The ethics of operative surgery / by Sir William Stokes.

THE ETHICS OF OPERATIVE SURGERY.

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It is with mingled feelings of pleasure, misgiving, and fear, that, at the request of the Medical Board of this Hospital, I venture to offer a short Address to the friends, supporters, and students of this time-honoured institution. The misgivings and fears, doubtless, largely outweigh the pleasure, as is always the case when the responsibility is great. Some have held that Inaugural Addresses are useless, out of date, and should be, as they are in most clinical hospitals in Dublin, discontinued. I confess I am one of those who have never been very enthusiastic about such Addresses, and I am particularly devoid of enthusiasm when it falls to my lot to deliver one. However, there is much to be said in favour of making some formal commencement of the winter session—a commencement of what is to be our common and, I trust, happy toil.

If no other purpose was served, a formal opening of the session affords an opportunity of giving a cordial greeting to those who have come back to resume what is likely to be their life-work, and a warm welcome to those who are about to commence it; both of which, on the part of my colleagues and myself, are offered in all sincerity.

It is not my intention to give you much advice, partly because I think that advice unsought is seldom valued, and partly because I think that, being no longer schoolboys, but men engaged, or about to engage, in one of the most strangely complex of all human sciences, and one, the daily progress of which, more particularly in surgery, is so rapid that it is hardly possible to keep pace with it, it would be almost insulting to you to urge the necessity for unceasing industry, for punctuality in your attendance at lectures and hospital, and for leading a steady, temperate, and moral life. I will assume, and, I am sure, rightly assume, that you are just as alive to the importance of these requirements as I am. All I would ask of you

[a] An Address introductory to the Session 1894–5, delivered in the Meath Hospital and County Dublin Infirmary, on Monday, October 8, 1894.

to remember is that, as Billroth said, "a student means a person who studies, and that to study does not consist in converting oneself into a mere passive receptacle for positive knowledge, but into one who can awake such knowledge into life. Let what you hear," he said, "enter your mind fully, warm you up, and so occupy your attention that you must think of it frequently; then the true pleasure and appreciation of this mental labour will fill you." You should be sure of two things, as George Eliot has said, "To love your work, and not be always looking over the edge of it, wanting your play to begin. And the other is, you must not be ashamed of your work, and think it would be more honourable to you to be doing something else." The student's duties and responsibilities are, in truth, embodied in the Scriptural words, "Whatsoever thy hand findeth to do, do it with thy might."

But if we expect and look for the fulfilment of these duties on the part of the student, what may he fairly and reasonably look for from his teacher? He may well expect that the teaching should have the elements of vitality in it, and not be merely "a sapless root," as Ruskin said, "capable at best of producing a shrivelled branch," but a reality, not a sham, and something more than a dreary catalogue of stale facts extracted out of some antiquated and discarded text-book. The student has a right to expect that his teacher be not satisfied with the stock of knowledge he has brought with him from the schools, which, if not continually vivified, refreshed, and increased by new experiences and acquisitions of knowledge, soon undergoes a process of acute atrophy, withers, and rots.

The student, a severe but, on the whole, a just critic, is well aware of the truth embodied in the old German adage, *Raste ich, roste ich*, "If I rest, I rust," and soon appreciates at their true value those who, wrapped in a thread-bare cloak of self-sufficiency, foolishly isolate themselves from their fellow-labourers, refuse to read the signs of the times, or to be influenced by the progressive spirit of the age, and immured in the mephitic atmosphere of their squalid and pigmy hovels, think the world regards them as kings.

As fellow-students, teacher and student should work together, and give and receive from each other both impulse and inspiration. A great teacher and scholar, the late Professor Jowett, has truly said, "Teaching should have warmth as well as light, and should be an interchange of mind with mind, quickened, animated, and cherished by the power of sympathy." A peculiar responsi-

bility devolves on a teacher in these countries. Belonging, as he does, to a great, a wide-spread, and ever-extending empire, that embraces nationalities in every part of the habitable globe, he has a duty that belongs to the teacher of no other country; and, as our illustrious Graves observed, "he exercises an influence without parallel or extent, having opportunities of benefiting or injuring his fellow-men that are incalculably great."

It has been my lot on various occasions to point out the giant strides in operative surgery that have been the outcome of the great revolution in the treatment of wounds initiated by Pasteur and Lister, and it will always be among the happiest recollections of my life that I was among those who first systematically and formally adopted Listerian antiseptic practice in Dublin. Much opposition and ridicule were encountered, but it has survived all such brainless depreciation, as of necessity it was bound to do, and it now occupies a position in surgical estimation from which it can never be dislodged. At times, indeed, faint and foolish echoes of opposition are heard, such as paragraphs headed "The Bursting-up of Listerism," "Death of the Carbolic Craze," "*Delenda est Carthago*," &c.; but the dreary farce is thoroughly played out, its frequent repetition having long since ceased even to excite a smile. The great principle of antisepsis as developed by Lister is now recognised and adopted wherever scientific surgery is taught and practised. And here I would venture to express the hope that the Committee, who are about to make large and much-needed additions and structural changes in the hospital, will aid in bringing the operating theatre into a condition more in harmony with modern antiseptic requirements than it is at present. The outlay required would not be great, and the benefit to the hospital, to surgery, and to the patients, would be untold.

If anything depreciatory of antisepsis could be said, it might be that in the minds of some zealous operators, it may have had a tendency to beget an overweening confidence in the powers of our art. The result has been that the ethical principles which should always guide us in our operative work have, at times, I think, been neglected, and operations undertaken that, in the present state of our knowledge, have, I fear, overleaped the pale of legitimate surgery. I allude more particularly to such procedures as pulmonary resection in cases of tuberculosis of the lung, transplantation of bones and periosteum from the lower animals for osteogenetic purposes, chiselling away projections of the bodies of the vertebræ

for the relief of anterior pressure on the cord in cases of fracture with displacement of those bones. Such procedures are fraught with dangers which are so insuperable, and over which antisepsis can exercise such little influence in their final results, as to render them, at present at all events, unjustifiable.

Among other cases, too, in which I think of late years the *nimia diligentia chirurgiæ* has been unduly developed, I would mention some forms of intestinal obstruction for which laparotomy has, with some surgeons, become almost the routine practice. Of course, if there is clear evidence of mechanical obstruction—as, for example, in volvulus, intussusception, or obstructions from adhesions and adventitious formations resulting from peritoneal inflammation or new growths—the indications for laparotomy are comparatively clear and distinct. But the case is different when the obstruction is due to other causes—*e.g.*, to defective nerve power, more particularly when it depends on senile debility, or a paralytic condition depending on certain local inflammations, such as ileus and appendicitis. I do not deny that there has been a very large proportion of recoveries from operations performed under these conditions; but I have a very strong suspicion, one almost approaching conviction, that a very considerable number of them would have had an equally good chance of recovery without the operation at all. On this subject Mr. Jonathan Hutchinson, one of the most thoughtful and philosophical of existing surgeons, expresses his opinion, that "if ever it should become the common practice in intestinal obstruction cases to operate early, and without attempting relief by other means, the fatality of this class of cases, as a whole, would be greatly increased." When one reads of a statistical record recently made of 450 cases of appendicitis, for which laparotomy was performed, one feels inclined to paraphrase the criticism of the French General on a certain famous military operation in the Crimean War, and exclaim, "*C'est magnifique, mais ce n'est pas la chirurgie!*" [a]

Another instance I would adduce, in which the ethical principles at should guide us in our operative work have been overlooked—I allude to the operative treatment of microcephalic idiocy. The deficiency of brain power in these cases is believed to be due to a premature closing of the sutures and fontanelles, and, as a result

[a] The criticism alluded to was made in reference to the famous cavalry charge at Balaclava, when one of the French Generals looking on, observed: "C'est magnifique, mais ce n'est pas la guerre."

of this, space is not given for a sufficient development and growth of the brain. To relieve this condition and give room for the brain to develop, it has been proposed by Lannelongue to perform either a linear or a circular craniotomy, or a *craniotomie à lambeaux*. Lannelongue, in 1891, published a series of twenty-five cases of craniotomy performed on children from eight months to twelve years of age, when only one death intervened. The results, immediate as well as remote, were alleged to be most favourable, especially as regards improvement in intelligence. In consequence of this very surprising result, the operation was promptly repeated by various surgeons in Europe and America, but, alas! with very different results, and the suspicion soon became unavoidable that the continuance of such success was not to be counted on—in fact, that the colours in the original picture were of somewhat too roseate a tint. Prof. Jacobi, in the able Address he delivered at the last International Medical Congress in Rome, sounded a warning note in reference to this procedure. He pointed out how many-sided is the ætiology of the sad condition of microcephalic idiocy, and that although insufficient cranial development may sometimes be a determining factor in arresting healthy brain growth, yet that such a condition is but one out of many others that predispose to mental deficiency. This is not the place to discuss the ætiology of idiocy, but I may mention that in the Address I have already alluded to, no less than eighteen different pathological conditions associated with it were enumerated, in not one of which could any form of craniotomy or craniectomy have possibly proved of the slightest advantage.

At the meeting of the German Surgical Society in Berlin last April, Tillmanns, of Leipzig, read a communication on craniectomy in microcephalus. He is unfavourably disposed to the operation, chiefly on the ground that in microcephalic heads there is almost always a congenital malformation of the brain which is uninfluenced by any abnormality in the calvaria. These changes, as Prof. Fraser and other observers have pointed out, are not confined to the brain alone, but are found affecting the whole of the central nervous system—in truth, the developmental changes are so profound in the microcephalic condition that no closure of sutures, or opening of sutures could influence them in any way. The sutures and fontenelles are, in Tillmanns' experience, normally developed in this condition. It is only then, in the very rare cases of microcephalus, with premature closure of them, that craniectomy could have any possible standpoint, and on two such cases Tillmanns operated. The

results were not encouraging. In the first case, that of a child aged a year and nine months, no improvement was observed, and in the second case, also of a child aged two and a half years, convulsions supervened some weeks after the operation and the patient died. Again, have there been no cases of microcephalus with premature ossification of the sutures and fontanelles in which there was the reverse of mental deficiency? One of the most brilliant meteors in the realms of poetry and romance that ever flashed across and illuminated the Western hemisphere, Sir Walter Scott, afforded, it is said, an example of this condition, and one trembles on thinking what the world might have lost had some enterprising and too zealous operator performed a *craniotomie à lambeaux* on him in his early childhood!

But let it not be considered that I take too pessimistic a view of the situation. Far from it. What I do think is that a sufficient discrimination of the suitable cases is not made, and cannot be made until our power of discriminating more accurately the various ætiological factors connected with mental deficiency is increased. Until that is done the difficulties surrounding discrimination will remain well-nigh insuperable; but, happily, there seems every prospect that in the near future these difficulties and obstacles will be removed.

A consideration of surgical ethics that frequently exercises the mind of the operating surgeon is the question of the principles that should guide him in dealing with cancerous growths. The question as to what constitutes justification in dealing with them in an operative way is ever present and surrounded with difficulty, as the result of such interference must end in weal or woe, satisfaction or regret to the patient as to the operator. Excision may, on the one hand, bring relief from suffering, prolongation or even saving of life; but, on the other hand, it may mean a fatal and disastrous stimulus to the morbid process. In truth, as regards cancer, we must confess that as yet we see through a glass darkly. We stand on a very small oasis of knowledge, to borrow a happy illustration of Lord Salisbury, "one surrounded by a wilderness of *nescience*." What we do know, however, is that success or failure very largely depends on the period at which operative interference is undertaken, and that excisions for cancer made during the early stages of its development are far more likely to be attended with subsequent immunity than at a later period. It has, therefore, been held, and I think rightly held, that a more

severe operation is justified in the earlier than in the later stages—that is to say, that for the smaller developments of cancer the larger operations should be performed, and *vice versâ;* the surgeon in the latter case limiting his actions to the narrowest bounds, as, for example, in fungating tumours of the breast, and extensive cancer of the tongue, palate and jaws. This is, as you are aware, the reverse of what is usually done.[a]

In the latter the ethical problem has to be solved as to whether we are ever justified in performing an operation when the chances of a permanently good result are not possible. In our attempts to solve this we should allow ourselves to be influenced by two considerations only, as my late colleague, Mr. Robert Adams, used to say, the first and foremost being the welfare of the patient, the other the credit of surgery. Our principal object and one of our highest aspirations should be that these two, which ought to be indissolubly united, should never be separated in our practice.

I have already spoken of those cases of cancer in which operations for their supposed cure are at times, in my opinion, wrongly undertaken, and hopes held out of recovery which only too often prove delusive. In such cases the disease is no longer a local one. It has crossed the frontier, so to speak, and taken up an impregnable position, from which, like a upas tree, it diffuses its malign influence far and wide. But if the fatal progress be checked in time a different result may be anticipated. This is not the occasion to enter into any clinical details, but I could adduce many instances of cancer of the tongue, jaws, breast, rectum, and other organs, where free excision done at an early stage has been attended with distinct and permanent relief.

If in the case of certain forms of intestinal obstruction, of cancer, of appendicitis, of microcephalus, and of other conditions I might indicate, there has been of late too great a readiness to resort to operative measures, let us consider for a moment the conditions in which surgeons at times do not resort to them with sufficient alacrity. First among these I would mention membranous croup and diphtheria. On the subject of the therapeutic value of tracheotomy in such cases there is, as many here are aware, very great divergence of opinion among surgical authorities; some maintaining that tracheotomy is distinctly contra-indicated, while others have swung the pendulum as far as it can go the other

[a] See Lancet, Jan. 9, 1886.

side, and hold that "the surgeon who would stand by and see a child die of suffocation in diphtheria without intubating or opening the trachea is unfit to practise his art." Without going so far as to endorse this somewhat exaggerated statement, I cannot but be of the opinion that those who oppose the operation in these cases are unmindful of the causes of death, which are—exhaustion, sepsis, and imperfect oxygenation, and that an opening into the trachea not only in most cases promptly relieves the first and third of these, but enables one to remove the false membrane, teeming with bacilli and steeped with toxin. The fact that the mortality of the operation is very great should not deter one from performing it. It rather furnishes an argument to me, at all events, in favour of operating, if possible, at an earlier period than is usually done; before, namely, exhaustion becomes extreme, and the system is hopelessly saturated with septic agencies.

Another instance in which early operative interference is imperatively called for is that of strangulated hernia. Now, there is little difference of opinion on this subject, but in the earlier periods of my professional career it was different, and I have on more than one occasion, yielding to the advice of those more experienced than myself at the time, had to regret having postponed operative interference in these cases; whereas, especially since the introduction of antiseptic surgery, that "brilliant victory," as the noble President of the British Association, the Marquis of Salisbury, K.G., recently termed it at Oxford, I cannot call to mind a single instance of failure I have had, or witnessed, when the strangulation was recent and the operator capable of performing this delicate exercise of our art with ordinary dexterity. When these conditions were not fulfilled, and especially the latter, a very different and calamitous record might be given.

Another instance in which surgical procrastination is, in my opinion, much to be deprecated is in the case of purulent pleural effusions. My belief is that the routine treatment by simple paracentesis is, in the majority of instances, unlikely to be attended with any permanent good result, and that if this treatment *alone* be adopted or followed, not only will there be, as a rule, a rapid re-accumulation of fluid, but time will be given by the delay for changes to occur which will militate strongly against success being obtained after any more radical method of treat-

ment is adopted, such as free drainage and thorough irrigation, or excision of ribs, as recommended by Esthlander.

It was extremely interesting as well as gratifying to me to learn that recently, in the Medical Section of the International Medical Congress in Rome, the performance of multiple costal resection in cases of purulent pleural effusions was strongly advocated as a primary operation. Many present here to-day are aware that this practice has been for several years advocated and practised in numerous instances, and with gratifying results, by Sir Philip C. Smyly and myself.

These are a few out of many instances I might mention in which a too precipitate or too tardy surgical operative interference is equally to be deprecated; under such circumstances, leading to results which are often as disheartening as they are calamitous and damaging to the reputation of surgery as a science and art. One of the chief objects and advantages of clinical study is to learn not only the best time to operate, but also how to discriminate the cases in which by operation reasonable hopes of permanent recovery may be entertained; those in which temporary relief may be obtained; and, lastly, those in which the surgeon should distinctly decline to undertake any active operative measure. To do this with success, and to acquire even a limited knowledge of a science which so frequently presents problems to solve, than which none are more complex, more difficult, or of greater import, involving, as they do, the stupendous issues of life or death, requires not only great natural aptitude, but also a lifetime of constant, unremitting, and bitter toil.

It has been said that a surgeon differs from a poet in this respect, that, whereas the latter has only to be born and not made, the former has both to be born and made, and this naturally leads me to say a few words on the process which we now adopt for making him.

A short time ago a distinguished surgical friend of mine, on learning something of what I thought of discussing on the present occasion, wrote to me—"Don't touch medical education; we are all sick of it." It occurred to me that there was a strong element of truth in the remark, and for a time I abandoned all idea of saying anything on the subject; but then the question occurred to me, why is it that we are sick of it? The answer promptly suggested itself: Because modern reformers in medical education—and to these the definition that was once given of "gentlemen farmers,"

as being persons who were "always making improvements that made things worse," might fitly be applied—fell into the great initial mistake of forgetting that what most urgently required improvement was preliminary training, and not the professional curriculum and examination. It was a wrong or false start, so to say. They began at the wrong end, placing the cart before the horse, and the outcome of it has been disillusion, disappointment, and the development of that nausea from which my friend spoke of himself and others as suffering. There is good reason for believing, too, that this unpleasant morbid condition is very prevalent in student circles, and painfully acute when they learn almost every year of fresh additions being made—Pelion heaped upon Ossa—to the already overloaded curriculum, and observe both the confusion and uncertainty resulting from the continual changes, lastly getting the gratifying intelligence that another year has been added to the lengthened period of their pupilage.

What should have been done was to establish for each division of the Kingdom a conjoint preliminary examination in Arts, in which some of the subjects now in the professional curriculum should have been included, such as Elementary Chemistry, Physics, and Biology. The State would have in such an examination a guarantee that every member of our profession had received a liberal extra-professional education. It should be conducted by persons unconnected with any of the licensing bodies and appointed by the State, and there should be no exemptions except to University graduates.

For our professional education I should like to see a system adopted analogous to that of the Arts course at the universities—viz., that of keeping terms either by examination or by lectures. Two terms by examination should only be required as obligatory on all—one at the end of the second, and the other, the final, at the termination of the fourth year. By this method those who felt they could make more rapid and genuine progress by reading and clinical observation, would not have to complain of having to attend so many systematic courses of lectures. On the other hand, those who considered they would derive more advantage from lectures would be freed from the necessity of passing more than the moderation and final examinations. To insist on every student, irrespective of his tastes, his habits, or his aptitude, going through the same routine of lectures and examinations, seems to me to be as unwise as it would be to insist on the same sized boot being worn

by every child when learning to walk. Compelling all to lie on a Procrustean bed and submit to an annual crushing under the wheels of the modern examinational Juggernaut, is the worst of the many errors made by recent educational reformers. To many the frequent recurrence of these examinational ordeals has a paralysing effect, and in many instances destroys what is one of the most important motive forces—namely, self-confidence.

I should be the last person to say anything in disparagement of the General Medical Council and its work. It has, without doubt, effected a vast amount of good, and deservedly earned the esteem and respect of the profession and the public, but in making the preliminary training the last instead of their first consideration a great error was committed. Had that mistake not been made, the present curriculum would not have been so crowded, and students would not have been brought into the unhappy condition which Mr. Greig Smith, speaking recently at Bristol, aptly compared to that of a Strassburg goose, fattened and crammed until not a healthy but a diseased condition is produced. The excess of the number of topics examined on, which number is increased every year, has the disastrous effect of causing a neglect of subjects which, having regard to the modern developments of surgery, are more than ever essential—I mean Anatomy, Physiology, and Practical Operative Surgery. Nothing could be more deplorable than the arrangement that the study of the two former subjects should practically cease at the end of the second year of professional study. Our predecessors who required a high standard of knowledge of these subjects at the final examination were wiser in their generation than their successors. What I have termed the modern developments of surgery loudly demand a reconsideration of the present position in this respect, for there are none of the recent advances in cerebral, thoracic, or abdominal surgery that have not been the direct outcome of improvement in our knowledge of these sciences.

To appreciate the merits of hese operations, therefore, and, still more, to perform them with hope of success, it is not merely desirable but essential that a much greater weight should be given to the study of Anatomy, Physiology, and Practical Operative Surgery than at present is the case. But under existing circumstances this is impossible. The student, wearied and weighed down by an accumulation of courses, and with the sword of Damocles in the shape of an annual sessional examination ever hanging over

his head, has neither time nor inclination to do anything that in student parlance will not "pay" at the examinations. By a recent unwise ordinance of the General Medical Council, the period of pupilage has been extended to five years, and in my opinion a greater blunder was never made. For a strong man it means a year's further exclusion of all time for thought or the pursuit of any original inquiry, and for the weak man it means a continuance of worry and no commensurate advantage.

The main argument that has been brought forward in favour of lengthening the period of pupilage is, that an extended period is the rule or custom in many other countries, and that as we should not be behind our neighbours, the same arrangement should hold good here. But in answer to such rubbish it may be asked, do the sick poor in those countries get better, more skilful, or more cheerfully offered medical and surgical aid than they have hitherto got here, or are the duties that devolve on the local medical officers discharged more conscientiously? I speak not from mere heresay, but from considerable personal knowledge, and I say, unhesitatingly, that the Poor Law Medical Officers of Ireland, and the practitioners generally throughout the United Kingdom, are not merely equal to, but in the great majority of instances are more highly qualified, and have higher professional attainments than, the corresponding members of our profession in France, Spain, Italy, and Scandinavia.

Professor Mahaffy, in an able article in the *Nineteenth Century* (Aug., 1893), mentions what the old doctrine of Education was—one which now appears to be abandoned—namely, "all we can teach the young out of the infinite of what can be known, is how to know one or two things, so that while the knowledge of other things may be made easier, the knowing of other things inaccurately may be despised." The importance of the principle of this doctrine is embodied in the well-known adage, "Beware of the man of one book." It seems to me that the outcome of most modern changes in medical education is in the direction of making students read not few books well but many books badly, and that the brain has been looked upon too much as an organ with an unlimited capacity for retaining, digesting, and absorbing, in a given time, every ascertained fact not only of medicine and surgery but also of all the sciences ancillary to them! The attempt to carry out this arrangement is fraught with real injury to many and disaster to some. I can speak with some confidence on this

subject after a long experience as an Examiner both here and in Oxford, and I have satisfied myself over and over again that the failure of a large proportion of candidates to answer up to the required standard was due not to want of diligence and honest conscientious work on their part, but simply to brain exhaustion from attempting to overload it with facts which were believed to be essential. When we remember that the subjects a knowledge of which is required include Anatomy, Physiology, Medicine—theoretical and clinical—Surgery, Midwifery, Gynæcology, Histology, Forensic Medicine, Toxicology, Hygiene, Chemistry, Operative Surgery, Pathology, Botany, Ophthalmology, Aural Surgery, Biology, Vaccination, Materia Medica, Therapeutics, Physics, Pharmacy, Political Medicine—whatever that is—and Mental Disease—the wonder is that the last-named is not frequently observed among students as an outcome of so voluminous, varied, and comprehensive a course of study.

But the chief objection that might reasonably be urged against such a system is that it promotes inaccuracy and superficiality—two things than which nothing could be more injurious, in truth fatal to the best interests, not alone of the individual but to the science which is the work of our lives, and our daily toil. What I should like to see, and hope to see is a lightening of the curriculum, by assigning some of the topics I have mentioned to ante-professional education, and having others (such as Ophthalmology, Aural Surgery, Mental Disease, and Hygiene) made the subjects of post-graduate study. Such changes would admit of a curtailment of the period of pupilage, and afford a longer time for the study of Anatomy, Physiology, and Practical Operative Surgery. Opportunity, also, would be afforded for a more efficient study of Sanitary Science or Public Medicine, which is now engaging so much attention, and to which so signal an impulse has been given by the earnest efforts of the distinguished representative of Medical Science in Oxford, Sir Henry Acland.

But whether that consummation, which is so devoutly to be wished for, be ever realised or not, your present course of action is clear and distinct, namely—to throw yourselves into the work you have chosen with determined will and all the strength and energy that God has given you, and not to cease but to continue it when the period of your pupilage is ended, heedless of all the jealous detractors and ignorant babblers that possibly you may meet with, who may, as Hamlet said, fret you, but cannot play

upon you. The greatness of your life's work should make you treat with scorn all their futile attempts to raise obstacles on your path, to undermine your professional character, to irritate and vex you. Remember that your life—and you should glory in the fact—must be one long studentship, and that the best part of the knowledge you must seek for is never obtained through the sole desire to gain wealth, state recognitions, and rewards. They may, it is true, command homage, but they can never by themselves secure esteem. "No man," it has been said, "can be great—he can hardly keep himself from wickedness—unless he gives up thinking much about pleasure or rewards." The honour they confer is fleeting, soon vanishes, and is forgotten. But that which does last, long after death has closed the scene, which lingers like the after-glow of a golden sunset, casting a halo round a cherished memory, is the respect which is conferred on all who, actuated by a deep and overmastering sense of the sacredness of their calling, and of the infinite pathos of human life, work. not so much for themselves as for others, for the profession of their choice, and for the fair fame of the land that gave them birth. These were the motive forces which animated and stimulated to effort such men as Cooper and Lathom, Syme and Alison, Crampton, Porter, Colles, and Graves, the best part of whose knowledge was gained by sympathy with human suffering, and by that enthusiasm for their work which we should all hope and pray for—the sympathy which is "the impassioned expression on the face of science," and enthusiasm the "genius of sincerity," without which even Truth accomplishes no victory. We should ever bear in mind the last words of the great Velpeau, who, when Death beckoned to him with his icy hand, whispered to the faithful friend beside him, "travaillons toujours." And so, with a lofty ideal to live and work up to, set out, "heart within and God o'erhead," and accomplish honestly and truthfully the task you have chosen to do, always bearing in mind that every forward step made by honest work, be it great or be it small, be it the assertion and establishment of a great principle, or but the faithful record of a case, may possibly be the means of bringing welfare and happiness, not alone to an individual, a class, a country, or an era, but that the good achieved may be, as was said of the work of Shakespeare—

"Not of an age, but for all time."