on the other hand, be led to think that when you have spread a net of examinations you have built a lasting house. Strike out a path for yourselves. In doing so let the spirit of inquiry be your guiding spirit; you shall find that as you follow it other things will come in its wake. If your teachers be men busy garnering new truths their pupils will gain real knowledge. With such teachers and such pupils you may safely throw aside many of the present devices, at once irksome and insufficient, for testing the work of the scholar. You will be able to afford to make your degrees at once efficient and economical, inasmuch as they will be remunerative not merely by the possession of them, but in the very getting of them. If you do this it will be strange if you do not reap the reward not of honour alone, but also of material success.

I fear that I may have been preaching heresy, and that in many things which I have said I have been very bold, but I have been encouraged to think that I might speak freely in a place which in times past and in other things has shown that it is not afraid of leading the way. One word more and I have done. I have been speaking this evening chiefly of matters medical, and have been urging the claims of scientific development, but I would not wish to be thought the advocate of science alone. Though it is true that the term "university" does not mean the care of universal knowledge, it is equally true that the full good which a university may gain cannot be gained if it narrows itself to one line or even to a few lines of study. For each branch of learning nothing is so good as to be continually in touch with other branches. In the ideal university whosoever comes finds what he wants to learn, whatever it be. May I hope that your university will draw near to the ideal, that it will set itself to nurse every kind of learning, disdaining no kind of knowledge because it seems useless, being afraid of no kind of knowledge because it is openly, even glaringly, useful.

AN ADDRESS

ON

MODERN UNIVERSITIES.

Delivered at the Opening of the Medical School of University College, Cardiff.

By ROBERT SAUNDBY, M.D., LL.D., F.R.C.P.,

Professor of Medicine at Mason University College, and Physician to the General Hospital, Birmingham; President of the Council of the British Medical Association.

INTRODUCTORY.

I AM honoured by being asked to address you at the opening of your winter session, and to have this opportunity of seeing your college, of meeting your teaching staff, and of saying a few words of welcome to those who commence, as well as to those who rejoin, their classes in this medical school.

Before going on I desire to say how much I regret the absence from ill-health of our friend Professor Haycraft, and I am sure you share my hope that he may speedily be restored to health and to those studies by which he has built up a brilliant reputation for himself and has conferred lustre upon this college.

I should like to congratulate you who are students of medicine upon the career you have chosen. There may be professions in which the work is better paid and less exacting, but there is none the practice of which affords the same varied interest if we come to our work in the proper spirit—that of naturalists or observers of Nature. The present is the time for you to cultivate this faculty, and for this purpose may I urge you to study botany, not in books only, but in the laboratory and the field on every opportunity?

This practice will not only initiate you into scientific methods and familiarise you with the great principles of organic structure and function, but will form the groundwork of a study which, in many of the phases of life, opened up by a medical career, may very reasonably be pursued with pleasure and profit. Therefore, neither despise this study nor regard it

as of merely passing interest. Make a point of going to every botanical excursion, for you will find that you can learn more from these pleasant holidays than from much reading of books.

I hope you will excuse me for having fallen into the temptation which such an opportunity as the present affords to offer advice. But as I have said so much will you bear with me if I make another suggestion? Learn to read French and German with such facility that the periodical scientific literature of these two great nations shall be open to you. Nothing is easier than the acquisition of this amount of knowledge, as it requires only a dictionary, a reading book, and a sufficient stock of perseverance. Above all, recollect that you are not here merely to learn how to pass certain examinations, although that is a duty which has to be kept in mind.

Most of you will have in these few years of study your only opportunity of obtaining systematic instruction in scientific principles. You may not learn here how to diagnose measles or to treat whooping-cough, but you ought to acquire what is of far more importance, those habits of scientific thought which will make you accurate diagnosticians and rational practitioners.

THE UNIVERSITY OF WALES.

You are fortunate in the conditions under which you are beginning your professional studies. You are students in a college possessing faculties of arts and science in which students may proceed to the degrees of B.A., B.Sc., etc., so that you are associated at the outset of your professional education with a broader culture than that of a purely medical school.

I hope many of you have taken advantage of that wider instruction before beginning your present studies. You are *alumni* of a college which is a constituent part of a university. The University of Wales is the youngest institution of its kind in the kingdom, and, like all young things, it is interesting because of the immense possibilities for good or evil that lurk behind the veil that hides the future. My interest is of the most sympathetic kind, for no one recognises more than do I the influences for good which such a university may exercise under proper conditions. Doubtless for sufficient reason your college does not attempt to give a complete course of medical instruction, but limits its functions to the first two years of professional study—that is to say, you are taught here only botany, geology, chemistry, physics, anatomy, physiology, materia medica and pharmacy. I should like to suggest the addition of bacteriology to this list as being most fittingly taught in its broad general principles during these years. Although there can be no difficulty in completing your school by the addition of Chairs of Medicine, Surgery, etc., whenever your Council shall see fit, there is such a well marked natural line dividing the subjects taught from those omitted that students may without disadvantage study here for two years and then proceed to some other great school for the concluding part of the curriculum.

The Principality of Wales may be proud of these first steps in the development of its medical school, and should rejoice that that school is connected with its University.

THE SCOTTISH UNIVERSITIES.

English medical education has unfortunately proceeded upon other lines. The English Medical Schools have been purely professional training places, and have grown up in connection with our great hospitals. They have given an excellent practical training, but their deficiencies in other respects have of late years become too obvious to be denied. Hence has arisen the demand for a university for London which shall be really a place of teaching and with which the medical schools of London may become properly related. In Scotland the national universities, having their seats in populous centres and not despising the encouragement of "bread studies," have fostered flourishing medical schools which have derived great advantages from their university connection, and have contributed no little in return to the prosperity of those seats of learning.

At St. Andrews alone has medical education stagnated, no doubt on account of the small size of the town; but the munificence of a nobleman well known in Cardiff—the Marquess of Bute—has now provided a building well equipped for the provision of just the same limited medical course as you

have here, and it is to be hoped and anticipated, in view of the crowded state of the other Scottish medical schools, that a career of usefulness now lies before the St. Andrews Medical School.

ENGLISH INTERMEDIATE SCHOOLS.

Why is it that England should have shown herself in the past so strangely indifferent to University education—nay, one might say so indifferent to education of all kinds? One hardly likes to say, with the Bishop of London, that the English public cares nothing for education, because it is difficult to conceive any apology for such an attitude that would not be too uncomplimentary to our fellow-countrymen. I am inclined to think better of them than this, and to believe that it is mainly because of the sort of thing which has been so long associated in their minds with the word "education" that they care so little for it. What wonder is it if John Bull undervalues education when he sees how little learning results from four years at a great public school, followed by three years at a still greater university, each claiming to give the best education in the country? The day has hardly yet passed in which education at a great public school consisted in practising the art of writing bad Latin verses, and the after-years spent at a university still implied, for the great majority, no substantial addition to the scanty store of school-acquired learning. With universities and public schools in which play takes the place of work, and the art of teaching is held of no account, why reproach the British public with want of care for education? The fault lies with our educationists who neglect to teach, who despise the duty of preparing for the professions, who have allowed the pursuit of athletics to be elevated to such a height that the future captains of the schools will not be the heads of the sixth forms, but the captains of cricket, football, or boating clubs. Such an exaggerated estimate of athletics as at present finds favour in English public schools and universities is madness. It amounts to a vast waste of enormous national resources, and is little short of a breach of trust on the part of heads of schools and colleges, who cannot conscientiously believe that they are doing their duty to the boys confided to their care. We, who as teachers and examiners, have to do with the unfortunate products of the present public school system, know the extraordinary difficulty which they find in passing their examinations, and we attribute this to their having undergone no previous mental discipline; they come to us without having acquired the power of application which it is above all the business of a schoolmaster to develop.

DEFECTIVE UNIVERSITY ORGANISATION IN ENGLAND.

No doubt there are hardworking grammar schools in our great cities—such as St. Paul's School in London and King Edward's School in Birmingham—where teaching is still regarded as the duty of the teacher and application is required from the taught; but such schools have no corresponding universities to which to send their boys. They must go either to Oxford or to Cambridge, where the demon of athletics reigns supreme, and where professional studies are deprecated, if not despised. These universities, moreover, by reason of their remoteness from the paternal home and the consequent increased expense involved, are in many cases beyond the reach of those who desire and would profit by the educational opportunities which a university affords.

In spite of public indifference and class prejudice, the demand for more universities has made itself heard, so far, at least, that charters have been granted to the Victoria University and to the University of Wales.

In your own case there has been a recognition, if parsimonious, of the principle that the State must provide the necessary funds. We in Birmingham believe that a university is a necessary complement to the educational system of our city, and we are endeavouring with some success to take the needful steps for its establishment. But the great difficulty is the want of money. No one wishes a shabby half-starved university, with a poor library, badly equipped laboratories, and an underpaid teaching staff. The ideal modern university must of necessity be an expensive institution—a few class-rooms grouped round a common hall can no longer suffice for its installation.

A GERMAN UNIVERSITY.

Let me describe to you one of the smaller German universities, that of Strassburg, which has an annual attendance of about 1,100 students, and may therefore fairly serve as a model of a provincial university, such as we should like to see not only in Birmingham, but in other great English cities.

The university buildings comprise forty special institutes fully equipped for teaching theology, law, philosophy, philology, geography, archaeology, ancient and modern languages, chemistry, physiology, pathology, geology, physics, botany, pharmacy, pharmacology, bacteriology, etc. The maintenance of these buildings costs the university about 360,000 marks, or £18,000 sterling per annum.

The library contains 730,000 volumes, and possesses an annual budget of 127,000 marks or over £6,000 sterling. The teaching staff consists of fifty-six ordinary professors who divide among them 523,000 marks, or an average income of £465 per annum. There are thirty extraordinary (honorary) professors, thirty-three *Privat-docenten* and two lecturers, the last two classes of teachers being paid by students' fees.

The total annual expenditure of the University amounts to 1,052,370 marks, or in round figures £52,000 sterling, of which sum the State contributes more than nine-tenths.

No one who knows the Germans will say that they are an extravagant people, and it is certain that money in many respects goes farther among them than with us, so that we may assume that £50,000 a year is not an excessive estimate for the expenditure of a properly equipped modern University.

THE DUTY OF THE STATE TOWARDS UNIVERSITIES.

Where is the money to come from? There can only be one answer to this question:—From the State. The State, which has given free elementary education, must complete its work and give, not free, but State-organised and state-equipped secondary and University education. The Lord President of the Council is reported to have said in a speech delivered by him not long ago in Manchester, that it was impossible, and in his opinion, undesirable, that universities should derive their main financial support from the State, for the reason that State assistance to such an extent would involve State control, and this he thought incompatible with the perfect and complete efficiency of an independent college. He admitted the indignity of colleges having to canvass for subscriptions, and he saw no other source upon which they could rely than the generosity of private donors. It is not encouraging to have such opinions expressed by the official head of the educational business of the country. One can hardly believe that the speaker has got beyond the common English idea of a university as a luxury for the well-to-do.

If the establishment of universities is for the benefit of the nation at large, the nation must and will pay for them. Are they, or are they not, beneficial? This is the only question worthy of discussion. The objection that State control is opposed to university efficiency is contradicted by the experience of all civilised countries, England alone excepted, where, be it observed, it has never been tried! In Scotland the universities receive very substantial assistance from the State, and this has not been accompanied by any paralysing effect. On the whole there is much to be said for a certain amount of State control, as in all university matters a Minister is a more impartial referee, able and willing to hear all sides of a question and to decide without respect to local considerations, and in the long run it is certain that national rights will never be sacrificed to those of a class, as has happened so often when funds have been placed in the keeping of private trustees. The worst of all evils in a university is the want of adequate funds, and I would rather see the establishment of our Birmingham university postponed for a generation than get one to-morrow which would be badly equipped and cramped in every direction, or worse still, that it should under pressure of competition attempt too much and do nothing well. I trust we shall show a strong determination to work within modest limits until the public comes to our aid and insists upon proper State support being given to institutions able to put forward such claims upon the national purse.

What are these claims? The national importance of the work done, and the impossibility of raising sufficient money

in any other way. There are only three possible bases upon which a university can be carried on.

The first of these is a commercial basis. Universal experience has failed to produce a satisfactory example of this type of institution, nor need we go to America for illustrations of the bad results which the commercial spirit, stimulated by want of funds, can produce in university affairs. The second basis is private benefaction or endowment, by which means great universities have been founded in America, but there is not the same rapid growth of wealth in this country, nor is there any modern instance here of the gift of such a vast sum as would be needed to build and endow a single university. No doubt there have been several cases in America, notably the Universities of Cornell and Johns Hopkins.

To build and endow a modern university would require about two millions sterling, but even if this vast sum could be obtained it would not be under proper public control, and there would be no guarantee that it would always be applied for the national benefit. Permanent endowments in private trusts are not the most desirable social institutions, and no country has more illustrations of money misapplied in this way than has England. To tell us, as did the Lord President at Manchester, that we must wait until some benevolent persons provide these great sums is equivalent to postponing the foundation of suitable modern universities to the Greek Kalends. The third and only practicable basis for a university is that of State support, which has in its favour the very strong argument that it has been accepted by every civilised country in the world, England alone excepted.

France spends $7\frac{1}{2}$ million of francs (£300,000) on university education, having nearly doubled the State contributions during recent years. In 1870 they amounted to only 4,215,521 francs (£168,620 17s. 6d.). She has, moreover, found it desirable to encourage provincial towns to find funds for university buildings, and has granted to each provincial faculty the title of "university," so that there are now fifteen universities in France expending over 12 million francs (£480,000) of which $7\frac{1}{2}$ millions, as already stated, are derived from the National Exchequer. These fifteen universities educate 26,000 students, which is in the proportion of 1 student to 1,400 of the population of France, the cost of each student to the State being about £11 10s. Taking the population of France at 38 millions, she has 1 university to about $2\frac{1}{2}$ millions of people.

In the whole of Germany there are 21 universities, educating 300,000 students, giving a proportion of 2,100,000 persons to a university, and 1 university student to 1,400 of the general population. I cannot give you the total expenditure, but the Government contributions amount to upwards of 14 millions of marks (£700,000), and the annual cost to the State of a university student is something like £23.

England possesses 4 universities, not one of which is equipped so as to fulfil modern requirements. They are in the proportion of 1 to $6\frac{1}{2}$ millions of the population. They educate 9,000 students, which number gives one university student to every 3,000 persons.

I am quoting these figures in order to show you what vast sums two great nations are now spending upon university education, and to contrast with them the miserable £25,000 which our Government deems sufficient for the needs of England with a population of 27 millions, whose welfare, livelihood, nay, very existence, depends upon the maintenance of the commercial and industrial supremacy which the country has enjoyed for more than a hundred years, but which is in danger of ebbing away to better educated rivals. I may be told that the sort of education the university affords is not of much use in trade. This is the often-heard fallacy, but even were it true, it is also true that education proceeds from above downwards and not from below upwards, and that if you want to improve our national education and to give it that practical character which is needed, you must have teachers who are imbued with the modern spirit, and have been educated in universities of the modern type.

THE STATUS AND DUTIES OF UNIVERSITY PROFESSORS.

We hear a great deal of nonsense talked about the danger to a university if studies are pursued there for any other purpose than the love of learning, but we do not hear of the danger of

stagnation which results when the university excludes from its walls all interest in the busy active life of the world. Does Oxford, where this doctrine is carefully cherished, contrast favourably with the universities of Germany where professional training is not despised? Which is more in touch with modern thought? Which contributes most to the progress of science or even of scholarship? The answer cannot be doubtful. I admit that in a country like ours, which is saturated with the commercial spirit, there cannot be so great a devotion to pure science and scholarship as in Germany, and it may be conceded that students, professors, and governing bodies in this country, are all alike too apt to consider what will pay them best, but although this tendency needs a check, it is better than the stagnation which takes place when an institution is shut off completely from the main stream of human interests and ambitions.

In the modern university, just as the students go there not to play but to learn, the professors should be appointed to teach and to inspire a love of learning, not to enjoy leisured ease or the empty dignity of an academic title and position. Heaven forbid that I should suggest that the sole duty of a professor is the oral delivery of lectures in a class-room! I admit with regret the existing tendency in some quarters to impose far too much class-room teaching upon professors, but there is the opposite extreme where the titular professor gives no lectures, takes no part in training anybody, or delivers an occasional brief course which forms no part of the work of the student for his degree.

The professor must not only teach but must be capable of inspiring a love of learning, to do which he must be himself a student, working at the head of his class, leading the way to new ideas, fresh facts, and broader inductions. The teaching of the professor must be supplemented by tutorial classes, "conferences" on the French and German plan, where all the talking is not on one side, where questions and answers bring out and test the student's knowledge, clear his ideas, and fix them in his mind. Finally, there must be compulsory attendance at frequent written class examinations. Such work in the class-room should be in part the preparation for, in part the complement to, work in the museums and laboratories. The modern student must not only read about the thing taught but he must see it, and, if possible, handle it. This condition demands space and materials, which cost money, but such a real and truth-promoting method will surely have the approval of a practical people, and will not be allowed to lack the necessary means. I believe that the more the nation hears about modern educational methods the sooner the prejudice against university education will die away, and the demand for the establishment of the necessary institutions will become irresistible. Unfortunately, it is not possible to demonstrate to a popular audience the work done in a laboratory. For popular instruction the lecture system is alone fitted, and popular lectures, that is, lectures which seek to be intelligible to persons who possess no previous training on the subject, must give a poor idea of the practical side of modern scientific education.

DEFECTS OF THE FEDERAL SYSTEM IN UNIVERSITY ORGANISATION.

The passage through Parliament of the University of London Reconstruction Bill has given a final blow to the hapless idea that a university might be merely an examining board, whose students could be left to acquire instruction how and where they pleased. But a not less objectionable makeshift is now popular, namely, that of uniting together a number of different colleges, heterogeneous in essential features, situated perhaps in widely-separated cities, composed of persons who cannot be expected or desired to see everything eye to eye with each other, possessing different aims and aspirations.

From this ill-assorted union is formed a so-called federal university. The chief merit of the plan is that it economises parchment; but this hardly seems a sufficiently important ground for such a departure from the lines upon which universities have hitherto been successfully established. The failure of this method in Ireland is most conspicuous, and it is much to be regretted that it still finds favour with our educational rulers. It is, of course, for the State to determine in which centres universities shall be established, but

it is impossible for a university to distribute itself satisfactorily over several different and distant places. The unfortunate result is a plurality of second-rate colleges, and nowhere that superiority of, at least, some one department which gives character to a university and raises the tone of the whole of its teaching. I am aware that your university has been patched together in this way, but you are still in the early days of the experiment. I recognise that there may have been a difficulty in adopting any other plan, but it will be most unfortunate if the precedents of Victoria and of Wales are regarded by the Government as a justification for the extension of the process to other localities where no such reason exists.

In reading the charter of your university, I was much surprised at the prohibition against the possession of real property to a greater value than £10,000 per annum. At the present time the restriction is probably not very burdensome, but it is difficult to understand why a Royal Charter should impose a disability from which other corporate bodies are free, or why it is that the State, which takes such a narrow view of its financial obligations towards university education, should seek to hamper such institutions in the nature of the bequests they may receive or the investments they may hold. This restriction is in the spirit of the Mortmain Act, which, whatever its utility in the Middle Ages, is now out of date.

UNIVERSITIES AND PROFESSIONAL EDUCATION.

The other disability imposed by your charter is the clause withholding the power to grant degrees of medicine. I suppose the reason for this was the non-existence of a medical school in connection with either of your colleges, but I think it would have been better if the power had been granted subject to the supervision of the General Medical Council, which has statutory control over all qualifying examinations and courses of study. The relation of universities to medical education can only be solved in one of two ways—either the State, as represented by the General Medical Council or some other statutory body, must itself conduct qualifying examinations, or this work must be left to the universities, and the State content itself with the right of supervision. On the whole, the latter seems to be the plan which has the advantage, for it is not only that which at present exists, but is the one which most civilised nations have adopted. I suspect that there was no great anxiety on the part of those who had to do with procuring this charter for what they perhaps considered the doubtful privilege of engaging in medical education. Unfortunately, we know that such an objection exists in certain quarters, and has played no small or doubtful part in hindering the progress of medical education in England. If Cambridge has within the last generation burst asunder the bonds of prejudice and has founded a flourishing medical school, Oxford still misapplies its medical endowments, and declines to reorganise its medical faculty. I hope the University of Wales will always welcome medical students, and that when circumstances permit the completion of this medical school steps will be taken to acquire the necessary powers for conferring degrees in medicine.

I would urge upon you that the modern university, if it is to have popular support and to play the part that it should do in our national life, must not despise what the Germans call "bread studies," but must feel pride in training men to be useful as well as learned citizens. Law, medicine, engineering, architecture and music are not unworthy to be associated with the most distinguished culture, and while those who study them in a university gain incalculable educational advantages, the university which undertakes these functions can be no loser from being thus brought into relation with the highest and best of the secular professions. I do not wish to disparage Oxford or Cambridge, which are delightful places for study and for amusement, affording a choice of either to those so fortunate as to be able to live there, but they are not and cannot be popular universities such as the nation needs.

THE NEED FOR UNIVERSITIES IN INDUSTRIAL CENTRES.

These must be seated in our great and populous cities and be near the home of the youth of both sexes who demand university education. In such universities the study of ancient languages and higher mathematics cannot be allowed so preponderating a position as has been assigned to them at

Oxford and Cambridge, although their educational value must be duly recognised. In this respect the University of Wales has begun well, the syllabus of its course of art studies offering much worthy of imitation by similar bodies.

There should be universities in Manchester, Liverpool, Birmingham, Leeds, Newcastle, and Bristol, and we should look forward to seeing one before long at Nottingham, and another at Norwich, or in some city of East Anglia. As already contended, the new universities must be mainly supported by the State, but the Government may fairly claim that a certain proportion of both capital expenditure and income should be provided locally. This would afford evidence of the reality of the demand.

In the expenditure upon sites of buildings the Government might ask that half the cost should be borne by the localities, but a smaller proportion of the annual budget, such as a third or two-fifths, would be enough to stimulate local liberality and to prove the seriousness of the promoters. Once these institutions are established and get into working order I do not fear for their future. The good they will do will secure public recognition, and will make it impossible for any Government to refuse whatever sums may be necessary to maintain their efficiency. This question of modern universities for our great cities is one in which all classes may be asked to interest themselves, for all are members of the Commonwealth and share in its well-being. But it is a matter that chiefly concerns those who live by their own labour, whether of head or of hands. This class is much larger than any other, and under our democratic constitution is able to control the Government. The one thing necessary is to rouse it to a sense of its needs, and this work of awakening can be effectively carried on by every man who believes what I have said to be true.

Our task is to explain the aim and the method of a modern university, to show the people the advantage to them of having near their reach such institutions in which their sons and their daughters may gain the advantages of a splendid practical education, and to urge that, following the example of other civilised Governments, it is the duty of our Government to aid by substantial money grants the formation without further delay of such universities in our principal English cities.

I think the establishment of the succession duties affords an additional claim for Government help, as this heavy tax is levied upon those very sources of charitable bequest which the Lord President regards as the only available means for providing more universities. This tax has been so successful and the total amount of revenue now raised is so enormous that it is incredible we should go on spending so much upon the navy which is to protect our trade and so little upon the higher education which is needed to keep any trade to be protected.

THE PROSPECTS OF THE MEDICAL PROFESSION.

Just one parting word to you, to whom I am especially speaking to-night, the medical students of Cardiff. You have made choice of a noble profession. See to it that you live nobly, for if you wish to understand goodness, or beauty, or religion, you must, as Schopenhauer says, evolve them in your lives. Time will bring its roses to all of you, but not to all fame or wealth. But if I cannot promise that you will all become medical baronets, or even medical knights, I can assure you that there is no profession in which success more certainly attends attention to business or in which so good an income can be as readily secured. Do not despise the expression "attention to business," for it is just in business qualities that so many of us fail, and whatever the sphere in which your talents place you, the common virtues of industry, order, and punctuality will more than anything else determine the relative amount of your success. Bear in mind that success has its dangers, and that the "millstone of poverty" (to quote Carlyle) may often be "the necessary ballast that keeps our centre of gravity right." No profession is more exposed to the temptation to petty acts of injustice or more in need of the prayer against envy, hatred, malice and all uncharitableness. We are given to magnify trifles and quarrel over twopence-halfpenny, talking much about ethics and doing things which are truly feminine in their petty meanness.

We are prone to cry out against all that exists and to say

with Jack Cade, "There shall be in England seven halfpenny loaves sold for a penny, the three-hooped pot shall have ten hoops and I will make it felony to drink small beer." This revolutionary spirit, be it well understood, applies only to matters medical, for in general politics we are usually very conservative.

The clamour for better pay and greater privileges depends in part upon inability to recognise the true position which we hold in society. That position depends mainly upon the public belief that we are a disinterested profession, and that belief rests upon the vast amount of public work we do for nothing. But if we follow the advice of some of our friends and seek to put the market price upon all our services, must we not reckon upon a change on the part of the public which may not be to our advantage?

Many acts which are full of grace and are accepted gratefully as free gifts become of doubtful worth when their value has to be appraised in hard cash. Would not our relations with the public lose their character of friendly intimacy which now distinguishes them, and in return for a more strict debit and credit account should we not find ourselves placed upon a purely business footing? Is it therefore certain that we should improve our position by seeking the uttermost farthing of the debt due to us? In your relations with your colleagues avoid giving offence, and if you have any differences strive to make as little noise about the matter as possible. Do not indulge in personal controversies, and shun the men who do.

Surely, after all,
The noblest answer unto such
Is perfect silence when they bawl.

Be honest men and gentlemen. In time to come most of you I hope will know the joy of wife and child, and with that substantial basis for your happiness you should find pleasure in your work and human and scientific interest sufficient to satisfy you so long as your lives shall last.

AN ADDRESS

ON

THE IMPORTANCE OF PERSONAL CHARACTER IN THE PROFESSION OF MEDICINE.

Delivered at the Opening of Yorkshire College, Leeds.

By CHARLES J. CULLINGWORTH, M.D., F.R.C.P.,

Obstetric Physician to St. Thomas's Hospital, London.

I CONSIDER it a very great honour to have been invited to take so prominent a part in the interesting ceremony of to-day. As an old Leeds student, and a native of this city, it is with both pride and pleasure that I observe the unmistakable signs of healthy prosperity in my old school, now the medical department of the Yorkshire College. Your buildings, your laboratories, your teaching appliances, and, of course, your fine hospital, will not only bear comparison with other similar institutions in this country, but are so modern and so complete as to warrant a passing twinge of envy in the breast of a London teacher. I should, however, be making but ill use of an exceptional opportunity if I wasted the few minutes at my disposal in elaborate compliments, however well deserved they may be. My desire to-day is to say a few words that shall, if possible, be encouraging and helpful—first to those of my younger brethren who are still *in statu pupillari*; and, secondly, to those who have just completed their curriculum, and are about to engage in that struggle for existence which is apparently becoming every year more severe and more hazardous to the well-being of the individual practitioner, both "in mind, body, and estate."

First, then, allow me to address myself to those who are still students. It is now a good many years since Sir James Paget, published in the *St. Bartholomew's Hospital Reports*, a short paper embodying the results of an inquiry as to what became of a thousand of his pupils within fifteen years of their entrance at St. Bartholomew's Hospital. It was a most interesting article, and is still well worth reading in its entirety, for what was true of the medical

student of thirty years ago is, in the main, equally true of the medical student of to-day, and, so far as I am aware, no similar inquiry has been made either before or since. Of the total number of Sir James's pupils during the period embraced in the inquiry (1839-59), many had, of course, been lost sight of, but the career of a thousand of them was known either to Sir James Paget himself or to his colleagues, the late Mr. Callender and Mr. (now Sir) Thomas Smith, both of whom were engaged with him in the investigation. The result is shown in the accompanying table. Of the 1,000:

23	had achieved distinguished success;
66	" considerable success;
507	" fair success;
124	" very limited success;
56	had failed entirely;
96	had left the profession;
87	had died within twelve years of commencing practice, 21 of them from diseases incurred in the exercise of their professional duties;
41	died during their pupillage, 17 of them from consumption.

It may be explained that in this summary "distinguished success" means that those classed under this heading had gained leading practices in counties or very large towns, or held important public offices, or had become medical officers of large hospitals or teacher in great schools. Those are stated to have attained "considerable success" who had gained and still held at the time the paper was written "high positions in the public services or leading practices in good districts," or who had already retired on their earnings, or who had won for themselves "much more than ordinary esteem and influence in society." The rest of those who could be said to have achieved any sort of real success constituted the third class. This class, which might be called the moderates, embraced more than half the total number of those whose histories were known. Of the other classes I need not here speak in detail beyond calling attention to the curiously large number that left the profession, nearly 10 per cent. of the whole. Most of those who are classed under this heading discarded the medical profession for other pursuits—the church, the army, the stage, commerce, and agriculture.

It is the concluding portion of the paper, however, that made at the time the strongest impression on my mind, and that induced me even after this lapse of years to bring it before you to-day. "Of course," says Sir James Paget, "in watching and reflecting on the careers of my pupils I have come to some strong beliefs on subjects of medical education, but this is not the place for publishing them. Only one I will set down, which may be of use to future pupils, and is justified by some hundreds of personal recollections. In remembering those with whom I was year after year associated, and whom it was my duty to study, nothing appears more certain than that the personal character, the very nature, the will of each student had far greater force in determining his career than any helps or hindrances whatever. All my recollections," he continues, "would lead me to say that every student may draw from his daily life a very likely forecast of his life in practice, for it will depend on himself a hundred-fold more than on circumstances. The time and the place, the work to be done and its responsibilities, will change; but the man will be the same except in so far as he may change himself."

It may be said that this was all very well thirty years ago, but that times have changed, and that whereas it may have been, and no doubt was, then possible for a man with character and perseverance by sheer force of good behaviour and steady plodding to come eventually to the front, no man could do so to-day unless he also possessed a more than average share of intelligence. For the general standard of knowledge in our profession has been raised and the range of knowledge greatly widened, so that much more is required to-day both in quantity and quality even of the ordinary pass-man, to say nothing of the honours men and prize winners. This way of putting the matter sounds exceedingly plausible, but it leaves out of view the fact that entrance into the profession is now guarded in a way that it was not guarded during the period of which Sir James Paget was writing, and that whereas a man could then enter upon his course of medical study without having given any proof of having received a fairly liberal education it is impossible for him to do so now. The preliminary examination in general education, which must be passed before a student can register,