membership examination at the College, and that which prevailed when Brodie and Lawrence were examiners. The present examination is looked upon as a difficult one, yet I do not think that it is so to those who approach it as a practical examination ought to be approached, through the avenue of honest and continuous practical work in the dissecting-room, the laboratory, and the wards. It is, indeed, difficult to get it up by "cram," and the lamentable fact that so many students try that plan accounts for the equally lamentable result that the percentage of rejections amounts, I fancy, to something between a quarter and a third at most of the examinations, and in some reaches a still higher figure.

I have no doubt that anyone who dispassionately examines the question, with a fair knowledge of the condition of things at different periods, will agree with me that the College of Surgeons, in its dealings with medical education, has acted vigorously and wisely, and has earned the gratitude of the profession of which it is the leading educational institution; and I do not doubt that in its degree the College of Physicians is entitled to a share of the same praise.

Having said so much as to the excellencies of the Colleges, I am compelled to say that, notwithstanding all their eminent services to the profession, these great institutions are not so organised as to do all they might for the service of the public. State medicine is coming every day into a more prominent position as a branch of general policy. Where are the medical advisers of the State? and who are they? All that we see in public leads us to conclude that medical questions are settled less on medical considerations than by a reference to popular clamour, or the pressure of contending interests. Meanwhile, the great Colleges of London are never consulted, except on some merely trivial point of administrative business; nor is their influence on any political question, such as a medical Act, in any proportion to the number and intelligence of their members. The reasons for this very undesirable state of things seem to me mainly two: the defective organisation of the Colleges, and their want of union. The College of Surgeons is organised on the model of a City company; in fact, for some time, it was governed by a master and wardens, exactly as a company is; and, though the names of the functionaries have been changed, the essence of the government remains the same. Such a constitution, in which the master or president changes every year, reduces his power, and with it that of his council, to a minimum, and makes the secretary or other non-professional officer the most important authority. The result is fatal to the public influence of the College, and it also binds it down inevitably to an unreasoning conservatism. It excludes altogether the influence which the general body of the profession, the Fellows and Members, ought in all reason and fairness to have on the deliberations of the Council and the

government of the great institution which derives its lustre from their numbers and achievements, and its very means of existence from their contributions. I have no doubt whatever that the administration of this great College must, and ultimately will, be reformed in these particulars, if it should still remain as a separate institution. Of the College of Physicians, I would say the same in one respect, that it affords too little scope for the representation of the general opinion of its members, and in that respect requires reorganisation. In other respects, its constitution seems to me much superior to that of my own College. The president is a more permanent officer, and has more influence on the course of college affairs; the Fellows meet in conclave; the administration is in professional, and not in lay, hands. But the question will inevitably occur before long, Why should these great bodies remain separate? They have at length, and, as I believe, with most happy augury, seen the desirability of union for the purposes of examination. Why should they not be united into one great institution, which would become the Medical University (if you like so to call it) for England, and possibly for the British Empire, through which the profession could communicate with the State and its various departments, and which could regulate all the various and intricate questions which are constantly cropping up with regard to the curriculum of education, the visitation of schools, the management and results of examinations, the titles under which men practise, and the methods which they employ to obtain practice. All these questions, and others of a similar nature, are now placed in the hands of the Medical Council, an august body of which the profession knows little more than this: that, though composed of the most eminent men, and animated by the best intentions, it has not hitherto done much for the solution of these problems. The reason I take to be, again, that the organisation of the Council is faulty, if it is intended as an instrument for action. For deliberation, indeed, nothing could be more appropriate than a body composed of the *élite* of the profession, taken from all parts of the British Islands, and elected by the Crown or by public bodies with all possible diversities of situation and interests; and, of deliberation, there is certainly plenty in the Council's proceedings. But the diversity of the interests which the members represent, and of their origin, effectually prevents any definite action.

Some more effectual machine must be provided, and one animated by a more powerful motive force. Now this machine can, as far as I see, be found only in some such institution as I have hinted at—formed by a combination of our great Colleges; and the motive force, where are we to find that? Well, I should reply, in some more popular organisation—more democratic, if you like to use that now fashionable term. I do not mean that the government of the Colleges is to be put into the hands of the Members. I am not so democratic as that; but I hope to see the day when the Members, as well as the Fellows, will have a voice in the election of the Council and of the President, and when, on all important matters, the constituency of the College (or of the united Colleges) will be consulted. That constituency, we must recollect, is not composed of handicraftsmen or agricultural labourers, but of professional gentlemen, perfectly acquainted with the wants of the profession (nay, much better acquainted with many of them than those who are called its "heads"), and the expression of whose opinion, could we find a means of eliciting it, would strengthen the authorities in a way no other force could do. It is not, then, in any spirit of hostility to the Colleges, but, on the contrary, with the sincerest desire to promote and extend their sphere of usefulness, that I advocate a change in their organisation, which, in fact, I regard as almost certain to be brought about in one form or other. The object I have in view is the formation of a great institution, which can worthily represent the medical profession in England, and through which the profession can pronounce its opinion with an authority which can only be possessed by a comprehensive and a self-governing body. No one, I think, will deny that there are plenty of subjects upon which the voice of the profession could be expressed decisively, and to the great benefit of the public, as well as their own. The present régime of happy-go-lucky has left us in a position equally unsatisfactory to both parties. If we look at the profession, we see it oppressed on all sides by so-called "charities," which eat up the means of living of general practitioners, while the good which they do to the public is, to use the mildest term, problematical. We see public appointments remunerated at a rate below starvation, yet eagerly sought after, in order to keep out competitors from the field of practice. If we look at the public, we see them the victims of every fresh folly and delusion which it may suit the reckless ingenuity of quacks to palm off upon them. And we cannot help admitting that there are many members of our own profession, whose diplomas may be perfectly regular, but whose practice is hardly to be distinguished from that of

the avowed quack. Coincidentally, in fact, with the immense strides which the art of medicine has made, we see this fungus of quackery growing more luxuriant. I do not say that a strong and prevalent central authority would reform all this. You can no more make men honest by authority than you can make them religious by Act of Parliament. But, at any rate, it would be easier to detect, and, if not punish, at least rebuke, infamy, if there were such an institution as I have imagined, and the materials for which lie so ready at hand, if we could but combine them. Think of the chaos in which all such matters are now weltering. There are plenty of good schools, and plenty of bad ones. But there is no central authority which has the right of visiting them, and exercises it; independent enough to be trusted to distinguish the bad from the good; and powerful enough to enforce on the former the alternative of reform or dissolution. There are plenty of good hospitals, organised for the service of the public, and the spread of medical education; but they are oppressed and stunted in their growth by a crowd of institutions, which are organised, not for the service of the public, but for private ends, and which, far from spreading medical education, draw off from our great medical schools many of the cases which would be most useful for clinical purposes. But there is no central authority which could guide the public to discern the one from the other. The public service is starved and the poor are ill-attended, in consequence of injudicious parsimony. Yet there is no central authority which could pronounce decisively on the bad policy of the employers, and on the unconscientious greediness of the employed, and so defend the poor, who are the victims of the system, against both. The indiscriminate abuse of medical charity is eating out whatever of manly independence may have been left in our poorer classes; and is, at the same time, rendering the struggles of the general practitioner more and more severe. Yet there is no central authority which could give a decisive opinion on all this, and rescue the public from a state of things as dangerous to the body politic as to the interests of our own profession. Men of good education and of sound experience—licentiates of our great colleges—complain that any inexperienced young man can go away to some trumpery university, and return with a degree, enabling him to pose in the eyes of the public as their professional superior; and there is no central authority to stop this nefarious traffic, or even expose its real nature. Such are a few, and only a few, of the uses to which my fancied central authority might be put. Your own experience will easily supply plenty of others.

And it does not seem to me at all unlikely that some such combination as I have hinted at, may be arrived at sooner perhaps than we now expect. The union of the two Colleges for examination purposes is a very striking and very pregnant fact. But, one thing, at any rate, we all can do, for we are all Members, either of the College of Physicians or Surgeons. We can, if you think with me, labour in every way that seems prudent and feasible, to obtain for the Fellows and Members of these Colleges the rights to which their intelligence and their social position entitle them in their own college; and so, if we cannot change the institutions which exist, we can at any rate hope to reform and strengthen them. In doing this, I am sure we shall be rendering an equal service to the public, and to this, the most energetic and the most progressive of all professions.

Gentlemen, my task is done. I only wish I could have executed it in a style more worthy of my great theme. These few minutes, however, will not be thrown away, if I have succeeded in arousing, in any degree, in the minds of the junior students, an idea of the greatness of the calling on which they are now entering, of the services which it has rendered to humanity in the recent past, and of the far greater services to be expected from it in the near future—if I have impressed on the more advanced students the conviction that success in their studies is only to be sought by constant personal familiarity with the actual facts of practice; and, still more, if I have in any degree stimulated my colleagues to a resolute determination, that they will attempt to place the organisation of our professional institutions on a footing more worthy of the rapid advances of medicine in public estimation and public usefulness. I need hardly say that my own share in any such attempt must necessarily be a very short and a very humble one; but I should be indeed glad if I could think I had done anything towards that brighter future that awaits the great profession to which I have dedicated all the active years of my life.

I am sensible that I have only touched on the very surface of my subject; but I trust to your indulgence to forgive my deficiencies, and to your intelligence to supply them. To handle such a theme fully, would require not a speech, but a treatise; and even then the matter is one not so much for words as for action. I confidently hope to see many of the deficiencies which I have noted in the present state of things remedied in no long time, and that is because I look confi-

dently to the energy of the rising generation of medical men, to enforce the reforms which are needed.

With all good wishes for your progress in your studies, and for the success of the noble school in which you commence them, I wish you all heartily farewell.

BRITISH MEDICAL ASSOCIATION.

FIFTY-THIRD ANNUAL MEETING.

PROCEEDINGS OF SECTIONS.

ON THE CAUSES OF ATROPHY OF THE OPTIC NERVE, OTHER THAN GLAUCOMATOUS.

Introduction to a Discussion in the Section of Ophthalmology at the Annual Meeting of the British Medical Association in Cardiff.

By ARTHUR H. BENSON, F.R.C.S.I.,

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WHEN your Secretaries wrote to ask me to open, at this meeting, a discussion on the "Causes of Atrophy of the Optic Nerve, other than Glaucomatous," I accepted with a degree of rashness which I have since had reason to regret. The subject is one of such difficulty and complexity, that I can only very imperfectly fulfil the task assigned to me, and must leave to those who are to take part in the discussion the more full elucidation of the dark places.

The advantage of stated discussions on subjects arranged beforehand has been questioned, and with, perhaps, some reason. I cannot, however, help thinking that it is an useful thing now and again to marshal and pass in review before us the various facts, as far as they are known, and the theories that are deemed most reasonable, concerning some of the subjects of importance in connection with each section of medicine and surgery.

A discussion, such as I anticipate to-day, serves to register the present state of knowledge and opinion, and to place in some collected form the most important points, both those that are understood and those that still remain unexplained. For I hold that it is of the greatest practical importance to know where our knowledge ceases; to recognise the extent of our ignorance; so that, knowing, we may be the more open to receive new facts when presented to us.

In discussing atrophy of the optic nerve, it must be understood that the term, as used, is synonymous with atrophy of the disc; for, from a clinical point of view, the disc is our guide, being the only part of the nerve visible, or capable of accurate investigation; and we are the more justified in adopting this nomenclature in view of the fact, that atrophy of the disc is always associated with atrophy of the nerve-trunk; and, conversely, atrophy of the nerve-trunk is probably always, if sufficient time be allowed, associated with atrophic changes in the disc.

By atrophy we mean to include all those trophic changes, whether primary in the nerve or consecutive to some other condition, whether the result of acute inflammation or of slow sclerosis, which, sooner or later, alters the appearance of the disc from its normal pink colour to white or bluish grey, with more or less marked change in the blood-vessels of the disc and retina.

Post mortem observations have shown that atrophy of the disc is not limited to the portion of the nerve that is visible with the ophthalmoscope, but always extends to the corresponding nerve-trunk, and often to the optic tract; that the change in the nerve varies greatly, in some cases rendering the trunk of the nerve considerably smaller than normal, and imparting to it a greyish translucent, or gelatinous look, by reason of a "wasting of all the structures of the nerve, fibres and connective elements, with, especially in recent cases, products of degeneration of the nerve-fibres. The position of the latter may, at first, be masked by rows of fatty particles.

"In other cases the nerve may be little diminished in size, but may present, under the microscope, a great increase in the interstitial connective tissue, fibres, and cells, with disappearance of the nerve-tubules. Commonly, the change is greater in the circumferential portions of the nerve than in the central. Occasionally the reverse is the case. In atrophy from pressure on the nerve its size is usually greatly reduced, and the increase of connective tissue is very considerable. In primary grey atrophy the nerve-trunk is usually little reduced in size, and is grey and gelatinous in appearance. Microscopically, it presents