ries of the laboratory, does not pay; and as for the written paper well, fireside anatomists are not apt to give very clear or very correct descriptions; fireside physiologists write perfect balloons of unsubstantial statements.

I have seemed to make examinations the end-all of your students' career, but I need hardly say that I look beyond them; the proof of a picture is in the selling of it; the proof of a student is in the passing of him. These are rough tests which mark out good pictures and competent men. I should hardly have made such a point of practical physiology had I not been convinced that its importance extends beyond as well as up to the time when a man receives his certificate of competency to take charge of lives and limbs.

I would have you convinced from the very outset of your medical studies that examinations and competency in after life are on the same lines—the same road leads to both, and to the success which is the natural and lawful reward of competency. It is the royal road of actual contact with facts which temper men as fire tempers steel. Your way lies through the dissecting room, the laboratory, and the hospital ward, more than through the lecture room and the printed book. It is something, no doubt, to be learned, to be well filled with the knowledge of what other men have thought, said, and done; but mere learning is an invertebrate; contact with facts gives it backbone, and makes all the difference between the bookworm and mental vertebrate man. And it is the same royal road that leads on to that well-grounded consciousness of power, to that fertility of practical resource in the face of danger; above all, to that "never say die" spirit, which is the best of drugs—best for your patients, best for their doctors, best, indeed, for every man and woman with duties and purposes to fulfil.

Note.—The diagrams used in the lecture were in red and blue. In the woodcuts as printed, red is light shading, blue is dark shading. In the third diagram red is in plain lines, blue in dotted lines.

INTRODUCTORY ADDRESS ON THE PRESENT POSITION OF UNIVERSITY EDUCATION IN LONDON.

*Delivered at King's College at the Opening of the Session
1888-89.*

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IN looking back through a somewhat lengthened professional career, Mr. Erichsen said that he could mark no incident in it that had given him more unmixed gratification than that of having been asked to preside on that occasion. It was not only that he felt it an honour, although he was well aware that the honour was not personal to himself, but that it was conferred upon him in virtue of that office which he held in a sister college as President of University College, and that the honour was, as it were, transmitted to him through that office of President and through that College over which he had the honour of presiding. In the name of that College he asked to be allowed to say how thoroughly it appreciated the honour that had been done to it through one of its officers.

But there was another source of deep gratification in his being present as President of University College, because it was an evidence, if any were needed, that those lines which once deeply and somewhat widely separated those two Colleges, University and King's, had now been obliterated. That change, and he thought he might say that advance, in public opinion which had marked the last half century had enabled two institutions (which at their origin differed so much as almost to be antagonistic) to assume a position of complete harmony. That harmony, as their Principal stated, had been brought about in a great measure by the co-operation of the two institutions in what he could not but think was one of the noblest and greatest educational works that had ever been attempted in this metropolis, namely, an endeavour to establish for the first time in the history

of London a Teaching University not only in, but for, London. It would, he said, ill become him to enter at any length into this question, inasmuch as they were all aware that a Royal Commission had been sitting for some months past, and was still in session, in order to consider the advisability of acceding to a petition that the two Colleges thought fit, in conjunction with other Institutions, to present to the Crown. But as he knew there was a great deal of misconception in the public mind, not only in the medical profession but in the mind of the public generally, upon this question of a new university for London, and as this might be the last time that he would have an opportunity of saying a word upon the subject in public before they received the report of that Commission which they were anxiously looking forward to, he might, perhaps, be allowed to say a few words in explanation of the position of the two Colleges in connection with the proposed Albert University.

It had long been felt by those who were interested in the cause of education in London that the sons and daughters of Londoners suffered much by the impossibility of receiving a thorough university education within the metropolis itself, and that it was necessary for them to go to institutions distant from their own homes in pursuit of the education which they desired. It was also felt—and especially in connection with the medical profession—that a great grievance existed in respect to the impossibility of those students who were educated in London receiving the much-coveted M.D. degree in connection with the schools in which they were educated, or only with very considerable difficulty and loss of time in the metropolis itself at all, and that it was necessary for them to go to distant or to foreign universities in order to receive such a degree. An Association outside the two Colleges, consisting of men much interested in educational matters, many of great learning and of great scientific repute, had been formed, and was presided over by a gentleman who in all probability was better cognisant of the requirements of medical students, so far as educational purposes were concerned, than any man living—he meant the President of the General Medical Council. That Association placed itself in communication with University and King's Colleges, and in consequence of the negotiations so opened up, those two Colleges joined in the views of that Association, and presented a petition to the Crown to enable them to take university rank, to give a university education, and to confer university degrees upon students in this metropolis. But they did not wish to do so alone and unaided. Neither of the Colleges had the slightest feeling of selfish interest in this matter. They were willing to sacrifice their own individuality, and they were anxious to associate themselves with the recognised medical schools in the metropolis on an equal and equitable footing, with the view of carrying out the object they had in view.

The governing bodies of the two Colleges felt that these great institutions had attained a position that gave them a perfect right to solicit from the Government that university rank should be conferred upon them, inasmuch as they stood in every respect upon an equal footing with the majority of the universities in the United Kingdom. Conjointly these two Colleges were founded some sixty years ago at a cost of considerably more than half a million of money. Conjointly they possessed an income from fees of something like £70,000 a year; conjointly they possessed trust funds to the extent of several hundreds of thousands of pounds for the endowment of lectureships, of scholarships, and prizes of various kinds. Each possessed in itself every requisite for a complete system of university education, a complete organisation of faculties, a faculty of arts, of laws, of science, and of medicine, and in that institution a department of theology. Each was connected with a large boys' school, and so far as the medical department was concerned, each College had a clinical hospital associated with it. Taking then the size of the two institutions, their wealth, their endowments, and their general position as educational establishments, the governing bodies of the two Colleges felt that they were fully justified in asking and petitioning that university rank might be conferred upon them. What the result of the deliberations of the Commission would be it was, of course, impossible for him or anyone outside of it to say, but they could only hope that the Commission might be favourably inclined to the petition which had been presented to the Crown by the evidence which had been brought before it. Without going further into this matter there was only one point which he wished to call attention to, and it was that, if the petition were granted, if university rank were accorded to the two Colleges in connection with the medical schools in London, they would be able to start at once with a

body of undergraduates which would be larger than that possessed, he believed, by any university in the United Kingdom. They would be able to start at once, so far as the two Colleges alone were concerned, with a body of undergraduates numbering something like 2,000, and if they added those who would come in from the various associated registered medical schools, the number of undergraduates would certainly amount to considerably above 3,000. He would abstain from going further into this matter, which was one which might well occupy him for a considerable time, one in which he, in common with Dr. Wace and the governing bodies of the two institutions, took the deepest interest, but it would be scarcely decorous to do more than state the few facts which he had done in face of the fact that the report of the Royal Commission had not as yet been issued.

Mr. Erichsen then proceeded to address the successful and the unsuccessful students. The failure of the latter would, *ceteris paribus*, in all probability be found to arise from one of three causes: 1, want of proper application; 2, want of method; 3, the attempt to grasp at too many subjects, the want of concentration of mind upon a more limited number. Success, he continued, was open to every man in the medical profession. There was no profession so open as that of medicine. There was no profession in which family influence, social circumstances, accidents of position availed so little as in that of medicine. The profession of medicine might be truly called the republic of medicine, in the sense that there was no hereditary rule in it—no privileged class. Every position in the medical profession was equally open to every man who entered it, if he had the ability to aspire to it, and the strength of character and will to seize it. It would give to those who entered it everything that the profession could afford, social position, scientific eminence, such honours as medical men were thought worthy of, such wealth as might fall to the lot of a professional man. It would give to him all these, and something much greater and nobler. It would give him the gift of daily usefulness in life, daily usefulness to his fellow creatures, with the consciousness of having led a useful life, and not having spent it in vain. Success in the medical profession would come to those who deserved it, and, when he spoke of success, he meant true and legitimate success, not tinsel, which was often taken for the real metal; not that notoriety which came from habitual self-assertion, from skilful self-advertisement, from the disparagement of competitors and rivals; still less did he mean that ignoble prosperity brought about by the plausible tongue, the supple knee, and the grasping hand; but success which was accorded to men by the unanimous voice of their own profession and of an enlightened public, which was the true measure of success in the profession. In order to obtain this and anything like true eminence in the profession, three things were necessary: 1, to study hard; 2, to observe closely and diligently; and 3, to live soberly and righteously in the sight of God and man. If that were done, success would attend their efforts.

The knowledge attained or being attained now during the period of studentship would, no doubt, be of considerable use hereafter; but the true system of education, and that system of education which they ought to strive at, was to endeavour to train their minds, not to the mere acquisition of dry facts, not the mere accumulation of masses of ill-digested knowledge, but to train their minds to remain open for the reception of truth throughout their lives, and to enable them to meet the various emergencies of the profession whenever they occurred. Medical knowledge was ever progressive and never stationary. Medicine was based on the natural sciences; the natural sciences were never at rest; they were always moving onwards, and so it was with medicine. A man who remained stationary retrograded when all around him was moving in advance. In order to keep abreast it was necessary for them not only to obtain equal knowledge with their brethren, but to throw aside that which had become effete and useless. The medical man must learn to forget and throw aside the *débris* of exploded theories and the dry and useless husks of obsolete practice. It was impossible for a man encumbered with obsolete knowledge to keep abreast of his competitors. He must learn to throw it aside; by whatever labour it had been acquired, it must be discarded and abandoned. Every man in the medical profession should be a student through his life, and in the course of a long existence they would find that it was absolutely necessary to relearn many matters thought to be thoroughly mastered at an earlier period. During his lifetime and in that of many still living three great discoveries had revolutionised the branch of surgery alone. These

were the elucidation of the pathology of tumours by the microscope, the use of anaesthetics, and the application of Pasteur's discoveries to the practice of surgery by the introduction of the antiseptic system of the treatment of wounds by Sir Joseph Lister. Forty years ago the microscope was scarcely used in pathological anatomy. A distinguished pathologist and surgeon of his day had said that a pathological fact only lived four years. In all probability, he gave a rather too long estimate of its life-history in those days. Before the introduction of anaesthetics the scenes in the operating theatre were very different to what was witnessed now. Every stroke of the knife was followed by a cry of anguish or a suppressed groan of intense suffering. Time was the great element in operations, and surgeons operated against time in order to save the patient prolonged and unnecessary suffering. Now it signified little whether the patient was fifty seconds or fifty minutes under the knife. They had to relearn a great part of operative surgery after the introduction of anaesthetics. But perhaps the greatest revolution in modern surgery was that which had been brought about by the introduction of that method of treatment which was due to the untiring energy of one of their professors—a man, he was proud to say, who had been a house-surgeon of his, with whom he had been united in ties of friendship ever since that period. He need scarcely say he meant Sir Joseph Lister. He knew no illustration more to the point to show how thoroughly necessary it was for a man to unlearn as well as learn than that which had taken place in connection with antiseptic surgery. In connection with the study of medicine, he might point out that there was a great charm, and that the acquisition of medical knowledge was attended with an amount of satisfaction that he believed did not attend any other profession. This arose from two causes. In the first place, medicine was, as he had already stated, never stationary; there was a constant variety in the study of medicine. There was never finality. You never came to a termination. You were always on the threshold probably of some new discovery that might revolutionise the whole practice of the profession.

Then another great charm of medical study was its many-sidedness. It touched on all sides every department of natural science—biology, chemistry, physics, botany, geology, meteorology. The mechanician found ample scope in the domain of practical surgery, the artist in delineating the anatomy of healthy or of morbid structures, and the man of literary tastes in the cultivation of the literature of his profession. There was probably no profession that yielded annually so abundant a literary harvest as the medical. Dr. Billings calculated that in one year there were 3,200 distinct works, 1,500 theses, and 40,000 articles published on medical subjects. But if there were special charms in the study of medicine, there was also a special danger, and that danger consisted in neglecting this many-sidedness and in becoming too technical. The profession should be their first study, but not their only one, or they would cramp and narrow their intellect. They must try to widen their intellectual range by other than technical work and devote an hour a day to music or to art or literature, and more especially to history, to poetry, or fiction. Let Macaulay or Froude, Scott, Tennyson or Longfellow, Dickens, Thackeray, or George Eliot be the intellectual antidotes to so prolonged a devotion to their purely professional studies.

In conclusion, Mr. Erichsen urged the students to bear in mind that from the first day on which they were registered they became members of a learned and liberal profession, and that they would be judged in the circle in which they moved by their conduct. Let that always be characterised by moral rectitude, and by attention to the amenities of polished life which were essential to the bearing and the character of a gentleman. In after life, when called to take part in the public affairs of a great profession, let them be guided not by a narrow and selfish regard to the interests of any one special institution or class in the profession, but by a broad and catholic spirit of liberality, and by a desire to advance the good of the whole. In their practice let their daily prayer be to illumine from whom all knowledge was derived to strengthen their judgment, to clear their perception, and to guide their hand aright. Let them remember that they belonged to a beneficent profession, the object of which was the alleviation of the physical ills of man, and to guard him from the invasion of disease—objects more beneficent and useful than were those of any other walk in life. If they would do this they would find that they would exercise their profession in happiness and in comfort. They would live to be respected and honoured by those who knew them, and respected, honoured and beloved the most by those who knew them best.