gation;—I mean a set of cases whose life is nothing but ailment. Their physiology, if I may so express it, is a state of pathology. Their nervous systems are so sensitive, and their digestions so feeble, that they know nothing of that satisfactory resistance to disturbing causes from without, which we call health; and who often suffer as much from futile attempts to cure them, as from their congenital defects.

These cases supply a constant *clientèle*, and I can hardly say how much we should add to the happiness of mankind by a better understanding of them. Of course, I exclude those dilettanti *malades imaginaires* who may be said to enjoy bad health; whilst the class of cases to which I refer of right claim our greatest sympathy.

But I feel that I must not longer tax your patience. From the nature of the case, it would be impossible to indicate, even in a cursory way, the many bearings which this collective research may take. One thing is certain: every question settled will but open another, and give renewed encouragement for fresh exertions. In all its aspects, this project, set on foot by the British Medical Association, cannot but advance the highest interests of our profession, and the more surely, in proportion as it extends our knowledge of the prevention and cure of disease.

This is the age of combinations; but I know of none which has a purer object than this: for what can surpass that whose purpose is the investigation of truth for the good of man?

AN ADDRESS ON THE COLLECTIVE INVESTIGATION OF DISEASE.*

BY SIR JAMES PAGET, BART., D.C.L., F.R.S.

MR. PRESIDENT AND GENTLEMEN,—When it was proposed to myself, as well as to Sir William Gull, that we should give addresses here on the subject of collective research, it seemed to me scarcely possible that two addresses on the same subject could be given on the same night; and when Sir William Gull was good enough to promise that he would speak first, I felt nearly certain that he would leave me nothing that could be said, except after the manner of useless repetition. I shall, therefore, speak very briefly; and I will add emphasis in proportion to the shortness of my speech, by admitting that I entirely agree with everything that Sir William Gull has said. I will ask you to allow me to flatter myself so far as to say that, if I had spoken first, I should have said the very same things. If I may condense what Sir William Gull has said at full length, it seems to me he has shown perfectly how this design of the British Medical Association may fulfil the two great purposes which we should have constantly in mind in our profession—the increase of knowledge and the improvement of the mind of the observer; for these things can rarely go apart.

I cannot but admire how well a large assembly such as this, representing, as it does, a yet larger Association, has declared itself to be in the state of mind most favourable to the acquirement of knowledge—the state of partial ignorance. The list of questions which is published upon each of the papers sent out by the Committee indicates that we are not ashamed to confess our doubts on some of the most important things that come before us; that we are prepared to start confessedly ignorant on many points upon which we are supposed to have complete and final knowledge. I think that, in common with most scientific men, we may boast that this is rather rare; that there are large groups of men, and those much esteemed, who rarely express doubt on anything, and thereby command the assent of those who listen to them. Without expressing the smallest preference for one side more than the other, I would say that this is best to be found amongst politicians, in whose speeches we almost entirely miss the words which are most familiar to ourselves—"perhaps," "possibly," "I rather think," "I would venture to suggest." I have looked with much curiosity, not for the sake of acquiring political knowledge, but for the sake of comparing the political and the scientific mind, to see if in some of the best and most renowned speeches I could find one expression of the kind. Not one is there. We must therefore be content to put up with what may be regarded as a sort of unpopularity if we confess ourselves to beginning with doubts, in order that we may be more sure in proceeding

towards knowledge; for there is no state of ignorance so hopeless, so profound, as that which cannot even doubt.

The questions also show well how very large the inquiry is, and how various the objects that must be had in view in every research that we undertake. Sir William Gull has rightly said that I had in view in the Bradshawe lecture the promotion of museums of morbid anatomy, and I am quite conscious that, whenever one undertakes to promote one thing, it is very difficult to avoid an appearance of depreciating others. I put, as it were in parenthesis into the lecture, some words which probably attracted no attention, and might have been omitted, implying that I should be the last to hold that any one method of inquiry on any scientific subject can be sufficient; and I said, what I venture to repeat, that the pathologist who thinks lightly of observation in practice, and the practitioner who thinks lightly of observation in pathology, will neither of them attain to more than that partial view of truth which is nearly as bad as error. And so I think, although still very highly estimating pathology, as illustrated by morbid anatomy, one may nevertheless speak with an unbounded desire for the success of an inquiry such as this, in which morbid anatomy may be almost wholly left out of sight. It is impossible to reckon what shall be ultimately the relative degrees of importance of the several methods of inquiry. I would rather hold that it is altogether childish to endeavour to say which method is best. One rule may be held for all; that is for each man best which he can do best, whether by force of circumstances, or by his own natural ability. And as one cannot but observe that the chief design of this collective inquiry is to bring into the fields of knowledge all that may be gathered in general practice by family and general practitioners, so I would not hesitate to name the knowledge which may be so gained as probably likely to lead to the very highest knowledge, and even the solution, of the most difficult problems in pathology that can be set before us. I would have dilated on this subject, but that Sir William Gull has treated it so fully in regard to the attainment of family histories. There is certainly no other means so good as that which may be possessed by those who have known families for generations, and who can, of their own knowledge, and not on the fallacious and often very false reports of relatives and friends, declare what has been prevalent in this and that household. And yet, if one should set before one's self the gravest and most important problem in all pathology, it would be that which concerns the inheritance of disease; and as Sir William Gull has rightly stated, the inheritance, not of disease alone, but of that which from generation to generation shall obliterate the disease which one ancestor may have acquired. Let me observe that this is a kind of knowledge which can be gathered in the most ordinary pursuits of life; it needs no minute inquiry. The mere recollection of the daily life that has been spent in this or that small village, among the two or three generations in one family, may recall it at once, and this is what we most thoroughly need, this personal and exact knowledge. And when I speak of knowledge that may be gained in the study of common things, there always comes to my mind the great example of Darwin, whose renown will last as long for the manner in which he pursued his knowledge, as even for the grand knowledge which he acquired. I have often felt in Darwin's greatest inquiries, and I would cite, as the chief among the kind, his last work on the influence of worms, that there are very few facts which might not have been observed by the common daily labourer in the field. He had the rare power of taking the common things that other men waste, and out of them making the grandest material of scientific work. So that it is vain to say that in any branch of practice, "I have no opportunity for scientific inquiry; I cannot investigate this; I can contribute nothing to that which I see the scientific members of the profession are doing." It requires merely the opportunity of a practice in the country, and the mind and resolution of Darwin, to bring great pathological conclusions out of the most ordinary facts of daily life in general practice. And if one wanted another motive for this, it would be the improvement of the observer's mind, and the charm which, as Sir William Gull has well said, he would find in the promotion of his own work, and in the mere pleasure of observing and finding his conclusions.

We are all very apt to think that, as we grow older, we acquire experience and grow wiser. I have lived long enough to feel and discern the exceeding fallacy of that as a general rule; and yet I venture to say that the starting with a distinctly observing and scientific mind is of the first importance in our lives; for the whole career of a man's life, his whole real success in practice—or, to speak more to the subject of the evening, the whole value of what he may contribute to knowledge may de-

* Delivered before the Metropolitan Counties Branch of the British Medical Association.

pend upon whether he begins with a mind for scientific inquiry. I am quite ready to believe, or rather I would say, I am quite willing to hope that the young men who now enter upon life, and are called qualified practitioners, are really, in the broadest and largest sense, qualified, as well as in the legal one. Legally they all are, but some are certainly not qualified to make full use of the knowledge which they may meet with in their career and practice. A very wise old man said that, it would be well if the youngest amongst us would remember that he is not infallible. It is a fault which is apt to prevail, to think that at the conclusion of study and with the right to practice, there is full power to do all that is required. There is not. Dr. Billings said cleverly the other day that he wished, after thirty years of practice, he really knew half as much as he was convinced he knew when he first obtained his diploma. And I recollect Sir Benjamin Brodie telling me that, when he looked back over forty years of practice, he was astonished, chiefly at the ignorance with which he began; and I think to most of us who have that long career, the same reflection may often happen. Now both of those would have said that the knowledge which they really acquired late in life was due, not to the mere fact of seeing cases nor to having lived long to see them, but to the care, the prudence, the discretion, with which they observed, and remembered, or recorded what they saw.

And if I may impute a fault to those who are admirable in all the ordinary work of their life, I would suggest how large a quantity of knowledge lies scattered and lost to the scientific world in the charge of those who are in large practice, and who record nothing. It will be indeed an admirable result, and I think it will be the result, of this system of collective research, if this fault is mended, if every one can be induced to record his answers to the several questions that will be asked, and in the recording will get the habit of recording for himself many things that are not asked; for I am quite sure that there is no one who will undertake this but will find in the task an amount of refreshment, and of pleasure in his practice, equal to that which may be had in any kind of speculative pursuit, in any kind of sport, in any kind of game. For amongst all these things—in sports, and games, and speculations, and the rest—there lies underneath one thing—the desire we all have to unveil mysteries. Even the boy who tosses a halfpenny to see which way it falls may illustrate a part of the scientific mind: at every toss he invents a mystery; at every fall he solves a mystery. So, on a larger and grander scale, in every investigation that we enter upon, we set before ourselves a mystery—a mystery that may be as interesting as that of a romance, of a drama, of a great tale told in the history of past times. The mystery is before us; the power of solving it may be in our minds; and I venture to promise to all who will begin with this collective inquiry, and then proceed from it to personal inquiry, a pleasure of this kind as great as can be had in any of the pleasures of life.

LONGEVITY OF MEDICAL MEN.—A daily paper notes that the following eminent physicians and surgeons have died during the year just closed, at ages varying from 78 to 96, namely:—John Flint South, F.R.C.S., late President of the Royal College of Surgeons of England, and Surgeon to St. Thomas's Hospital, 85; George Samuel Jenks, M.D. Edinburgh, F.R.C.P. London, 93—he served in the Peninsula from 1812 to the end of the war in 1814, and at Waterloo; Price Blackwood Hallows, F.R.C.S. England, 81; Sir Robert Christison, Bart., M.D., D.C.L., LL.D., one of Her Majesty's Physicians in Ordinary, Scotland, 85; John Francis De Grave, M.R.C.P., late Master of the Society of Apothecaries, 92; John Lonsdale Minshull, F.R.C.S. England, 81; George Macilwaine, F.R.C.S. England, 86; Sir James Alderson, M.D. Oxon, D.C.L., F.R.S., Physician Extraordinary to the Queen, and late President of the Royal College of Physicians, London, 87; Henry John Gore, F.R.C.S. England, 85; Staff Surgeon William St. George Davies, R.N., 96—he served as Acting Surgeon in the *Norge* at the Bombardment of Copenhagen under Admiral Gambier and Lord Cathcart in 1807, and was in all probability the very last survivor of that engagement; Henry Bell, M.D., 85; George Gulliver; F.R.S., F.R.C.S., late Surgeon, Royal Horse Guards, 79; A. E. Blest, M.D. Edinburgh, Indian Army, 85; Staff Surgeon Cotton, 87; Edward Greatrex, F.R.C.S., late Surgeon, Coldstream Guards, 83; Edward Doubleday, F.R.C.S., 84; John Haxworth, 86; Sir Thomas Watson, Bart., M.D., D.C.L., F.R.S., Physician in Ordinary to the Queen, and a former President of the Royal College of Physicians, London, 90; Inspector-General Cross, R.N., 78; James Arthur Wilson, M.D., F.R.S., Senior Fellow of the Royal College of Physicians, 88.

REMARKS

ON THE

COLLECTIVE INVESTIGATION OF DISEASE.*

By G. M. HUMPHRY, M.D., F.R.S.,

Professor of Anatomy in the University of Cambridge, Surgeon to Addenbrooke's Hospital, etc.

My duty, gentlemen, is a very easy one, and that is to ask of you to give your thanks for the two addresses which have just been delivered. In the first place, for the noble address which has laid before us the real work we have to do, the work of seeking out and developing the pathology of the living; and which has also laid before us the many difficulties and dangers which surround us in the work: an address by one whose remarkable ability, singular good sense, and genius for work and for inspiring work in others, have been to-night so well exhibited. As for the other address, from one the charm of whose oratory, in conformity with the charm of his character, wins for him that universal love which is felt by everyone of us towards him, it has already received the expression of your thanks. It is not only this meeting, but the British Medical Association, the whole medical profession, the whole community, which is indebted to these two men, the foremost men of our profession, who have given their time and thought to come before us on this occasion, and who thereby show so deep an interest in this matter as a great professional investigation.

I confess that, in my knowledge of the whole history of the British Medical Association—and that knowledge is nearly coeval with that history—nothing has given me so much hope for the Association, and for its permanent beneficial influence upon the profession and upon the world at large, as the manner in which it has taken up this subject of collective investigation—the manner in which it has been taken up by the leading members of the Association, who have given it all the aid they could, and who have not been sparing of the funds of the Association. The last thing which was said to me by one of the greatest, the most earnest and most efficient promoters of the British Medical Association—the man to whom the Association is, perhaps, more indebted than to any other man living—was this: "Your work will make considerable demands upon the funds of the Association; but you must not be cramped for want of funds. It is a great work, and deserves all the assistance the Association can give it." The manner, also, in which the work has been taken up by many members of the Association has been most satisfactory. The manner in which they have combined to form committees and to carry out the work has shown that they have a real sterling interest in it, and that they desire that the British Medical Association should connect itself actively with the promotion of the science and the practice of medicine. I have always felt that there could be no task which the Association could undertake so appropriately as the great duty of collecting the scattered fragments of knowledge which are daily and hourly running to waste; and surely there is no other profession, no other class of men, in whose case there is so large a number of facts and observations continually running to waste as in the medical profession. To gather together these scattered fragments, to condense, to analyse, to make them the basis of the furtherance of the science and practice of medicine, must be one of the greatest and highest works which the Association can undertake. We boast of our numerical power, of our ten thousand members, but let us remember that power means responsibility—that the only right ground for the continuance of power is the good use of it. The only assurance of the stability of power is well doing; the only assurance of the stability and persistence of our Association is, that it should use its power in right directions; that it should satisfy the yearnings of medical men for its work in scientific medicine. And not only will this undertaking have the advantage, as I trust it will, of bringing large accumulations of knowledge to bear, but there is also that which has been alluded to, both by Sir William Gull and Sir James Paget, namely, the advantage that must accrue to the members of the profession who take part in the work. No one can read those admirable cards

* Made at a Meeting of the Metropolitan Counties Branch, January 17th, 1883.