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THE PRESENT POSITION AND PROSPECTS OF THE DOMAIN OF THERAPEUTICS, WITH A GLANCE AT ITS RELATIONS TO THE NEIGHBOURING SCIENCES.

Gentlemen,-My first duty is to express to you my appreciation of the honour you have conferred upon me in electing me to the Presidential Chair of the Ulster Medical Society.

When the decision of the Council was conveyed to me – the grave responsibility attached to the honour, my own sense of incapacity, and the knowledge that I was lacking the requisite professional maturity, compelled me to seriously hesitate before undertaking to fill a position which has been honoured by such a long and unbroken line of able and distinguished Presidents. The hearty assurances of help and promises of co-operation from all quarters which greeted my expressions of misgiving at once convinced me that what I had regarded mainly in the light of a responsibility was also a duty and a privilege.

Allow me, then, to perform the first pleasing task associated with my office – to give you one and all a hearty welcome to your new Reading Room and Library – with the earnest hope that the new departure initiated by the Council will be productive of the greatest good, and will draw the members of the Society into still closer relationship, and cement and strengthen the bonds which should tightly hold together the members of our great brotherhood.

I have experienced my first difficulty as your President in selecting a subject for your consideration at the inauguration of what I trust will eventuate in a most successful and enjoyable session. Filled with affection and veneration for the distinguished men who have occupied this chair in the past, and feeling a sacred reverence for the archives of the Society, my first thought was to dive into the history of other days and to bring to your notice records of men who have left behind them enduring foot-prints upon the shifting sands of medicine.

Such a retrospect appeared to me to be very desirable before beginning a new era, and, doubtless,



from it we would have derived much comfort and courage, and been enabled to buckle on our armour with lighter hearts and stronger faith. The labour of one who is justly regarded as the historian of the Ulster Medical Society has, however, gathered up every nugget upon this hallowed field, and has compelled all future Presidents to delve in poorer soil for the scanty materials out of which to rear their inaugural orations.

To him must I leave the task of placing on our obituary records the Society's deep and inexpressible sense of loss of one who has passed away since we last met in this room. In the removal of Doctor Henry M'Cormac from amongst us, one of the most remarkable men of the time has left, not only our Society, but the profession throughout the world to mourn the loss of an original thinker, a prolific writer, and an indefatigable worker. When the history of the medicine of the present century is written his name must be enrolled as one of the many who have conferred a lasting benefit upon the human race. By his early appreciation of the practical application of the theories of the respiratory functions, at a time when experimental physiology was in its infancy, he perhaps more than any other man may be said to have

initiated reform in one department of the field of sanitary science.

The Society cannot expect in our day to recoup the loss it has sustained in the removal of Professor Andrews, the brilliant scientist and successful experimentalist. His early discovery in connection with the heat of combination, and his researches on the liquefaction of the elementary gases, and his demonstration of the "intermediate " state, excited the admiration of the entire scientific world.

These additions during the year to our list of departed members, coupled with that of Dr. Henry Purdon, who was justly regarded as the "father of the profession" in Belfast, and whose memory is sacredly enshrined in all our hearts, compels me to feel and to acknowledge that we are beginning our new era in a state of orphanage. At the same time we must not forget that whilst it is ours to mourn their irreparable loss, it is also ours to look back with pride upon our illustrious parentage.

It occurred to me that I could with advantage occupy your attention for a brief period, in which we might look back at what has been recently taking place in some departments of the great field of medicine.

That branch of medical science which has for its aim the treatment and cure of disease possesses, I think, the most interest to the majority of the members of our profession, and if you permit me to crave your indulgence I shall attempt to take a rapid survey of the present position and prospects of the domain of therapeutics, and glance at its relations to some of the neighbouring departments.

We constantly hear expressions of opinion about want of progress in this branch of medicine, and it appears to be fashionable in some quarters to lament that whilst pathology, bacteriology, physiology, gynaecology, and every other "ology" is progressing with rapid strides, the treatment of disease remains pretty much in the same position as it did a quarter of a century ago. It appears to me a suitable opportunity to look into this question for ourselves, and see, if this be true, how far it may be in our power to remedy it; and if it be untrue to expose the fallacy.

To the hospital physician, as well as to the busy practitioner, the term therapeutics too often means that vague and somewhat shadowy land where the contradictory results of experiments upon the lower animals are hopelessly blended with opposing theories and fruitless applications of the resulting fallacies to the treatment of diseases in mankind. Much difficulty will be at once removed if we clearly recognise that there are *at least* two distinct sciences included in the ordinary conception of the term therapeutics. For, in addition to the "treatment of disease" there is the science of pharmacology – the science of the action of remedies apart altogether from disease; a study of the effects produced by remedial agents upon healthy or normal physiological conditions. Though this department of experimental medicine may still be regarded as in its infancy, it is making enormous strides. Called into existence by the creative genius of Magendie, during the lifetime of some of my present auditors, it has developed under difficulties sufficient to strangle the growth and progress of any other branch of science.

Opposed in our own country by the morbid sentimentality and wicked ignorance of hysterical agitators, and obstructed by the restrictions of a shortsighted Legislature, still pharmacology has continued to enrich therapeutics and alleviate human suffering – rearing a lasting memorial, in the face of unparalleled obstacles to the truly scientific and self-sacrificing spirit of practical medicine.

Whilst for the successful treatment of disease we must always look for aid and guidance from the results obtained by the experimental methods of research employed in pharmacology, at present the application of still unperfected results is one of the dangers which the practical physician has ever to be on the look-out for. It is the ill-judged and hasty utilisation of such pharmacological results which, perhaps more than anything else, has tended to throw doubt upon the progress made in therapeutics. As we really look beneath the surface the unprejudiced observer must see that the solid foundations of a scientific treatment of disease are being surely and permanently laid. Encompassed about with clouds of witnesses, I need at this stage in passing only refer to the researches of Brunton upon the action of the nitrites, of Frazer and Crum Brown upon strychnine, of our Continental brethren who have been investigating the actions of the chinolin series and the mydriatic alkaloids, of Matthew Hay, who has recently demonstrated the action of the saline group of cathartics, and to the results which every month teem in upon us from the happy pastures where the anti-vivisection mania has not retarded the triumphant sweep of scientific research. It is true that these valuable results are not immediately revolutionising the treatment of disease, but it is certain that in two directions we are gaining ground. Firstly, in the introduction of new remedies of great value and power; and, secondly, in the use of the older remedial agents with far greater precision and effect.

The other departments of medicine are adding

their share in our advance, and if we look towards chemistry the results are almost startling. It is only within a very recent period that the intimate connection and relationship between physiological action and chemical constitution has been at all recognised, and it was, I believe, not taking a too roseate view of our situation which led Lauder Brunton, a few months ago, to declare that having passed through the flint, stone, and bronze ages, we are just now entering into the iron age of therapeutics.

The science of chemistry has contributed to this in no small degree, and the rapid working out of the principles upon which physiological action and chemical constitution are related to each other have already achieved results which but a few years ago would have been regarded as fabulous. We cannot surely be standing still when the pharmacologist can predict with almost unerring certainty that once the chemist can succeed in producing certain readjustments of the molecular particles of various carbon bodies, he will, with the resulting new compound, produce certain definite and novel physiological or therapeutical effects. To my mind there have been few advances in the whole range of science which during recent years can compare with this. Yet this prediction has been made, and is being constantly fulfilled, and every few months we are having antipyretic remedies created and placed in the hands of the physician, by which he can reduce fever heat with almost as great certainty and precision as the engineer can reduce the pressure of the steam upon his safety-valve.

The humble science of pharmacy has done much to help therapeutics, and it would be difficult to over-estimate the enormous advantage which the practical physician experiences daily in using the active principles of drugs instead of the crude vegetable decoctions of twenty years ago. Had we no other evidence of progress than even this, one could hardly say we were standing still. The alkaloids, isolated during the past few years, have furnished a new series of excellent and precise weapons which the scientific therapeutist can wield with a uniformity of result and certainty of action undreamt of by our fathers. The synthetical preparation of various rare and expensive principles by the pharmaceutical chemist, marks an era in our progress which is deserving of record, and, as I speak, come the tidings that one cherished hope of the pharmacist has been realised, and that quinine has been successfully produced by artificial means.

To the practical pharmacist the physician is

deeply indebted, and I fear we do not sufficiently recognise the invaluable labours of men who are ceaselessly toiling on and laying at our feet the richest remedial agents extracted from the great laboratory of nature. There is a development of modern pharmacy, however, which, far from being an advance, is decidedly, in my opinion, calculated to retard the progress of the healing art – I refer to the practice of huge American and English drug houses who are flooding this country with ready-made remedies, and cut and dry formulae for every ache and symptom to which flesh is heir. This practice threatens to either faithful ally, the scientific exterminate our pharmacist, or convert him into a mere bottle-filling machine.

At this juncture we might refer to an event of some importance - I refer to the advent of the new pharmacopoeia. When we wish to get a correct idea of the condition of the healing art, in any remote age, there are, perhaps, few more reliable methods than to study the pharmacopoeia, or list of remedial agents in use during the time. Let us for a moment apply this test to our own day. Is the recent volume evidence of progress or decay? I find myself here in a difficulty. Dr. Quain, upon whom the great burden of the work has fallen, has by his great ability and indefatigable labour earned the lasting gratitude of the entire profession, and I believe no one man, of the present or past age, could have more successfully carried through the great undertaking. But we cannot accept the new work as an index of the progress made in therapeutics since the last issue, either judged by the number of worthless remedies still retained, or by the number of agents of undisputed merit omitted. Nevertheless, to the most casual observer the work abounds with conclusive evidences of solid progress, though it can never hope to be a true indication of the therapeutics of the day until the Medical Council avail themselves of the aid of practical therapeutists, whose duty it should be to send forward reports at short stated periods.

With this digression, we will leave the subject of pharmacy and glance at the relations of pathology to the science of therapeutics. It would be unfair to ignore the aid rendered by this science to the healing art. The President of one of the sections of the British Medical Association Meeting, last August, declared that one of his predecessors in the chair had rightly said, "pathology is the basis of every rational system of therapeutics." Allowing to pathology every credit, we might glance critically at some of the ways in which she has aided her offspring. The aid appears to have been more of the destructive than of the

constructive kind, but it was, nevertheless, valuable. Once the naked eve or microscope demonstrated the grosser forms of pathological lesions, causing many of the well-recognised diseases, the death-knell of long-vaunted specifics was rung out, and a healthy scepticism was fostered. Looking down the tube of the microscope, for example at the changes in the nerve cells of the posterior columns of the cord of an ataxic patient, the first reflection of the pathologist doubtless often was, "How useless, arsenic, silver, or iodides! - remedies cannot touch a lesion like this." As the various structural or organic affections were, one after another, demonstrated to be associated with grave and profound pathological changes, this feeling of unbelief in the older lines of treatment gradually gained ground, and a deeper longing filled the breast of the physician for a less empiric and a more rational system of treatment. I have no doubt that the change was one which benefited the department of therapeutics considerably. Like every other reaction, however, this one also went too far, and the spirit of scepticism became a barrier to progress - men refused to believe that remedies could produce results which, in their ignorance, they could not understand the modus operandi of, unless the effects were very striking and unmistakable. The new discoveries in the pathological field became more fascinating as the science gained more in exactness and the domain of treatment was comparatively neglected in the hospitals and medical schools. I have been often astonished at the brilliant and interesting clinics in the Metropolitan Hospitals, where the physician, after a long and elaborate account of the history, symptomatology, diagnosis, and pathology of a case, wound up his remarks sometimes without even a word upon the treatment, or more frequently in a single sentence, deploring his inability to satisfy himself about the utility of the usual remedies in the case before him. Young medical men leave the schools often without the faintest idea even of dosage, and innocent sometimes of any practical knowledge of the therapeutic action of the most valuable and reliable remedies. Contrasting these men with the older practitioners of half a century ago as regards their success in treatment during the first half dozen years of their practice, one might be tempted to conclude that not only was the science of therapeutics not progressing, but that it was fast retrograding.

Going round the wards with one of the most learned and distinguished physicians of a great Metropolitan Hospital, a few years ago, we came to a little patient suffering from chorea. He said to me, "How do you treat your cases of this disease in Ireland?" My reply was, "With arsenic;" and he asked, "Do you really believe in it?" "Undoubtedly we do." He said, "From what I know and have seen of the pathology of chorea I did not believe that arsenic could be of the slightest use to it; nevertheless, I determined to prove it, and I have demonstrated the fallacy to which some men still cling. I treated so many cases of chorea with teaspoonful doses of aqua camphorae, and a similar series with arsenic, and the results were precisely similar. My large class of students have taken a deep interest in the experiment, and you can ask any of them do they believe in arsenic now."Upon inquiry I satisfied myself that the doses of Fowler's solution administered were so small that any practical therapeutist could have foretold with certainty the result of his protracted series of experiments. It is placed beyond doubt that choreic children can tolerate enormous doses of arsenic, and that in chronic cases this drug may be given in quantities ten times greater than are necessary to produce the ordinary tonic effects of the drug, and always with telling results. Under almost similar circumstances I was confronted by a distinguished pathologist who, after trying iodide of potassium in tertiary syphilis for some years, was convinced that it was of little value. I have since carefully examined several broad and sweeping statements of a similar class, and have generally satisfied myself that much of the scepticism about many of our oldest and most trusted remedial agents has arisen from ignorance of the elementary knowledge of their doses, and methods of administration. I have thought it advisable to refer to this aspect of the subject, because I believe it is, to a great extent, the explanation of the unfavourable opinion of the progress of therapeutics held by some of the most distinguished and scientific members of our teaching bodies. It is, however, better, upon the whole, for our science that scepticism should take the place of the blind faith that existed in past days – a faith in heroic doses and in a meddlesome polypharmacy which characterised the stone age of therapeutics.

We must not for a moment base our estimate of the progress we are making by the extent or quality of the knowledge imparted in some of the medical schools, or attach much weight to what may be the prevailing fashion in a few places of affecting a disbelief which is too often grounded upon want of knowledge or a half-consciousness of ignorance.

Such a condition of matters is not evidence that therapeutics is standing still, but strongly suggests to us the serious possibility that men in their anxious

search after new and more fascinating truths, and in their eager desire to keep abreast of the ever-streaming tide of discovery, may find themselves losing hold of some of the anchors forged by their predecessors after centuries of laborious observation and patient toil.

The direct advantages which accrue from a knowledge of pathology to the scientific therapeutist are too obvious for me to dwell upon, though I think they are often overrated. The late Dr. Moxon, himself a brilliant pathologist, in speaking to a class at Guy's upon the value of a knowledge of pathology, said he thought the pathology of the Pathological Society and of the post-mortem room afforded little help in the treatment of disease, except perhaps to give the physician confidence in himself. Thus he said:-"Pathology gives you a way of knowing what is happening and going to happen in your patient; and the public expects that of you. I shall take leave to pity you much if you do not get a good knowledge of such pathology, otherwise you will be ignorant and unstable; and if you have any conscience you will be full of fears that others better informed than yourself would conduct the patient's case better than you are doing. So you will take your unmerited fees in a properly nervous perspiration, suspecting all the while that the patient's aunt is strongly recommending Mr. Johnston. It is for your own good that you learn pathology, so that you may have sound knowledge to rely upon when rivalry outside and weakness within shall shake your nerves. Here is the difference then - pathology serves to give confidence in yourself, therapeutics serves to cure your patients, and you will find that is what your patients want." These remarks evidently apply to the individual more than to the science, as there can be no doubt that every genuine advance made in the science of pathology must ultimately benefit therapeutics. Still there is in them the foreshadowing of the great truth that the newer additions to medicine have rather tended to make men neglect the close and patient study of the immediate and remote effects of remedies used in disease in the same thorough and careful way in which their fathers did.

Physiology has in its onward march very materially helped the science of treating disease, and indeed the investigations of pharmacologists have often been of service to the physiologist, both sciences being so closely linked together.

Did time permit us to closely examine the advances made in pharmacology, pathology, chemistry, pharmacy, and physiology, we would, without further evidence, be driven to the conclusion that nolens volens, the therapeutist must be advancing.

A department like therapeutics, which is based upon all these sciences, *cannot* stand still. Should it once attempt to halt, like the tired or unwilling horse in the team, it would be lifted off its feet, and swept on by its vigorous and ambitious companions in their swift race to reach the golden goal of truth.

Let us look for a moment at the <u>results</u> of therapeutic progress. We have said that at least in two directions the evidence is clear. Our old remedies are used with greater precision, and we have a vast array of new remedial agents of unquestioned value.

The truth of our first statement is so obvious as scarcely to require proof, and my only difficulty is in selecting an example out of the innumerable host which appears before me. Two of our commonest drugs suggest themselves - digitalis and mercury. When I first commenced the study of medicine I remember well my introduction to foxglove, which even at that recent period was regarded as a narcotic, and its virtues were impressed upon me with all the dogma of authority, especially its great power as a cardiac sedative. I was informed and taught that it would subdue a Hercules, and was of great value in weakening the pulse and soothing the heart when it was acting too strongly, but that it was dangerous, and should not be used when the pulse was weak and irregular. We now understand its action, and employ this drug daily as a cardiac tonic in imperfect compensation, watching its influence upon the cardiac ganglia, measuring its effect upon the lengthening of the diastolic pause, and observing how the wearied cardiac muscle gains new life and vigour by the increased coronary nourishment administered during the prolonged diastole. Though often we may be puzzled and disappointed, owing to the many complex disturbing influences at work, still constantly we shall find cases in which we can use this tried and faithful weapon with an accuracy approaching the mathematical. In the case of mercury, we might spend much time portraying the evils of the older methods of use in which profuse and sometimes fatal salivation followed the administration of the drug in heroic and long-continued doses. The physician now rarely, if ever, salivates, but by careful study weighs the amount of the metal required to act as an antidote to the vital poison of syphilis, and by patient watching and close observation adjusts the balance sometimes with as near approach to complete success as crowns the efforts of the chemist in neutralising his solutions in the laboratory. Not only has the wild and culpable dosing by large quantities of mercury been long since

abandoned, but, in our approach to accuracy, the infamy and discredit into which the drug had more recently fallen, are rapidly passing off, and we recognise its virtues and know its reputation to be now above the danger of future detractions by our descendants, as they are already beyond the extravagant praises of our ancestors. If anyone should still doubt that our methods of using this venerable remedy are incomparably superior to those employed even a few years ago, let him reflect upon the revolution which dilute solutions of the bichloride has wrought in obstetric practice, and how (as pointed out last week in an able address of one of our members) annually hundreds of lives are saved in the lying-in hospitals of the Continent by the judicious use of this fatal enemy of every member of the germ world.

By examining the methods in which we *now* administer the antiphlogistic, cathartic, diuretic, or expectorant remedies in use fifty years ago, we might easily satisfy ourselves that our progress was rapid and certain, even if we did not possess *one new* remedy of acknowledged power.

This brings us to the consideration of the difficult subject of New Remedies – a question requiring for its proper treatment a far more matured experience than mine; and in attempting to deal with it I must crave your indulgence whilst we consider – "Is the enormous number of new remedies evidence of progress or decay in therapeutics?" My experience is too short and my reading too limited to compare accurately our position in this respect with what it was at any given period during the last hundred years; but I believe that at no time during this century had the profession ever such an array of comparatively new and untried remedies placed before them.

It is interesting and encouraging to find that the multiplicity of remedies has always been regarded with suspicion and often with disfavour by the scientific physician, even in the stone and bronze ages of therapeutics. Thus Dr. Paris, writing fifty years ago about the remedies in use in his day, says:- "It has been very justly observed that there is a certain maturity of the human mind acquired from generation to generation, in the mass, as there is in the different stages of life in the individual man. What is history, when thus philosophically studied, but the faithful record of this progress, pointing out for instruction various causes which the have accelerated, retarded, or obstructed it in different ages and countries? Thus is our art, in its earlier periods, like the young and sanguine practitioner, characterised by an excess of credulity - every object is tinted with imaginative hues and magnified in the mist of dawn; we find, for instance, the early herbals assigning almost incredulous virtues to every herb of the field, while in the present day the list of those which are admitted to possess any real efficacy is reduced to the limit of a few slender pages. Just so is it with the career of the individual. 'When I was young,' said Dr. Radcliffe, 'I possessed at least twenty remedies for every disease, but when advanced in age I found twenty diseases without a remedy;' or, in other words, his imagination had been tempered by reason and his early credulity subdued by long experience. The mirror of history casts its lights as well as its shadows. It discovers fallacies that may mortify our untaught conceit, but it as surely displays truths which must gratify our pride, inspire our hopes, and give a keener edge to our exertions."

This truly scientific simile puts the host of new remedies in a fair light, and their number is suggestive of the infancy of therapeutics. If the venerable author of the Pharmacologia was to appear upon the scene to-night, I fear he would conclude, after glancing at the array of specimens before us, that we were fast entering upon our second childhood. But the case is not so bad as at first sight appears; and if we examine it more closely we will be able to satisfy ourselves that the present condition of current medical literature and the high pressure of professional life have to answer for many of the new remedies.

Nowadays a man, perhaps upon the result of a single fallacious observation, thinks he has discovered a specific, and without patiently waiting, as his fathers would have done, and verified his observation by repeated trials, he rushes into the weekly medical journal - whose pages are always at his command burning to give his discovery to the world, and his own name along with it. This has, however, one advantage - his statements are put to the test by scores or perhaps hundreds of medical men over the world, and the life of the new remedy and his own fame wither in an hour. It is, however, sad to reflect how much ingenuity and labour it requires to disprove one of these random puffs. Our process of sifting is much more rapid and severe than in former days, and if a new drug survive a year there is a fair chance that there is something in it. The vast majority of these ephemeral specifics are from the vegetable kingdom, and many hail from the New World, where quite a frenzy for therapeutic discovery has seized upon the great enterprising drug-houses, and men have actually been appointed for the specific purpose of hunting up the sickly survivors of old Indian and

Mexican tribes, and introducing as potent remedies the weeds and shrubs whose virtues have been handed down for ages among these primitive men in mythic song and barbaric incantation.

This ransacking of the vegetable world has not been without some benefit to the healing art, and the ceaseless activity of the searchers after "cures" has brought unto the therapeutist now and then a diamond surrounded with tons of rubbish. Not only has the botanical kingdom been explored from every point in the compass, but the Russian, whose barren tablelands do not afford much vegetable wealth, has, with a taste less poetical and not so refined, turned his attention to the animal kingdom, and the great scientists of his realm are now in rhapsodies over boiled cockroaches and blattic acid. No wonder such results and practices have produced in candid minds a pardonable scepticism, or that that portion of the profession which is not given to deep reasoning and profound research should libel the department of therapeutics; but, after all, these are but some of the many evidences which hang upon the flanks of progress. In the present enlightened age of medicine there is almost greater danger and temptation to the physician to scout all the new drugs, than there is for him to fall into the error of regarding them as specifics.

We have all been struck, in watching a clever workman at his labour, in seeing to what an infinite number of purposes he is able to apply some primitive-looking tool, which, by daily handling, has almost become part of himself. He performs with it innumerable feats for which it never was intended to be used with more rapidity and accuracy than his less skilful fellow with his large assortment of formidable looking utensils. So is it in therapeutics, and it is the experience of every one of us that we can achieve, through long experience, with one of the good old remedies - when we have got to know our weapon results of the most varied and certain kind, unknown and undreamt of by the hunter after newer agents. Thus, yearly we lessen the number of our drugs as we acquire knowledge and dexterity in the use of them, and this tendency increases as we grow older, and ever will be the solid bulwark which will protect our Materia Medica against the swarming hosts of non-official remedies which threaten to inundate us. This conservative principle may, however, be carried too far, and undoubtedly, with many men, is a barrier to progress. As individuals we should adopt the rule to ·

"Be not the first by whom the new is tried, Nor yet the last to lay the old aside." Disregarding and discountenancing a large percentage of the so-called new drugs, a glance at the remaining list will show us that agents of marvellous power and uniformity of action have been pouring in upon us during the last few years. Measured by any standard we can apply, the discovery and introduction of these remedies are indicative of a progress by leaps and bounds, and not surpassed in any other department of medicine, save in the case of the new-born science of bacteriology.

When I thought of addressing you, it was, at first, my intention to read some notes on each of the new remedies which I had tried and satisfied myself about; but I think the object will be best attained by asking your attention to the beautiful collection of new and rare drugs which, at my suggestion, Mr. Pring has most liberally and cordially placed before us this evening. The specimens have been selected with great care and skill by Mr. Green, and, I am sure, include some hitherto never exhibited before in Ireland.

The remedies and preparations of undisputed value which have been added to the Pharmacopoeia last year number over 100. At least twenty are of primary importance, and are well known and almost universally used. To do justice to these would require a paper written separately upon each one. I shall now simply content myself with an enumeration of them:-

Salicylic Acid, which has in a very short time established itself as a medicine of great efficacy in subduing the pain and fever in acute rheumatism.

Boric Acid, the almost harmless or innocuous antiseptic by which we can disinfect the entire urinary tract with certainty and rapidity.

Apomorphia, which, in addition to its emetic qualities, is the best known expectorant.

Butyl-Chloral, which, in addition to its hypnotic action, specially affects the fifth nerve.

Caffein, introduced for its digitalis-like effects, without the dangers of this drug.

Gelsemium, which is a valuable addition to our anti-neuralgic remedies.

Chrysophanic Acid, which is almost a specific for psoriasis, but which should be given internally.

Cocain, the marvellous local anaesthetic.

Iodoform, whose introduction has revolutionised some steps in operative surgery, but which never should be used along with any other surgical dressing.

Jaborandi and Pilocarpin, by whose intense sudorific action life is often saved in uraemic coma.

Cascara Sagrada, *the* remedy for chronic constipation.

Codeina, nearly the only drug which influences the course of diabetes.

The Oleates, which already (as proved by Dr. Shoemaker) have achieved so much in the treatment of nearly every form of cutaneous inflammation.

Nitro-Glycerine, which, in the hands of Dr. Murrell, in addition to its valuable cardiac and vascular action, promises to be the remedy for sea-sickness.

Vaselin and Paraffin, which, perhaps, with the exception of Glycerine, have been applied to more uses than any other official drug.

Thymol, Menthol, the Sulphocarbolates, and other anti-zymotics.

It is when we come to the list of new remedies not yet included in the Pharmacopoeia that one really faces the difficulty of estimating the value of recent accessions to our Materia Medica. The mere enumeration of the names of those which have been generally accepted would weary you; and, if I attempted to give an opinion only of the most highly valued of them, you could hardly fail to think that I was taking an extravagant view of their worth.

Abrus Precatorius (or Jequirity Seed), which, though of very recent introduction as a remedy for various chronic diseases of the conjunctiva, is only recovering from the reaction caused by the too extravagant and enthusiastic report of its wonderful properties.

Osmic Acid is rapidly coming into use as a successful remedy for inveterate epilepsy, sciatica, and neuralgia.

Casca (or Ordeal Bark), Lily of the Valley, Adonis Vernalis, and Mistletoe, by some mystical coincidence beyond the intellect of the therapeutist, have been successfully used in affections of the heart.

Ichthyol, a geological novelty, has already established its value as a remedy in scaly skin affections.

Lycoperdon Giganteum (the puff ball), an old and tried domestic remedy for trivial cuts and lacerations, has been recently re-introduced by Dr. Thompson, and found to possess haemostatic qualities which place it by a long way at the head of the list of blood-staunching substances. The beautiful specimen upon the table was captured last year in Belvoir Park.

Papain, the new vegetable ferment (prepared by Finkler's method) bids fair to push pepsin out of the field, and, by its power of digesting animal substances, it can be used to disintegrate the false membrane in diphtheria.

Of Coal Tar products, Naphthol, Naphthalin, Fuchsin, and Chinolin have made names for themselves which will not soon be forgotten.

Amongst the host of new antiseptics several have

been demonstrated to be of great value for special purposes, as – Boroglyceride, Resorcin, Aseptol (or Sulphocarbol), Terebene, Trichloroacetic Acid, Iodol, and many others.

The therapeutist, in his search for remedies whose uniformity of action and certainty of result could always be counted upon, has introduced active principles, glucosides, and alkaloids of enormous value, and discarded the crude drugs when possible. Thus we have Hyoscyamin, Cotoin and Paracotoin, Pelletierin, Arbutin, Aspidospermin, Helenin, Eserin. Picrotoxin, Agaricin, Emetien, and numerous other active principles of great power and value.

It can hardly be questioned that the new departure of introducing physiological remedies so-called – as Haemoglobin and albuminates of iron and mercury – has been a step in the right direction. Trypsin, Pancreatin, and Bynin, are also accessions of undoubted value.

Strophanthus Hispidus, the recently introduced cardiac remedy, has already won laurels, and Professor Fraser's prognostication of its uses and virtues has been more than fulfilled, and we must recognise in it a remedy of rare power and great value in failing compensation.

The new hypnotics, Paraldehyde, and Urethan, I sincerely trust will continue to hold the high place to which they have been elected. If future observers confirm and establish their freedom from cardiac contra-indication, they will soon push aside a drug whose danger and power for mischief is, I believe, only faintly appreciated – I refer to chloral hydrate.

Lanolin, the recently introduced basis for ointments, though only a few months old, is destined, I believe, to play a most important part not only in cutaneous medicine but in a much wider sphere. The rapidity with which it enters the system through the skin is astonishing. I am at present trying the inunction of several remedies in combination with it, and I hope to be able to report a satisfactory result.

The discovery and introduction of the antipyretic remedies, inaugurated by Skraup a few years ago, mark an important era in the history of scientific medicine – Hydroquinone, Thallin, Kairin, and Antipyrin–which have been tried by thousands of observers and reported upon by many of the great clinical teachers of the day. No truer test of the nature, extent, and rapidity of our progress could be found than is to be seen in a survey of the history of these chinolin derivatives had we time to enter into it.

About six years ago chinolin was synthetically prepared by Bayer and Skraup, and found to possess antipyretic virtues of a feeble and unsatisfactory type.

Fischer, following up the discovery, produced the methyl and ethyl hydrides of oxychinolin which, under the name of kairin, attracted much attention a few years ago. Owing to the dangerous and fatal collapse following their administration, they have almost passed out of the field. Skraup, however, continuing his synthetical triumphs by aiming at the creation of substances more closely resembling quinine, produced methyloxy-chinolin, or chinanisol, whose salts were found to be powerful antipyretics. The administration of them, however, was attended with some drawbacks, and it was found that the hydrogen compound promised to give better results, and hence thallin or tetrahydro-chinanisol - the most energetic of these bodies - was brought into use. It likewise was found to possess some dangerous qualities, and after a short time was born the almost harmless dimethyl-oxychinizin or antipvrin - the prince of antipyretics.

This drug has now been administered in many thousands of cases, and has been found to reduce fever heat with most remarkable certainty; the very few instances where unpleasant symptoms have been observed may be safely ignored, as the disturbances were noticed only where large doses had been given. One death attributed to its action may be fairly explained upon other grounds, and in judicious hands it may be regarded as practically innocuous. It has been given in fever arising from whatever causes with the same uniformity of result. I have administered it during the last two years with frequency and to my entire satisfaction. It is in the burning and exhausting high temperature of phthisis that its value is most apparent. I have used it about fifty times under these conditions. Often have I seen the temperature of the parched and withered-up victim of tubercle fall 6° F. with a comfort and joy one could never forget. Here is a temperature chart selected at random from a series of hospital cases. Though the patient was suffering from an incurable malady of a terribly malignant nature - acute miliary tuberculosis - of only a few weeks' duration, the temperature fell with striking regularity after each administration; once a drop of 7° occurred, and the most indescribable ease and comfort was experienced. I wish that I could report that these remedies cure the diseased condition which causes the high temperature. I cannot satisfy myself that, as at present administered, they do more than is reported of them, but that their use is attended with the most beneficial temporary blessings no one can question.

The new remedies which I have thus briefly enumerated are but a few of the most remarkable,

and I stop at them, not because the list is exhausted, but because already I have drawn too much upon your indulgence. Had time permitted I should have briefly referred to other startling strides in the progress of therapeutics. I must confess I omitted some because my language might have been considered more than wildly extravagant had I descanted upon them. It was my privilege to hear the first report in this country upon the trial of massage. I did not know that the speaker was Dr. Playfair, and, as he related the miraculous results of the treatment, I sat in astonishment wondering how any man could be expected to believe in results which appeared so utterly impossible. I certainly felt for the moment that the speaker's head required a little vigorous massage. But all he said and much more have been abundantly verified.

The results of the treatment of hydrophobia cannot be said to be less wonderful. Many remedies, such as these last-mentioned, cannot be exhibited in a collection like what we have to-night, but we must not forget them in our rapid glance at the proofs of therapeutic progress. Such are the treatment of various nerve lesions by improved electrical appliances; of the hitherto fatal hyperpyrexia by cold baths; and of the treatment of phthisis by improved and better understood climatic agents.

Leaving then the past and the present behind us, and looking to the future, we ask ourselves – What are the prospects? None but the foolhardy would venture to prophesy – our speed has been rapid during the last ten years, and the increased velocity has caused our equilibrium to become a little unstable.

Let us hope that, in our life-struggle against disease, we shall not at our *present rate* continue to add new weapons to our armoury. Rather let us pray for an armistice, during which time will be given to make ourselves thoroughly familiar with the handling, the range, and the action of the deadly implements placed in our hands.

The new discoveries run forward in swiftly diverging lines, and leave between them ever-widening wedges of virgin territory; ours be it to break up this unexplored soil and perfect - in the sure and slow way our fathers did – the science of the treatment of disease. Ever mindful of the universal law that high development and slow growth must proceed together, we might be tempted to prophesy that, in our approach to perfection, we may expect to move at a slower, steadier, and more uniform pace than in the immediate past. The bold outlines of a new science may be struck in a few short years, while

it will take centuries of patiently wrought-out details to fill in and perfect it. So is it in relation to our recent advances in therapeutics.

Pursuing the broad suggestive latitudes, pardonable I hope in the opening address of a session, and discarding the logical exactness necessary in a paper, I might compare our position with a picture which suggests itself to me, as I reflect upon the recent past, the present, and our prospects of the future. There arises before me, as I speak, the idea of a great artist who is about to begin a painting which is to be his life-work, and which, in his yearning after immortal fame, he fondly dreams will hand his name down the ages.

A commencement is made, and the huge canvas is soon filled with the outlines of figures glowing with animation and beauty; and in a comparatively short time the entire plan of the picture starts into life under his enthusiastic touch. To the ordinary beholder the life-task in its effective and dazzling brightness is almost accomplished, and a few more touches of the brush only are needed to perfect the rapidly-accomplished work. Not so, however; the able artist realises that only now are his labours really beginning. For the last finishing touches to this graceful figure the statues of early Greece, Florence, and Rome must be studied. For that flowing head-dress must the wardrobes of the East be searched; while that antique armour may necessitate an examination of the spoils of ancient Egypt. For the warm sunlight of that glowing sky oriental hills must be climbed with burning feet ere the last flashes of golden light can be added to the perfected vision. And the painter may feel the snows of winter upon his brow before the great task of his life receives the last strokes of development from hands already withering under the decay of age.

This brings us (in conclusion) to our part in the perfecting of the newer scientific therapeutics. Are we to stand idly by while others by their labours build up and give the finishing touches to the science of treating disease? Under the regretable difficulties and obstacles mentioned at the beginning of my remarks, it is in the power of few, if any. of us to demonstrate the action of remedies upon the lower animals. It is, fortunately for our immediate purpose, hardly necessary; and I need not say that experimenting upon our patients would be both unjustifiable and immoral.

It is our duty to clothe the figures created by the genius of Magendie, Brunton, Fraser, Hay, Koch, Foster, Schroff, and the host of pharmacologists who may be said to have created, by their recent researches, a new science. The details of their glorious artwork can be filled in only by us. At the bedside, by patient and laborious observation only can the gaps be levelled up or bridged over, which the lines of recent discovery have left between them.

Did time permit I would fain dwell upon the ennobling influence of such a motive imparted into the daily task of our arduous lives. Finding out and clinging to truth when discovered, each one of us would become a true scientist, *working* for and *living* for *one* object – the perfection of our science and the relief of human suffering.

As I sit down it is with the painful feeling that some of you may think I have been "exhibiting the excess of credulity associated with youth, and that unconsciously I have been tinting the science of our profession with imaginative hues and magnifying it in the mists of dawn."With all respect let me say it is you who are in error. Did we not all at one time feel overwhelmed with the grandeur of the profession we had just entered, or were about to enter? Let us ask ourselves - Why the change? And my seniors will pardon me when I say that the science of the treatment of disease has not become less worthy of veneration since the time they first entered its portals, but that their position and experience are exactly like that of my own when lately I stood spellbound under the shadows of the lordly Cathedral of Cologne, overcome with the silent majesty of its awe-inspiring dimensions.

To my surprise, after entering, and pausing a moment in the long-drawn aisles and 'neath the fretted vaults, my oppression soon passed away, and I felt myself ceasing to be impressed by the vast proportions of the gorgeous temple, till sweeping along the corridors of memory came up the lines of the master: –

"Enter – its grandeur overwhelms thee not; And why? It is not lessened; but thy mind, Expanded by the genius of the spot, Has grown colossal."

Presidential Opening Address Ulster Medical Society 7th November 1901

Ladies and Gentlemen, I am deeply sensible of the honour which you have conferred upon me by again electing me to the Presidential Chair of your Society.

After the expiration of my first year of office in 1887 the members unanimously re-elected me for another year, but though I appreciated highly their confidence, circumstances beyond my control prevented my accepting the position then. In return for such a great compliment I could only reply that if at any future time my poor services in any capacity were required by the Society they would be willingly placed at its disposal.

I, therefore, respond to your flattering request, confident of the support of the same wise counsel and cordial assistance from every member which made the session of 1886–87 such a pleasant and happy one for myself.

If so, we may fairly hope that the present session will not prove to be a failure, and that we may all carry with us in the future a pleasing memory of the helpful work accomplished in it, and of friendships formed or deepened during our winter evenings' debates.

After six or eight hours a day of proof-reading during the last three months, anything of the nature of a formal address would be an infliction upon you, as it is impossible under such circumstances that one could bring to bear upon any medical subject that freshness and enthusiasm which might be the plea or excuse for detaining you for any length of time upon the opening night of the session. Anticipating such a condition of mental fag, I ventured to stipulate with some of the representatives of your Council that our opening night, owing to this, would be memorable from the absence of the usual oration. In the disjointed and fragmentary remarks which are to do duty for an inaugural address, I shall endeavour, as far as in me lies, to draw lightly upon your patience.

Upon again taking office after fifteen years one's first mental process is naturally a retrospection. Though it is a tempting theme, I shall avoid inflicting upon you a catalogue of the advances made in our professional knowledge and practice during this time. The period is too recent for a *summary*, and the *de*-tails would occupy many hours, even if I confined my

remarks to such subjects as Abdominal and Aseptic Surgery, Serumtherapy, and the innumerable host of new remedies. Moreover, such an address would serve little useful purpose. You are all made familiar in your daily work with every recent advance in medicine, and you are not likely to forget the importance of the facts or discoveries without which you cannot expect to become successful physicians or surgeons. There is, however, to my retrospection another side of which, in the hurry and bustle of our professional life, we are liable to forget, and in the short time at my disposal we will look back at the members' roll of the Society as it existed at the commencement of 1886. Before this time Dr. Esler acted the part of Robert Paterson, the Cameronian whom Scott has made immortal as "Old Mortality." Our "Old Mortality" dived into the ancient history of Belfast medicine, and his papers preserved in the Transactions are an invaluable possession. In these he has cleared away the moss and lichens, and rechiselled the inscriptions which bore testimony to the virtues of Haliday, James M'Donnell, Malcolm, S. S. Thompson, Reade, Pirrie, Charles Purdon, and many other worthies.

The Ulster Medical Society, exclusive of its honorary members, at the beginning of 1886 had a membership of 66. It is startling to find that in less than 16 years only 27 of these now remain on the roll of members. A few have lapsed into non-members through indifference, several have sought new pastures, and no less than 29 have fallen on sleep.

This appalling mortality was not confined to the Ulster Medical Society's membership. The list of practitioners practising medicine in and about Belfast in that year (1886) numbered about 140. Of these about 60 have died since then. The profession contained an unusually large number of men who had grown old in its service in those days, and it is a remarkable fact that of the 29 members of our Society who have entered into their rest very few were young men. It is a consoling fact that the general average of the ages of our departed brethren must have been well on to 70 years.

I propose to make a brief biographical survey of some of the most notable figures on this illustrious roll, many of whom have left us a rich heritage in their long lives full of noble deeds and self-sacrifice, whilst a few have written their names large in the annals of medicine. The first figure is that of

PROFESSOR THOMAS ANDREWS.

His was, perhaps, the most celebrated and original of the number. He died a few weeks before the advent

of 1886, having terminated his existence upon the 26th November previously at the age of 72 years. He was born in Donegall Square upon the 19th December, 1813, and published, when he was 15 years old, his first contribution to science - "On the Action of a Flame urged by the Blow-Pipe on other Flames." This appeared in the Philosophical Magazine of 1829. The mere enumeration of the titles of his scientific papers would occupy a considerable amount of time, for he was a most indefatigable worker. Everything he did was characterised by the most conscientious and laborious exactitude, and some of his researches raised him to the rank of a "discoverer." He is probably best known, and his name will ever continue to be associated with the discovery of the continuity of the liquid and gaseous states of matter. That research, published in his first Bakerian Lecture in 1869, led the way to the liquefaction of the gases, which had been hitherto known under the name of "noncondensable." This was brought about by his discovery of the critical point, or critical temperature, and the adaptation of the apparatus and methods which he employed in the solidification of carbonic acid. His researches upon the heat of combination, the latent heat of vapours, and the constitution and properties of ozone led also to far-reaching results.

He was engaged in the practice of medicine actively and most successfully for about ten years, but he resigned his practice and appointments in 1845 upon being elected Vice-President of the Queen's College. It was interesting to note that one of his earliest researches was upon the chemistry of the blood in cholera patients; another was into the changes produced in the composition of the blood by repeated bleedings.

In the new edition of my "Dictionary of Treatment," under Alcoholism, a suggestion is made for the alleviation of the drink evil by forcing the Legislature to prevent all publicans from supplying any spirituous beverage of a higher alcohol strength than claret. Within the last few days I found in looking into Professor Andrews' printed papers that he powerfully advocated this measure at a meeting of the Social Science Association in 1867. His proposal was that no licensed publican should be allowed to sell, or keep in store, any liquor containing more than 17 per cent. of alcohol (*i.e.*, the strength of sherry), though he hoped, he said, to see the burgundy standard of 12 per cent. eventually adopted.

He held very strong views upon the functions of Universities and the duties of Governments to the higher education, as is to be seen in his "Studium Generale," published in 1867. He regarded the system of grouping a number of teaching institutions in affiliation with a University as fatal to freedom and progress.

"Each College," he said, "should be the site of a true and independent University as in Germany centres of intelligence scattered over a country each shining brightly with its own peculiar light, and not coldly reflecting the rays of a distant luminary." He strongly urged the conversion of Owens College, Manchester, into a University of the Scotch or German type, and he held that any attempt by it "of affiliating Colleges all over the country, or by substituting examinations for Collegiate training, could only lead to the degradation of all high mental culture, whether scientific or literary." However we might differ from those views, they serve to aid us in forming a correct estimate of the many-sidedness of this successful experimentalist, whose profound and original mind did not confine itself to the elucidation of scientific problems, but was ever ready to grapple with the complicated questions of public and general importance. The memory of his unassuming greatness, of his honesty of purpose, and of his untiring patience is a heritage of which any society should feel justly proud. The death of Andrews was soon followed by that of one of the most remarkable figures in the history of Irish medicine,

Dr. HENRY MACCORMAC.

Upon the 26th May, 1886, Dr. Henry MacCormac entered into rest. He was born in 1800, being, therefore, 86 years old at the time of his decease. After graduating in 1824 he made voyages to the Cape, Sierra Leone, and North America with the view of studying the habits of the native tribes. Upon his return he commenced practice, and was appointed one of the physicians to the Belfast Fever Hospital, which afterwards became the General and later on the Royal, and now is the Royal Victoria Hospital. In 1832 he had charge of the Cholera Hospital, and rendered invaluable service in that period of panic and suffering. He afterwards became Professor of Medicine in the old Belfast Medical School, before the establishment of Queen's College, and he acted for many years as visiting physician to the District Lunatic Asylum. He was a man of the widest culture and most varied knowledge. Up to the time of his death he was engaged upon an exhaustive work on philology, and he had knowledge of at least 20 languages. His published writings covered a wide field of subjects, and in this respect his position is probably

unique in the history of medicine. These are the titles of a few of them: - "A Work on Fever," "A Translation of Antoninus," "A Treatise on Stammering," "The Philosophv of Human Nature," "The Nature and Treatment of Asiatic Cholera," "Aspirations from the Inner - the Spiritual Life," "Consumption as Engendered by Pre-breathed Air,""The Conversations of a Soul with God," "Methodus Medendi, or the Practice of Medicine," "Moral Secular Education for the Irish People," "The Etiology of Tubercle," and so on. Owing to his early advocacy of many reforms in medicine he has been regarded as a reformer, and is still spoken of as one of the pioneers of medicine of the early years of the last century. To my mind, his position amongst the immortals is not that of the discoverer, the reformer, or the pioneer. He belongs to the rarest group of medical celebrities. MacCormac was a Seer. In the spiritual realm of thought his position must be defined as a Mystic.It will only be at the end of another fifty years that MacCormac's marvellous prevision can be realized. He saw clearly as only the Seer can, things whose advent if we yet see at all we see through a glass darkly. No greater contrast could be afforded between two minds than that of his and of the other great man I first mentioned. Andrews found new truths after most laborious and brilliant research, not moving one step till he had patiently satisfied himself of his data. MacCormac saw them afar off by means of some strange gift possessed by the few. His was an instinct which when it paused to reason very often erred. Andrews's results were the outcome of the exercise of rare reasoning powers drawing safe conclusions from observed facts, and leading with often painful precision to important advances of knowledge.

MacCormac's name will ever be associated with the open-air treatment of phthisis and tuberculosis. He was the first to clearly see the value of pure air as an agent in the prevention and cure of the disease, though when he attempted to find a working hypothesis he failed utterly.

It is interesting to note that in Germany an influential committee was formed last July to establish a memorial to the memory of Dr. Hermann Brehmer, whose name is associated in Germany with the introduction of the open-air treatment of consumption. Brehmer died on December 22nd, 1889, three and a half years after MacCormac. I have been unable to find out the date of Brehmer's first published contributions, but we know that Mac-Cormac's fearless advocacy of the open-air method began early in his professional career, when the last century was still in its youth. I cannot refrain from giving another example of the marvellous foresight of this great seer. He affirmed, and possibly he was the first to really see, the identity of tubercle and scrofula at a time when many of those engaged in research in this field never seemed to suspect any connection between the two diseases, which Koch's discovery has since demonstrated to be identical. Perhaps more remarkable still was his vision that the so-called white swellings, or chronic joint and bone diseases, were identical with ordinary consumption.

It must also be remembered that he was amongst the first to see the benefits which would arise from a complete reversal of the then recognised passive methods of treating insane patients in asylums. The time is fast coming – indeed it has already come – when we should take a lesson from Germany as to how we should show our reverence for the great minds who have laid medicine under such lasting obligations to their memories.

It is interesting to note that MacCormac forestalled one of our great sanitary reformers of the present time in at least one particular, for I notice amongst his published papers that there was one entitled – "The Painless Extinction of Life in Animals Designed for Human Food."

Dr. John Woods Beck died upon the 2nd May, 1886, being nearly 70 years old. His son, Frederick E. Beck, died on 31st October, 1896, at the age of 52. Both were well-known general practitioners, who served their day and generation with faithfulness and zeal.

The next loss sustained by the Society fell upon the 2nd April, 1887, when Dr. James Barron's life, full of hope and bright promise, was suddenly cut short. He died during the year of his office as secretary to the Society. He was a young man endowed with intellectual faculties of a high order, and with personal qualities which had already endeared him to his colleagues.

About the same time Dr. S. M. Malcolmson's promising career was arrested by death, at the very beginning of his professional life. He had decided to confine himself to the study of pathological problems and histological research. I cannot give the exact date of his death, but it was during the session of 1886-87, and I regret to state that of the great majority of our deceased members no record of the dates of their deaths exist in our Minutes or Transactions. I have only been able to ascertain dates by examining the obituary columns of the British Medical Journal and Lancet, or by making personal application to their surviving relatives or executors. Even at the risk of wearying you I shall give dates when these are

possible, so that this brief record may, if you think it worth preservation, be printed in your Annals, and may show that you were not without reverence for our dead. Indeed this is my chief object in selecting this subject for my address.

Dr. J. Meenan's young life was also brought to a close this session. His social and amiable qualities were highly appreciated by his medical brethren, who little imagined that his gay good humour was never again to be heard at another annual dinner. He died on the 10th July, 1887.

Just one brief month after the death of our honorary secretary there passed away, upon the 2nd May, 1887, under melancholy circumstances, a notable figure at all our meetings and festive gatherings. Upon this date

DR. JOHN MOORE

terminated his career at Crieff, in Perthshire, where he travelled for a much-needed rest. He had faithfully served the Society during many years as honorary secretary, and he filled the Presidential Chair in 1873-74, and he is referred to in Dr. Esler's paper upon the Past Presidents of the Society, contributed in 1886.

He was President of the Society upon the occasion of the visit of the British Association, and occupied the chair at the memorable breakfast given in honour of the medical members. To him belonged the honour of being the founder of the flourishing and powerful North of Ireland Branch of the British Medical Association, and he took an active part in all the arrangements for the highly-successful meeting of the British Medical Association which took place in 1884.

He was surgeon to the Royal Hospital for many years, and he also filled the post of gaol surgeon at the time of his death. He was a man of the loftiest ideals in everything pertaining to the honour and dignity of the profession, and the conduct of human affairs. Indeed, herein lay the strength and the weakness of his character. His ideal was so sublime that it was often an impossible one, and failure fretted his sensitive spirit, and helped to wear out his active mind.

The following session of 1887-1888 saw the removal of Dr. E. D. Gribben, at an advanced age. He was one of the oldest general practitioners in Belfast.

Upon the 29th July, 1887, the next great blank on the membership roll was created. Upon that date was gathered to his fathers one of the most illustrious of Irish surgeons, a man of world-wide fame –

PROFESSOR ALEXANDER GORDON.

He was an original genius, the bent of whose powerful mind was inventive or creative, though he was also one of the closest and most accurate observers of his day. In this respect he was an example of one of the rarest combinations of intellectual forces to be met with in medicine. Confining his intellectual operations mainly to the domain of fractures it is not too much to say that he found the pathology and treatment of this important department of surgery in a condition bordering upon chaos, and dominated largely by empiricism. He left it with its pathological problems and facts reduced to order, and its treatment based upon a clear and purely scientific foundation. If we reflect for a moment upon the state of the literature of fractures at the lower end of the radius and the upper end of the femur when Gordon entered upon his labours, it might be compared to the condition of a stagnant pool, which he transformed into a clear and crystal spring. He has left behind him in his published writings - all too few - and especially in his unrivalled collection of fractures at the Queen's College, an enduring monument of his patient, though brilliant, research, which has made an impression upon the surgery of the last century which must last for all time.

If his intellectual powers exhibited qualities not often met in a high state in any single individual, his personal characteristics were not less strangely combined, and to those who did not know him were often a puzzle. We can hardly hope to ever see in our day again such child-like simplicity combined with such fearless honesty; such exquisite gentleness in union with such unswerving firmness; so high regard for the honour of his profession united with an utter disregard of all personal honour or preferment.

Many years after his death I dedicated an American edition of my "Dictionary of Treatment" to his memory, which, in a single sentence, may be accepted as doing duty for an epitaph:-

In Memoriam ALEXANDER GORDON, M.D., Professor of Surgery, Queen's College, Belfast, 1849-1886. A man of rare singleness of purpose and of unfaltering rectitude, Whose great originality and practical genius marked an epoch in the progress of his Art: This Volume is Dedicated by His Affectionate Pupil.

A few months after Gordon's death his life-long friend,

DR. T. K. WHEELER,

died upon January 13th, 1888. It is doubtful if the removal of a medical man from his sphere of usefulness in the North of Ireland ever produced such universal and deep sorrow as was evinced upon this occasion. Dr. Wheeler had a very extensive practice, and a most unusually wide circle of friends and patients, who loved him deeply, and his heart was big enough to enter lovingly into all their joys and sorrows. His devotion to those placed under his watchful care was loyal and untiring. Hundreds still survive him - and I am one among these - who in times of illness and bereavement regarded his presence as a benediction, and who still cherish his memory sacredly enshrined in their hearts till they meet him again. He was an able and successful practitioner, and I can recall as if yesterday the chief points in his address on "Puerperal Eclampsia," which he delivered when President of this Society, exactly a quarter of a century ago.

His death was soon followed by that of

DR. H. S. FERGUSON,

who departed upon the 16th June, 1890, at the age of 75 years, after a long and very successful county practice. He was one of the most polished gentlemen that ever graced our local profession; of courtly manners, and the very soul of all professional honour. His intellectual powers were of a high order, and I believe he was one of the shrewdest men I have ever met, never having heard him pronounce an unsound opinion. We might locate him as belonging to a group of what I like to think of as the old princes of our profession, at the head of which stood Dr. Thomas Reade, who died in 1873; and Drs. Charles and Henry Purdon, the former of whom had died in 1882, the latter in the August of 1886. To the same group belonged

DR. SAMUEL BROWNE, R.N.,

who died upon the 26th August, 1890, a few weeks after Dr. Ferguson. He had attained the age of 81 years. He was like Dr. Ferguson, a perfect gentleman, with the bearing, presence, and courtly manners of the olden world type. In addition to his varied and extensive surgical experience on the staff of the Royal Hospital, he practised for many years as an ophthalmic surgeon, and was the founder of the first Ophthalmic Hospital erected in Belfast. Dr. Browne was a man of great public spirit, and took a leading part in most of the philanthropic movements originating in Belfast. He graced the Mayoralty in 1870, and afterwards occupied the important position of Medical Superintendent and Officer of Health for the Borough.

Upon August11th in this same year of 1890, which was so fatal to several of our leading medical men, there passed away one of the ablest and most successful medical practitioners ever known in Ireland. This was

DR. JAMES W. THOMAS SMITH.

He was 60 years old at his death, and into his professional life of about 40 years was crowded an amount of purely professional labour seldom if ever achieved by the longest lived members of our hard-working and laborious profession. Perhaps no practitioner in recent times in Ireland enjoyed a wider field of private and consulting practice. I say *enjoyed*, for Dr. Smith loved his hard work, and seemed to live only for it, and very seldom indulged in even a short holiday.

He wrote little, and hence has left practically nothing behind him to swell the literature of medicine. He cannot be said to have increased our knowledge in the sense that Andrews, and Gordon, and MacCormac have done. Few men, however, have more nobly and successfully laid their impress upon their generation than Dr. Smith. He was a brilliant clinical teacher, and the influence of his teaching upon the students and young practitioners of the Belfast Medical School could hardly be exaggerated. In diagnosis he was absolutely unrivalled. At the bedside in the hospital it was not enough to say that he shone in diagnosis; he was often sparkling and really lustrous. His perceptive faculties were developed to a rare state of perfection, and they were ever on the alert, though to the student and to the casual observer he hardly seemed to exercise them at times, but appeared to arrive at his conclusion of what was wrong by a method of intuition or instinct, scarcely himself knowing or understanding how or why. Those who knew and understood him best, however, were satisfied that he did not arrive at his diagnosis by an effort of instinct akin to the way in which the faithful friend and companion of man recognises game. He arrived at his decision by a rapid inductive process (often apparently automatic), drawing his inference from a number of observed facts or features which ordinary men generally

overlook. The bent and configuration of his mind was such that he never guessed, and consequently he was very seldom wrong. He possessed a valuable gift which prevented guessing, and which consequently saved him from the degradation of attempting a socalled "lightning diagnosis" - he had the rare endowment of conscientiously taking infinite pains in every examination which he undertook. Even after he satisfied himself about the correctness of his diagnosis, he rapidly, but accurately, determined the condition of every organ in the body where this was possible before prescribing for his patient, and before committing himself to an opinion. It was this habit so rare in busy hospital men which made the teaching of Dr. James Smith a power for good in the training of the medical students of our large school. No one could escape the lessons which it taught, and many generations of young medical men must continue to reap the benefits which have flowed from the influence of his conscientious and thorough methods upon every one of his old pupils who are still engaged in clinical teaching.

His powers in prognosis were even more remarkable than in diagnosis, and compelled the average thinking man to believe that *medicus nascitur non fit*; certainly in the ordinary sense of the words he was a born physician, but it is more to his credit (and from this reflection every one of us should take a lesson) that he faithfully trained himself, and developed to the highest perfection every faculty and talent with which he had been so generously endowed.

His son, Dr. Strafford Smith, followed him on 5th October, 1900, at the age of 41 years. He was a man beloved by all who knew him, and he had already given promise of being a successful clinical teacher. I believe the sentiment embodied in the words graven upon his father's tombstone is singularly appropriate to the virtues of both men – "To live in hearts we leave behind is not to die," and in this sense, indeed, none of our worthies are yet dead.

R. W. PRING, L.A.H.D.

The next notable blank on the roll of membership as it existed in 1886 was that caused on the 10th November, 1891, by the death, at 63 years of age, of Mr. R. W. Pring, L.A.H.D., and for some years President of the Irish Pharmaceutical Society. He was the head of Messrs. Grattan & Co., and was one of the many links which associated the art of pharmacy with the science of medicine in Ireland. He was a thoroughly scientific chemist as well as a practical pharmacist, and his many sterling qualities, both of head and heart, gained for him the entire confidence of the medical profession in Belfast and the North of Ireland. Though he never practised as a physician, few medical men in our locality have been so helpful to their medical brethren. He was the Martindale of his time, and like our dear friend, Dr. Henry Whitaker, whom we rejoice that we have with us, was ever ready to place at the disposal of the practitioner his sound scientific knowledge and his rare practical judgment in all matters relating to Materia Medica and Pharmacy.

The next blank upon our roll was that caused by the death of Dr. Henry Burden, on the 19th February, 1893, at the age of 58 years. He was a man of a purely scientific cast of mind, and could hardly be said to belong to the ranks of the practising physician, as he devoted himself mainly to the study and teaching of Chemistry and Pathology. He was a first-class microscopist, and became the first pathologist to the Royal Hospital. He afterwards occupied the position of President of the Ulster Medical Society during the session of 1888-89. About the same time was removed a young man of promise and of sterling worth – Dr. O'S. M'Parland, who was not, however, upon the roll of 1886. He died upon 21st January, 1893.

Our next loss was that sustained by the removal from our roll of a very striking personality.

PROFESSOR ROBERT FOSTER DILL

died upon the 20th July, 1893, at the age of 82 years. He occupied the Chair of Midwifery at the Queen's College, and filled the office of Coroner for the Borough for a period of nearly 30 years. He occupied the Presidential Chair of the Society during the session of 1879-80, and again in 1883-84, so that in our annals his name was written large, and his removal created a blank which has never been filled up. He was a ready debater and took a deep interest in all the work of the Society for many years. The scene of his greatest triumphs was the annual dinner and few of us can forget his brilliant and sparkling after-dinner speeches. As an old secretary of the Society, I can affirm that he was only to be heard at his best when taken unawares.

There arises before me as I speak a vision of his aged and venerable form, thrilling with all the enthusiasm of youth as he stood up to respond to the toast of "Prosperity to Ireland" at the annual dinner in 1887. All those who heard that oration were dazzled with it, but very few knew that it was delivered

entirely impromptu, and that the speaker was at the moment of its delivery suffering agonising pain. He had arisen from a sick bed to be present, but not to speak. Though combative, and at times pugnacious, I cannot remember a single instance where our festive gatherings were ever ruffled or even rippled by a remark made in his happy post-prandial reflections.

DR. JOHN S. DRENNAN.

A few months afterwards, upon November 2nd, 1893, at the age of 84, Dr. John S. Drennan died. He began his professional life as a Lecturer or Professor of Materia Medica in the Leeds Medical School, but afterwards returned to Ireland, and became a successful practitioner. He was the son of the famous Irish Volunteer, Dr. Wm. Drennan, whose political and literary writings are referred to in Dr. Esler's paper on "The Early History of Medicine in Belfast."

At the period under our consideration (*i.e.*, 1886), Dr. John Drennan had long retired from active practice, and it was felt that his removal from amongst us had severed one of the few remaining links between the then present and the remote past. He was, like his father, a man of strong literary taste, and collections of his own verse and of his father's ballads were published, and are still to be met with in most unexpected places.

Within a few weeks later, on the 4th of January, 1894, passed away a very notable figure in

DR. ALEXANDER HARKIN,

at the advanced age of 77. He took a deep interest in the work of the Society up to the time of his death, and his published writings covered a wide field. He was a close observer of clinical facts, and his fertile imagination never left him at a loss for theories to account for his facts. He made observations, extending over many years, upon the cutaneous sensibility in the areas over the upper dorsal spines, and drew some remarkable inferences from these researches, which, if ultimately proved to be correct, will throw light upon many an obscure corner in the physiology of the nervous system. He was the first observer who systematically tested the effects of a large blister applied over the heart in uncomplicated acute rheumatism. He found that it reduced temperature, and rapidly removed most of the symptoms in a very remarkable manner. Not content with these observations, he insisted upon a new pathology of rheumatism, which he defined to be an endocarditis, and he continued to think of the heart as a great joint, by blistering over which he prevented endocarditis and valvular lesion.

These observations have been in the main verified by Caton, who apparently without any knowledge of Harkin's practice or theory, has quite recently published similar results. He prevents the advent of valvular disease by stimulating the trophic centres by blistering the skin areas most closely associated with the heart, viz., the skin between the clavicle and nipple, which is supplied by the first four dorsal nerves. Both observers have struck upon the same important truth independently, though it is probable that the theories of both are incorrect. More remarkable still was the treatment of cholera first introduced by Harkin. He started upon the theory that the cholera poison produced its lethal effects through its action upon the sympathetic, and he was quite satisfied that by blistering the vagus nerve he could cure the disease. The vesication he conceived caused stimulation of the vagus, which by its increased inhibitory action "controlled the exuberant activity of its ordinary antagonist - the great sympathetic."

Dr. Harkin was a man like Drennan, with a highly-cultivated literary taste, and some of his unpublished lyrics gave evidence of touching pathos and profoundly religious feeling, and through all his efforts in verse there ran a deep vein of passionate love for his country. His contributions to the Society's debates, even on such subjects as Koch's treatment of phthisis, or the salicylic compounds in acute rheumatism, were sometimes enlivened by unexpected flashes of wit of a high order, and which, contrary to expectation, seemed never to be out of place. He was to those who knew him well a most delightful and entertaining companion; simple and confiding as a child, with the strong likes and dislikes of a child, and with that pure child-like faith in the Eternal, which at times seemed to transform him into a giant. This faith was the key-note of his loving and lovable character. To the very few who knew this side of his character his removal left an aching void. I would rather see his approving smile to-night, and feel the grasp of his warm hand, than accept the greetings of all the greater ones who have passed away.

DR. RICHARD ROSS

died on November 13th, 1895, at the age of 68. He was President of the Society during 1876-77, having succeeded Dr. T. K. Wheeler. His sudden death caused a wide-spread gloom over the city, and though he enjoyed for many years a select and high-class

practice, in no circle was his loss more deeply deplored than amongst the poor, who mourned for him as for a friend. His old hospital patients still speak of him with genuine affection, and they sometimes called him "the good physician." He was a man of singular disinterestedness and purity of motive, and goodness of heart. To him the agony of the pauper appealed more touchingly than did the sufferings of his wealthy patients, because his tender heart realized how little there was in the environment of the poor to ameliorate their miseries, or to assist the physician in his efforts for their relief.

The obituary notice in the British Medical Journal contained the following, from one of his colleagues, which I cannot forbear to quote: - "Dr. Ross was one of the purest, kindest, most unselfish, and most faithful men who have ever adorned the profession of medicine. His nature had no flaw of meanness or pettiness. He was absolutely devoid of jealousy, or greed, or unworthy ambition. He lived for his profession and his patients, and he received in return an enthusiastic affection and a profound esteem such as few men have ever evoked. No word of bitterness, or censure, or discontent, or repining ever passed his lips. His presence brought help, and comfort, and benediction where-ever he went. If ever man 'wore the white flower of a blameless life' it was Richard Ross. Indefatigable in labours, unwearied in well-doing, careless of self, prodigal of professional aid, of wise counsel, and of kind sympathy, he has gone to his rest amidst the deepest and most unaffected mourning. The tears of the poor are perhaps his best epitaph."

Dr. John Strahan

died upon the 23rd January, 1896, at the age of 44. He was a man of considerable intellectual power, and had already contributed freely to medical literature. Ten years before his death he was awarded the Fothergill Gold Medal by the London Medical Society for his essay upon "The Nature of Fevers." The following year he won the Philadelphia Memorial Prize for his essay on "Extra-Uterine Pregnancy," and, in 1892, he won the Boston Warren Prize by his essay on "Rickets."

The next vacancy on the 1886 list of members was caused by the removal of a striking personality in

PROFESSOR JAMES SEATON REID,

who, at the age of 85 years, died upon May 3rd, 1896. He held the post of Visiting Physician to the Union Fever Hospital for almost half-a-century, and he occupied the chair of Materia Medica in Queen's College for 33 years. As a teacher he was scarcely as highly appreciated as he should have been. I do not hesitate to give him a high place, having received from his lectures more knowledge and aid, of the kind not usually found in books, than from any of my other teachers in the practical subjects of the medical curriculum.

It is only within the past few years that pharmacology has illuminated the dark continent of Materia Medica, and breathed the breath of life into its dry bones. The next generation of students will have a much more interesting subject to listen to than had Reid's pupils. Charles Darwin said "that he looked back upon the hours spent in attending the Materia Medica lectures as the most inexpressibly dreary experience of his life." I can only hope that when my own brief obituary notice comes to be placed amongst the annals of your Society that in Christian charity the nature of our subject will be before the mind's eye of the Recording Angel, and that I may be found worthy of the verdict which you will not hesitate to give my venerable predecessor - "He hath done what he could."

Dr. Reid enjoyed the full confidence and high esteem of all his professional brethren. He was for very many years recognised as the greatest authority on the diagnosis, prognosis, and treatment of fevers in the North of Ireland. He filled the Presidential Chair during the session 1867–68. As regards his personal virtues, all who had the privilege of knowing Dr. Reid intimately know that a kind heart throbbed underneath his brusque and somewhat rough manner. I was always certain that this was but the mask which he wore to conceal his tenderness. Upon two occasions, long before his death, I have seen his manly form bowed under emotion, which only obtained relief in floods of tears.

Dr. Henry Bingham died upon 29th March, 1898. He was a man of great force of character, and possessed intellectual power of a high order. His jovial good humour often sparkled at our festive gatherings, and his comparatively early removal was a very serious loss to his professional brethren and to the public weal, as he took a deep interest in many questions of municipal and sanitary importance.

The next vacancy occurred on July 6th, 1898, a few months afterwards, when Dr. David Johnston died. He was one of the most successful general practitioners in the city, a man of close and accurate observation, shrewd, and sound in his judgment, resourceful, and intensely practical; a safe and most reliable obstetrician. He conferred upon the large

working-class population, amongst whom he chiefly laboured, the benefits of a skill and experience not often within the reach of the wealthiest.

In about three weeks he was followed by his life-long friend and relative, Dr. W. S. Speer, also a worthy and respected member of our Society, but one who was not upon the roll in 1886-87, having only been elected in 1890. He died upon 3rd August, 1898. Dr. Hugh M'Harry died upon the 11th of September, 1898 – a man who had devoted the greater portion of his fifty-two years in labouring amongst the poor.

The next great gap in our membership was caused by the irreparable loss which we sustained in the death of

PROFESSOR JAMES CUMING,

which occurred upon the 27th August, 1899, at the age of 66. His removal is far too recent for any ordinary mind to form a correct estimate of his colossal character. We must wait till the years bring us a little farther from his towering personality before we can get a sufficient sense of proportion to do it justice, and I am not going to attempt what I feel to be an impossibility.

His position in the profession differed entirely from that of all those to whom I have already referred. Death had been very busy in our ranks during the 15 or 16 years over which my brief survey extends, and one by one the senior members had been called to their well-earned rest. In few senses could any of them be regarded at the time of their removal as the head of our local profession. Dr. Cuming's relation to his medical brethren was almost unique. He was their recognised head and leader in all professional matters at the period of his death. He reigned with undisputed sway over a loyal kingdom, whose subjects were nearly all his old pupils and friends, whose respect and esteem for him deepened with his advancing years.

He occupied the post of Visiting Physician to the Royal Hospital for nearly 34 years, and he adorned the Chair of Medicine in Queen's College for a similar period. As a lecturer he was a remarkable success, being a thorough master of a perfect literary style, and of a calm philosophic reasoning power, which made his class-room utterances models of everything which a lecture should be. Indeed, it is doubtful if any other medical school in Great Britain could boast of two such lucid and fault-less exponents of medical science as we possessed in the seventies in Professor Redfern, whom we all rejoice that we have still with us, and in Professor Cuming, whose loss we still continue to deplore.

The range and accuracy of his reading were phenomenal. There was no department of human knowledge, ancient or modern, which could be said to be entirely new to him, and what struck the observer most was the remarkable way in which he had digested his knowledge. He was not a book-worm, though the good books were few that he had not perused and assimilated. He was a scholar and philosopher. Those who knew him best will feel that I am not over-stating the case when I say that there were probably half a dozen Chairs in his College which he could have filled to as great advantage as he did the Chair of Medicine. His knowledge of English History and Literature was accurate and profound, his highly-cultured mind grasping the spirit of the authors with whom he loved to commune, and here, as in the case of the ancient classical writers, he shrank from parading his scholarship, and was seldom heard to quote even his beloved Horace and Homer. His familiarity with French, German, and modern Italian literature was no less remarkable.

Whilst constantly keeping up his extensive political and literary reading nothing seemed to escape him in the domain of medicine and pathology. Up to the year before his death I have frequently found him re-writing his lectures. He had little faith in drugs, and his profound scepticism acted as a wholesome antidote to the empiricism which was rampant at the time when he entered upon professional practice. It served him also in his study of the natural history of disease, as he was able to watch it, in its progress, uninfluenced by his negative therapeutics. Unlike his colleague, Dr. Smith, he did not appear at his best by the hospital bedside, but any deficiency in acuity was amply compensated for by his more powerful logical and reflective faculties. If an absolutely perfect physician is ever to appear upon this planet he must be found to be built upon the types of both men, possessing the marvellously acute perceptive faculties of the one combined with the very highly-developed reasoning powers of the other. Such an one has not yet appeared.

It is a subject for deep regret that Dr. Cuming, like Dr. Smith, has left practically no written contributions to our medical literature. A volume of his lectures would be keenly appreciated, and amid the changing phases of our ephemeral literature it would ever remain a medical classic. There is only one man of my acquaintance who could edit such a volume, and he is the able and cultured successor of our great Professor of Medicine.

The key-note of Dr. Cuming's character was his spotless integrity. I have fought by his side in many campaigns, and have never seen him swerve from the right. He was as just a man as I have ever known. His love of peace and harmony constantly led him to suggest compromises with the view of smoothing down differences between his professional brethren, but he never made a compromise with the truth. Leading men who resort often to compromises are very frequently suspected of not being over-scrupulous, and possibly Dr. Cuming may have sometimes been misunderstood, but I rejoice in being permitted to testify to his unfailing uprightness. There is a word which describes his general character better than any other word or phrase in our language. It is scarcely a dictionary word yet in the sense in which I am about to use it, but we all know its unmistakable meaning when I say, after a life-long intimacy, that I believe Dr. Cuming was the squarest man I have ever known.

His judicial mind almost invariably led him to a correct and absolutely impartial judgment upon any matter left to his decision. To say more would be to say that he was not mortal. He narrowly escaped a serious weakness in one detail - a weakness of great minds, and seen in one of England's greatest statesmen not long since passed away. Upon a subject on which he felt very deeply Dr. Cuming was liable to persuade himself that the weight of evidence was upon the side of his affections. But as he came to his conclusions with slowness and deliberation in all matters not capable of mathematical demonstration, his robust honesty eventually came to his aid, and I have many times heard him state that he was nearly making a mistake. It was an evidence of the greatness and of the purity of his mind that he did not hesitate to own that he changed his opinion, and the feeling that he had already committed himself never for a moment closed the door of his judgment.

His genial wit and pleasing humour, his ready and always graceful oratory, charmed every listener at our festive gatherings, and never left a pain behind.

His Presidential utterances during the memorable meeting of the great British Medical Association in Belfast were the delight and admiration of even the most experienced annual visitants at such gatherings, and every Belfast man was proud of him on this occasion.

I cannot conclude these brief reflections without expressing, upon behalf of every member of our profession, our grateful appreciation of the motives which actuated his loving and faithful friend, Mrs. Pirrie, in raising to the memory of this great physician the splendid memorial in the form of the Cuming Ward of the Royal Victoria Hospital.

Upon April 25th, 1900, Dr. James Smyth died at the age of 52. Up to the time of his death he was engaged in one of the most extensive midwifery practices in Ireland, and as an obstetrician had achieved a high reputation amongst his professional brethren for his operative skill. His name is associated with an instrument which he devised for facilitating the operation of craniotomy.

A few weeks afterwards, upon the 11th June, 1900, Dr. Robt. Clements passed away at the age of 51 years. He had given much attention to the practical working out of the Poor-Law System, and was appointed one of the Medical Examiners, or Inspectors, in this service. He had left Belfast after his appointment, and was unknown to the rising generation of members, but his death caused sincere regret amongst his numerous old friends still surviving.

To make further comment upon this illustrious list of our deceased brethern is unnecessary. I have attempted in my brief analysis to point out a few of the most conspicuous characteristics in the case of each, which I trust may appeal to all of us, if we hope in our turn to leave behind us such footprints as may help our weary brethren to take heart again when they read of, or listen to, our good deeds.