

On the relation of practical medicine to philosophical method, and popular opinion : being the Annual Oration delivered before the North London Medical Society, on February 10th, 1858 / by J. Russell Reynolds.

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ON
THE RELATION OF PRACTICAL MEDICINE
TO PHILOSOPHICAL METHOD,
AND
POPULAR OPINION :
BEING THE
ANNUAL ORATION,
DELIVERED BEFORE THE
NORTH LONDON MEDICAL SOCIETY,
ON FEBRUARY 10TH, 1858,

BY
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UNIVERSITY MEDICAL SCHOLAR ;
FELLOW OF UNIVERSITY COLLEGE ;
LICENTIATE OF THE ROYAL COLLEGE OF PHYSICIANS OF LONDON ;
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PRINTED BY ORDER OF THE SOCIETY.

THE RELATION OF PHYSICAL EXERCISE

TO PSYCHOLOGICAL DEVELOPMENT

IN THE

ANNUAL ORATION

NORTH LONDON MEDICAL SOCIETY

J. HUSSELL REYNOLDS, M.D., F.R.S.

LECTURE DELIVERED AT THE ANNUAL MEETING OF THE SOCIETY, HELD AT THE ROYAL COLLEGE OF PHYSICIANS, 1881.

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MR. PRESIDENT AND GENTLEMEN,

As set forth in the laws of the North London Medical Society, the annual Oration shall contain a retrospective account of the advance of practical medicine during the preceding year; but it is not provided in those laws that practical medicine shall advance. Such a contingency as the "arrest of development," was evidently not contemplated by those who constructed the framework and rocked the cradle of this Society; and when it drew its first infantile breath, and exhibited an energy of purpose and vitality, such as precluded the idea of mal-nutrition, spontaneous gangrene, ricketty collapse, loss of members, and other "ills that flesh is heir to," its sanguine parents, nurses, sponsors, and law-makers had their hopes unclouded by any prognosis of retrogression in the family of societies and sciences to which this new and vigorous member was introduced.

For a time the infant progressed favourably, and there was no room for fear. It grew, as all organisations do, by the assimilation of raw material, and the excretion of waste products; but after a year or two had passed, its health failed, and ordinary treatment did no good. Change of residence was recommended and adopted, but with no great measure of success; and at length it was brought back again to its native air, in which it now enjoys a tolerable amount of comfortable vitality.

Considered in relation to other members of the somewhat large family of societies, this has contributed a fair proportion of work; and, for an individual of its age and opportunities, it has advanced the general reputation of the scientific stock from which it sprung. But when we come annually to regard the advance which practical medicine has accomplished, we do not limit ourselves to this child of its old age, nor must we take for granted, because science is a year older, and perhaps a size larger, that it is necessarily either wiser or better than it was; but we must examine it carefully, and ascertain whether it has improved or advanced at all, and if so, in what direction; whether it has retrograded, and if so, for what cause.

In the "Oration" which it is my honour to deliver now, I purpose to depart somewhat from the usual custom of this Society, and

instead of pointing out the advance of practical medicine during the past year, I will review the present relation occupied by medical science to general philosophical persuasion on the one hand, and to popular opinion on the other; explaining, so far as is within my power, and within the limits of your patience, the causes which operate in producing an advance or retrogression in the scientific position of our profession; and also those which raise or depress it in popular esteem.

In thus departing from the letter of the laws of the Society, it does not appear to me that I wander from their spirit; but if I lay myself open to that charge, my excuse must be that my place to-night was to have been filled by one who would have complied with the laws in both respects, but whose removal from London has occasioned a loss to this and many other Societies, which will not be readily supplied. Mr. H. Burford Norman, whose counsel and character we honour, whose friendship we value; and for whom, with an increase of acquaintance we have always felt more than an equivalent increase of respect,—Mr. Norman, had he addressed you, would doubtless have recalled to your minds the important additions which have been made to our knowledge during the preceding year; but in his absence I must ask your attention to a somewhat more extended, perhaps more important, but I fear to many, less interesting theme.

If we come to regard the relation of practical medicine to general philosophic speculation; or, in other words, the prevailing philosophy, or general method employed in scientific medicine, there is much deserving our attention. We must, for the time losing sight of minor points, some amiable weaknesses, and many individual peculiarities, endeavour to discover what is the actual, predominant idea, principle, or tendency of the scientific mind. We have not to state what Dr. This, or Mr. That may do in a particular case, for it may often happen that those well-known practitioners themselves would find as much difficulty in squaring every dose of "James's powder," or every application of "water-dressing" with any general philosophical idea, as they would in "squaring the circle," or arranging some neat little apparatus for "perpetual motion." But we must discover what is the prevailing direction of their minds, and of the Profession at large, when reasoning with themselves, or consulting with one another in ordinary, and more especially in extraordinary cases. The extraordinary cases illustrate the tone of mind more efficiently than the ordinary, because, for them, mere routine is of necessity disregarded. We cannot at once untie those little metaphysical red-tape parcels of prescriptions which we carry about with us, in posse, in our heads; but we have to apply, deductively, to new combinations of phenomena, certain principles we have somewhat laboriously gathered; we have nothing ready-made at hand;

we have to invent new formulæ, and thus bring up to the work our past experience, and employ it according to our present and prevailing method.

There can be little doubt that "practical medicine," or medicine considered as an "art," has now been for some years, so far as the Profession itself is concerned, striving to become "scientific"; that the object has been to guide the art, and advance it by the science; to discover a scientific basis for the operations and appliances which have been accidentally or empirically employed. In some cases this attempt has been successful, in others it has not; but the Profession has not ruthlessly thrown away all that it could not reduce to system, and it would be difficult, even now, to say why we do many things we do; but science in days gone by, was led by art, and now the former would take the lead. It is not in medicine alone that science and art have thus changed positions. The same alternations have been observed in music, agriculture, painting, and architecture. Sometimes the one has been blind, and the other, with both eyes open, has led it on its way, cured its eyesight, and in return been blinded for its pains, but also conducted onward with more or less kindly offices; sometimes the leader whichever it has been, has wandered and lost its way; sometimes the blind has led the blind, and both have fallen into the ditch.

Various have been the relations of scientific medicine to applied or practical therapeutics. Various are the relations at the present day. There are the philosophic doubters, the employers of the "expectant medicine," and nought beside; and there are the ignorant charlatans, "bone-setters," and general pill-vendors, who can show you the tubercles that their pill-victims have expectorated. The "art," with its immediately perceived practical results, is always the stronger motive influence for the many. Sometimes it breaks loose from all restraint, and disports itself easily when unrepressed by any force but that of its own personal convenience. Sometimes it has been so held in by the reins of scientific dogma, that nothing but retrogression or "backing," and that of ungainly aspect has been achieved; but sometimes, and such is the case now with the greater portion of the medical profession in England, the art, the strong motive power, has been broken in, guided, and encouraged forward in a good path, and towards a successful end by the steady hand and practised eye of science.

But granting that the advance of practical medicine is thus directed by a scientific aim, what is the relation of the science of medicine to other sciences, and to that general method, the *scientia scientiarum*, our prevailing philosophy? What is the principle, or plan, or "method," underlying all the sciences, and directing the present progress of scientific medicine?

To answer this question we must not look merely at the practice of individuals, nor at certain ephemeral productions of medical lite-

rature; which are as hybrids, unproductive hybrids, between science and commercial speculation. These showily dressed-up volumes of medicine-made-easy, which tell the profession nothing, and the public only something of which ignorance would indeed be bliss, are no better types of our scientific position than are the advertisements of fifty thousand cures by some delightful farinaceous compound of bean-meal and saw-dust. But we may judge from the introductory lectures of our teachers, and from their systematic courses of instruction; from the general character pervading the better contributions to the periodical press; from the materials for and mode of discussion adopted at our societies; from the more solid portion of our literature; and from the daily practice and habit of thought adopted by the great bulk of the profession.

Judging from all these sources, the undoubted impression would be that our general method is that gradually developing from the time of Bacon and Descartes, but now assuming a more distinct form, and possessing the name of "Positivism." Whether we call it by that name or by any other, or by no name at all, it is evident that the spirit of so-called Positivism is penetrating all our scientific work, and directing the course of our medical enquiries.

It is not my intention to enter upon any discussion of the merits or demerits, the wants supplied, and the lacunæ left unfilled by the "system of positive philosophy;" I will limit my observations to those features of that system which specially influence our own professional study.

The two which exert the most considerable effect, are the "classification" of the sciences and the general "method" adopted with regard to each of them.

One of the most difficult problems of philosophy has been the "classification" of the sciences; and although numerous attempts for its solution have been made by profound thinkers of antiquity and of modern times, as yet no thoroughly comprehensive system has been developed. That some of the sciences are closely related to one another we may daily recognise; we can scarcely speak of any phenomenon or process belonging to some without entrenching upon and using the language of others. For example, the processes of life, such as digestion, respiration and the like, require a knowledge of physics and chemistry, not only for their comprehension, but for the expression of their simplest facts; and again, neither physics nor chemistry can be said to be exhausted until we have developed them into animal mechanics and organic chemistry.

The sciences of physiology and pathology are, to a certain extent, compounded of chemistry, mechanics, and general physics, together with astronomy, so far as it relates to the climatic conditions and variations in animal life; and the history of these sciences presents us with ample illustration of the Eidolon pointed out by Bacon, that "some men become attached to particular sciences and contemplations

either from supposing themselves the authors and inventors of them, or from having bestowed the greatest pains upon such subjects, and thus become most habituated to them ;” and further, that “ if men of this description apply themselves to philosophy and contemplation of a universal nature, they wrest and corrupt them by their pre-conceived fancies.”

At one time, when chemistry received a strong impulse from the influence of Paracelsus, De la Boe Sylvius, and others, every vital process was referred to chemical agency ; and thus, in the most unscrupulous and often clumsy manner, fermentation, effervescence, ebullition, and other not very easily imagined changes in the animal fluids were held to account for all the phenomena of life, both in health and disease. But again, “ mechanics” rose to higher dignity than heretofore, and the curves, angles, and forces were found to be equally satisfactory solutions. With German metaphysics arose new explanations, and every physical fact was found in dependence upon some higher metaphysical fact, of which consciousness was the only witness. Physiology, previously the offshoot of chemistry or mechanics, a subdivision of those larger sciences, had now to take its place as an underling of psychology. Whence to start from, and towards what goal to direct inquiries in the study of physiology, were questions asked often, and thus variously answered. A satisfactory answer could only come from a true classification ; such an arrangement of the several elements of study that this one should occupy its proper place.

The result of the thought and teaching of the last quarter of a century has been, practically, to place the science of biology (by this term including all vegetal and animal anatomy, physiology, and pathology,) in the position which is claimed for it by the positive philosopher, and which may be seen in the following order of affiliation of the sciences : mathematics, astronomy, physics, chemistry, biology, sociology. It thus becomes the connecting link between general physics and chemistry on the one hand, and social science on the other.

The principle of order adopted in this arrangement is that, starting from mathematics, we have the most general and least dependent first, and that each of the others is successively dependent upon those which precede it, the order being one of increasing complexity, speciality, and dependency. Any one may be understood without those which follow—no one can be entered upon without some knowledge of those which go before.

This is the point to which we have practically arrived in our medical education. We learn some mathematics and astronomy at school, and we enter upon a study of physiology through the doorways of physics and chemistry. We leave psychology out of the question, or have it brought in, so much of it as can be dragged in, in a few lectures on the functions of the brain, or still fewer upon diseases of the mind.

Thus the student who is sufficiently "well-up" to "pass," enters upon his career of practice, in which he has constantly to deal with life,—life in its thousandfold phases of health and disease, so played upon by mind and emotion, that we can never fully appreciate, and perhaps never over-estimate the influence of those unseen powers;—and yet he often enters upon this work without so much as a notion upon psychology, and with ideas of life built up only of anatomy, chemistry, and physics.

The idea of life—that it is merely a modification of general physical forces—is gaining ground, and seriously affecting both our teaching and our practice. It is not a part of the "positive philosophy," but it is often the result of the "positive method," and of the system of "classification;" and sometimes of a bungling of this with the idea of the "correlation" of forces, or with the notion of some central, single force.

The progress of science tends to show unity of plan amid all the marvellous diversity of nature, to evoke order out of chaos, and harmony from discord; but it should ever be borne in mind, that analogy is not identity, and that harmony is not unison; and that although we may gain glimpses or hints of order, harmony, and unity, a perception of it, in its real nature, is quite as distant as it ever was,—as far from the author of "Nomos" as from the Grecian Thales.

Isomorphous salts are not identical although they possess many properties in common; there is still the differentia—their primary chemical constitution—which cannot be broken down. Vital and physical forces are not shown to be identical, although they bear many striking resemblances, there is as yet the persistent differentia of life, which cannot be resolved. Is it said that you may trace life downwards until you find phenomena between which and certain chemical and physical changes you cannot draw the line? I may reply that Regent Street and Oxford Street cross at one particular point, and sitting on the lamp in the middle of the Regent Circus, it would be difficult to say in which street you were; but they are not identical although they meet; and, on the other hand, you may trace life upwards, from its lowest forms until you find it in the consciousness, the higher thought, and aspirations, of humanity, the reference of which to simple or complex physics is as impossible for the mind to accomplish as it is for it to descry the difference at the other extreme.

But it is not the idea of some central or universal force, the diverse manifestations of which result here in physical, there in chemical, and elsewhere in vital phenomena, which is the most dangerous and delusive notion; although in order to arrive at some good-looking generalisation many have tortured facts, magnifying some and diminishing others, dressing up one class, and not only stripping and shaving, but actually flaying others, until they might fairly challenge their most intimate relations to swear to their

identity. It is not this generalisation, to arrive at which a kind of scientific steeple-chase has to be ridden, leaping over obstacles, and getting out of the way of great chasms which must inevitably sink the rider and his steed beyond all reach of mortal eyesight. It is not this generalisation, which as a goal may be well enough, but which as an imaginary hobby-horse is a most unsafe instrument of progression, that we have to fear; for it may be, when duly regarded, a useful stimulus of well-directed work; but it is that other principle and system with which it is so often confounded, and in exclusive satisfaction with which it so often ends, namely, the entry upon the study of life through the material side alone, and the resting contented with such explanations of vital phenomena and processes as extend only to a definite and accurate statement of the physical and chemical elements which enter into them as component parts.

It is not for a moment intended by these remarks to underrate the importance of accurate physical and chemical examination; wherever physics and chemistry can explain even a part of a vital process, they should be used for that purpose, and used to the full; but the great fact, we are in danger of losing sight of, is that a process is not explained when only a part of it is detailed in any terms be they physical or chemical; even though they are conveyed with accurate measuring and weighing, to the thousandth part of a grain or the ten-thousandth part of a line. In regarding the process of digestion, for example, nothing is to be gained by the imagination of some imperial "Archæus," seated upon his gastric throne, and wielding the sceptre of royal digestive state; neither is anything gained by supposing a mysterious "vital entity," or still more unimaginable "vital intelligence," or "vital force," degrading itself from its high position to do the low-caste work of a chemical underling; for now we know that the process is one, the immediate changes of which depend simply upon the exercise of ordinary physical and chemical agencies; and, moreover, that the said agencies are (unlike many functionaries) quite equal to their work, and can accomplish it, outside the body, and without any vital drilling, interference, or overlooking. But when we have separated "Pepsine," and even converted it into an article of diet, thus bringing up a valuable "contingent" to the support of an exhausted stomach;—when we have determined its atomic weight, and bestowed upon it the due measure of its titles, that real "reward of merit," its C. H. N. O.;—when we have analysed its compounds, and become thoroughly acquainted with the forms and limits of action of its most valuable "adjutant," the gastric acid;—when we know all the "peptones," and can say how pepsine may, with an alkali for its assistance, change its colours, and come down, as by a flank movement, upon the unsuspecting amylaceous compounds:—when we have accomplished all this, and much more beside, and have numbered the hours that the "engage-

ment" between gastric forces and various viands must occupy;—when we have definitely weighed the compounds, enumerated the "casualties," and estimated the waste products that rise in air, is there nothing left for us to study; is there nothing that has escaped us; nothing that we have left unweighed; nothing that we have failed in reducing to our formulæ? Is the physiology of digestion summed up in this expression of chemical results? What is there that determines the sense of hunger, of thirst, or of satiety, and how do these influence the chemical transpositions? What is the nexus between thought, sleep, anxiety, or other emotional disturbances, and those sensations; and through them, or not through them, upon this easily described action of the pepsine and its assistant acid? Where do mind and feeling come in contact with these material processes; and how do they mutually exert their action and reaction? What fits the carnivorous stomach for its food, the herbivorous for its work? How and where is the relation between them and the dental apparatus? Outside, or beyond the most simple chemical results, we are at once arrested by a hundred questions, as yet unsolved, and as far, apparently, from solution as they were when first suggesting themselves to the human mind. Partial answers may be given, *i. e.*, we may advance the problem one degree further from the most easily-observed phenomena; but a great gulph comes between us and the final answer; and divide as we will the narrow ground that lies between our starting point and the margin of that gulph; laboriously measure as we like, and accurately name every step of the process from the first rough fact to that brink, reached in the ages long since passed without such fine calculations, we do not by such means fill up the gulph itself, nor have we yet discovered even a plank wherewith to launch out upon the dark sea that comes between the material and the immaterial; the seen and the unseen.

We have not to undervalue, or reduce in importance the information already gained of and from the examination of the material and physical forces, but what we have to do is to guard carefully against mistaking their real import, imagining them of far greater value and extent than they really are, and of disregarding the facts and processes which are revealed to us through consciousness alone. At the one extreme is consciousness, at the other physical and chemical phenomena, and they are placed in mysterious relationship; the one class is as real as the other, and we have equally to value both; and in order to arrive at any correct general physiological principles, we must start from the two grounds, and proceed from what is known in each to what is unknown between the two.

But, instead of this, what do we do? We often rest satisfied with but one-half of physiological facts. We imagine, and our students are often taught to imagine, that the physiology of respiration is exhausted when they have learned how many cubic inches of air

constitute the vital capacity of the thorax, how many are exchanged in ordinary breathing, how much per cent. of oxygen is taken in, how much per cent. of carbonic acid is thrown out; what muscles expand the thorax, how the air is squeezed away from the pulmonary vesicles, what nerves act upon the muscles, and so forth. Again, the student often feels satisfied when he can find a parallel between the galvanic battery and the nervous system, and can apply some such mysterious word as "polarity" to both. In short there is a species of contentment, the very reverse of that which will lead to further investigation, in knowing accurately some ponderable and measurable facts; a strong temptation to suppose that these constitute the whole instead of only a portion of that which has to be known; and further, a great disposition to think that the whole is already known.

Now this mode of viewing life and vital phenomena is, I think, the very reverse of an "advance." Organic chemistry and animal mechanics are carried forward, but the science of physiology remains behind, and unless there is an advance in physiology and pathology there can be no real advance of practical medicine.

Considered further, the results of this system, in so far forth as it depends upon classification, are to be seen in the undue regard paid to anatomy, both structural and descriptive, in relation to physiology; and in the overweening attachment to morbid anatomy in regard of pathology. Again, the same tendency exhibits itself in the attention paid to physical signs of thoracic disease as compared with that bestowed upon symptoms; in the disposition to use the results of statistical information derived from a study of the many rather than to interpret the phenomena of an individual case; in the degree of satisfaction which is felt in merely recording certain chemical results, such as those which may be observed in diabetes, Bright's disease, and the like, rather than in arriving at some idea of the instances under examination in relation to the disease itself; and again, in the employment of medicines whose *modus operandi* can be more or less readily explained on some chemical or physical principle.

Now, in all these cases, there is a good in the method employed; there is, or may be, accuracy to a certain extent; but the harm which arises is from the limitation of inquiry, and of the spirit of inquiry to this one-half of the phenomena.

It has always appeared to me that a vast amount of valuable time is literally wasted upon anatomy, and especially upon that branch of it termed "descriptive anatomy." Of course it is needless to say that for the operative surgeon such a knowledge of "surgical anatomy" as shall render him competent, upon any emergency, to know with what elements he has to deal is absolutely necessary; and again, for the physician, a knowledge of visceral anatomy is requisite; but what useful end is obtained by a laborious taxing of

the memory by all sorts of artificial devices, by V. A. B.'s and B. O. D. F. I.'s, in order to "get through an examination" in which the candidate is expected to know the distribution and relations of every nerve filament, and vascular ramuscule, the origin and insertion of every muscle, the course and contingencies of viscera, and parts of viscera which never come under the surgeon's knife, and are always hidden from the physician's ken, I am at a loss to conceive.

As a mere exercise of memory it is not a particularly good one, for it is of such a nature that four-fifths of it is lost as soon as the examination is over; and further, the boy at school should have educated his memory, and the student should not have to waste one-half of his ordinary three years curriculum of proper professional study by a mere gymnastic exercise of mind.

I do not think I overstate the amount of time which is commonly devoted to anatomy. The first three months of the first term are bestowed upon "getting up the bones," and learning all about their ossification, epiphyses, and what not; the best part of the second three months is devoted to dissection of the muscles, fasciæ, and ligaments; physiology is thrown in as a makeweight, as something to give an hour to daily; but the "first year's man" is not to "bother himself much about physiology," he had "much better get up his bones;" they are "particular about bones at the Royal College." With dissection and lectures the most valuable portion of the second year is spent again upon anatomy. Lectures on medicine, surgery, and physiology also come in, but to be "strong upon anatomy" is the aim, and with a mind tired by endeavouring to remember the ins and outs, and ups and downs of every artery and nerve, but a jaded attention is given to medicine; and the "second year's man" sees but little way into physiology; for he devotes himself to surgery, as it comes more in his path, and is more immediately perceived. Again, a considerable portion of the third year is expended in "grinding" up anatomy for the examination, until the edge is sufficiently fine to cut its course through the Court at Lincoln's Inn, and to be blunted down into uselessness by a few congratulatory dinners upon having "passed."

What is the good of all this? I have often asked, but have never yet received a satisfactory reply. How much of minuter descriptive anatomy do we, any of us, remember? How much less do we find of real value to us in our daily work? How should we stand a stiff examination now? We should, many of us, positively flounder in our "bones!"

For those who intend to graduate at universities, or to take honours wherever they may be, there can be no doubt that the field of anatomy is an ample and noble one for emulation and distinction; but for the practical use which is made of anatomy in after years, I believe that six months' genuine work would be fully sufficient, and

the ordinary student would then have time to ground himself well, instead of "grinding" himself wretchedly, in physiology, pathology, medicine, and surgery.

Now, I know from my own observation, that many have commenced the practice of their profession who could tell you the origin and insertion of all the muscles, the relations of all the arteries and nerves; who might distinguish corns from cancer, or "take up" the radial artery if required; but who could not diagnosticate measles from scarlet fever; who know nothing whatever of diseases of the skin, nothing of mental disease, and who would find it difficult, except by mere guess, to distinguish pneumonia from bronchitis!

But again, the prominence given to morbid anatomy in the general study of pathology is an illustration of the same tendency, and also of its injurious results. A knowledge of structural changes is of very high importance, but it is not of exclusive value. Acquaintance with the nature of organic lesions, their causes, natural history, sequence, and results, is of real assistance in practical medicine only when combined with etiology from the other side, a knowledge of symptoms and of general dynamic changes. But now we often see men who can discuss the quality of myeloid tumours, and talk very learnedly upon cells, nuclei, and degenerations, upon what is carcinoma, and upon what is not; and yet whose opinion of a case during life would be of value in inverse proportion to the accuracy of their microscopical delineations.

In practical medicine what errors have we not seen from an exclusive attention to bruits, rhonchi, percussion notes, and the like, when these have been set up in value above the general, vital phenomena, whose perception and valuation is not quite so readily attained!

But it is unnecessary to multiply examples, for the direction of the professional mind at the present day, doubtless commencing in a healthy reaction against traditional nonsense and time-honoured empiricism is sufficiently evident; but that which is the groundwork of the erroneous and extreme development of this reactive movement, that wherein lies the error from which its evil results will spring, is the position given in our minds to the science of physiology, viz., as a science to be reached only on the material side; a position in some instances the result of extended and profound philosophical consideration; but in many others, one which physiology has acquired through indolence, and through the innate disposition of the human mind to rest satisfied with that the results of which are the most easily perceived; a position by no means the result of careful consideration, but arising from the negations of modern teaching, from the prevailing tone of medical literature, and from the self-gratulation which can be felt at finding something definite and certain, some fractions of the truth that we can state in precise terms and figures, and which we may use, or fancy to be a substitute for the whole truth, which as yet lies far beyond.

Closely associated with this prevailing characteristic of the professional mind, is another which has to do with the method employed; and this stated in the most general terms, consists in our ignoring the questions "Why?" and "How?" and simply asking the question "What?" This we are doing to an almost exclusive, and as I believe injurious degree in physiology, pathology, and therapeutics. Not that we deliberately set our minds to erase from their surface and dig up from their depths, the tendency to inquire after causes; but that practically we inquire much less into causes than we did, and rest satisfied with statements, which may be more accurate to the degree they extend than those formerly acquired, but which stop far short of explanation.

Thus, in physiology we no longer trouble ourselves with divers questions as to why certain classes of animals are found in certain quarters of the globe, and others elsewhere; why there are the differences that exist between the several orders of the animal and vegetable creation; how it comes to pass that the marsupium is provided for the imperfectly developed embryo; how the herbivorous stomach is associated with grinding teeth; why hybrids are sterile, and how the limits of hybridity are fixed; why the life of man is ordered in relation to time, so that at certain epochs dentition, puberty, and decline occur; and how at these periods there are special proclivities to disease. Instead of thus perplexing ourselves we discover and record the actual facts; we make maps, displaying the geographical distribution of the species of animals and plants; we describe with increased minuteness the orders already known; we take per-centages of human life, and construct tables of mortality; we establish insurance offices, to provide against the contingencies we are unable to avert; we tabulate, and can tell one another to the minutest fraction of a grain, the mean amount of urea it is our bounden duty to excrete; we know how long is our marketable expectancy of life; and given the weight, age, sex, constitution, disease, and length of its duration in a certain individual, we might tell him with some approximation to accuracy how soon his rigor mortis ought to set in, and how soon it would disappear!

The tendency is, with definite statements of this kind, to rest contented, and to carry physiology hitherto, and no further; to treat as moonstruck and valueless, except as another example for some asylum statistics, the individual who is not quite satisfied with such results, and who endeavours to gain some glimpses of the truth, which they approach and partly represent, and the rest of which he is striving, although but dimly, to see.

In pathology we carry the system still further; we now value little anything that does not come to us in algebraic form, and we do not read anything that goes beyond. Pathological books will soon be a series of very "compound-addition" sums. We are only pleased with such statements as these: that out of a hundred cases

of such a disease, the hundred being imaginary, or perhaps eighty of them, for twenty only have been actually examined, 49·36 presented headache, and of these 9·42 suffered frontally, and 8·33 occipitally, and that the rest were doubtful; that an hereditary taint was discovered in 50 per cent., that the mean duration was 13·72 weeks; that treatment effected nothing in 99·99 per cent.; and that post mortem such a lesion was found in so many cases, and such another in the rest.

When this method is employed only as a means towards an end, and such a definite result is obtained as a perception of the truth, that there are two great groups of fevers hitherto confounded into one; and when that knowledge is carried still further, and when we are shown that these are not different forms of the same disease, but that each is dependent upon a specific poison, then the method referred to is of the highest value. When the hereditary character of phthisis is examined, and the laws of hæmoptysis are traced, as they have been by Dr. Walshe, then most valuable additions to our knowledge are made, and the method is of the greatest practical utility; but when some half dozen cases are examined, and per centages of great accuracy are calculated from them, and carried to two places of decimals; or when the information conveyed consists only in the detail of a number of vulgar fractions, then the work is useless, and only "stops the way" for more valuable inquiry.

By statistical information we may show that many currently received dogmata are wrong; and, in regard of pathology, that our nomenclature is fearfully defective. We may point out the direction in which the truth lies, and may approximate an accurate statement of certain facts; by per centages we may eliminate errors, and convey some fractions of the truth; but the truth itself, the principle, or law, cannot be converted into figures, it lies beyond them, is an inference from them, and is subject to no exceptions and no change.

That typhus and typhoid fevers are two distinct diseases, and originate in two distinct agencies is the most logical conclusion warranted from the facts laboriously brought together by our President; but the distinction between them is as marked in two individuals lying side by side in the same ward as it is in two hundred individuals scattered throughout the metropolis. No collection of figures can represent the two truths elicited; they are independent of number, and exist in the facts themselves, as appreciated by the mind. That which is typhus, and that which is typhoid, must in each instance operate according to fixed laws, and produce appropriate and uniform results under identical circumstances; but the conditions of operation are most complicated, and we cannot yet unravel the mysteries of organisation or of meteorological constitution. What has been done then is the aggregation of facts, their analysis, comparison, and contrast, and an inference has been drawn; but the

numerical statements which are made represent only fractions of the truth with regard to the distinctness of those two diseases; and that we are obliged to use them is evidence of the necessary imperfection of our modes of observation, the limitation of our powers, and our incapacity to seize upon, and regard as phenomena, naked and abstract truths.

Certain phenomena are essential to the idea of, or rather are necessarily included in that which we denote or connote by the terms typhus and typhoid fever respectively; these are present in every case. Others are not necessary to the idea, and they are observed with less or greater frequency. The principle of association of essential features into two large groups has been seized by Dr. Jenner, but the principle of association of non-essential characters has not yet been discovered.

The point, then, that I wish to insist on is, that the mere collection of facts is useful, but only as a means towards an end; that the numerical analysis of facts is useful only in the same manner; and that the true value of statistics is in their pointing to something beyond them, which requires neither fractions nor per centages for its expression, viz., the truth, which is always dimly or partially seen; but even in those portions which we do see is ever harmonious and unchanging, and as true and unchanging in the individual as in the multitude, in the minutest atom as in the Universe itself.

Now, let it be borne in mind that a necessary part of the mental process which led to the demonstration of two classes of fever, and of two distinct sources of disturbance, is the question "why?" Here are a hundred cases of "continued fever" in many respects bearing close resemblance; but some present these features (rose rash, intestinal disturbance, &c.), others present a different series (mulberry rash, and so on); an accumulation of facts, ever so carefully carried to two places of decimals, would be valuable, but would not advance pathology; but the question "why" these different groupings occur? is asked, and immediately an "advance" is made, for the answer comes, because the two groups have different causes, and can, further, be traced to different sources.

There is no conviction more strongly impressed upon my mind than this, that the constant tendency of the human mind to ask the question "why?" and the insatiable desire to receive its answer is the great stimulus to work, and the most potent agent in advancing science of every kind. Absolute "final causes," or "first causes," we may never find out; they may be utterly beyond our present reach of thought and our present capacities of apprehension; but the search after reason and cause—the endeavour to travel as far forwards as is possible in the path towards their discovery is the most fruitful endeavour of the human mind; fruitful in the discovery of truth, and also, it must be allowed, in the supposition of

error. The tendency of the present day is to ignore causation, and give up the question "why?" and this because some in endeavouring to supply an answer have given falsehood instead of truth. The tendency is wrong, and its adoption is merely adding cumbrously to the breadth of science without promoting its advance. It is one feature of the professional mind, against which, therefore, we have earnestly to strive.

The mode in which the prevailing philosophy of medicine affects therapeutics is evidenced in the "expectant medicine," or medical fatalism of the present day. Doubtless in years gone by a great deal too much was done, and done erroneously; but now there seems growing up, and this especially among the younger members of the profession, an idea that medicine can do nothing, or at all events nothing but harm. We seem to be in danger of forgetting that thirty grains of ipecacuanha in a tumbler of warm water can exert an effect; that five grains of calomel and an ounce of castor oil may exercise some influence; and that opium, quinine, and iron are of certain utility, and produce appreciable results.

"Cases get well without treatment," it is said, "a placebo is all that is wanted—*syrupi rhœados semi-drachma; aquæ fontanæ fluiduncia; sexta quaque hora* is amply sufficient," and so on. There is some truth in all this, but all this is not truth. Dr. Garrod's recent searches on the combination of solanaceous alkaloids with caustic alkalis is somewhat humiliating evidence of the want of accuracy in making therapeutical observations. It is surprising to think that so many must have continued prescribing these two things together without ever discovering that no results followed the introduction of the alkaloids; but there the fact stands a melancholy illustration of therapeutical carelessness.

The action of medicines is not submitted to rigid examination, and so long as this continues undone, therapeutics cannot advance. That which is true in the medical fatalism of the present day is, I think, the gradually growing disbelief in specifics; *i.e.* in the power of a given drug to expel a given disease. The idea of specifics had its origin in some metaphysical notion of disease as an entity in the organism, which entity was to be cast out by another entity, somewhat stronger coming in; and this notion is dying out of the professional mind. We now regard disease as a condition of the organism, which has to be changed; and whilst the number of even so called specifics is daily decreasing, an increased knowledge of the early conditions of disease is displaying the fact that by judicious measures, medicinal and others, those conditions may be changed or their results obviated. Bad health is not regarded as an entity to be removed, but a state to be improved by physical education. Disease is not a demon to be exorcised, but a bad habit to be reformed.

In order to improve the state of professional education which is

not in some respects that of advance, we want serious changes of the following kind. Instead of wasting two or three years in compounding pills and draughts, and occasionally seeing practice which he cannot understand, the student, before he enters upon his curriculum of college or hospital work, should be well grounded in physics, chemistry, and botany, and not be bothered (as he often is during this period even), with the "bones." He should bestow comparatively much less of his time upon anatomy, and much more upon physiology. Psychology in its non-controversial points should form an integral part of his education. Lecturers on medicine and surgery should not waste their time on pathological anatomy; but leave that to its proper teacher, and thus gain more time for instruction in symptoms and vital characteristics of disease. The spirit of investigation should be evoked rather than details crammed down, and the action of medicines should be made a special object of clinical study.

By such means we should gain the advantages derivable from the prevalent philosophical system of the day, and should at the same time avoid its injurious results. Practical medicine would then advance, instead of becoming, as it now appears in danger of becoming, a cumbrous mass of unwieldy diagnostic and prognostic machinery, with the daily increasing conviction that therapeutically considered it is of little use.

A vast responsibility attaches to us in the performance of our duty; life and death, happiness or sorrow, are committed to our care. Some of us are not too old to recollect our feelings when the first patient entrusted entirely to our care died in spite of all our efforts. We may remember the suggestions of our own minds that this thing was left undone, and that the other might have been better left undone. We may remember writing the death certificate with a trembling hand, doubtful both of our diagnosis and our treatment. But some of us are not too young to know how lightly we regard these matters now; and although this may in part be due to enlarged experience and acquaintance with the limits of human power to arrest or avert the progress of disease, let us see well to it that this ease does not come from a false system of practical philosophy,—from a pride or self-sufficiency that would assign the limits of scientific art just precisely where our own information reaches, and from an unworthy throwing off of personal responsibility on to the broad shoulders of science or irresponsible laws.

In relation to popular opinion and respect, the medical profession undergoes great vicissitudes of fortune; but in spite of all its reverses, it manages to live on, and to appear as well fed, and in as decent apparel, year after year, as if really fortune had nothing whatever to do with its comfort and respectability.

There are always different parties in the community, and by one

or another some form of the medical practitioner is kept alive. Sometimes one party is predominant, sometimes another, and yet no one of them utterly dies out.

In regard of popular feeling just now, the community may be divided into three classes. First, there are those forming the utterly respectable supporters of "the Ministry," and who believe in the orthodox practitioners; who have faith in the Royal Colleges of Physicians and Surgeons, and in the Worshipful Society of Apothecaries; who call things by old names, believe in fever, inflammation, boils, gout, consumption and other maladies; respect fervently leeches, blisters, black draughts, blue pill, and colocynth; send for their doctors as soon as they are ill, do just exactly as they are bid, inquire simply whether the liver is affected or the head, and are satisfied with what they term his "pronouncings." They think they are attacked by a veritable enemy; they respect most highly some one who "knows their constitution," and who knew their father's, and who knows also what their "enemy" is;—they believe in "bile" and "bilious attacks;"—and, giving themselves up to the man who brought them into the world, or sent their fathers out, they are bothered with no doubts, and are content to be killed or cured in the approved and orthodox old way.

Then there is another class, the sceptics and eclectics; people who believe that medicine is all a sham, and who never send for advice until they are frightened, because very bad. They do it then with a bad grace, and with a half-expressed supposition that it will do no good. Sometimes they follow the advice that is given; but more often they do just the opposite. They get more frightened, multiply opinions, call in Drs. This and That, believing in neither of them, and perhaps dying in that faith;—or getting better, and saying it was because they took some of their own port wine. They treat the science as a farce altogether, speaking of it as uncertain and useless, and yet are so constantly wandering from one to another of its practitioners that they get no good at all; and while philosophically asserting that the art can do nothing, and that Nature must do every thing by her own inflexible laws, and irresistible operations, they yet growl at the practitioner for not accomplishing more than their own statements allow to be possible.

This class is a large one, but not so large as the third, which consists of the extremely credulous, these latter being frequently a compound of scepticism and credulity. The great desire of the third class is something new, something they can talk largely about and "do a little bit of" themselves; and there is always plenty of novelty for their amusement or their injury. These people are eccentric, and often pride themselves in "free thinking" and in knowing a little,—I beg their pardon—a great deal of physiology and pathology. They have generally got hold of some "wonderful man," who knows everything; and they regard the orthodox prac-

titioners as bigoted old women, who know far less than themselves. They always have plenty of cases in their memory, and they think themselves fully qualified to observe and interpret the phenomena of disease and of medicinal action. They have second-hands to their watches, and feel their own and one another's pulses, and they have a great fancy for looking at their own tongues in the glass. They are learned upon diet, and know exactly what alcoholic stimulus does, and they are very kind in offering suggestions to their medical advisers. They always use scientific terms, and flatter themselves they do this very correctly. One of this class never tells you he has "taken cold," or that he is "bilious," but you are informed at once that your patient has bronchitis, or suffers from gastric irritation; and you are asked whether you have heard of Dr. So-and-so's new remedy, or have tried Mr. Nobody's mode of treatment

These patients know what symptoms to have, and generally have them, and if you do not cure them immediately they go to some one else, who cured their first cousin of a similar attack; they know it was precisely similar, and what was done in his case was so-and-so. They always ask what you are going to give them, because generally they cannot bear the slightest grain of some half dozen most ordinary drugs. They are always taking medicine, and recommending others to do the same. They travel to Germany to drink the waters there; go to Harrogate, and rejoice in the odour of antiquated eggs. They try globules for a time, and carry about them most tempting little cases of bottles, from which they regale themselves with grain doses of differently named samples of sugar of milk, and all this in accordance with their little books. Hydropathy, compressed air baths, quack medicines, revalenta arabica, galvanism, mesmerism, spirit-rapping, and the like are all tried, and one and another for the time extolled; then they go their backsliding ways to "antibilious pills;" have a fit of claret; then an attack of "old dry Lisbon;" become teetotallers, vegetarians, great walkers, and carry pedometers; wear ventilating hats, try brandy and salt, and give up coffee, find out "it's all the stomach," and take pepsine; break their legs, and go to a "bone-setter" to have them mended. They wish they had been doctors themselves; they think their own case the most extraordinary upon earth: they believe to the full in physic of all kinds, but they as potently believe that no one understands it but themselves; and when they are about to die, they always think that it is because they did not do something else, or "drink some waters" for a month longer three years ago.

Now, it is owing to the numerical and social predominance of one or the other of these three classes that the regular orthodox profession has its position of affluence, respect, or ignoring; but the distribution of these classes, and the influences they exert are in great measure due to the bearing of the profession itself.

With regard to medicine and systems of medical practice, there

are similar cyclical changes to those which we may recognise in religion, politics, and art. The diversity of the human mind produces parties, which without running into minute analysis, are these three. 1st, The old orthodox believers in institutions, and the ways of their grandfathers; 2nd, the believers in themselves, in the next generation, in novelty, or at all events disbelievers in the old; and 3rd, a certain middle class of sceptics, eclectics, and the like, often very foolish in their conduct, although priding themselves upon superior judgment.

So soon as there is an infallibility assumed, a Papacy of science letters, medicine, surgery, or what not, there is a Protestant Association on the side of reform. Let the Protestant become dogmatic, or even orderly and positive, and there is immediately Dissent. Let Dissent become in its turn authoritative, and then there are others who "from this orthodox kind of Dissent have dissented," and although there are some willing to stop at every halting place of opinion, there are others willing to stop at none, but endeavouring after some Utopian scheme which cannot be realized, and which mainly consists in a negation of the value of any other.

At the present time the reform, advance, or dissenting party in medicine is a large one. The orthodox believers are also numerous, and the eclectic class, partly sceptical, and partly credulous, is intermediate in numbers and influence. The regular profession, *i.e.*, ourselves, we who are the favoured people of truth, are renounced by the first class, half-renounced by the third, and only cordially believed in by the second; whilst that large party, compounded of the credulous and would-be advance devotees cling fondly to those Heathen and Gentile intruders, the homœopaths, hydropaths, mesmerists, bone-setters, and the like.

Why is it that the regular profession has only a limited number of faithful adherents? Why is it that so large a number of the people are dissatisfied, and are constantly veering off into pathys, whose absurdity seems only equalled by their hold upon the public mind? Why is it that so many, whose real object is truth and progress, and well-being, should be found opposed to the orthodox practitioners? What is it that has lessened the respect of some members of the the community for the profession?

There are several proximate causes which may readily be pointed out, although it may not be so easy to suggest means for their removal.

The first of these is that some of the older practitioners, of all ranks in the profession, are scientifically considered far behind the present day. They ignore or treat disdainfully that which they did not learn when themselves at school. Their practice is enormously large; they are hurried from house to house; they trust to their own all-seeing eyes, and their "very large experience;" they give little attention to the cases that they meet; they deal in platitudes; fire

off prescriptions at a moment's notice; take their fees, or cross off names in their visiting books, and are gone, producing a marvellous impression of sagacity and experience on the faithful few, but on many of the thinking and feeling portion of the community, leaving no other impression than that they are most delusive institutions. This does not, of course in any way, apply to many of the oldest or most time-honoured names; but it certainly applies to some, and to their scientific ignorance and practical carelessness, much of the common disrespect of the profession is due.

We should not judge them too harshly; many who think the most harshly would probably do the same if placed in a similar position; and there are abundant excuses for their negligence. Their time is fully occupied; they are jaded with each day's work; they are constantly beset with long stories about cases they can see through at a glance; they are often "called in" just to back up another practitioner against his client's doubts; many do think that skill in diagnosis is in proportion to the rapidity with which it is framed; and that knowledge of disease is evidenced only by positive and off-hand assertions. Their time is valuable; their words are weighty; they know not how to limit their work, and yet do justice to themselves; they cannot do justice to all their patients without limiting their work; they are on the horns of a dilemma, and who shall solve it?

We would not attempt the solution; further, we would not take one farthing from the annual receipts of those the value of whose counsel and experience is beyond all pecuniary representation; but it may be suggested that their rate of remuneration should be increased, so that they should do less work, but do it better, have more time for reflection, and have it within their power to keep au courant with the science of the day.

Another fruitful source of the disrespect paid to the profession is the present state of medical literature, and for this the younger members of the profession are mainly responsible. We have some works of which any Country might be proud, but these are as the few grains of wheat among cart-loads of chaff, the poor half-penny-worth of bread to balance an "intolerable deal of sack." Baits, in the form of books, are thrown in to catch idle roués at their clubs. Taking titles are devised for nervous dowagers and dyspeptic lords; books are made easy reading in order to beguile the railway traveller; some numbers of some of our journals have more the character of "advertising vans," than of scientific periodicals. Extraordinary cases of the cure of some incurable diseases are announced. You read them, and find first that the diagnosis was wrong, and then that the patient was not cured; but the title of the paper is in the columns of the "Times." Carefully analyse the titles of books which may appear in half-a-dozen papers, and though

differing in form they scarcely differ in spirit from the puffs of 50,000 cures to be effected by this or the other pill or unguent. One would think from a perusal of our title pages that every fact in medicine was known, every disease understood, every ill amenable to treatment; that we were omniscient sages and consummate artists; but, alas! too frequently the largeness of our profession is only equalled by the vanity of our performance!

There is one consolation with regard to this species of literature, and it is that it cannot live. It serves a merely temporary purpose, and has only a temporary existence; but while it lasts it must, and it does, lessen the respect which ought to be felt for a learned and scientific profession.

It is easy enough to see the source whence it arises. There is a great law of demand and supply, and the more philosophical or scientific treatises are not read. Numbers of books are therefore written, not for the purpose of conveying important information, not as the vehicles of discovered truth, not as the results of earnest and successful work, but as mere indirect advertisements that this physician or surgeon has attended to, or wishes it to be understood that he has attended to such a colony of diseases, and that the other has devoted himself to a different class.

The young physician or surgeon looks about for a vacant nook in the field of maladies, he luckily hits upon one that has not recently been broken up, and immediately the literary plough is put in, the seed cast, and the forthcoming crop announced. The profession as a whole is to blame for this, because in the main it is intent upon remunerative practice, rather than advance in science; and because it regards that which is readily perceived, and can be turned immediately to practical account in treatment with more favour than anything which really contributes to the stock of knowledge, but which may not be so easily applied.

In addition to these two causes (the requirement of trifling books by the careless readers, and the consequent mere advertising "book-making" to supply the demand), there is a still deeper source of this miserable literature, and one which affects every rank of the profession, some primarily and some secondarily. I allude to the absence in this Country of any tangible reward for purely scientific merit and scientific work of the highest order. There is no position which the Profession or the Government of the Country can give to a medical man as the reward of his labours which it is worth his while to accept, if by practice he can make £2,000 a-year. There are not half-a-dozen positions that are worth his acceptance, if by practice he can make £1,000. There is, therefore, no external inducement to real exertion; for the posts, such as do exist, are frequently obtained by other influences than those of real merit.

In great measure this arises from the multiplicity of our schools,

and consequent deterioration in value of the posts which they can offer. If our metropolitan schools were diminished to one-fifth of their present number, there might be offices worthy of the ambition and stimulative of the exertion of the most energetic and the best informed; there would be some encouragement to continued scientific labour, and to really earnest devotion to those branches of professional study which cannot be directly remunerated by fees. But as it is, there is no stimulus of this kind, and the work that is done is of low order, and the literature that results is of inferior character and temporary existence; for what is the young physician or surgeon to do? If he has real ability, perseverance, and high endeavour, he may devote himself to work, and in due time gain his reward; but the process is a tedious one, and there are many who have neither the qualities which shall secure true distinction, nor the capacity for patient waiting while they work. What then is one of this class to do?

What he often does is of the following kind. He takes a house, and duly announces himself by brass plate, and it may be "night bell;" he ventures upon an occasional brougham; and decorates a boy in buttons, or a man in sober black; he has waiting room and consulting room in perfect order; he is furnished with stethoscope, urinometer, microscope, and litmus, or with catheters, bistouries, and bandages; "The Times" is supplied for the waiting patients; he is ready to devote himself to every case that comes; but he sits in solitary state, and reads "The Times" himself. A dispensary or hospital appointment falls vacant, and forthwith there is a vigorous canvass; every electioneering device is employed; his committee drinks his wine; his testimonials fly to the four winds; weeks are spent in unpleasant callings, and sometimes in still more unpleasant and unworthy tricks. He may get his appointment or he may not; but we suppose he does, and then, he has a large field for charitable exertion; and in this he may work, as some have done, most nobly. But he might find this also a field for useful observation, and might, by careful elimination, elicit from it valuable results. Yet it often happens that he merely spends hour after hour, month after month, in ordering plaisters for lumbago, ipecacuanha for colds, or in strapping up old abraded legs, and seriously considering whitlows and gonorrhœa. A complimentary fee or two comes from some kindly disposed governor of the charitable institution; but our young friend works on gratuitously, and reads "The Times."

And now comes the book! with the pretention of large, but the evidence of ill-digested experience; and he is soon honoured with a scantling of "gratuitous patients," kindly sent to him by valuable friends—old servants of the family, perhaps, out of place, who happen to have the disease he he has written of in his book. He sees them, because it may lead to something else. They come with long-drawn elevations of the knocker, as if the door's vocal apparatus

uttered a heart-rending sigh, and suddenly cut it off in the middle; for the timorous object of charity, while pondering on his woes, is seized with the idea that he but keeps the young doctor's eye in for tongues, and his ears for auscultation.

Then follow the small people, who think they will "have a physician for once," and go to a young doctor and get a full guinea's worth for their fee. They think the favor they confer is great, and they depart fervently impressed with their own importance.

The book, if properly adapted to the times, begins to tell; and soon gentlemen hurry up from the City in Hansom cabs, detail their grievances in five minutes, and are gone. They meet one another in the waiting room, and now the doctor's fame begins to spread; for man is a gregarious animal, and nothing is so consoling to Mr. Dyspeptic's feelings as to know that some other unfortunate is in the same boat with him; and he would rather be killed in good company than cured alone. M.P.'s., stray Baronets, and Reverend gentlemen appear in due succession with apparently one prevailing impression upon their minds, viz., that their titles are to be taken in part payment of their fees, and accordingly they generally suppress the baser coin. A few consultations break the ice still further, and soon the young, or now the middle aged, physician or surgeon is fairly launched; is towed in one direction and toadied in another; he finds himself of great importance, and his time is no longer his own. He has gained his practice through an easy though a tedious path, and he is not now disposed to attempt any serious work.

But there is one other cause which influences the respect in which the Profession is held, and which is, I think, operating now to its serious disadvantage; it is the occasional deficiency of medical information, arising partly from the multiplicity of schools, partly from the system adopted at those schools, and partly from the mental character and calibre of many who are induced to enter the Profession simply as a mode of "getting a living," but who have never inquired for themselves, and whose friends have never inquired for them, whether they had any real liking or aptitude for the work.

Whatever may be its causes, or the combination of its causes, it is allowed that there is ignorance and want of adaptation for the kind of study or employment, and this in practitioners of every grade, and at all ages; and such a circumstance cannot fail to lessen the dignity of a Profession, to which is entrusted the health, happiness, and life of the Community.

With, then, these defects in the education, literature, scientific character, and deportment of the regular Profession, we cannot wonder that, with society constituted as it is, there should be seen on the one hand triumphant quackery, and on the other philosophic doubt.

The orthodox practitioner is beset on either side; and while some have too much bigotry for the novelty-hunter, and too little certitude to impress the credulous, they have not the scientific character, and too much self-confidence, or confidence in old dogmata, to gain the respect of the thinking eclectic. They are, therefore, limited to those, who, from old habits, or conservative principles, or personal regard, are happy in entrusting themselves to the representatives of the recognised institutions of their Country, and who are content with the approved methods, whether they issue in life or death.

But, notwithstanding these conditions, which are certainly not those of advance, there is much with regard to which we may honestly congratulate ourselves and one another. The position assigned to the science of life, and the method adopted in teaching that science, secure for us many advantages previously beyond our reach. Information is more definite, more accurate, and more valuable; and if, practically, we profess ourselves able to do less good than was formerly believed within the scope of therapeutics, most undoubtedly we do less harm. If we cannot cure the developed diseases which an enlarged pathology has separated, and enabled us to recognise, we may detect them in their earlier stages, may accomplish more by hygienic measures in their prevention, and be more fully prepared for their final issue. We know more accurately the limits of our powers, and if occasionally giving less hope than our predecessors, we are not the sources of such bitter disappointment. We can influence disease in the masses by attending to the conditions from which it springs, and we can safely construct insurance offices which shall be of advantage to the many without injuring the individual.

These are no inconsiderable powers; but in using them we should not use them exclusively, but endeavour to advance the science and the art in all directions in which it may be carried forward by human ingenuity and toil. And if with regard to the position of the profession in popular respect there is that which we have to lament, and the more so because it is in great measure dependent upon certain conduct of the Profession to which exception must be taken, there is still much in which we may gratefully and hopefully rejoice. There is certainly no other profession which enjoys more of the public confidence and esteem, and which, in a vast number of instances, so thoroughly deserves them both.

There may be carelessness here and ignorance there, but scattered throughout our country there are thousands of men who are, with diligence and self-sacrifice, performing their arduous duty. There are many great names of which England and Europe may be justly proud; and there are others of whom Society makes constant mention, and with profound and well-earned respect. But, besides these,

there are thousands who are little known beyond the circle of their immediate occupation, but who are the real friends of the sorrowing and suffering poor; whom no inclemency of weather, no loneliness of country-side, no squalor and wretchedness, no fever-haunted den of misery and disease,—whom no combination of all that makes life heart-sickening and almost abhorrent to our nature, can deter or frighten from their work; but who perform that work with no other reward than the dying blessing of some poor labourer, whose day of toil is done,—the thanks and tears of the fatherless and the widow, and the consciousness of having faithfully finished the work which was given them to do. These are the men who leave no trace behind them on the page of scientific history,—who may have contributed no fraction to the sum of human knowledge, but whose life is not forgotten; and who when the muster-roll of humanity is complete, will be found to have done that which is more really good in having strengthened a manly charity and Christian love which are abiding things, than in having added to the partial and imperfect knowledge which shall vanish away.

While then cherishing the memory of those great ones that have gone, honestly priding ourselves upon the great ones that are yet living amongst us, and paying our tribute of thanks to them for the measure in which they have contributed to the advance of our Profession, we would not forget nor undervalue the labours of others, who with less apparent effect, but with no less certain results, and often with a higher aim, have so lived and laboured as to win for the whole body, of which they formed a part, the respect and gratitude of our race.

The real advance of practical medicine is not determined solely by the position it takes among the sciences, or by the success which attends its therapeutic efforts, but by the elevation of its moral and social character, and to this real advance all may, in their proper sphere, contribute. There is scarcely any imaginable limit to the influence for good which our Profession may exert. To it are entrusted all the capacities for suffering or for pleasure with which our mysterious organisms are endowed; life, with all its manifold changes, its bodily infirmities, its subtleties of mind, is committed to its care. The realisation of long-deferred hopes, the blighting of fairest prospects;—the weakness of the once strong man; the almost fiendish strength of the bodily-enfeebled maniac;—the victory over agonising pain; the humiliation of loathsome malady;—the joy of returning health; the crushing grief of irresistible disease;—birth, with its labour and sorrow; and death, with its repose,—are among its familiar scenes. We are daily and hourly placed on the threshold of life,—on the border-land between the seen and unseen. We have constantly before us the great unravelled problem of humanity. Vague sounds float out to us from those around whom disease has

thrown the mysterious veil of so-called "unconsciousness." We hear them "wandering" in the darkness our human knowledge strives to penetrate in vain; we feel that it may be light. What questions are we not asked by those who stand around, eager to know what relation those objects of solicitude, and of long years of love, yet bear to them! There lies the vesture of mortality, scarcely rustling with the breath of life. Can it again be placed on common terms with us? Are there any ties yet left unsevered? Or is it, even now, the cast-off garment, fitted only for decay? We stand appalled before the great facts we can neither doubt nor explain. We are conscious of our two-fold being. We can recognise its intense reality in the consciousness of others. We are regarded as the interpreters of that awful hour; but how to interpret all these circumstances is not taught us in pathological treatises; how to act under them finds no place in our systematic therapeutics. We have to learn it by the study of ourselves and others, and by the experience which time alone can give.

But "thanks to the human heart, by which we live," thanks to its nobler nature, its common sympathies, "its tenderness, its hopes, and fears," the suffering man has always found in the Medical Profession the succour and support he needs; and if, year after year, the scientific advances which are accomplished are not such as to satisfy the ambitious inquirer after truth, yet the sorrows of humanity are hourly soothed, and the load of life is lessened by the unselfish care and kindly offices of that Profession, whose mission—to use the words of one of its great Masters, but recently passed away—is to "cure the curable and comfort the incurable;" and in whose ranks it is our common honour and privilege to take our stand.