

# David Peter Gaussen (1861–1938)

President of the Ulster Medical Society

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## Presidential Opening Address

Ulster Medical Society

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### SOME RECENT ADVANCES IN SCIENTIFIC MEDICINE.

LADIES AND GENTLEMEN – During the year that is past some events of more than passing interest to the members of this Society have taken place, which on an occasion such as the present deserve mention.

The Equipment Fund of the Queen's College, which was inaugurated by the magnificent generosity of one of our merchant princes, who, when a boy, spent a few years in our city, has attained that signal success which it so well merited. Now, thanks to the splendid response of the citizens of Belfast, and especially of the members of the medical and other learned professions, the Queen's College, of which we all feel so justly proud, will be able to fully maintain that predominant position in the world of literary and scientific learning which she has so well gained and held during the past fifty years.

Just now the extraordinary rapid advance of scientific research demands extraordinary efforts to be made by those in authority to keep the College abreast of the advancing tide. I am sure it is a matter of sincere satisfaction to us all that these efforts have been so completely crowned with success, and we heartily congratulate President Hamilton and those associated with him on the satisfactory result.

The honorary degree conferred on the President, in company with so many learned and distinguished men from all parts of the world, at the ter-centenary celebration of the Ancient University of Aberdeen, was a well deserved one, and we offer him our most hearty congratulations on being the worthy recipient of it.

Our best thanks are due to Sir Otto Jaffé for the fine portrait of Edward Jenner, which, in the kindness of his heart, he presented to the Ulster Medical Society during the past session, and which so well adorns these walls. It is well thus to keep fresh in our memory the name of a man whose genius placed him a century before his age, and who may truly be termed "the Apostle of Preventive Medicine." During the past year a disciple of his, A. E. Wright, has

received the honour of knighthood from His Majesty the King. Sir A. E. Wright, whose father was a distinguished and well-known citizen of Belfast, and who himself spent so many years of his life among us, has gained for himself an imperishable name in the annals of preventive medicine, and we offer him our sincere congratulations on the well-merited honour he has received.

I would like briefly to refer to another event of interest, which I regret to have to say we cannot view with anything like the same satisfaction as those which I have already mentioned.

The legal decision in the case of Tughan v. Darnell was a mere travesty of justice, and one which was manifestly unfair to Dr. Darnell, and to the profession which he represents. It may have been law of a certain kind, but it certainly was not equity.

In no other learned profession could such a condition of affairs become possible, and it behoves us, as a profession, to unite and insist on having our rights so maintained and protected that it will be impossible in the future for any of our members to suffer for the sins and shortcomings of thoughtless and entirely stupid individuals in the manner Dr. Darnell has unfortunately had to do in this case.

During the past year we have lost through death a Fellow of this Society. I refer to the late Dr. James Lynass. He was well known to most of us, and was a most promising and talented member of the medical profession. He was elected in 1894 a Member of the Ulster Medical Society, and became a Fellow at the opening of the Medical Institute in 1901. He was Pathological Secretary, in conjunction with Professor Lorrain Smith, for a number of years, and made several interesting communications to the Society. Dr. Lynass was educated at Queen's College, Belfast, and graduated M.B. of the Royal University in 1892. He was appointed Visiting Medical Officer to the Belfast Union Infirmary in 1899, and did some excellent surgical work at the infirmary. He was building up a large and valuable practice, and much sorrow is felt among the profession and the public generally at the premature ending of such a promising career.

The subject on which I wish briefly to address a few remarks, which, I hope, may be of some interest to you, is, for the want of a better name, entitled "Some Recent Advances in Scientific Medicine." I have to thank the Fellows and Members of the Ulster Medical Society for the very great honour they have

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conferred on me in electing me as their President for the present year – an honour which I feel has been done not personally to myself, but to the great class of general practitioners to which I belong. In this present age, when medical science is advancing with such tremendous rapidity, when increasingly numerous and profoundly important discoveries in, I may say, nearly every one of its important branches are being made with a rapidity that is almost bewildering, it seems to me that the time must at length come when the average human intellect will be unable to assimilate to any proper degree all the several points connected with the various branches of our profession, and that *per se* the general practitioner must cease to exist, and specialism become universal. This time, however, has not yet come, and we still remain a large and, I may say, not unimportant branch of the medical profession.

The question of our survival is one which futurity alone can solve. Depend upon it, all must follow Nature's great law of the survival of the fittest. I question whether any amount of particular knowledge of his subject will ever enable the specialist to entirely displace the general practitioner. If the human race were composed merely of a series of elaborate machines, each of whose machinery was of a most intricate and complex nature, requiring specially expert engineers for its different parts, then such might possibly be the case; but, as experience has taught every one of us, there is a something in man – and, may I add, more particularly in women – which refuses to be bound by any of our known laws of treatment, and which in fact is, I may say, a law unto itself – I refer to that unknown quantity, “the influence of the mind on the body.” In spite of all the recent advances in scientific medicine, I fear this most fascinating and (to my mind) really important subject has been entirely left behind, and has been almost altogether allowed to fall into the hands of charlatans and designing persons, who have prostituted their powers to bad and mercenary purposes, and have brought discredit on the whole subject. The complex question as to what extent the brain influences the functions of the body, or, *vice versa*, is influenced by them, is one which has not received adequate attention from our medical therapists; yet we see examples of it in our practice every day. We all know how much better a man feels when he is told he is looking well. Cases of dyspepsia brought on by mental worry are of daily occurrence among our patients. I remember when I was House Physician in the Royal Hospital the case of a woman who had not slept for nights, and to whom I

promised one day to send a sleeping-draught, which I quite forgot to do. The next morning, when approaching her bed, I for the first time remembered my promise, and was just about to apologise when she rather surprised me by saying, “Thank you so much for the good sleeping-draught; I have had a splendid night's sleep”! On inquiring from the nurse, I found she had just had her usual medicine, and had slept well all night. Instances such as these are familiar to us all.

The connection that exists between mind and matter is a subject of which we know comparatively little or nothing; and yet I venture to assert that it is one which will amply repay very careful experimental research, and I look forward with confidence to a future when it will be regarded as one of the most useful and valuable therapeutic agencies which the medical profession possesses. There is that to a great extent unconscious influence which the medical practitioner exercises over the mind of his patient, who has confidence in him, which is one of the most essential conditions of success in medical treatment, and without which, in some cases certainly, the most brilliant therapeutic knowledge and treatment will not have that success which they certainly merit.

The profession, as a whole, are too little inclined to give serious scientific consideration to the undoubted fact that this power of influence exists. A great number look upon it as hysterical weakness, to be entirely kept down, and in no case to be encouraged; but there it is, implanted by Nature, and as such, as students of Nature's laws, we are morally bound to study it scientifically, and to use it practically.

As general practitioners, the great majority of patients who consult us are suffering from minor ailments the exact replica of which we would find it very difficult to discover in any of our text-books; and it is peculiarly in cases such as these that this almost unconscious power of influence is exercised by the experienced physician, with more or less force, but always with signal benefit to the favourable progress of the case. All that I have said on this subject surely goes to prove that medical psychology must not be limited merely to mental disorders, but that the subject must be enlarged and made to embrace the scientific study of these two great and most interesting problems: – (1) The influence which the unconscious as well as the conscious region of the mind of an individual has over the functions of his own body; and (2) the influence which the mind of one person is able, consciously or unconsciously, to exercise over the mind, and, through it, over the

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functions of the body of another.

There is a latent power within the body, as is admitted by every thoughtful physician, which is always endeavouring to restore that lost relationship which must exist in all those abnormal conditions which we specifically call diseases. That power, which we call Nature, must be guided and directed from psychic centres which exist in the unconscious, as distinguished from the conscious, region of the mind.

The conception of this fact opens up to us an entirely new phase of medical treatment, and shows us that part of the mind which exercises an almost unlimited power over the body, for good or ill. The supreme object of all treatment, both medical and surgical, is to assist this power, which we call Nature, and in the cure of disease we recognise that she is the great physician, and that we, at the best, are only her very humble assistants.

Let us look a little further, and consider is it not possible to conceive that in the near future means will be discovered which will enable the physician to exert a more or less controlling influence over this unconscious region of the mind, which will be a tremendous and, in fact, I may say an overpowering factor in the treatment of certain diseases? It may be so, but at any rate I submit that the time has now come when this great question must be placed on a broader and firmer scientific basis, by the practical study of the relationship which exists between the unconscious as well as the conscious regions of the sound mind and the body in health and disease.

During the five years of special study which all medical students have to undergo before they become qualified to take their degree, there is not one minute devoted to the study of this important scientific subject. Surely this is not as it should be, and I can only sincerely hope that the Medical Council will recognise the vast importance and great possibilities of this form of treatment, and will have the subject of medical psychology in all its branches made compulsory, so that students will be scientifically and practically instructed in its uses, and their proper method of application.

I now come to the very interesting question: What recent advance has taken place in our knowledge of the therapeutic action of drugs, and of the art of prescribing them? The answer is difficult. Certainly our knowledge of the exact action of certain drugs in certain diseases has very much increased, and we are able with quiet confidence to prescribe them, knowing that they will produce certain well-recognised results. But, after all, the few drugs to which I refer are but as a drop in the ocean compared

with the innumerable multitude of drugs, and combinations of drugs, old and new, which have been and are every day being brought before the profession in ever-increasing numbers. The busy practitioner is simply bewildered by them, and hardly knows where to turn for light. Our British Pharmacopoeia has swollen to an enormous degree, and yet has been entirely unable to cope with them. That some of them are excellent there is no doubt, but, unfortunately for the profession and for the public at large, they are almost altogether in the hands of manufacturing chemists and companies pecuniarily interested in their success, who advertise their virtues freely in the public Press, and also, I am sorry to say, in our leading medical and surgical journals.

The time must soon come, and in my opinion has come, when a radical change must be made, and our knowledge of drugs based on scientific and reliable experimental principles, and not, as at present it is to a great extent, on the recommendation of financially interested observers. It is nothing less than a blot on our boasted advance in medical science that this condition of affairs is permitted to continue.

Meantime, what is to be our attitude towards this subject as it stands at present? No doubt the use of proprietary medicine, about whose exact composition no information is forthcoming, must, on ethical grounds, be condemned; but are we therefore justified, because the remedy is a secret one, in entirely refusing to have anything to do with it? This, I believe, is the orthodox attitude taken up by the leading members of the profession, and it is the only logical outcome of the present anomalous situation; but surely it is an absurdly weak position, and one which should not exist in this present practical age. It must be admitted that occasionally some secret remedy is of undoubted value in the treatment of disease. The public are not slow to grasp this fact, and, as a consequence, rush blindly to the opposite extreme of believing everything the flowery advertisements state, until their eyes are opened by the sad test of practical experience. Our patients naturally look up to us, and confide their health to our keeping. Under these circumstances I fully believe that it is our bounden duty to put the question of their welfare before all others, even if doing so should entail the prescribing of some proprietary remedy of whose exact composition we are kept in ignorance, provided we honestly consider it advisable in their interests to do so.

Let us hope, in the interests of the profession generally, that the therapeutic authorities of this and

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other great nations will see their way to devise means for practically testing the value of all medicines, proprietary and otherwise, and while discarding all useless remedies, both old and new, will issue under their "Imprimatur" a text-book, giving simple, clear scientific and practical explanations of the therapeutic action and uses of such drugs only whose effects they have scientifically and practically determined. Too much reliance was formerly placed on drugs in the treatment of disease. No doubt they constitute a part, and in some cases a very important part, of successful treatment. The tendency had been to rely on them to an almost foolish extent, greatly to the exclusion of those rational therapeutic remedies, such as fresh air, dieting, good nursing, etc., which we now consider so essential. A great advance has recently been made in this direction, which has been even more marked since new and scientifically exact methods of treatment have and are being discovered which strike at the very root of disease with a certainty never attained before.

It is now my pleasing task to turn to another great branch of scientific medicine, where, without doubt, advances of a very wide and far-reaching character have recently been made. I refer to preventive medicine. The old maxim, "prevention is better than cure," is a true one, and it is the watchword of that great army of scientific workers and observers all over the world, who are cheerfully spending their lives in endeavouring to wrest from nature those secrets which she so jealously guards.

Most important and very interesting discoveries have recently been made in the prevention, early recognition, and treatment of a great class of diseases. Starting with Lister's supremely important discovery of germs as a cause of disease, we have the origin of bacteriology, which has developed to such an enormous extent within recent years, and has placed preventive medicine on a stable and scientific basis.

Prophylactic treatment by inoculation, as begun by Jenner, and continued by Pasteur, Haffkeine, Behring, and Wright, has advanced with enormous rapidity, and bids fair to revolutionize in the near future our ideas of disease. The cure of rabies was quickly followed by the prophylactic treatment of other diseases, such as cholera and enteric fever, by the injection of different sera, the effects of which were more or less successful. Then quickly followed the great and important discovery of how to bring about a cure after an infection has taken place and the symptoms of the disease have actually developed. This was amply demonstrated by Behring

and Kitasata in the successful treatment of diphtheria by inoculations of antitoxin serum. This has eclipsed all former methods, and has practically robbed that disease of its former terrors. It was, however, reserved for Sir A. E. Wright, after years of close experimental research, to make the momentous discovery that it is possible to find out the powers of resistance possessed by any person to any stated microbe, and not only to do this, but also to demonstrate the means whereby this natural power of resistance can be so raised and strengthened, as to practically render the person immune from all attacks of the microbe. The principles laid down by Wright are destined to open up new paths of treatment for the therapeutist to follow in many diseases, where the treatment, up till the present, has been entirely empirical and symptomatic. Take, for example, boils, acne, and all the numerous class of diseases caused by the staphylococcus. We all know how difficult these are to treat, and what unsatisfactory results often follow our best efforts; the same may truly be said of many tubercular lesions, such as lupus, adenitis, peritonitis, &c. Now, following Wright's principles, we compare the opsonic index of a patient suffering from any one of these diseases with that of a man in perfect health, and finding it, as we almost invariably do, lower than normal, inoculations of a specially prepared emulsion of dead bacilli are given, and the index thereby raised to, or well above normal, with the result that the symptoms very often subside with almost magical rapidity, and a cure, often permanent, is quickly brought about. In a most interesting paper read by Doctors Houston and Rankin last session before the Society, cases such as these were amply demonstrated, and most surprisingly good results were obtained by these gentlemen from the use of Wright's methods.

Let us glance for a moment at the enormous possibilities which this method, pursued to its logical sequence, opens up to the enterprising therapeutist in the field of preventive medicine. Take, for example, the prevention of consumption.

I do not suppose it will ever become possible to banish entirely the tubercle bacillus from our midst. It will be found lurking in the dust blown up by the wind, in railway carriages, crowded rooms, and places of public entertainment, &c.; in fact, like the poor, we will always have it with us, and it will be impossible for the human race to escape entirely from exposure to its contact. In this connection the question of heredity, as a source of consumption, may, with advantage, be considered. Clinically, we recognise heredity as a predisposing cause of tuberculosis. I

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would suggest that the opsonic index in children of tubercular parents will usually be found lower to the tubercular bacillus than in the normal healthy person, and that *here* is the explanation of the predisposition which we call hereditary, and which they undoubtedly possess, to contract the disease. In such conditions the immense advantages to be derived from the use of Wright's methods are obvious. By inoculation the lowered index is raised to, or above the normal, the predisposition is removed, and the patient is immunized against the disease as thoroughly as efficient vaccination immunizes against smallpox. Nature, in the great majority of mankind, supplies to the serum the opsonin necessary to keep the index at normal, and so the attacks of the numerous varieties of bacilli to which we are daily exposed are overcome. It is those cases in which the supply of opsonin is deficient for any particular microbe that fall victims to the assaults of that microbe, nature, unsupported, being unable to resist their attacks.

Here is the golden opportunity for the physician, having first discovered the lowered index, by timely inoculations so to raise it as to enable nature to overcome in the contest, and thus save the patient from an attack of the disease. The great difficulty that lies in the way of the practical application of Wright's methods towards the prevention of disease among the public generally is that, for their proper performance, much time, expert skill, and the use of a laboratory are necessary. Let us hope that they may soon be simplified; but even if this were impossible, the probable results seem to me so grandly beneficial that it is our duty to endeavour to have this branch of treatment not only taken up by our great hospitals, as is already so well exemplified by the Royal Victoria Hospital, Belfast, but also we should agitate for the appointment of special haematologists by the local governing authorities, who would attend at certain free dispensaries and examine and, when found necessary, inoculate the poor. Were this efficiently carried out, an immense advance would have been made in the prevention of bacterially-caused diseases, and much benefit would result to the public generally.

There is no doubt but that the principle of therapeutic inoculation will persist in practical medicine; and we must unite in honouring the man whose brilliant genius, after so much prolonged scientific research in the laboratory, has evoked a method of treatment so universal in its application, and so scientifically correct and practically beneficial in its results.

There are other preventive means which I

would like briefly to suggest as probable aids to the extermination of microbic diseases generally.

Take the case of Tuberculosis. No doubt the open-air treatment and the establishment of sanatoria have done much to mitigate suffering and prolong life, but they in themselves have failed to cure the disease, once established; and it is to prevention absolutely, and to that alone, that we must look for success. The means of prevention of this and other similar diseases are well known to us all, but their successful application can only be brought about by the scientific education of the general public in a way that has never heretofore been attempted. As a profession, therefore, I would suggest that we should form ourselves into an authoritative organization for the proper education of the public. The fact that they are ignorant of medical affairs is due to defective education rather than prejudice. We must rectify this, and endeavour to educate them up to the point where they can understand the broad humanitarianism of modern preventive medicine. This can only be efficiently done by our laying aside that extreme reticence and reserve which has so long characterized the profession; and by popular lectures delivered to all classes, both to the rich and more particularly to the poor; by easily understood newspaper articles; by plain individual conversations with our patients and the public generally, and all other means in our power, showing them the dangers that surround them and the comparatively easy means of escape that exist, if only they will avail themselves of them. This is assuredly the pivot around which the successful combating of tuberculosis and other bacterially caused diseases to a great extent revolves, and it behoves us as a profession to seriously consider our moral responsibility in the matter.

Another important matter, the adoption of which we should strongly advocate with the public authorities, is the instruction of the children in all our National Schools in the elements of Practical Hygiene and Sanitary Science, in the cause and prevention of Tuberculosis in particular, and also of all other so-called infectious and contagious diseases. This should be made compulsory, and I have no doubt but that very beneficial results would soon follow its universal application. "The child is father to the man," and what he learns in his early days has a commanding influence over his future life.

It would be impossible for me, within the limits of an address such as the present, to adequately refer to the many other recent important advances in scientific medicine which have taken place in a

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manner at all commensurate with their value.

The story of the discovery of the cause and means of propagation of malaria and yellow fever is of most thrilling interest, and reads more like a fairy tale than an important scientific fact. Its results, however, as regards the preventive treatment of these diseases are of the utmost value, and reflect the greatest honour and credit on the names of Major Ross, Finlay, of Havana, and their fellow-investigators, who cheerfully imperilled their lives in tropical countries when making a scientific and practical study of these diseases.

The discovery and use of the Röntgen rays have influenced our treatment of disease most beneficially in its medical, but more especially in its surgical aspect.

The use of rays of blue light, as recommended by Finsen in the treatment of certain hitherto intractable skin diseases, has produced wonderfully good results.

Hydrotherapy has also become a more exact science, and the use of cold sponging and baths for the reduction of fever, and of warm packs for producing free perspiration, have now become universally recognised methods of treatment.

Massage is rapidly becoming a frequent and much-appreciated form of treatment, and the intelligent development of the different muscles of the body by carefully considered exercises, as recommended and practised by the Swedish school, has now taken root in our midst, and produced excellent results.

Electricity has advanced rapidly in general utility, and our knowledge of it has greatly increased, but in its practical application to scientific medical treatment a similar advance has not taken place. It is still largely in the experimental stage, and has suffered by having fallen into the hands of advertising quacks, who, without the necessary scientific knowledge of disease, have extolled its virtues as a universal panacea, and so brought it into disrepute. Though we do not at present fully understand them, I feel certain that it possesses great potentialities for good in the treatment of disease, and that it will amply repay that careful study and scientific investigation which it is sure to get at the hands of the medical profession.

In conclusion, I would just like to say that the more we study Nature, and Nature's laws – the more we endeavour to find out her secrets, as applied to what we call life and the maintenance of health, and, having done so, discover how we can best assist those natural forces in the body which she is constantly

utilising on our behalf against that inevitable disease and decay which must eventually be the common lot of us all – the more we persevere in this course, the nearer do we come to that true knowledge of disease, and that perfect success in treatment, which the self-sacrifice and persevering study of the members of the medical profession so well deserves to attain.