

**Introductory lecture delivered to the class of military surgery in the University of Edinburgh, May 2, 1854 / by Sir George Ballingall, M.D.**

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23

# INTRODUCTORY LECTURE

DELIVERED TO

## THE CLASS OF MILITARY SURGERY

IN THE UNIVERSITY OF EDINBURGH, MAY 2, 1854.

BY

SIR GEORGE BALLINGALL, M.D., F.R.S.E.,

PROFESSOR OF MILITARY SURGERY IN THE UNIVERSITY OF EDINBURGH.

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[FROM THE MONTHLY JOURNAL OF MEDICAL SCIENCE, JUNE 1854.]

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I ENTER, gentlemen, said the professor, on the duties of the present session, under a sense of responsibility which I have not heretofore felt; and it is all the more heavy because I am becoming the less able to bear it. We are not now engaged in "little wars" in distant quarters of the world, but, for the first time since I have held office, are embarked in a formidable conflict with a gigantic power nearer home—a conflict in which the lives and the health of our soldiers and seamen must be deeply involved. We are also about to have established chairs of military surgery in the two other capital cities of the empire. This is an object which I have long desired, for which I have strenuously contended wherever I could make my voice to be heard; and for which I must, in some measure, be held responsible, as having been the first to advise it. The occupant of this chair, whoever he may be, will, I expect, soon have to compete with two talented rivals—rivals in the race of honour and utility—rivals in their ambition to promote the health and the well-being of our brave soldiers and seamen. The contingencies of a great European war, will, I trust, bring me an increased number of those interesting communications which I have ever warmly cherished, whether coming from my contemporaries in the service, or from my old pupils. They also impose upon me the necessity of a vigilant attention to the events of the coming campaign, and to the reports, whether public or private, on the health of the troops and the treatment of the wounded.

After a notice of those most prominent in the department of military medicine and surgery, Sir George Ballingall proceeded as follows:—

I have, gentlemen, upon the present occasion been somewhat brief in my notices of the lives and writings of the army and navy surgeons, in order to make room for a short sketch of the introduction and progress of the class of military surgery in this university. I think it right upon this occasion (possibly the last, on which I may have to address a new audience), to give something like an account of my stewardship—something like a "compte rendue"—some account of the adverse circumstances I had to contend with at the outset, and of the very gratifying support which I have received in later years—something which may excuse me, in the eyes of the profession, for many short-comings, of which I am abundantly sensible—and something which may encourage you to perseverance in a good cause.

You are already aware that the institution of a chair like this was first recommended by that distinguished surgeon, the late Mr John Bell, in the memoir to which I have just referred—a memoir which you will find reprinted in the *Medico-Chirurgical Review* for 1844—a memoir which you will do well to peruse. With some enthusiasm in the language, perhaps I may say some extravagance of expression, it breathes throughout a spirit of patriotism and a feeling of sympathy with the wounded seaman, worthy of all admiration. John Bell, however, was never destined to fill this chair. After a lapse of several years the office was instituted in the person of a not less celebrated man, the late Dr Thomson, who had been previously nominated to a professorship of general surgery, established by the Royal College of Surgeons. I know from the best of all authority, namely, from Dr Thomson's own lips, that a main object which he had in view, in connecting the professorship of military surgery with his other office, was the more complete and effective teaching of surgery within the university. But while this measure was one of great importance to the teaching of general or systematic surgery, as connected with this school, I have always held it to have been an unfortunate event for the cause of military surgery. By this arrangement the course of military surgery was conducted, during the whole of the Peninsular war, in conjunction with, or as an appendage to, a more extended course of lectures. The class thus lost its individual character; it lost, above all, the concentration of Dr Thomson's acknowledged talent upon a subject which he could not have failed to elucidate, to improve, and to amplify. I need not, gentlemen, hesitate to repeat what you will find recorded in my evidence given before the Royal Commissioners for visiting the Scottish universities in 1826. I have there said: "Had Dr Thomson been bred a military surgeon, and had he devoted the energy of his mind to the class of military surgery alone, I think it would have held a different rank in the public estimation, and in the university from what it now does."

The circumstances to which I allude, had exercised a depressing influence upon the class. Mr Bell's memoir, which contains an excellent programme of a course of military surgery, and of which only a very few copies had got into circulation, had done little to open the eyes of the profession to the extensive field which may properly be embraced in such a course. When I succeeded to the chair in 1822, upon Dr Thomson's resignation, I found little facility for the illustration of a course of military surgery. No separate nor complete course of lectures had yet been delivered; no class-room nor museum was appropriated to it in the college; and indeed I may almost say, that it had neither "a local habitation nor a name." Numerous prejudices and misconceptions in regard to this subject prevailed in the professional mind, the most prominent of which was, that a course of military surgery was only to be a series of lectures on gunshot wounds. The public mind, again, had begun to be turned, well and wisely, to the arts of peace; the country was heartily tired of war and all its expensive establishments; reductions had been effected, and were still proceeding in all directions. Even the small saving to be accomplished by the suppressing of this chair, was, I have reason to know, suggested to the authorities. In the session of 1823-24, I delivered my first course of lectures, supported by thirty-three medical officers in the public service, and only four other pupils. The attendance of the former class of gentlemen was indeed for many years my principal encouragement to go on. From the period I have specified up to the year 1846, when I was obliged, in consequence of the state of my health, to transfer my lectures to the summer session, the average attendance of surgeons of the army and navy, and Hon. East India Company's Service was twenty-two. Many of these gentlemen had returned from foreign climes, full of interesting, and to me very valuable information. Numbers of them had, like myself, entered the service before they were even qualified by age to take a doctor's degree, and had returned to this school for the purpose of graduation. This class of pupils has naturally and greatly diminished in proportion as it has become more common for gentlemen to take their degrees before settling in practice, or entering the several departments of the

public service, and in proportion as there are fewer of these gentlemen studying here in the summer than in the winter session.

From the moment I entered upon office I have ever entertained the opinion, that if there was any one class of gentlemen, more than another, to whom my experience had qualified me to be useful, it was to those educating for the East India Company's Service, or serving with Her Majesty's Regiments in that country. I had acquired some experience in the practice of encampments in India, a position in which, whether in peace or in war, the Indian army passes so large a portion of its time. I had been in my tent during a part of two monsoons, and even with all the appliances and means which an officer can command, knew well how trying it is to the health of every individual, more especially to that of the common soldier, to be exposed in such a situation; I had ample experience in the treatment of the fevers, dysenteries, and liver diseases of India. At Prince of Wales' Island I had seen much of those formidable ulcers so destructive to the soldiery in some of our eastern possessions, and I had seen something of the treatment of the wounded at Java. The two last mentioned localities are within a few degrees of the line, where the soldier's constitution had to contend with the baneful influence of the climate, as well as to repair the injury done to his person.

One of my first moves, then, was to apply to the learned gentleman at that time holding the appointment of examining physician to the East India Company, for a recognition of my course, so far as to recommend it to candidates for his department. I was met, however, by technicalities, perhaps not very unnatural for a London physician who had never been engaged in any branch of the public service. I was told that he had nothing to do with surgery, and that he trusted entirely to the College of Surgeons for the surgical qualifications of his candidates. I then memorialized the Court of Directors; but here my memorial, no doubt through the same limited views and erroneous representations, met with a very unmerited and ungracious reception. It was represented as casting reflections upon the character and education of the Company's surgeons, than which nothing could be further from my intention. Fortunately, however, I was enabled to show that that very memorial had been penned by a distinguished medical officer of the Bombay army. I was supported by the favourable opinion of ten medical officers of the Honourable Company's Service, from the rank of superintending, to that of assistant-surgeon, several of whom were then pupils of the class, and expressed themselves to the following effect:—"We, the undersigned medical officers of the Honourable East India Company's Service, do most willingly express our opinion of the great utility of the lectures on military surgery delivered in the University of Edinburgh to those young men educating with a view to our service. Some of us, who have now retired from the service, have to regret that no similar source of instruction existed at the period when we were educated; and others who are about returning to India, have eagerly embraced the opportunity afforded us by Dr Ballingall, of profiting by his experience in the treatment of the diseases incident to European troops in that country." My cause was kindly espoused by the late Colonel Vans Agnew, then in the Direction, to whom I had been slightly known when serving as Assistant Surgeon to the Royals, when he was Deputy Adjutant-General of the Madras army, and it ended by a qualified recommendation of my course, notwithstanding the unfavourable feeling of the examining physician. This was a "heavy blow and great discouragement" at the outset, but has been amply compensated by the support I have received from the same quarter in later years, and upon which it will be more agreeable to enlarge.

No other circumstance of any moment affecting the class of military surgery occurred until an investigation took place into the state of the Scottish universities and schools of medicine in 1826, when sentiments favourable to this chair were expressed by the late Director General of the medical department of the army, and by others. I got many kind hints from well-meaning friends that the professorship of military surgery might easily be converted into a pro-

fessorship of general or systematic surgery, which was still a desideratum in the university. This view of the matter, however, I steadily resisted, and in a memorial, submitted to the Royal Commissioners for visiting the Scottish universities, expressed myself to the following effect: "Whatever may be my sentiments as to the expediency of instituting a professorship of general surgery in the university, and they are certainly favourable to such an institution, I am at the same time decidedly of opinion that such a professorship should not be formed by sacrificing the chair of military surgery, a chair which in the hands of an experienced army surgeon I have ever considered capable of being rendered interesting to the students of medicine generally, and peculiarly important to such of them as may be educating for the public service of the state."

In 1829 the regulations of the Royal College of Surgeons of Edinburgh, to be followed by candidates for their diploma, underwent a protracted and careful revision. Two courses of surgery were enjoined, and a resolution was adopted, giving to those students who chose to avail themselves of it, the option of taking a course of military surgery in lieu of one of these. With the passing of this resolution, and the manner in which it was carried, I have always been peculiarly gratified. It was moved by an able and experienced naval surgeon, the late Dr Kelly of Leith, who, in bringing it forward, said, "I do so as a boon to the student, not to the professor." To this period I look back, as the era from which I date the subsequent change which has taken place in the minds of the profession and the public as to the utility of separate courses of instruction for military and naval surgeons. It was speedily followed by a corresponding movement on the part of the heads of the medical departments of the army, the navy, and the ordnance, giving the same option to candidates for their respective branches of the service. From these quarters, indeed, I have always experienced a steady and consistent support. From Sir James M'Gregor and Sir William Burnet I am in possession of numerous letters expressing approbation of this course, and of my writings relative to it. In one of these letters the late Director-General expresses his regret that similar lectureships did not exist in the other schools of the empire; and the course is now I believe recognised by most, if not all, those licensing bodies by whom two or more courses of surgery are required. The session 1829-30 was the first in which the regulation I have alluded to could have had any effect on the class; and it is somewhat remarkable that while three sessions before this period the number of pupils, exclusive of those in the public service, was only nine, in three years after, in the session 1832-33, it had risen to twenty-nine.

The next most important event affecting this class, was the securing of Mr Alcock's museum. When I heard of this being likely to come into the market, in consequence of the failure of Mr Alcock's health, and his being obliged to relinquish his profession, I urged, in my place in the *Senatus Academicus*, the propriety of obtaining his collection for this school, and after a report upon the subject by Mr Guthrie, and the late Mr Liston, the money was voted, and my wishes very kindly acceded to. This, under a more liberal patronage from the Government, is an expense which, with great propriety, might have fallen upon the public; but you will agree with me in thinking, that it was a suitable and a becoming act on the part of a body which owes all the funds it possesses to two general officers of the army—the late Generals Reid and Stratton. If there is any neglect or omission, for which I particularly blame myself, it is for not having cultivated more assiduously the acquaintance of the late Sir Joseph Stratton. I had known him many years before as a major in the army, in command of the Inniskillen Dragoons, and repeatedly met him in society after I became resident in Edinburgh. Had I been aware of his benevolent intentions towards this university—had I brought him to my class and shown him my museum, I make no doubt that he would have been induced to specify the military surgery, as General Reid did the music, as a special object of his bequest.

In the autumn of 1843, I made a visit to the military hospitals on the Continent, and the schools of instruction for the army surgeons attached to some of these establishments. On my return, I addressed a letter to the late Sir Robert

Peel, urging the endowment of additional chairs of military surgery in this country, contrasting the liberal expenditure of the foreign governments, France, Austria, Prussia, and Belgium, in providing instruction for the medical officers of the public service, with the scanty provision made for the same purpose in this country; contrasting also the remarkable difference of duties which devolve upon the surgeons of the continental armies compared with those which must be undertaken by the surgeons attached to the fleets and armies of Great Britain. The former are occupied, I may say exclusively, in treating the diseases of their native climate, while of the latter, not less than two-thirds are constantly employed in the treatment of formidable and fatal diseases, incident to soldiers and seamen on foreign stations and in tropical climates, diseases with which neither practitioners nor teachers in this country are, of necessity, practically acquainted. This letter, although favourably received, could not be expected to command much of the attention of the Premier, occupied, as of necessity he always is, with the graver concerns of the state; and was merely addressed to Sir Robert Peel as having been the Home Secretary, and the dispenser of the Crown patronage, at the time I received my appointment. The letter, however, attracted considerable attention for the moment, and brought me a large number of complimentary acknowledgments from various quarters. But this soon passed away, and it was likely to follow the fate of John Bell's memoir, until in the summer of 1849, when I was resident at Taunton in Somersetshire, a copy was put into the hands of Sir De Lacy Evans, which he acknowledged in the most encouraging terms.

It is to this distinguished officer that the public is indebted for carrying through Parliament a measure, which, if followed out with due zeal, energy, and intelligence on the part of the teachers, cannot fail to be highly beneficial to the health of the soldiers and seamen, and, at the same time, creditable to the country. But let me first advert to the other quarters from which I have received support in urging the endowment of additional professorships. Wherever it has been mentioned, either by the military or medical journals, both those published in this city and in the other divisions of the empire, the measure has, with one solitary exception, met with unanimous support. I allude here to an unfavourable, and, I say it advisedly, an inexperienced critique on my letter to Sir Robert Peel, published in the *Medico-Chirurgical Review* for 1844. This, however, I have no reason to regret, for it gave me the opportunity of publishing in the number of that *Journal* for July 1844 ("Extra limites") a reply, which was, I believe, conclusive; and which enabled me to give to my professional brethren some explanatory details, which would have been altogether out of place in an address to the minister. Of the professional *Journals* which have taken part in this question, none have advocated it with more steadiness, consistency, and vigour, than the *Lancet*. There you will find, within the last few years, a series of powerful leading articles, supported by reference to authorities of the highest import, those of Sir William Napier, the historian of the Peninsular war, the late venerable Dr Robert Jackson, Mr John Bell, Mr Guthrie, and many others. There also have been published, successively, during the last three years, extracts from each of the introductory lectures delivered to the students of this class. But this is not the only way in which that *Journal* has promoted the cause. In it have appeared numerous papers and letters, relative to military hygiene, and to the equipment of the soldier, as bearing on his health; there, too, has been strenuously advocated the cause of the naval assistant-surgeons, a cause which must ultimately triumph, notwithstanding the determined opposition which it has hitherto encountered. In the discussions upon this point, an event in the mutiny at the Nore in 1797, seems to have been lost sight of. On that occasion, the seamen, amongst other things, petitioned for "better attendance when sick and when wounded in action." Let us take care that it does not come to this again.

Of the gentlemen to whom individually I feel indebted for support, are two connected with the service of the Honourable East India Company, and their



conduct forms a most agreeable contrast to the little encouragement I got from that quarter at the commencement of my labours; the first of these gentlemen is Dr Scott, who, for several years past, has so well filled the office of examining physician to the East India Company, and who, two years ago, with the sanction of the Court of Directors, took the very important step of requiring attendance on a course of military surgery, by all candidates for the East India Service, who may be educated in schools where such courses are given. But it is by the communications, both public and private, of Mr James Ranald Martin, of the Bengal Medical Service, that I have been more especially encouraged to persevere, when desponding under feelings akin to those which must have actuated Mr Guthrie, when he penned the concluding paragraph of his recent letter to the *Times*, on the Medical Service of the British Army. But I should do Mr Martin little justice, if I were to withhold from you the knowledge of other cases in which his name stands prominently connected with the honour and interest of the medical departments both of the Queen's and the East India Company's services. He is the author of the "Claims of Medical Officers to Military Honours." This consists in a series of interesting narratives of personal adventure and gallant conduct on the part of medical officers in the service of the state; and some startling facts as to the numbers of them who have fought, who have bled, and who have fallen in the service of their sovereign and their country. This gentleman's friendly intercourse with Sir Howard Douglas and Sir De Lacy Evans, and his relationship to the late distinguished Adjutant-General, Sir John Macdonald, gave him an influential voice in that matter, and you will, I trust, agree with me in thinking that it was well exercised. But there is yet another important measure affecting more particularly his own branch of the service, in which Mr Martin took part. It is chiefly owing, I believe, to this gentleman's representations, that the rule of seniority so long rigidly followed in appointing to the highest positions in the medical department of the Indian service, has recently been broken through, and room given for selection without reference to previous rank in the army. I am of opinion, gentlemen, that the practice of selection should be but sparingly followed; but had no room been left for it, the service must, on numerous occasions, have suffered. In that case the battle of Barossa would not have been fought by Lord Lynedoch as a General Officer, nor would the Duke of Wellington have terminated the last continental war, by winning the battle of Waterloo, as a Field Marshal. In our own department, Sir James M'Gregor would not have encountered the perils of Walcheren as Inspector-General of hospitals, nor would he have been raised to the responsible position of Director-General of the medical department of the army five-and-thirty years before the termination of his professional life.

But to return to the chairs of military surgery, the subject was first broached in the last session of Parliament by Sir De Lacy Evans, in a speech which you will find specially reported in the *Lancet* for 5th March 1853. It was kindly received by the Secretary at War, who immediately set about inquiries to enable him to judge of the matter. I was soon after this given to understand, that the medical testimony in favour of the measure was abundant, but that it was desirable to have the opinions of some experienced general officers on the subject. Upon this I immediately wrote to the Earl of Cathcart, who had many years held the appointment of Commander of the Forces in North Britain, and who had been repeatedly present in this class-room. In his lordship's reply, in connection with many kind and too flattering expressions towards myself, is the following:—"Having had the pleasure of being present at several of your introductory lectures, during the period I held the command in Scotland, I had ample opportunity of appreciating the high value and importance of such a branch of instruction to the students who were qualifying themselves for their future duties as medical officers of the army. It is, therefore, with great satisfaction that I now express my most cordial concurrence with Sir De Lacy Evans, in the view he has taken of this subject, being firmly persuaded that by extending the advantage of such institutions to the other capitals of the United Kingdom as he

proposes, the result would be most beneficial to the best interests of the country, both in regard to economy of money, and, what is of more value, human life." From the late Lieutenant-General Sir Neil Douglas, who also for several years held the command in this country, and who had done me the honour of being occasionally present in this class-room, I was previously in possession of a letter containing the following expressions with reference to my address to Sir Robert Peel:—"I have read your pamphlet with much attention, and as I think you have made out a most triumphant case, I trust your highly useful suggestions will be attended to." These letters were forwarded through Mr Martin, with one or two of the others which I possess on the same subject, from Sir Thomas Brisbane, Sir James Russell, my old shipmate Sir Robert Sale, and my old brother officer General Wetherall, the Deputy Adjutant-General of the army, and now about my oldest friend in the service. These letters must, I think, have done much to confirm the favourable opinion which the Secretary at War seems from the first to have taken of the measure which I have so long advocated. I was told, indeed, many months ago, by a distinguished medical officer, that if any Secretary at War was likely to adopt my views, the Right Honourable Sidney Herbert was the man. I heard, however, nothing more upon the subject, until I was agreeably surprised on reading the right honourable gentleman's speech in moving the army estimates this session, to find that with repeated expressions complimentary to this school of medicine, and to the gallant officer who last year introduced the subject to the notice of the House, he proposed a vote of L.400 for the endowment of additional professorships of military surgery in London and in Dublin, and this passed without a dissenting voice.

I must now apologise for the egotism into which I have been led, but I commenced by saying that I was going to give a sketch of the progress of military surgery in this university, and from this, after more than thirty years' tenure of office, I cannot disconnect myself. Some allowance will, I hope, be made for a little feeling of exultation, when you consider that at the period of my accession to this chair, the question of doing it away, as a sinecure, was gravely considered, while there now stands recorded in the present session of Parliament an unanimous vote of the house for the endowment of two other chairs of the same description—when you consider that, exclusive of medical officers in the public service, I commenced my first course of lectures with only four pupils, while I terminated the last summer session with forty-seven.

I would now, gentlemen, advert for a moment to some of those subjects which must immediately engage your attention at the very commencement of the course, and which press upon my mind at present in consequence of some remarkable coincidences. You will easily understand that the recruiting of the army is a subject of paramount importance to its efficiency. The author of the "Formation, Discipline, and Economy of Armies," has well observed, that the selection of men fitted for the purposes of war, and their instruction in approved forms of discipline, is a subject demanding the closest attention of every patriotic statesman, and of every scientific soldier. We have within these few weeks a well-timed work on the recruiting of the army by Mr Massy, which I shall in my next lecture bring under your notice, along with that of my late friend Mr Marshall. But there are two points connected with this subject, which do not appear to me to have yet sufficiently engaged the attention of the authorities—viz. the principle upon which the standard height for the recruit should be fixed, and the use of the andrometer. The standard has often varied, and must, indeed, vary from time to time, according to the greater or lesser exigencies of the service, but it should never deviate far from the average height of the nation, or of the district from which the recruits are to be taken. The closer it comes to this average the better, in as far as the health, the energy, and endurance of the soldier are concerned. The Andrometer or man-measurer, of which you will see a woodcut in my "Outlines," and of which I shall show you the original specimen, made by the inventor, is calculated to take the admeasurements, and give the proportions of all the more important parts of the person. Let us, then, take a

pattern man of the standard height (say 5 feet 6, 7, or 8 inches, as the case may be)—a man perfect in his physique, with whose development no fault can be found, and let us note his proportions. Let every succeeding recruit be then placed in the andrometer, and see how near he comes to this standard of perfection, or where he deviates from it. Were this to be generally practised, no faulty development in any of the more important parts could possibly escape the observation of the most inexperienced observer; and at a time when so many men are to be passed into the service, whether for the militia or for the line, I cannot but think that the use of this instrument would prove a most important auxiliary to those surgeons of militia who may have but little experience in this essential part of their duty, and to those young surgeons entering the army, who may, as I was myself, be called upon to exercise their judgment in passing recruits before they are many hours in the service. I am far, however, from desiring to take from experienced surgeons the exercise of a large discretion in this matter. There is many a cross-made fellow, many a man who is not an "Apollo Belvidere" in his person, who may yet prove an active and efficient soldier; this is, perhaps, more particularly observable in the navy, where there are many expert, vigorous, and hardy seamen, whose persons would not stand the rigid exercise of a sculptor's eye.

The feeding and the lodgment of the troops are circumstances on which their health must ever very essentially depend; and, in a recent speech in Parliament, Earl Grey, in moving for some papers connected with the administration of the army, has put this in a very striking point of view. It appears that, in some of our West India settlements, the proportion of deaths amongst the military was, for a series of years, as high as 130 per thousand; that notwithstanding reiterated representations from the medical officers of its injurious effect upon their health, salt provisions continued to be issued to the troops five days a week. That while the convicts they were employed to guard were allowed five days' fresh meat in the week, and enjoyed good health, the soldiers who were unstained by crime, were condemned to five days' salt provisions weekly, and in consequence suffered severely in their health. This was the more inexcusable, because it was found upon inquiry, that parties were ready to supply fresh meat at a cheaper rate than the salt. Again, with regard to the barracks, his lordship refers to numerous reports from medical officers, complaining of the insufficiency of the accommodation in this respect, the rooms not even water tight, the men sleeping in hammocks and allowed only 18 inches of sleeping room. While it is somewhat discouraging to find that his lordship had so much occasion to lament the little attention which was paid to the representations, again and again made by the medical officers, he still, you will observe, refers to medical opinion as the proper authority to guide the executive in these matters. "My lords," says he, "I may be told that these disasters are the inevitable result of the climate; if it were so, it would be a frightful thing; but I say it is not the inevitable result of the climate, for, after the investigation to which I have alluded had been made, various measures were adopted to counteract the frightful evils that were ascertained to exist; and in a very few years—if not immediately within the next four years—that mortality was reduced from 130 to 53 in the thousand. But the improvement did not stop there, for, within the last ten years, instead of the deaths being 130 in the thousand, the average number was only 34."

Upon the space to be allotted to men in barracks, I fear that very limited and erroneous views still prevail. We find, upon a not very distant occasion, a distinguished general officer of chivalrous spirit, of indomitable courage, a man who was the father, the friend, and the idol of his soldiers, a man, too, of large experience both in European and in Indian warfare, talking of 300 cubic feet as a sufficient space for the soldier in barracks. I will not couple a name which I so much respect with so grave an error; but when we find an officer of this description speaking of 300 feet as sufficient space, we must think that he had yet much to learn—speaking this way, too, with reference to the construction of a barrack in India, where space is for the most part as easily procured as it is in-

dispensably necessary, where property is in that enviable and indefinite condition which I once heard described by a dignified highland clergyman—the venerable principal of one of our universities—who spoke of the property of his clansmen of old, as consisting, not of what they *had* but what they *could take*.

I have thus cursorily noticed these few points to show you the grave responsibility that attaches to your representations, and to show you how far your range of observation must be extended beyond the common objects of professional inquiry. The province of the engineer, the architect, and the commissary, are not beyond the legitimate field of a medical officer's observation. In the introductory and in the concluding divisions of the course, you will find me referring, perhaps less frequently to medical and surgical authors, than to the "Statistical reports on the health of the army and navy," to the "Engineers' papers," and to the "Blue books" of Parliament. You must not be deterred from looking into these by the jokes which have lately been passed on the practice of "pottering over blue books." Believe me, that although this may be made matter of humour by the politician, you will find in some of these books matter of grave importance to the medical officer.

Since I last met my class, several of my old pupils are on their way to Turkey. Amongst these are Deputy-Inspector Linton, the medical officers of the King's Own, and some of the young gentlemen who occupied these benches last summer. My best wishes go with them, and I make no doubt that they will acquit themselves as the surgeons of the British army always have done. Some of the more youthful and ardent spirits amongst you may think that I too, like my fellow-labourer, Mr Tuffnell of Dublin, and my colleague in the Royal Infirmary, Mr Mackenzie, should have been preparing to start for the Danube. I have been before on the banks of the Danube, and nothing would give me greater pleasure than to be there now; but a lame hand, from a painful and anomalous affection of my fingers, an impaired eye, from a recent attack of rheumatic ophthalmia, and, above all, a load of 68 years upon my shoulders, are miserable qualifications for a campaign in Turkey. I must therefore be content, for the present, to remain at my post, and to endeavour to convey to you some of that information regarding the health of the troops, of which my own experience or the kindness of my friends has put me in possession.





