be taken before entering at such school. The Scottish schools admit it only after the first two years of education at a medical school. The latter system has certainly the advantage of giving to the practitioner a more instructed, and therefore a more efficient, pupil. Whether such increased efficiency would be deemed by the master an equivalent for the expense of maintenance of the pupil, so as to lighten the expense of his prolonged education, is a question, I think, to be referred entirely to, and decided by, the general practitioners only. It is nearly certain that it would be a greater benefit to the pupil himself, than the system of requiring it before entering a medical school, as stated in the list of queries before alluded to. If, however, a preliminary examination in botany, chemistry, physics, and the elements of general anatomy and physiology were required *before the articulated pupilage* as well as before admission to a medical school, most of the advantages of the latter system would be gained without the interruption of the student's regular course of technical medical education, an interruption of a year's absence, which would intensify the frequent forgetfulness of anatomy and physiology even now complained of by the examiners in surgery at the pass examination.

I am very glad to observe a most marked and decided "consensus" of opinion of both teachers and practitioners to question 5 in the same series, viz., that a full two years should be spent in the wards of the hospital after passing the primary examination in anatomy and physiology. It is, in my opinion, one of the most important of all the detailed matters connected with medical education, and it should be accompanied by a much stricter method of enforcing attendance of actual clinical examinations, and of signing certificates of fitness of each individual student, than is now usually enforced.

Medicine as an art, gentlemen, has always and must always continue to precede medicine as a science, if a science it can even now be called. This is true, even to a greater extent, of surgery. We cannot wait in the emergencies of human suffering, and hold our hands, for a rational explanation of our methods of relief. Hence the necessity for empiricism; hence the various and absurd theories which have been given for practices which have proved successful. Men drew water from wells ages before Torricelli explained the pressure of the atmosphere in the action of the pump. And you will even now find twenty men who know what to do sooner than one who can render a valid reason for what he does. So medicine and surgery must be taught in the doctor's private dispensary and in the wards of our hospitals, as an art to be practised before it is explained as a science. "*Oportet discitem credere*" comes before "*Oportet edoctum judicare*" in the maxim of the old world philosophers.

Gentlemen, we are living in changeable if not stirring times, and it is at least very open to question whether we can decide, off-hand and straightway, all these nice adjustments of medical education in the way most advantageous for our posterity.

While we are, on the one hand, most sensible of the evils of multiplying and competing licensing bodies, and endeavouring to remove them by the establishment of a common State portal, we are, on the other, on the point of adding one more licensing authority to the nineteen already existing. The new Victoria University arises to compete with the Universities of Oxford, Cambridge, and London, in the face of the effete and collapsing warning of the University of Durham.

Concentration and redistribution in learning, as in politics, go hand in hand in our reforming land. In all the learned professions, everything seems to be somehow very wrong, and must needs be set right at once and without delay. We have all our hands full; and the strongest and toughest have perhaps rather a better chance of survival than the best and fittest. We have, like the one in the parable, often "bought a yoke of oxen, and must needs go and prove them", when we should have been wiser to prove them before buying them.

In the Church, we have priests and laymen, and bishops and priests, and bishops and laymen, wrangling in courts of law, and pugnacious in newspapers. In the Law are alterations, amalgamations, and radical changes, conducted, albeit, in close chambers, and usually with all the shrewd reticence of the gentlemen of the long robe. But from the arcana of even these quiet councils issue forth occasional explosions of a somewhat volcanic nature. The ecclesiastical judge bites his thumb at the Queen's Bench justice, and somewhat indecorous and personal attribution of motives emerge in the public papers.

Similar outbreaks occur in architectural and in engineering circles. The House of Commons itself, the "collective wisdom of the nation" is passing through the uneasy stages of an eruptive fever, and uncontrollable by the ordinary usages and traditions, gets mobbed into a confusion somewhat chaotic upon Home Rule and foreign affairs. Trivial causes bring on, in this tetanic condition, very violent convulsions; and the presence of a cat-of-nine-tails in the august custody of the Ser-

geant at Arms is sufficient to make everybody from the honourable the Speaker downwards "out of order".

"It is a reeling world, my lord", as Catesby says in *Richard the Second*. There is surely something in the air, or in the weather, or in the sun-spots! That the result of the medley will tend somehow to the advancement of learning and science in promoting the greatest happiness of the greatest number is not open to doubt. Movement of this kind is usually evolution; and we may rest confidently in the hope that in some future happy time the competitions of the nineteen medical degree-granting bodies will develop into a professional "happy family", with no encroaching licentiates assuming titles which do not fairly belong to them, when "the envy of Ephraim and the vexations of Judah" will cease from troubling the dignified repose of the General Medical Council; and when both practitioners and students, unfettered by regulations, can be trusted to be *a law unto themselves* (as advocated by some of our enthusiastic, though somewhat *doctrinaire* advisers). Then will medical science and experience be among those good things which that wonderful compendium of all sorts of knowledge which was wrapped up in the brain of Shakespeare designates as "Begot in the ventricles of memory, nourished in the womb of the pia mater, and delivered upon the mellowing of occasion" (*Love's Labour's Lost*, Act IV, scene 2).

THE GENERAL PRACTITIONER OF MEDICINE : HIS POSITION AND EDUCATION.

Being an Extract from the Introductory Address delivered at the Annual Meeting of the South-Eastern Branch.

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It has been suggested to me that "the General Practitioner" should be the burden of my song to-day; and, as for nearly twenty years I had the honour of being very actively engaged in that capacity, I trust I am not incompetent to approach the subject without prejudice or reserve.

The general cry for higher education, for medical reform, the discussion on medical titles, our relations with the State and with the public, all betray an unsettled state of the *mens medica*, a disturbed condition of our professional relations with each other and with the public. We are in the throes of change, and the efforts of our admirable British Medical Association will still be needed, as they have hitherto always been employed, to conduct these changes along the right paths and make all things work together for good. On the subject of higher education, although I admit that in one sense no education can be too high for such a profession as ours, I am entirely a nonconformist to the view that of all who enter its portals the same high standard should be demanded.

Let us consider for a moment our relations with each other, consulting physicians and consulting surgeons acting as general practitioners, and general practitioners sporting their degrees and thinking themselves, as no doubt they very often are, as good as the physicians and surgeons. Then, again, think of the specialists and what they arrogate to themselves, and how on their particular subjects they ride over everybody. Is it wonderful that with such glaring incongruities the public are puzzled, and often take what appear to us very irregular means of satisfying their own particular medical requirements?

A Frenchman who had committed a murder for gain, when asked by the judge why he had been guilty of such a crime, replied: "Il faut vivre", to which the judge replied, "Je ne vois pas la nécessité", and immediately ordered him to be hanged. Now, "Il faut vivre" is probably the only, but still very potent, reason why many physicians and surgeons enter into competition with the general practitioners, and the same may be said of those consulting surgeons who prescribe for medical cases. I fear this axiom will continue primarily to live at the root of our actions, however we may try to alter, disguise, or avoid the imputation. The same applies also to the prescribing chemists, to the unqualified practitioners, and last, but not least, to the lowest and most mercenary of all, the common quack.

We are apt to forget in our wallings for medical reform, that it is by no means the duty of the legislature to take up the cause of the doctors, and to give them various forms of protection; on the contrary, a statesman should, and would doubtless as a rule, see it to be his duty to do the greatest good for the greatest numbers; and it is on this ground that I take leave to differ from the general almost universal cry of raising the standard of medical education to an uniform height. I do not see what is to happen to the impecunious, the lower class of tradespeople, to the artisans, and to all those labouring but independent

classes above the region of the charity seekers and indigent paupers. It is quite clear that our highly educated and aspiring young practitioners who have had the means of spending five or six years at the hospitals and schools in acquiring their medical knowledge will not descend to accept such fees as these classes are able to afford; and consequently they will be driven to consult quacks, and prescribing chemists, or to sacrifice their independence by availing themselves of medical charity. Now, to drive such a large section of the community to spend their money outside the pale of the profession is simply to deprive the profession of a very large amount of income which would, if we gave the opportunity, flow naturally into its coffers.

Even in my own experience, there has existed the (what would now be called) old-fashioned apothecary, the very man who, in my opinion, administered in the best possible way to the medical and surgical requirements of that section of society just now referred to. Some of these we have most of us known personally; men who had open surgeries where man and maid might have a tooth pulled out for a shilling, or a splinter removed, or an abscess opened for a proportionate fee, or where a mother might have some teething powders for her baby, and ask for some liver powders for her little Johnny; where, in short, all people might have their petty ailments dealt with in a satisfactory manner, and in the cheapest and readiest method. These surgeries were similar to the out-patient room of the hospital or dispensary, only the patients retained their independence on retiring, and left something behind them for the doctor to live upon. In some of our manufacturing towns of the north, a few still exist. I have in my mind one gentleman who has prescribed literally for hundreds daily, and has his dispensers at hand to make up quickly what is ordered: the shilling, more or even less, is paid for the medicines, and the doctor becomes rich and enjoys a fine country house, with carriages, horses, and their attendant luxuries. Another case, too, I know of in a coal and mining district where a firm of three partners prescribe in a similar way, and have a clerk to see fair play; a basin stands on the office-table, and the pitmen and their families put in what they can afford. These gentlemen are all of high character, and two of them I know to be exceptionally talented both in medical and surgical cases.

It is open to question whether provident dispensaries can ever take the place of the open surgeries: the public does not like to be bound by societies in such a personal matter as health, nor does it feel so independent in its choice of a doctor.

I regret that these valuable men are fast dying out. From their enormous field of observation they became quick sighted in detecting diseases, and had a ready way of dealing with them; and, although they could not, perhaps, so profoundly investigate an obscure case, they would often in the lesser things in physic (which after all form the chief part of our practice) be wiser and more trustworthy than the theoretically and highly educated man of more recent date.

At one of the meetings of our Association, it was told that a graduate of the University of London of high standing, being called to attend a case of measles, treated it as a skin-disease, and gave iodide of potassium. This seems very absurd, but can we, on reflection, wonder at it? I should be glad to know how many cases of measles any of us saw during our time of so-called "walking the hospital", and further, how much confidence any of us would place in a doctor who had only learned his profession theoretically. Now, it appears to me that all this insistence upon such a complete mastery of theoretical detail, before any other practical work of the profession is undertaken, is an error on the part of our medical reformers, as I also think is the large number of subjects in which complete theoretical knowledge is demanded.

I think the examination of the conjoint board, should it ever exist, ought not to be of too high a standard, or range over too many subjects, but that it should demand a very satisfactory practical knowledge of all the common "ills that flesh is heir to", so as to resuscitate, if possible, the surgeon and apothecary of twenty years ago. This should be the minimum and State examination for the protection of the general public; and men from these ranks would supply the medical and surgical necessities of those with limited means for a suitable remuneration, as well as attend to those small ailments about which the more wealthy preferred not to trouble their physician. Men who had not passed this State examination should not, under any circumstances, be allowed to practise, whether chemist, druggist, or quack. Here the responsibility of the State might cease, and the respective corporations and Universities would offer their higher honours to all who aspired to and were thoroughly able to achieve them.

We are, however, met by a serious difficulty on the very threshold of the question; the public, from custom and from want of knowledge of the subject, will recognise the degree of M.D. as the *alone* higher qualification. F.R.C.P. and F.R.C.S. have to them no practical meaning, as even a Fellow of the Royal College of Physicians cannot

properly call himself a doctor, and a *doctor the public will have*. Since this is so, the degree of M.D. becomes an absolute necessity to him who aspires to higher medical position. How is this to be obtained by those who had not originally thought of any position beyond that of general practitioners? Like many others, I have had good reason to know that the doors of the British Universities are practically closed to those who would improve their medical position, certainly to those in active practice beyond the bounds of the metropolis; for the former Medical Reform Bill caused the Universities to insist upon certain courses of lectures being attended in a certain order, as well as many other requirements incompatible with residence in the provinces, entirely ignoring the fact that these lectures *have* been attended, and these requirements complied with previously to passing the examination for a general practitioner.

A friend of mine, who was six years in London, and had obtained by examination the Fellowship of the Royal College of Surgeons, and had fulfilled all the essential requirements of the London University, entered into practice. After some years, he found he had very little surgical and much medical work; and he was made to feel that, if he could but be called doctor, it would increase his influence with his patients and in the future probably be of considerable service to himself. He appealed to Cambridge and other Universities, but at first none would listen to him; at length, however, one did consent to receive him at the examinations if he attended a quarter of the lectures; and, as he had to travel a long distance to the University, those lectures were concentrated and lumped together in a short space of time, in order that my friend as well as the University might at least fulfil the letter of the law.

Gentlemen, why should this continue? I once put the question to a distinguished member of our profession and one occupying the highest offices in it, and his answer was that a degree implied a leisurely education, and generally a higher cultivation, and that it was very desirable that this should continue. In this I heartily agree with him; but I think there are other ways of obtaining this higher cultivation than attending for a second time courses of lectures, the utility of many of which is open to question, even when only attended for once in a lifetime. I maintain that a gentleman who has followed out the usual curriculum for making a general practitioner at the present day, and who has obtained some position at the end, say, of ten years of private practice, and has so kept up his anatomical, physiological, pathological, and medical knowledge as to pass a good searching examination at that period without any favour, is in all respects more fitted to uphold the dignity of the M.D. degree than the younger man who has simply followed the course as at present prescribed by the University authorities without having borne the responsibility of private practice, and his character as a man and a gentleman been tested and tempered by the hard experience of life.

Responsibility is, indeed, a master in the art of teaching, no master so thorough as he; books and theory sink into insignificance beside him; ten years under such a master, and the knowledge of men and manners, of what is called life, with the general reading which every thoughtful man would undertake during that period is, to my mind, an education and cultivation not equal with, but far, very far, superior, to that of the University graduate, who is deficient in such training, but who, perhaps, had even distinguished himself in the acquisition of theoretical knowledge.

Is it to be tolerated that a man, having started in life at a certain standard in his profession, should by law and usage *not have the liberty to raise himself to a higher standard*? A young man, I may say a boy, enters the London hospitals with the intention of being a general practitioner. He is entirely inexperienced as to what it exactly means, and ignorant as to his own powers and inclinations; he finds, perhaps, after he has done his work, that he has much distinguished himself, and that he would like to become a physician, and to take a degree at the London University. He is told that, unless he matriculates and goes through the whole curriculum *de novo*, this cannot be; the doors are closed to him, however excellent and distinguished he may be. Surely, gentlemen, this is antiquated conservatism, worthy only of the days of George III; and this in an University (I refer especially to that of London), affecting to be governed by the most liberal and advanced of principles.

It is obstructive policy such as this which drives men, and very good men too, to seek a foreign diploma to enable even those who are already members of the Royal College of Physicians to say to the public that they possess an University degree.

Men who take this road for becoming physicians will naturally be of the practical class rather than the teachers, scholars, writers, and philosophers of our ranks; these last will still take their rise from the ordinary University curriculum, in which theory and original investigation will hold its place and tend to develop those qualities which lead and

guide others, and enable their possessors to leave behind them a reputation and a name. The high-class general practitioner will still continue, as well he may do, the strength of the profession, the friend and adviser of families, the guide and support of many a weak mind and body—essentially the family doctor.

Probably few of us stop to reflect on the great responsibility of our position, how much we have in our hands of the happiness and welfare of society, and how enormous is the personal influence of the doctor when once he obtains the confidence and sympathy of his patients. Solomon says: "A merry heart doeth good like a medicine", and how constantly is a doctor able to give this merry heart to his patient by correcting sad and mistaken views of case or condition, by turning the current of thought into other channels, by exciting fresh interests, by calling upon the sympathies on behalf of others, and, most of all, by calling out the philosophical or religious attributes of the individual, and urging a proper and judicious cultivation of them.

Think how bodily function must be affected by a "merry heart", and how, conversely, a "broken spirit drieth the bones".

MEDICAL EDUCATION:

BEING

An Extract from the Oration delivered before the Hunterian Society of London, February 1879.

By WALTER RIVINGTON, B.A., M.S., F.R.C.S.Eng.,
Surgeon to the London Hospital, etc.

THE estimation of the medical profession by the public will be directly proportionate to the general standard of culture attained by its members, and to its freedom from trade propensities and trade practices; whilst its position in the body politic will largely depend upon the efficiency and cohesion of its internal organisation. The general standard of culture rests upon a tripod: preliminary knowledge, scientific knowledge, and professional knowledge and skill. Each and all of these branches must be cultivated in due measure and proportion; for by general culture we take our position in society as gentlemen; by scientific culture we raise our art above the level of a mere handicraft and mystery; and by professional culture we separate ourselves from the quacks and empirics who thrive by obtaining the repute of superior wisdom in things whereof they are grossly ignorant, and by professing to cure diseases which are either beyond human means of relief, or have been conjured up in the morbid imaginations of their dupes and victims by vile publications and nefarious schemes. A few months ago, we found the *Times* remarking: "A very large proportion of the general practitioners who now throng every town could well be spared; but they are in possession, and cannot be got rid of." Whether this be exaggerated or not, a candid review of the present state of medical education and examination can scarcely fail to convince you that, great as have been the advances and the gains of the last twenty-one years, since the passing of the Medical Act in 1858, which has been justly styled the Magna Charta of the medical profession, and since the commencement of the labours of the General Medical Council, which I for one have no wish to depreciate—since the time when it was the boast of a transpontine grinder that he could take a respectable cabman out of the ranks and pass him through the College of Surgeons in six months—the proper standard has not yet been reached in any of the three branches of knowledge upon which our repute is based. Can it be said that our preliminary examinations are satisfactory, so long as they are carried on by so many different boards and vary so greatly in value? It is true that the percentage of rejections, even at the mildest of the boards, is enormous; but it is equally true that the percentage of rejections, compared with the quality of the candidates, ought to be very much greater even than it is. Possibly the candidate who did not know whether physician was spelt with a great or a little F was referred to his studies; but the testimony of the visitors to the professional examinations has been, that a large proportion of men who have successfully surmounted the dire ordeal of the preliminary, display, at the first and second professional examinations, a sad incapacity for writing grammatically and spelling correctly the words of their mother tongue. The experience of every medical teacher and examiner will strongly support this observation.

As you might expect from three Colleges of Physicians, four Colleges of Surgeons, two Apothecaries' Halls, and ten Universities, there is an absolute want of uniformity in the regulations of the nineteen corporations, both as regards attendance on educational courses and examination in the scientific subjects. A second detrimental feature is a want of correspondence between the requirements of corporations for education

and their requirements for examination—some of the medical authorities compelling the student to attend courses of instruction in subjects in which they decline to examine. In the third place, the study of the scientific subjects is insufficiently encouraged. No desirable branch of knowledge for a medical man could occupy a more deplorable position than physics or natural philosophy. It has been divorced from chemistry, and cast adrift without legal provision for its maintenance. It is no longer taught as part of the chemical course at our medical schools, and in many it is not taught at all. The wisdom of the General Medical Council has enjoined it as a purely optional subject of examination at the preliminary, but merely to the extent of "elementary mechanics of solids and fluids, meaning hereby mechanics, hydrostatics, pneumatics, and hydraulics"; and, therefore, the colleges and halls neglect it altogether, except so far as it is kindly permitted to be an optional subject for the preliminary.* The result of this is that the general practitioner may enter on his career without even a rudimentary acquaintance with the phenomena of heat, light, sound, and electricity; or the principles exemplified in the structure of any common instrument—such as the thermometer, barometer, or an ordinary syringe, let alone a pump. And yet you expect the general practitioner to be a scientific light, shining in a dark place, and to assist in laying a scientific foundation for medical practice.

If you turn to the strictly professional subjects and to the regulations of the nineteen corporations for the professional education of medical students, you will discover striking evidence of the immense advantage which the public and the profession derive from the enjoyment of the boon of being provided with nineteen independent medical authorities issuing separate codes of compulsory observances. The first evil which shows the cloven hoofs is the remarkable fact, that there is scarcely a subject of medical study in regard to which the regulations of the corporations coincide. Categorical details would weary you. Suffice it here to say that the regulations differ in respect to anatomy, physiology, materia medica, medicine, surgery, midwifery and diseases of women, the practice of medicine and surgery, clinical medicine, clinical surgery, pathology and morbid anatomy, the performance of the duties of clinical clerk and dresser, and the number of midwifery cases to be attended; and that the difference extends to the number and kind of courses in the specified subjects, to the number of lectures in a course, and to the number of patients or of beds which a hospital must contain to be recognised by the authorities. To some minds, possibly, the diversity of requirement may present a pleasing parallelism to that resemblance, in general outline with diversity of detail, which has been described by Professor Humphry in his work on the human skeleton as a law of created being, exemplified abundantly in the animal and vegetable kingdoms, and observable in our own bodies in the structure of the vertebrae and the ribs, none of which are mere repetitions of each other. Unfortunately, however, the parallelism stops here; for, whilst the diversity in nature, whatever may have been its cause—whether it bears a teleological or a Darwinian significance—is strictly correlated to the performance of useful and necessary functions, the diversity of regulations of the corporations is a serious inconvenience to the student, prevents the establishment of the great desideratum of medical education—a satisfactory uniform code for the minimum qualifications to practise medicine and surgery—and interferes with the utility of the medical profession to the public, and with the elevation of the profession in the social scale. On what grounds of common sense or public convenience can any one defend the diversity of the requirements of the corporations in regard to midwifery cases? Is "Caledonia stern and wild" so "meet a nurse for the" obstetric "child" that he can become an expert after attending six cases of labour; whilst his southern brother must painfully present himself ten or twenty times at the "imminent and deadly breach"?

A second evil, not less striking, and directly flowing from the number of regulating medical authorities, is the burden of an over-legislation. Ten years ago, I pointed out to the Medical Teachers' Association that the pious care of the licensing corporations, in compelling the body of the medical student in the hope of benefiting his mind, had resulted in providing for attendance on courses of instruction, not only during eight hours out of three hundred and seventy-nine available working days during the first eighteen months of the student's career, but also during eight hours out of eighty-nine additional days, which did not, and of course could not, exist; so that, if the student were to endeavour to carry out in his first two years all the prescribed regulations, and conscientiously to earn all the necessary certificates, he would find that the hours of the working day were more than occupied, and that no time would be left for bodily sustenance. Moreover, he would run at his examinations serious risk of reference to his studies, to use the polite

* Since this was written, Physics to the extent named has been made a compulsory subject by the Medical Council.