AN ADDRESS

ON

POST-GRADUATE POSSIBILITIES.

Delivered at the Opening of the Medical Classes in the University of Glasgow, October 25th, 1887.

By PIERCE ADOLPHUS SIMPSON, M.A.CANTAB., M.D.,
Regius Professor of Forensic Medicine.

GENTLEMEN,—I have been entrusted by the Medical Faculty with the pleasing task, on behalf of my colleagues and myself, of bidding you a most cordial welcome to the Medical School of this ancient University, and of wishing you happiness and success in the prosecution of your studies. We regard you all as friends, some as new, some as old, but all as friends alike, in whose future welfare we take a deep and lasting interest, and whose success in life we endeavour to promote as a father does that of his child. As the bud is to the flower, so is your present enjoyment of youth to the full blossom of honourable old age which we trust is in store for you; and while we by no means grudge you the energy, the vivacity, the lofty aspirations of those earlier years, which for us have passed away, we would have you remember that

"Youth what man's age is like to be doth show,
We may our end by our beginning know."

Or, as the French proverb puts it, "*L'homme est toujours l'enfant, et l'enfant toujours l'homme.*"

Yours is the springtime of life, neither scorched by summer heats nor chilled by winter frosts, while we, your seniors, must be content with, and grateful for, the more sombre tints of autumn. As seasons come and go so rapidly, it is but natural to overlook the march of time, and while we are apt "to see Time's furrows on another's brow, how few themselves in that just mirror see." As your years increase you will have many reminders that you are no longer young as formerly, and you will look back on your college days with wistful eyes, and with regret that you cannot spend them once again amidst the friends of your youth, and all its pleasant associations. And should you fail to notice, or should you actually escape the silvery hairs and crow-foot wrinkles unknown to youth, you will be confronted with milestones on the road of life which will stand out in bold relief, reminding you that when a few more such have been passed, the end of your journey will be near at hand.

It is now my lot (and I am grateful for it) to have reached such a milestone, for thirteen years have passed away since—as Promoter for the year, and on behalf of the Medical Faculty—I addressed some words of welcome and encouragement to your predecessors at the commencement of a winter session. Thirteen years may seem to some as but a little while, and yet they amount to one-sixth part of even a very long lifetime. Many are the changes which have taken place during these few years. Some of those I addressed in 1874 have long since joined the ranks of the great majority, having fallen victims to that dire enemy, disease, which they had devoted their lives to combat. Others have already attained to high professional success, thereby gladdening the heart of their old mother at Gilmorehill. That *Alma Mater* herself, too, has undergone many changes, causing an overflow in one case of grief, and in another case of gladness. She has lost the services of no less than nine distinguished teachers of whom she was justly proud, and whose faces were so familiar to us only thirteen years ago.

We are a far larger family now than we were in 1873-74. In that year there were 1,333 matriculated students, while during the year 1886-87 the number amounted to 2,255. When a family increases by such rapid strides, it is usual to flit to more commodious premises; and, although our present circumstances will not admit of this, we have been able—thanks to generous and valued friends—to make many modern improvements in our house at Gilmorehill, which were sadly wanting, even in 1873. We have now this noble hall, the gift of a Scottish nobleman, who, noble in more ways than in name, magnanimously expressed his sympathy with our *Alma Mater* by a donation of £45,000. The Randolph Hall is a fitting companion to the magnificent gift of the Marquis of Bute, and adds one more to the many debts of gratitude which the University owes to the merchant princes of this great city of Glasgow.

For many years we had realised as a blank in our University the want of a suitable *locale*, wherein students might feel themselves at

home, and where they would have facilities for discussing professional and other topics with comfort to themselves and with benefit to the University. This is a defect more keenly felt in Scottish than in English university life, as the undergraduates south of the Tweed, by living for the most part within the college walls, have ample opportunities for that healthy, social intercourse which is so calculated to lessen self-conceit, to encourage mutual forbearance, and to mould and prepare the character for overcoming the rough trials of future years. But, by the noble munificence of an old medical graduate of our University, we have now a Students' Union, which will supply this long-felt want; and, under the prudent management of the students themselves, a really laudable scheme of Home Rule will be established, which will serve not only to maintain the integrity of the "Union," but which will be a source of satisfaction to every member of the Senatus.

As you enter our University grounds by the north-east gateway, you cannot but notice a quaint and ornate structure which was not there thirteen years ago. Neither in respect of age nor architecture does it seem to have any sympathy with the noble edifice erected by Gilbert Scott, and yet the bond of union between them is of the nearest and dearest kind. By the generosity of Sir William Pearce, at an outlay on his part of £5,000, you are reminded that our University at Gilmorehill is no *parvenue*, but a veteran institution, with a noble life-history of more than four hundred years. The march of civilisation forced her to change her abode, but we have thus been able to save from destruction a relic of the dear old soot-begrimed home, which will serve to awaken for long years to come the fond memories of old college days in the minds of those who so often passed beneath its portal.

Shortly after passing this old landmark, you will notice a new structure of which we cannot boast. It is built of iron, and in architectural design it is disgustingly simple. I often wonder what strangers conceive to be the exact mission in life of this curious structure. It resembles an overgrown water-tank, which might indeed be useful on board ship (although somewhat clumsy even there), but which is wholly unworthy of, and unsuited for the growing requirements of a great anatomical school. I live in hope that this huge tank may at all events serve one good purpose, by drawing the attention of the public of Glasgow to the pressing need which we at present experience for an extension of the buildings of the anatomical department, so as to bring them on a par with those of other medical schools throughout the country; and thus to remedy the great disadvantages from which we suffer at present, owing to want of room.

We have for a long time served as a living example of the man who began to build a tower and was unable to finish it, and the beauty of our University buildings has thereby, hitherto, been greatly curtailed. This was not wholly our fault—we had the will, but we had not the ways and means. These have now happily made their appearance, and not only may we soon expect to see completed the summit of our hopes in this direction, but also it may be to hear a harmonious peal of bells, in the place of that croaking cymbal which is now wont to summon us to our class-rooms at Gilmorehill.

In 1874 an event occurred, pregnant with hopes of the greatest importance for this University; for, about the close of that year the Western Infirmary was born. It is now 13 years of age, and not only has it increased in stature during that period, but, as far as my experience goes, there is not to be found—either in America, Canada, or on the Continent of Europe—a similar institution which is better organised, more efficiently managed, or in which, in proportion to its size, more satisfactory surgical and medical results are obtained. Clinical teaching, like every other human teaching, may still, and doubtless does, lack perfection; but I venture to say that in no branch of professional study has improvement been more marked during recent years than in that of clinical work; and that nowhere is that advance more marked than in the wards of the Western Infirmary.

Such are some of the improvements which have been made in our University home during the last thirteen years, and were I to linger on them, they would furnish an ample theme for the few words which it is my pleasing duty to address to you. But just as sight is best appreciated by him who previously had it not, so can I assure you that you would better appreciate your present advantages could you have shared in the disadvantages of your predecessors.

In casting about in my mind for some subject which might interest you, I have encountered a preliminary difficulty, in the fact that in every few years introductory addresses have completely covered the ground which is allotted me to tread, and I thus run the serious risk—nay, I thus incur the certainty—of walking in the footsteps of swifter and abler feet than mine. An eminent divine, on being twitted by a member of his congregation for having preached a sermon which he

had delivered only a short time previously, replied: "Yes, and I intend repeating the same sermon over and over again until I see my precepts carried into practice." This might or might not be a wise plan for a teacher of divinity, but it is not one which could commend itself to a promoter of a medical school at the beginning of a winter session. In nearly every introductory address which I have read for some time past, when our profession, like every other profession, is being overstocked, reference has been made to the remark of Mr. Abernethy, the famous teacher of surgery at St. Bartholomew's, who, on coming to deliver his first lecture in a new class-room which was filled to the door, exclaimed: "Good gracious, gentlemen, what is to become of you all?" This is a far more burning question at the present day than it was in Abernethy's time, and it may be impertinent on my part to help you to answer it, seeing that already so many solutions have been suggested. But as all of you must ere very long solve the riddle for yourselves, and as on the solution of it in each case hangs, in a great degree, the success or failure of your professional life, it appeared to me that a brief review of the various channels which are open to medical graduates when they emerge from their *Alma Mater* might not be wholly devoid of interest to you.

Before, however, making choice of one of these channels, there is a preliminary step, the importance of which I cannot too strongly urge upon every newly-made medical graduate—namely, that he should endeavour to obtain an appointment as house-surgeon or resident medical officer to some town or county hospital, or infirmary, or dispensary for six months at least, or for a longer period if possible; so that his young shoulders may in safety feel the weight and responsibility of the treatment of disease, guided by the older heads and more trained hands of those whose experience is greater than his own. This training will give the young practitioner an amount of confidence in the work of his profession which he is unlikely, at that early stage, to obtain in any other way, and to which he will look back with gratitude for the rest of his life. The salaries attached to these appointments range from £60 to £120, with apartments, board, coal, gas, and attendance.

Walks of Medical Life.—In alluding to some of the walks of medical life open to graduates, I shall have to enter into the question of emolument, for it is one which no young professional man can afford to ignore unless he enters life with independent means—a state of matters which is exceedingly unusual in our profession. Medical men, like other men, must live, and living nowadays involves more outlay and expenditure than it did in the days of our grandfathers. But here I must guard myself against the possibility of being misunderstood. Our profession is not one in which the realisation of a fortune is to be looked for. A fair competency is all that can be expected; and the prize to be won in the medical calling does not consist of bank notes, but in the inward satisfaction of having to some extent contributed to the extension of medical knowledge, as well as to the alleviation of human suffering. I would even go much further than this. Should any of you, unhappily, have entered upon your professional studies regarding your future work as a mere trade, in which monetary success is the gerdon coveted, to such I would say "Lose not an hour; pack up your medical library and sell it to the highest bidder, and betake yourself to any trade or handicraft, however humble, in which your monetary aspirations may or may not be realised." In this way our noble profession will not be debased by followers whose mistaken notions of medical work could lead to nothing save disappointment to themselves, and bring obloquy upon a calling so entirely unsuited to them.

Assuming, then, that you recognise the pursuit of science and the relief of suffering humanity as your main aim and highest reward in entering your profession, it will be quite justifiable to take into minor account its financial aspect.

Public Services.—There is one outlet in profession life which many medical men elect to follow, and which may already have occupied the attention of some whom I now address. I refer to the public services of the Navy and the Army. Before making such a choice, or, indeed, any choice of a future path in life, there is need of much deliberation and careful weighing of the *pros* and *cons*; for, when once that choice is made, it may be very inconvenient or difficult to alter it. In the public services the young doctor's income is secure from the outset, and, although it is small in amount, it is sufficient for all his ordinary wants; and certainly in excess of what he might look forward to in private practice, till after the lapse of many years of anxious work and tedious toil. In the public services, too, he will be comparatively free from care, and he will have plenty of leisure, which, if he be wise, he may partly devote to professional study and research. But, on the other hand, he must remember that he will

never be his own master, and that he must always expect to find his hands so tied down by red tape as to cause mental irritation to which he dare not give expression. Moreover, his income will not increase commensurately with his years, or as he might reasonably expect to do in private practice; and, on retiring from the service at the age of 40 or 50, he must either spend the rest of his life in the endeavour to make the two ends meet, or else he must (although he seldom does) adopt the alternative of commencing the drudgery of professional work in civil life. But, supposing the decision is made in favour of one of the public services, which service is it to be? To obtain a commission as surgeon in Her Majesty's services, whether in the Army at home, the Indian Army, or the Royal Navy, the candidate must be doubly qualified and registered, of sound bodily health, and of good moral character. He must not be over 28 years of age, unless in the case of the Army he enters for service on the West Coast of Africa. He must pass a competitive examination in anatomy, physiology, medicine, including therapeutics, the diseases of women and children, surgery, including operations from the dead body, and the application of apparatus, chemistry, and pharmacy, with a practical knowledge of drugs. The competitors are arranged according to merit, after passing the examination, and the selection of candidates is made accordingly. Successful candidates for the Army and for the Indian Medical Service then undergo a course of study of not less than four months at Netley, upon hygiene, clinical and military medicine, clinical and military surgery, pathology of diseases and injuries incident to military service. The "surgeon on probation" for the home service, on leaving Netley, gets his commission as surgeon, with a pay of £200 per annum. The "surgeon on promotion" for the Indian Medical Service, on leaving Netley, gets his commission as surgeon, with a pay of ten shillings per day, and on arriving in India, his pay is Rs. 286 per month. Successful candidates for the Navy go to Haslar Hospital for the study of hygiene, and for hospital work; and on leaving Haslar get their commission as surgeons, with a pay of 11s. 6d. per day.

The Naval Service.—Of these services the Royal Navy stands first in order of precedence. Not many years ago the Navy did not hold out many inducements to medical men, and was deservedly regarded by them as a most unpopular service; but the naval authorities, having favourably considered the remonstrances made to them by the medical profession, the naval surgeon of to-day occupies a highly honourable position, and one which befits an educated gentleman. He spends a healthy and a happy life, surrounded by genial comrades, and he enjoys the privilege of relative rank in common with his fellow officers, depending on his length of service and other circumstances. The delights of foreign travel in every quarter of our world (since the sun never sets out of sight of Her Majesty's dominions) make up for the unavoidable drawbacks of ship-life, while the naval surgeon's purse—although never over full—is spared those constant appeals which are so painfully known to us who live on land. Sea sharks, doubtless, are ugly customers, but you can keep out of their way; land sharks are as deadly and numerous, but it is difficult to avoid them. During time of peace the lack of a due amount of stimulating professional work is no doubt a drawback to the naval surgeon, especially as serious cases are apt to be drafted into a naval hospital on the first opportunity; but not only may the leisure on board ship be advantageously utilised by professional study, but the naval medical officer when on shore may devote himself to clinical work in some hospital, or attend some of those post-graduate courses which are now so common, should such an opportunity offer itself. Of course, to a "life on the ocean wave, and a home on the rolling deep" are denied the softer influences of domestic life, for nothing could be more undesirable than married life under such divided (I had almost said divorced) conditions; but perhaps after all, the knowledge of the world and of human life which is to be gained by a few years at sea in Her Majesty's service may prove a useful training, not only for the good husband, but also for the useful citizen.

Army Medical Department.—The Army Medical Department, although junior to that in the sister service, is one of which the medical profession may be (and I trust will always have reason to be) equally as well as justly proud—proud by reason of the self-sacrificing devotion and heroic deeds of her sons, whether in the field of battle or in the equally deadly field of epidemic disease, whether under a tropical sun or in the icy regions of northern climes. The Army Medical Service has generally hitherto been a popular one with young men entering upon professional life, and during a long series of years it has attracted to its ranks many of the brightest ornaments of our greatest medical schools. I deeply regret to say that, owing to circumstances which have recently taken place, the Army Medical Service is not one which young medical men can at present be advised to join. With the

ostensible object of improving that service, it has from time to time been subjected to an amount of War Office tinkering which has unsettled the position of its medical officers, and on many occasions so degraded that position as to render it in every way an undesirable one. I may here remind you that, up till the promulgation of the last War Office Warrant of January 1st, 1887, there were three kinds of rank in the British army, namely, substantive rank, which is held by every combatant officer, whether commissioned or non-commissioned, from a field-marshal to a corporal; honorary rank, to which all the branches of the service (with the all but total exception of the medical one) could attain to; and, lastly, relative rank, which practically was the only rank granted to medical officers in the army. Relative rank meant this: the army surgeon on leaving Netley ranked, *quid* precedence, as a captain; the surgeon-major ranked as a major, and, after twenty years' service, as a lieutenant-colonel; the brigade-surgeon as lieutenant-colonel; the deputy surgeon-general as colonel; the surgeon-general and the director-general as major-general. This relative rank conferred upon medical officers that position to which, in common with their combatant colleagues, their term of service and education justly entitled them. I say justly entitled them, because if looking only to the important duties which they perform even in times of peace, and still more to the dangers to which they are constantly exposed on the battle-field, they well deserved that recognition as regards relative rank which, as far as I know, was ungrudgingly acquiesced in by their comrades. To take a recent example: the experience gained in the Zulu war showed that (call them non-combatant as you please) medical officers have to bear all the dangers connected with active warfare just as combatant officers, and in addition they have to meet dangers which combatant officers do not share. That is a fact which is often lost sight of. The dangers to which medical officers are exposed are greater, because they have to face the assassin who strikes in the dark; they have to face the plagues, dysentery, fevers, and all the evils belonging thereto; they have to stand between the living and the dead; and they cannot desert their posts in consequence of illness, though they can send combatant officers to healthier places. This is well shown in the list of deaths in the Army Medical Service since the commencement of the same Zulu war, which show that eighty-five surgeons have fallen, either on the field of battle or from disease or wounds contracted in active service. The records of our army when in active service in the past teems with instances on the part of the army surgeon not only of sublime devotion to professional duty up to the last moment of his life, but also where combatant duties were nobly performed, when these were unavoidably forced upon him. On the many battlefields of Flanders, beneath the burning sun of Spain, in the valley of Inkerman, in the well of Cawnpore, on the inglorious hill of Majuba, there, side by side with their brethren in arms, sleeping the last sleep of the brave, lie the army surgeons of Great Britain. They marched, and conquered, and fell with their comrades; alike in bravery and honour, alike in suffering and privation, and to each alike the laurel wreath is due. It was not a combatant officer, but a military surgeon (Dr. Brydon), whom Sale saw ride through the gates of Jellalabad, apparently on the point of death from hunger, exhaustion, and fatigue, the survivor of Keith's army of Afghanistan. It was the same Dr. Brydon who in after years was one of that small but heroic band, whose fame will live as long as the glory of their country, and who, behind the frail walls of the Lucknow Residency, kept the rebel hordes at bay, and saved the honour of our countrywomen and of our country.

The War Office "tinkering" to which I have alluded has manifested itself in the shape of several warrants issued from time to time, some of them conferring privileges, and others taking these away. The privileges were generally granted when the number of candidates fell greatly below the requirements of the medical service, and as soon as that service was amply recruited, another warrant usually swept away the recently accorded privileges. Take the first famous warrant of 1858—known as Lord Herbert's Warrant—which was the outcome of the inquiry by a Royal Commission into the health of the army after the Crimean war. This warrant, in all its important provisions, had but a short life. Many of the privileges which it conferred upon the medical officers were gradually taken away, especially those which had reference to position and rank in the service. As a consequence of this, the fair supply of candidates who came into the service after the reorganisation of 1858 was made public gradually fell off, and the authorities were obliged to consider what steps should be taken in order to meet this falling supply. Then came Admiral Milne's Committee, and out of that sprang another warrant, with another reorganisation of the department. This warrant did not by any means restore the whole of the privileges which, granted by the warrant of

1858, had been subsequently taken away, and the result was that it did not satisfy either the service or the profession generally.

Next came the "unification warrant" of 1873, whereby medical officers were removed to some extent (indeed, subsequently, they were removed altogether) from their regiments, and they were allowed to retire after a short service of ten years, while a premium was offered to induce young professional men to enter the service. This "unification warrant" proved a failure; it was not acceptable to the profession, and it was found to be impossible under its conditions to recruit the service with efficient candidates. This state of matters led to a further re-organisation in 1876, when another report was published, and a new warrant was promulgated, granting somewhat better conditions, and restoring continuous service to the medical department. But even this warrant did not bring in the required number of candidates, and did not give the public service the indispensable requirement of a medical staff adequate in numbers and efficiency. In 1879 a further warrant was published, which has been in force up to a recent time. By this warrant of 1879 confidence and contentment were to a great extent restored to the service, and an ample supply of high-class candidates has ever since been at the command of the State. Surely with a contented public and a contented profession, the War Office might have likewise been content. But even yet it "was not happy." No; the tinker was secretly hard at work towards the end of last year, and his latest production was made public on January 1st, 1887, in the shape of a new warrant, whereby the medical officers of Her Majesty's service have, by one fell swoop, been stripped of their military position, and left in the pitiable condition of well-dressed "camp-followers." In other words, their "relative rank" has been abolished. The Secretary for War (Mr. Stanhope) has expressed his belief that "relative rank" meant nothing, and that its abolition leaves the medical officer exactly in the same position that he previously occupied—on the principle, I suppose, that if you take nothing from nothing, nothing still remains. He therefore regards this grievance of the army medical officers as a purely sentimental one, and one for which there is no call for redress. The Secretary for War considers his opinion to be strengthened by the fact that he has not received any direct remonstrance from the members of the medical staff. I really cannot believe that Mr. Secretary Stanhope seriously advances this negative evidence as of any value in support of his views. Is it conceivable that the subordinates of any public service (the Army Medical Service for example) would rise in arms against their superiors, and publicly denounce them as violators of contract and of good faith, and as enemies to the welfare of that service? But nevertheless such is the verdict given throughout the length and breadth of the profession—a verdict of necessity spoken in a whisper by the present members of the medical staff, but loudly proclaimed on the house-tops by veteran medical officers, who, having retired from the service, are no longer tongue-tied through fear of the powers that be in high places. That verdict declares the abolition of "relative rank" to be one of the most disastrous blows ever dealt against the Army Medical Service, and it is a verdict which is being approved of in a very practical way by the various medical schools of Great Britain, in the interests of their graduates. Until, then, this obnoxious warrant has been rescinded, and the medical officer reinstated in that position to which his education and important duties entitle him, I would earnestly warn medical graduates against joining the Army Medical Service; feeling sure (as I do) that stopping the supplies will afford the surest and quickest remedy for this latest and most vexatious grievance of the Army Medical Staff.

Private Practice at Home and Abroad.—Undoubtedly the largest field for medical labour, and the one which will always enlist the greatest number of followers, is civil practice either at home or abroad, whether men prefer to practise as specialists or as general practitioners. The advance of medical science within our own times has been so rapid and so great, owing to the ever-increasing number of earnest workers and their careful records of the facts which they have observed, that it is quite impossible for any man nowadays to attain to excellence in every branch of medical practice. This being so, it is in the interest of the public as well as of the profession that many men should become specialists, devoting their whole time and energy to the study of the diseases to which one organ or one set of organs is liable, and so should thus acquire a proficiency in the treatment of those diseases to which the general practitioner cannot expect to attain. The choice between specialism and general practice is to be made by each man according to his individual bias, though none should forget that the specialist will probably have more time on his hands during the earlier years of his professional life than he who engages in general practice. This choice, however, need not be, and indeed seldom is, made at the outset. More frequently a man occupies himself at first

as a general practitioner, and then, after a longer or shorter period, he decides whether he will continue to attend to all the natural (or unnatural) shocks that flesh is heir to, or else become a specialist for the treatment of a limited number of them. For him who decides on private practice as his line of professional life there is another matter quite as important as the one to which I have just now alluded. I refer to the question of abode: whether is a medical man commencing life to cast his lot in the country or in a town, at home or abroad? This question can only be settled by having regard to various considerations. In country practice the labourers are comparatively few and the work is often very hard, involving long journeys by night as well as by day; whereas in town practice the labourers are frequently so numerous that not a few of them find their duties less arduous than they would wish them to be. The desire to be near relatives or friends, or both, will often overrule all other considerations in the selection of a locality. But here let me guard you against the not unnatural fallacy that as soon as you settle in practice all your relatives and friends will fly to you for advice whenever the state of their health renders advice necessary. They may not say it to you in so many words, but they will show by their deeds that they prefer your "trying your hand" upon some one else before entrusting the care of their bodies to your (as they believe) untrained hands. Again, the question of locality may be influenced by climatic considerations. Some men would like to spend their lives in such balmy air as that of Devonshire or the Isle of Wight, while others, scorning such effeminate surroundings, would prefer to begin and end their days near John o' Groats or in the Hebrides. It may interest those who have decided on settling down in practice at home to note in the tables which I now show you the population as gathered from the census of 1881, as well as the number of medical practitioners in each of the principal towns in England and Scotland in that year. These tables will also indicate the population of the United Kingdom and its divisions as ascertained by the censuses of 1851, 1861, 1871, 1881, and the proportions of medical men to the population.

It is difficult to decide as to the proper proportion of medical men to the population. In the army there is a surgeon to every 204 men, or 49 to 10,000. The civil population have not one-sixth part of this number. It is impossible to accept the army as affording any fair basis for even an approximate conclusion. The analogy of the army is fallacious, because the supply in the army is based on a calculation of extraordinary contingencies, which are not taken into account in civil life. Nor can we lay down any hard-and-fast line for the United Kingdom which would be applicable for each of its divisions, nor a hard-and-fast line for any of the divisions which would be applicable to all the counties, nor for the counties which would be applicable to the towns and villages and country districts, nor for any large town which would be applicable to more than a few of the other large towns. The subject is of a decidedly complex character. In order even to arrive at the actual facts of the case as it stands at present more information is required. We must add to the number of medical men the number of practising unqualified assistants and counter-prescribing chemists, and these two classes are an unknown quantity, whose absence from the calculation would vitiate the conclusion which we wish to draw. We want to ascertain, at least approximately, what proportion of medical men is an adequate one for supplying the wants of the population under ordinary circumstances, and it is doubtful whether we are at present in a position to settle the question. All that we can do with the data before us is to calculate the actual proportion of qualified medical men to the population in each division of the kingdom. If we turn to the various towns, and villages, and districts in the different divisions of the kingdom, we find the greatest anomalies prevailing in the distribution of medical men and in their proportion to the population; so much so that no safe general statement can be made until the circumstances of each individual district, town, and village have been investigated, and until it has been ascertained, by inspection and inquiry, whether the medical attendance in each and all is sufficient or insufficient, and if insufficient, what are the causes of the insufficiency. The proportion of medical men to the population in various localities is influenced by various circumstances such as these, namely:—

(1.) Fashionable seaside towns and inland watering-places having a migratory population, or a considerable number from the upper classes of society, as ordinary residents, or as invalid visitors, will have a large proportion of medical men to the population.

(2.) Towns with a large manufacturing interest and numerous factories, employing hundreds and thousands of operatives, and mining districts, will have a small proportion of medical men to the population.

(3.) Decaying towns, out-of-the-way places, country districts, with

a poor and scattered population, difficult of access, will probably have a small proportion of medical men.

(4.) Villages in more civilised parts of the country, districts where there are many small farmers, and where there is a chance of getting practice out of neighbouring villages and small towns, and where club appointments are to be obtained, will probably have a large proportion of medical men to the population.

Exceptions may, of course, be found to all such general statements, and the averages may lead to fallacious conclusions from various causes which do not appear on the face of the figures.

The increase in the number of medical practitioners since 1881 is very great, amounting in the present year to 2,021 in England and Wales, 814 in Scotland, and 1,847 in Ireland, or a total increase of 4,682 in the United Kingdom. Nor would it be difficult to assign a reason for this. During the last few years there has been an unprecedented amount of depression in trade all the world over, which, unhappily, still continues; and while this depression lasts men flock in abnormal numbers to the medical and other professions, as affording them a better chance in the battle of life than commerce can, meanwhile, hold out to them. The merchant attributes the bad times to "over-production," and this assuredly points a moral to the young medical graduate in quest of a suitable locality for his future home. If he would avoid that medical congestion to which I have alluded, and as to the existence of which there cannot be any doubt, I would suggest that in most of our colonies he would find a sphere of usefulness much larger than is, at the present time, to be found at home.

The extent of this vast colonial territory, subject to the British Crown, is indeed enormous. For instance, Canada, stretching as it does from the Atlantic to the Pacific, has an area of 3,620,500 square miles, almost as large as that of Europe, with a population of 4,550,000.

In the vast number of islands which lie between the Pacific and Indian Oceans, and which go under the name of Australasia, the British territory has an area of 3,181,344 square miles, and a population of 3,000,000.

The British possessions in the West Indies have an area of 13,750 square miles, with a population of 1,250,000; and the British territory in Africa extends to 240,110 square miles, with a population of 2,249,824.

In calling attention to the colonies as a field for medical practice, I must qualify my advice with a few words of caution. It must be borne in mind, in the first place, that the large capitals of our main colonies, towns such as Montreal, Melbourne, Sydney, etc., have universities of their own, which are licensed to grant medical degrees upon their own account, and whose courses of instruction are permitted to count in any case as partially fulfilling the requirements demanded for graduation in our universities at home. Moreover, it is not to be forgotten that colonists conceive that their own medical graduates are in possession of a better all-round education than those whose curriculum has been completely taken out in this country, inasmuch as all colonial medical students are obliged, before entering upon their medical studies, to have passed at least a portion of their arts course. Again, colonial graduates have, of course, ties of interest with those among whom they have been brought up, which serve to give them a start in life, and place them at an advantage over the new comer. But in every colony there are always frontier settlements created by the onward march of the colonists in their haste to conquer the unoccupied soil. I have visited many places of this description in the great North-West of Canada, between the province of Ontario and the Pacific Ocean; towns which have sprung up as if by magic, and which, only a few years ago consisting of a handful of Indian wigwags, now contain from five to ten thousand inhabitants. The best colonial graduates stay in the large and older cities, but in the new border settlements (the particulars regarding such being easily obtainable from the different agents-general) there is abundant scope for medical practice. Of course, colonial life has its drawbacks, including the necessary separation from the associations and friends of the old home; but I am confident that the young medical practitioner would in many cases find a far more fertile soil in the New World than in the old one for the exercise of his profession and the development of the talents entrusted to him.

Before passing from this subject I may remind you that medical appointments, to the number of twelve to fifteen per annum, are from time to time filled up by the Colonial Office in London, for the following colonies, namely, Jamaica, Trinidad, British Guiana, the Windward and Leeward Islands, British Honduras, Hong Kong, Fiji, Western Australia, West African Settlements, the Gold Coast, Cyprus, Ceylon, Gibraltar, St. Helena, and the Falkland Islands. The majority of these appointments involve the medical charge of a dis-

trict, including the supervision of its sanitation, and the care of a hospital, poor-house, asylum, or other Government institution. The salary commences at from £200 to £500 a year, and rises after varying periods of service to £1,200 and £1,500. In almost all cases private practice may be engaged in, and in some periodical leave of absence is given, and a retiring pension is granted. As regards many of these Colonial Government appointments, the question of bodily health and vigour has a very important bearing. In Glasgow, as well as in many other parts of this kingdom, we constantly grumble about our miserable climate, and doubtless in this respect our patience is often sorely tried. But we may go further and fare worse. In many of these colonial stations, such as the Gold Coast, for example, the climate is exceedingly trying for Europeans, and especially for those of delicate constitution. Before, therefore, accepting any of these appointments, the practitioner should make himself aware of the climatic conditions of the district, so as to ascertain how far his bodily health may enable him to cope with them.

Mercantile Marine.—Amongst the temporarily useful courses open for general practice are surgeoncies in the large shipping companies, such as the Peninsular and Oriental Company, the Cunard Company, the Anchor Line, and many others. The practitioner who fills one of these positions will have opportunities for seeing the material world, as well as sometimes the world of men. And to see the world thus may be of great use, for it widens a man's views of life, and now and then results in the formation of valued and lifelong friendships. There is, however, an attendant disadvantage in such a career; it creates in many an unsettled or a roving disposition, which is not conducive to settling down subsequently in private practice. Moreover, as retiring pensions are not granted by these shipping companies, a lengthened period of service as surgeon is not desirable.

Lady Doctors.—There is one source of competition which you will have to face, and from which your fathers and grandfathers in the profession were exempt. It is a competition which is still in its infancy, but it bids fair to attain to womanhood ere many years are over, and it is one the important bearing of which cannot be overlooked. The gentler sex have directed their first line of attack against the profession of medicine, and ungallant, indeed, would he be who refused to congratulate the plucky and indefatigable victors. Who knows how long the pulpit and the bar may be safe from attack? But, meanwhile, it is the medical citadel which has been stormed. Lady physicians, skilful and fully equipped, are within hail of all who need them. In America, this medical female progress is even more rapid and decided than in Europe; for example, three ladies (M.D.'s) are members of the clinical board at Philadelphia, and in that city there are eight lady physicians making incomes of 20,000 dollars, twelve of 10,000 dollars, and twenty-two of 1,000 dollars.

This profane exploit of ambitious women entering the sacred precincts of the medical profession has aroused the warmest antagonism within the charmed circle of regular male practitioners. It cannot be denied that there have been medical women from remote periods of antiquity. The professional mind, however, appears to be unable to contemplate with calmness the accomplished fact of actually existing female doctors, although its equanimity would not be disturbed by any historic portrait. It is not that the arguments against women undertaking medical practice are overwhelmingly strong, and that the supporters of female practitioners are perversely blind to their cogency. (For the arguments on the other side are not without force), but that there is something in the nature of the idea which carries away a certain section of the profession, and leads to a display of adverse feeling, unsurpassed in intensity by any which is called forth by any other professional topic.

Many of the most estimable members of our profession perceive in the medical education and destination of women a horrible and vicious attempt on the part of women to deliberately unsex themselves in the acquisition of anatomical and physiological knowledge, the gratification of a prurient and morbid curiosity and thirst after undesirable information, and in the performance of routine medical and surgical duties, the assumption of offices which Nature intended exclusively for men. Hence the antagonists of medical women lose all patience over the discussion, and are incapable of arguing it out with any approach to calmness. The eminent physician who would rather follow his daughter to the grave than see her studying practical anatomy forgets that he is not obliged to bring up his daughter to the medical profession, and that the fact that he would not allow his daughter to be medically educated is no ground for preventing his neighbour from allowing his daughter to acquire knowledge and skill. It would be going too far in the opposite direction to charge the antagonists of medical women with trades unionism; but this is a charge which unprofessional

supporters of medical women might urge, and have urged, with some plausibility, because the effect is the same as if the trades union spirit actually prevailed. I am very far from being in favour of a medical career for women, holding, as I do, that by frame, temperament, and mental constitution, woman is not well adapted for medical, far less for surgical, practice; but I do not think that the members of our profession should do more than exercise a private influence against the destination of young women to the medical profession. Medical practitioners have ample opportunities of supplying information concerning the nature of a medical student's career, the difficulties and dangers of the profession, and so of tempering this unfortunate enthusiasm. But it was never, I think, the office of our profession to lead the van of any crusade against the admission of women into our own ranks. Such opposition is sure to be decried as akin to trades-unionism, and it is difficult to refute the charge, however untrue. We may honestly say that the opposition of our profession to the admission of women is disinterested, and is solely to prevent injudicious women from embarking on a course which must prove injurious to them. As to the wisdom or folly of women adopting medicine as a profession, let women themselves be the judges. So long as they content themselves with schools of their own, and desist from clamouring for that abomination, namely, mixed classes, we have no ground for complaint, but should rather wish them God speed. Apart from the study of medicine, the intellectual progress made by women in recent years has been very great. It is but a few months since the University of Cambridge furnished a brilliant example of this in the person of Miss Ramsay; and the results of the recent London University examinations show some striking figures. For the Matriculation Examination there were 1,100 candidates—that is, 150 women and 950 men. Out of these, 100 women and 515 men passed—that is, two-thirds in the one case, and little more than one-half in the other. Nor is this all, for in the honour list one-fifth were women, while one-ninth were men. Facts of this kind must speak for themselves, as evidence that the new régime is bearing fruit. If it be the destiny of woman in any degree to regenerate the coming age, and to infuse into a race yet unborn a nobler, more gracious, and less sordid spirit than that of the present era, there is but one pathway to success. Women must win their way, maintain and hold it, dauntless to the end—not by trying to become men, but by remaining more than ever women in the truest sense—by self-respect, discipline, and self-restraint; by search for the truth; by purity of aim; by faith in all goodness; and by the radiance of a spotless life. The fight may be no easy one, but the victory will be certain. If they need encouragement by the way, let them take it from the lips of the Poet Laureate—

"Work out your freedom. Girls,
Knowledge is now no more a fountain sealed;
Drink deep! until the habits of the slave,
The sins of emptiness, gossip, and spite,
And slander die."

I have endeavoured to lay before you, gentlemen, the principal lines in which your lots are to be cast, in the event of your adhering to your present intention of following the medical profession as your avocation for life. The choice of the particular department which you would prefer must be made by each one for himself; and in the selection you should be guided, not only by the strength of your body and of your purse, but also by the inward conviction that in this or that medical sphere, which you have deliberately chosen, you will contribute most to the health and happiness of your fellow-men. Do not be selfish in your choice, but be mainly swayed by the consideration that your mission in life is to lessen the misery and suffering of the greatest possible number; to ward off disease as well as to check it when it appears; to minister to a body, and often to a mind, diseased; to soothe the pains that afflict the anguished frame; to uplift the downcast spirit; to "husband out life's taper at the close, and keep the flames from wasting;" to lengthen, under Providence, the period of human life, and to slacken the footsteps towards that "undiscovered country from whose bourne no traveller returns"—surely these are objects worthy of the loftiest minds! You have chosen a noble profession—noble in its aims; noble, from the long roll of illustrious men on whose memories a glorious halo will ever rest; and noble, from its many victories in the eternal warfare it wages against disease and death. The inheritance which is thus bequeathed to you is of no ordinary kind; in comparison with it mere wealth and fortune are as dust in the balance. The blessings which have been conferred upon the human race by such men as Jenner, Ferguson, Simpson, Lister, and many others, have been sanctified by the thanksgivings of hundreds of thousands whose sufferings have

been lessened by their benign influence. Upon you devolves the responsibility of carrying out the noble aims which their genius has achieved, and of winning fresh victories in the domain of the healing art. Keep therefore, I warn you, your minds ever awake, your eyes ever open, and your ears ever on the alert; so that, perchance, it may be vouchsafed to some of you to uplift the filmy veils behind which some of Nature's most important medical facts and laws are no doubt still tantalisingly masked.

In striving to carry out your divinely-inspired mission with honesty of purpose and with the golden rule for your guide, do not be discouraged although all men should not speak well of you. You have heard the story of the painter of olden time, who exposed his picture to public criticism, and left a paint-brush close at hand so that anybody might blot out any particular feature of which he disapproved. Of course, the ingenuous artist soon found that everybody had some fault to find; and, bit by bit, his unfortunate picture was totally obliterated. Just as it was with the picture, gentlemen, so it is with the life-work of the majority; somebody will be pretty sure to take a crooked and distorted view of your character and of your actions, however meritorious they may be; some will do this wilfully and maliciously, and others through misunderstanding. But good, honest, persevering work in any sphere of duty will assuredly win its way in the end, and bring with it its own exceeding great reward.

The aphorism of the Father of Medicine, written upwards of 2,000 years ago, still holds true—"Life is short and the art long." The span of life allotted to each of us is too long if it be devoted to the pursuit of evil ways, and too short if our object be to follow in the right path, and to leave even a single "footprint on the sands of time." "The golden moments in the stream of life rush past us, and we see nothing but sand; the angels come to visit us, and we only know them when they are gone." Avail yourselves, then, of all the opportunities which may be offered to you, not only during the rest of your curriculum, but in your professional life, of acquiring knowledge and of doing good to your fellow men. If you allow these opportunities to slip, they will pass you beyond recall. Ere many years are passed, you, like the rest of us, will be called upon to give an account of your stewardship; and, assuredly, the members of the healing art will be amongst those to whom ten talents have been given. If you use these aright—and you will have ample opportunities of doing so—you will not fail to be numbered amongst the good and faithful; but if you fail to turn them to good account, you will richly deserve the title of unprofitable servants.

COMPARISON OF THE CÆSAREAN SECTION WITH PORRO'S OPERATION.

Read in the Section of Surgery at the Annual Meeting of the British Medical Association held in Dublin, August, 1887.

By SIR SPENCER WELLS, BART., F.R.C.S.,
Consulting Surgeon, Samaritan Hospital for Women and Children.

FIFTY years ago, when I was a student in Dublin, the comparative danger of Craniotomy and the Cæsaean section was the subject of warm discussion. Montgomery, Beattie, Churchill, and many others argued the question with great ability, with wide diversity of opinion, but with the perfect good temper of friendly rivals anxiously seeking for truth, and with the earnest desire to benefit mankind. At that time the operation which Porro described as "utero-ovarian amputation completing Cæsaean section" had not been seriously considered. Ten years before my student days in Dublin, that remarkable man, James Blundell—always far in advance of his time—had said to the students of Guy's Hospital, in 1828: "In speculative moments, I have sometimes felt inclined to persuade myself that the dangers of the Cæsaean operation might be considerably diminished by the total removal of the uterus. Perhaps this method of operating may prove an eminent and valuable improvement."

Blundell and other operators in Germany, Italy, and Russia proved by experiments on rabbits, sheep, and bitches that the uterus is not at all necessary to life; but it was not until 1869 that there is any record of amputation of the gravid uterus having been attempted in a living woman. In that year, Dr. Storer, of Boston, performed Cæsaean section, without any idea of doing more. But the uterus was the seat of a fibro-cystic tumour; severe bleeding occurred, and Dr. Storer removed the uterus as the only means of stopping bleeding. It was not until seven years after this, that Professor Porro performed the first premeditated operation which is now known by his name.

This was in 1876, and within eight years after that time Dr. Godson was able to bring before the Obstetric Section of this Association, at the meeting in 1884, not only a case of his own performed in 1882, successful both to mother and child—the first in the United Kingdom—but to give particulars in tables, admirably arranged and compiled with rare industry, of 137 cases of true Porro's operations, and of 5 other cases of utero-ovarian amputations during pregnancy, before the foetus was viable; and of 6 cases where the foetus was removed from the abdominal cavity by laparotomy, and the ruptured uterus was amputated. Dr. Godson afterwards published a supplement to his tables, bringing the historical record up to the latter end of 1884, and the number of true Porro's operations to 152, with a result to the mother of 66 recoveries to 86 deaths, a mortality of 56.5 per cent. Excluding the children who only lived a few hours, 96 were living. Thus, the number of women who recovered, 66, added to the 96 living children, makes a total of 162 lives saved by 152 operations.

My own experience of Porro's operation is limited to one case, so is my experience of the Cæsaean section, with one case where I excised a cancerous uterus which contained a foetus of about the sixth month. I fear that, although the three women all recovered, I can do little more than offer a few suggestions for consideration, and invite discussion upon questions which still wait for authoritative decision.

Perhaps the case which I have called one of Cæsaean section can hardly be considered as thus accurately described, for the child was not viable, but only a foetus of about the fifth month. But the case is of some importance in its bearing upon the discussion invited to-day, and in the history of the Cæsaean section, as I believe it was the first case where the opening in the uterine wall left after the removal of the foetus and placenta was closed by sutures. I published a full report of this case more than twenty years ago (*Medical Times and Gazette*, September 30th, 1865).

After removing an adherent multilocular cyst of the left ovary, weighing about 28 lbs., I tapped what I took for a cyst of the right ovary, and found it to be the gravid uterus. A quantity of liquor amnii and a foetus of about five months' escaped, and I easily peeled off the placenta from the inner surface of the uterine cavity. I made a free opening into the vagina by passing my finger from above through the os, and when bleeding was arrested by uterine contraction, I brought the peritoneal edges of the opening in the uterine wall together by an uninterrupted suture of fine silk, one long end of which I had previously passed into the uterine cavity, and out through the os into the vagina. By seven or eight points the uterine edges were brought accurately together, and the upper end of the silk was brought out through the opening in the abdominal wall. Although this patient recovered and is still in good health, she went through a period of very serious illness—fever, pain, profuse discharge and protracted convalescence—in striking contrast to the two cases where I removed the entire uterus.

In the first of these two cases the foetus was only about a week over the six months after conception. After opening the uterine cavity, and allowing the liquor amnii to escape, I removed the foetus, and then the uterus and both ovaries, with a cauliflower mass limited to the cervix which may be described as a growth "midway between papilloma and epithelioma." This patient recovered as well as after an average ovariectomy, and remained fairly well for several months; but she died of intra-abdominal cancer about a year after the operation. The case was brought before the Royal Medical and Chirurgical Society in 1881.

The true Porro's operation is not an excision of the entire uterus. It is the completion of the Cæsaean section by supravaginal amputation of the uterus, and it was not proposed by him with reference to uterine cancer or any form of uterine tumour, but simply to save the woman from many of the dangers which follow the Cæsaean section when the uterus and ovaries are not removed.

In my case, a full report of which appeared in the *JOURNAL* last June, it is almost certain that the entire uterus was removed, although after recovery something like the lips of the os could be felt at the top of the vagina. The impediment to parturition was not deformity of the pelvic bones, but the presence of a large, solid, immovable fibroid tumour of the uterus, which rendered delivery by the natural passage impossible. Supposing the Cæsaean section only had been performed, the child and placenta removed, and the uterus with the tumour left undisturbed, it is certain that the patient would have been left in a position of considerable peril to life, and if recovery did follow, she would still have been left with her pelvis blocked up by a solid tumour. While this was an additional reason for preferring Porro's operation to the Cæsaean section, the presence of the tumour (which was afterwards found to weigh 9 lbs.) added considerably to the difficulty and danger of the operation.