

# DOCTORS AND THEIR WORK

OR

*MEDICINE, QUACKERY, AND DISEASE*

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'J'ay fait ce que j'ay voulu: tout le monde me reconnoit en  
mon livre, et mon livre en moy.'—MONTAIGNE

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## PREFACE

No one, whose daily experience has for many years brought him into contact, as a medical or surgical adviser, with people of both sexes and of all ranks and ages, can have failed to observe how deeply rooted in many minds is a faith in certain doctors, or in certain so-called methods of treatment, or in certain so-called remedies, for which the faithful themselves would be unable to assign any foundation in reason, in evidence, or even in probability. It would seem to follow, as a matter of course, that although such faith may sometimes be justified by events, it must in a definite proportion of cases be misleading; and, when misleading, it can scarcely fail to be productive of loss—it may be of money, or of time, or of health, or possibly of all three. It has been the aim of the writer, in the following

pages, to bring about a better understanding of medical objects and methods than now commonly prevails; and to show patients in what way they may best co-operate with their physicians for the attainment of ends which both classes are bound to regard as of primary importance—the relief of suffering and the prolongation of life.

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# DOCTORS AND THEIR WORK

## CHAPTER I

### INTRODUCTORY

IN the evening of a life which for more than sixty years has been mainly devoted to the acquirement and the application of medical and surgical knowledge, it seems not unnatural to look back upon some of its incidents with pleasure or with regret, to judge of them, and of the conduct which they seemed to require, by the light of longer and wider experience, and to consider to what extent that experience can now be rendered available for the guidance of a younger generation, whether of patients or of doctors, in the difficulties which time cannot fail occasionally to introduce into their relations with each other. Into what errors have I fallen, from which I would fain see others remain exempt; or what injustice have I suffered, which I would fain see others unwilling to inflict? In many

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respects, as regards a sense of reciprocal duty between the medical profession and the public, the time seems to me to be greatly out of joint; and the tendency of feeling, on both sides, to be in the direction of deepening and widening a chasm which, in the interests of the general health and safety, it is manifestly and urgently desirable to close. At present, two sets of very worthy people often misunderstand each other. The public think that doctors ask too much; the doctors think that their claims are not adequately appreciated by the public. Perhaps both may in some measure be right; and certainly both might find real or apparent grounds for their respective opinions.

I fear it must be admitted, on an impartial survey of the facts, that the medical profession, apart from a few distinguished individuals, does not hold, in the estimation of the public, anything like so good a position as that which it held fifty years ago. The change has been brought about, in some measure, by a great increase in the number of the professions, or of callings which, by a little straining of the meaning of words, will admit of being so designated; with the result that the doctor, instead of being one of the supports of a tripod formed by law, physic, and divinity, must be content to share his social and professional position with the followers of many other pursuits, some of which

it would be inexpedient to name, and to submit his culture, his dress, and his *savoir faire*, to comparisons from which they would formerly have been exempt, and under which they are not always calculated to take the foremost place. There has perhaps been too great a tendency, on the part of many members of the medical profession, to regard their qualifications as affording them an assured scientific position; and hence too little care to maintain in fact the superiority of attainment which they would often be disposed to claim in theory. The followers of what may be called the new professions, on the other hand, have been compelled by the lack of a traditional status to spare no pains in securing an actual one, with the not unnatural consequence that, in the opinion of a large number of people, the profession of medicine now occupies a comparatively humble position with regard to the general efficiency of its members. It is not uncommonly believed or thought that the average doctor knows less of his calling, and is less fit to be entrusted with its responsibilities, than the average engineer or the average architect. It seldom occurs to those who so criticise us, and indeed they are not always intelligent enough to understand, that the work of the doctor, if done in the right way, is infinitely more difficult than that of any other calling. The architect or the engineer has to deal with

physical laws alone, and with forces which can be exactly estimated; while the doctor has indeed to apply physical laws, but to apply them under conditions which can seldom be accurately known, and in the presence of forces which can never be exactly estimated. The personality of the sick man will oftentimes falsify the most carefully considered conclusions. An error of calculation as to the weight which should be placed upon a girder would be a proof of professional incompetence, but an error as to the amount of strain which could be endured by a human creature must, in the nature of things, sometimes be unavoidable.

In the opinion of the writer, moreover, there has been, during the last half century, and coincidentally with great advances in medical knowledge, a change definitely for the worse in the conduct of medical education. Sixty years ago, the profession in England consisted of a small number of 'physicians,' a small number of operating or so-called 'pure' surgeons, and a large body of 'general' or family practitioners. The 'physician' was a graduate of Oxford or of Cambridge, who had enjoyed all the advantages which his University could confer. He was a Fellow or Member of the Royal College of Physicians, a corporation in which elegant and accurate scholarship was traditional, and his degree was usually an evidence that he had passed through a real mental

training before entering upon the special studies required by his profession. He was an inheritor, through such men as Sir Henry Halford and Sir Henry Holland, of the ideals which had descended to them from Linacre and from Harvey; and he placed the dignity of his college and the honour of his calling far above considerations of personal popularity or of personal advancement. A member of a very small and select corporation, in which the conduct of every individual was an important factor in determining the status of the rest, he was subject to the strongest possible inducements to adhere to a high moral standard, and to abstain even from the appearance of committing any act by which his brethren could be prejudiced in the estimation of the world. Nor did his college leave him without guidance in any difficulties which might arise out of his circumstances. Admitted first as a Member, he knew that any deviation from professional propriety would place an insuperable barrier between him and the Fellowship; and, when the latter much-coveted dignity had been attained, he was still amenable to the Censor's Board and to the general opinion of his peers, and was liable to be put upon his defence if anything approaching to unworthiness were even alleged against him.

At the same time the 'general practitioner'—the medical man, that is to say, whose services were in

daily request as a family medical attendant—did not acquire any right to the title either of ‘doctor’ or of ‘physician,’ and obtained his authorisation to practise from two bodies, the Royal College of Surgeons and the Society of Apothecaries ; the former conducting examinations in general anatomy and in the treatment of injuries and of surgical or external diseases, the latter in internal anatomy, in the treatment of internal or general diseases, and in the management of childbirth. A great difference between the education of that day and of the present arose from the condition that, in order to obtain the license of the Society of Apothecaries, it was necessary to go through a period of domestic pupilage or ‘apprenticeship’ to a licentiate engaged in practice before commencing a prescribed course of hospital study. This pupilage originally extended over five years, and during its continuance the learner almost necessarily acquired the traditions and tone of mind of the profession. He learnt, almost incidentally, what was expected from a medical man in his relations to the public. He learnt how to conduct the business of a practice, how to avoid friction with patients or with other medical men, and how to govern himself in all the intricate relations of professional life. The objections commonly urged against this domestic pupilage, and which ultimately led to its abandonment, were mainly that it arrested school education

at too early a period, and that the years which it consumed were sometimes passed either in idleness or in mentally unprofitable labour. But when, as in the great majority of cases (since parents and guardians, as a rule, were properly careful as to the hands in which they placed the young people over whom they had control), the master was a man of integrity and competence, the time of the pupil was not only well spent, but was often better spent than it is at present. He would pass some years in daily contact with an intelligent teacher of mature mind, who would gradually wean his thoughts from childish things. The term of pupilage required by the Apothecaries Act was five years; but it soon came to be recognised that this might be curtailed with advantage, and an arrangement was often made by which its latter part, and the commencement of the hospital course, were suffered to run concurrently. In the meanwhile, not only had the pupil been taught the first principles of professional conduct, and the methods of dealing with professional difficulties, but also, in a great number of instances, he had been persuaded and assisted to take up some branch of physical science, or of natural history, and was found, when he reached the hospital, to have a respectable acquaintance with chemistry or botany, or electricity, or all three, and perhaps also with some of the masterpieces of

English literature ; while the requirements of the Society's examination compelled him to keep up some small knowledge of Latin. All this was mental education of an effective kind ; and it sent the student to a hospital in a condition of fitness to profit by the teaching which he there received. When, in due course, he obtained his qualifications, he was as fit to practise his profession as any young man ever can be ; and his standard of conduct, in relation to its duties and its opportunities, was practically that of the physician already described, to whom he looked up as to a member of a superior class in his own calling, holding to him somewhat the relation that a barrister does to a solicitor, from whom he was at all times certain to receive due and courteous consideration, and who would never seek in any way to trespass upon his province.

While such was the state of things in England, it had been, from time immemorial, the custom of Scottish and Irish Universities to confer degrees in medicine after examinations which were mainly medical in their scope, and which could not be held to establish more than a modest amount of acquirement in scholarship or general knowledge. In those divisions of the kingdom, therefore, the degree and the title of 'Dr.,' instead of being confined to the highest grade of the profession, belonged of right to the great body of general practitioners ; and

represented something essentially different from that which they represented in England. At some, at least, of these Universities, the degree in medicine was not only conferred after a professional examination which was said not to be extremely searching, but also either without residence or after residence for only a short period. At the same time, the establishment of the University of London, at which no residence, but only very high proficiency, was the qualification for a degree, excited the desire for such a distinction among many English students of conspicuous ability, who might have found difficulty in the way of going to Oxford or Cambridge, and who did not of necessity intend to confine themselves to what was known conventionally as the work of a 'physician.' It was not surprising that other English students, not necessarily of conspicuous ability, began to turn their thoughts towards a simpler and more easy method of attaining the coveted title; and many of these, as soon as they had passed the ordinary English examinations entitling them to practise, proceeded to cross the Tweed in quest of a designation which at least bore the semblance of an honour. It followed that, every here and there, a young general practitioner, with no more than the ordinary education and ordinary attainments of his class, was found to be in legitimate possession of the title of 'Dr.,' which he placed

upon his doorplate or upon his cards, with at least a tacit assumption that it indicated superiority over those of his brethren or his competitors who were compelled to describe themselves by the less dignified abbreviation of 'Mr.' In relation to the actual number of practitioners, the cases were not very numerous, but they were numerous enough to constitute a mild professional grievance; especially as, during the first half of the century, the stamp of the Scottish doctorate was chiefly sought by a class of English students who were not manifestly likely to become highly distinguished by reason of their own superior merits or attainments.

At the time referred to, men possessing only Scottish or Irish qualifications, whatever they might be called, could not legally practise in England; and hence, among Englishmen, these qualifications were only sought in addition to English ones, and for the sake of the titles which they conferred. A complete change in this respect was wrought by the Medical Act of 1858, which legalised, over the whole of the United Kingdom, the qualifying medical examinations of each division, and which therefore threw open the field of English practice to Scottish or Irish doctors without restraint. It is quite possible that the jealousy of these 'doctors,' which had for some time been felt by many English general practitioners, led to imputations which

might not have been justified by facts ; but it was commonly assumed that no Englishman, already qualified in England, who sought a degree in Scotland with the avowed intention of returning south to practise, was ever rejected by the examiners. Hence, when the Bill for opening England to Scottish and Irish graduates was before Parliament, grave fears were expressed lest it should lead to a competition downwards among Scottish and Irish examining bodies, struggling with each other for the fees of English students ; and, in order to guard against this danger, a body called the 'General Medical Council' was instituted, and was charged with the duty of ascertaining that a pass examination, in each division of the kingdom, should be based, as nearly as possible, upon identical requirements with regard to duration and character of study and extent of knowledge. Absolute identity would, of course, be impossible of attainment, but approximate identity may be said to have been secured. At the same time, 'apprenticeship' was abolished as a step towards the attainment of the license of the Society of Apothecaries, and the practice of conferring medical degrees without residence was greatly restricted, and placed under such regulations as no longer to be liable to abuse.

While, therefore, sixty years ago, the profession in England consisted of two bodies, the higher

grade, or physicians, men of university training and scholarly attainments, and the lower grade, or general practitioners, who had probably received no more than a practical professional education, both of these bodies were of far more uniform composition than their successors have since become, and were, I think, in the phrase of modern biology, somewhat better adjusted to their environment; especially as a consequence of having been educated in methods of professional conduct which were the outcome of long experience, and the embodiment of high principles. Professional conduct is no longer taught to medical students. It forms no part of the course at any school of medicine; and systematic instruction with regard to it may be said to have perished with the cessation of domestic pupilage. A young man entering the profession has now to be a law unto himself; and hence, without any absence of good intention, he is sometimes liable to fall into errors against which his predecessors of an earlier generation would have been warned in time. Of such errors, some are detrimental to the worldly success of those by whom they are committed; while others, and those the more serious, while they may even tend towards what would be called the prosperity of the individual, may none the less lower the character and reputation of the calling to which he belongs. There are forms of success

which, in the eyes of upright men, are infinitely worse than failure; and the fact that these forms may be striven for, and striven for effectively, redounds to the discredit of the public even more than to that of the medical profession. The public are our employers, and, in the long run, we shall be what our employers make us. If they would but apply themselves to an endeavour to understand the aims of medicine, and the methods by which alone these aims can be fulfilled, many evils now in active operation would be palliated or removed. It will be my endeavour, in the following pages, in some small degree to promote the growth of such an understanding.

## CHAPTER II

MEDICAL STUDENTS AND THEIR PRELIMINARY  
EDUCATION

It is in most cases expedient to begin at the beginning; and it would be difficult to write in a satisfactory manner about a profession which even its contemners, if such there be, must admit to be 'great' at least in a numerical sense, without some glance at the sources from which it is recruited, or at the preparation which is required as a condition of entering its ranks. The circumstances which determine a boy's choice of his future calling are almost infinitely various, and range over the whole fields of opportunity, of fitness, and of inclination. The latter may not infrequently be directed towards medicine by observation of the important part which is played by the doctor in many households, and by recognition of the manner in which his presence removes anxiety, or in which his skill assuages pain. 'There are men and classes of men,' wrote Robert Louis Stevenson, in his dedication of 'Under-

woods,' 'that stand above the common herd; the soldier, the sailor, and the shepherd not unfrequently; the artist rarely; rarer still, the clergyman; the physician almost as a rule. He is the flower (such as it is) of our civilisation; and when that stage of man is done with, and only remembered to be marvelled at in history, he will be thought to have shared as little as any in the defects of the period, and most notably exhibited the virtues of the race. Generosity he has, such as is possible to those who practise an art, never to those who drive a trade; discretion, tested by a hundred secrets; tact, tried in a thousand embarrassments; and, what are more important, Heraclean cheerfulness and courage. So it is that he brings air and cheer into the sick room, and often enough, though not so often as he wishes, brings healing.' In the presence of such appreciation as this, and it is felt, and in their own language uttered, by hundreds who have no power of finished expression, it is natural that the impulses of a generous boy should impel him towards a life in which he too may come to be looked upon with like regard, and to be expected with like eagerness. Few boys again, few at least of those who are on the way to become Englishmen, could read such a book as 'Two Years Ago' without a wish to emulate the exploits of its hero; or, turning from fiction to fact,

which is stranger than fiction, could be unmoved by the history of Assistant Surgeon Thompson, who remained, with only one servant as his companion, for three days and nights on the battle-field of the Alma, endeavouring to relieve the sufferings of the wounded ; by that of Dr. Hayes, who took no small part in the desperate struggle at Rorke's Drift ; by that of Landor at Majuba Hill, when, himself severely wounded, he yet found strength to place his skill at the disposal of others ; or by that of Surgeon-Captain Whitchurch, whose bravery made him conspicuous among brave men in the heroic defence of Chitral. Still more recent examples of the same kind will be furnished in abundance by the records of the late war in South Africa ; and, speaking generally, in an empire on which the sun never sets, there is no place and no day in which members of the medical profession may not be found at the post of duty, wherever this may be, in the palaces of the wealthy, in the slums of cities, in the lonely hamlet, in the beleaguered garrison, in the tented field. No other calling affords equal opportunities of observing and of studying the essentials, as distinguished from the accidentals, of human nature ; no other so entwines the love of truth with every fibre of the intellectual organism ; no other affords even approximately equal opportunities of doing good.

These, no doubt, are weighty considerations ; but,

as the late Sir James Paget pointed out many years ago, there is yet another which must be taken into account, by every young man or by his friends, in determining upon the choice of a profession. There must be reasonable ground for expecting, from that which is chosen, that it will afford an honest living, in the social position of a gentleman. In order to arrive at some trustworthy opinion with regard to the advantages offered by medicine in this respect, Sir James, assisted by two of his colleagues, traced out the careers of 1,000 medical students, who had entered at St. Bartholomew's Hospital, and had left it at least fifteen years before the inquiry commenced.

Of these :

- 23 achieved distinguished success.
- 66 „ considerable success.
- 507 „ fair success.
- 124 „ very limited success.
- 56 failed entirely.
- 96 left the profession.
- 87 died within twelve years of commencing practice.
- 41 died during pupillage.

In Sir James Paget's original paper, which may be found in the 5th volume (1869) of the 'St. Bartholomew's Hospital Reports,' these figures are elucidated by commentary. The book is not

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easily accessible, and may therefore be quoted at some length. Sir James says :—

‘ In this table they are classed as having achieved distinguished success who, within fifteen years after entering, gained, and to the end of the time maintained, leading practices in counties or very large towns, or held important public offices, or became medical officers of large hospitals, or teachers in great schools, as the Professors of Anatomy in Cambridge, Oxford, and Edinburgh, all of whom it was my singular good fortune to have for pupils.

‘ Considerable success is ascribed to those who gained and still hold high positions in the public services, or leading practices in good districts, or who retired with money earned in practice, or gained much more than ordinary esteem and influence in society.

‘ The fair or moderate success which was the lot of rather more than half those whose histories are known was that measure of well-doing which consisted in having a fair practice—enough to live with—maintaining a good professional and personal reputation, or in holding ordinary appointments in the public services, or in the Colonies, and gaining promotion in due course of time.

‘ Very limited success is assigned to those who, within the fifteen years, were not even in moderately good practice, or apparently likely to attain it ; or

who were just living, and that not well, by their work ; or still employed as assistants in ordinary practices, or erratic and never prosperous, or doing much less than, with their education and other opportunities of success, they should have achieved.

‘They who failed entirely were a very mixed class, agreeing only in their total want of success. Of the 56 who made up the gloomy total, 15 were never able to pass examinations, some because of idleness or listlessness, a very few through sheer want of intellect. Of those who did pass, 5 failed because of scandalous misconduct ; 10 through ill-health or misadventure, sheer ill-luck as it seemed ; and 10 through their continuance in the same habits of intemperance or dissipation as had made us, even while they were students, anticipate their failure. Of the remaining 16, we only know that they have failed ; they are not in disrepute, but they are barely maintaining themselves.

‘It will seem strange to every one, I think, that so many as 96, or nearly 10 per cent. of the whole number, left the profession after beginning either its study or its practice. Of these, 13 left or were expelled in disgrace while pupils, and 3 were wisely removed by their friends. Of the remaining 80, 1 while still a pupil, and 1 after beginning practice, retired on private means, too rich to need to work ; 4, after beginning practice, had to leave in

disgrace—one of these was rather sinned against than sinning; another, who had been a good student, speculated in mines, lost money, forged, and is in prison; 3 became actors, of whom 2 are in obscurity and 1 is well-esteemed in genteel comedy; 4 entered the army with commissions, 1 after and 3 before obtaining a diploma for practice; 3 pupils enlisted as privates, and 1 of these distinguished himself by courage and good conduct sufficiently to win a commission; 1, while a pupil, left for the Bar and has succeeded; 5, after passing, took orders in the Church of England, and 2 in the Church of Rome; 10 pupils, and as many after having begun practice, left for different forms of mercantile life at home or in the Colonies; 3 pupils and 6 young practitioners took to farming. The remaining 27 left the profession for various pursuits, which need not be specified, unless to say that 3 became homœopathic practitioners, but took to that class no repute for either wisdom or working power.

‘On the whole, looking over the list, and remembering the characters of those who left the profession for other pursuits, there appears no reason for believing that they have “bettered themselves.” Some have succeeded, some have failed; the result would have been, I think, the same if they had remained in their first calling.

‘Last comes the melancholy list of deaths, telling

that of those who entered nearly 13 per cent. were dead within fifteen years. The percentage, although apparently large, was not in excess of the average for young males for the period in which it occurred, and does not indicate any special unhealthiness of the profession. Forty-one died during pupilage, including 17 from phthisis, 4 (at least) from fever caught in the hospital, and 2 committed suicide; 87 died after beginning practice, some after attaining great success, some after long and vainly struggling in ill-health; 21 died of diseases incurred in their duties; 5 committed suicide, 2 of them in circumstances of great disgrace; 1 was hanged, the notorious Palmer, who committed murder at Rugeley—he was an idle, dissipated student, cursed with more money than he had either the wisdom or the virtue to use well.

‘This, then, is what became of a thousand medical students; and probably the same lots, or nearly the same, in life have fallen or will fall to many thousands more. It would be interesting if, with facts such as these, one could compare our profession with others, as to the chances and degrees of success which it offers to its students. But I know no facts that would serve for a comparison; nor would any be fair unless account were taken of the several amounts of capital in time or money expended upon each pursuit, and the times of reaching

and the securities of retaining success in each and their various social advantages and happinesses. On all these points we are without knowledge; but I will set down one belief, which may be of use to future pupils, and is justified by some hundreds of personal recollections. In remembering those with whom I was year after year associated, and whom it was my duty to study, nothing appears more certain than that the personal character, the very nature, the will, of each student had far greater force in determining his career than any helps or hindrances whatever. All my recollections would lead me to tell that every student may draw from his daily life a very likely forecast of his life in practice, for it will depend on himself a hundred-fold more than on circumstances. The time and the place, the work to be done and its responsibilities, will change; but the man will do the same, except in so far as he may change himself.'

My own experience as a teacher has been small when compared with that of Sir James Paget, but it has been sufficient to bring me into general harmony with his conclusions. I entertain no doubt that a very large proportion of the failures among those who enter the medical profession, or who strive to enter it, might have been foreseen as inevitable, and might therefore have been avoided if due circumspection had been exercised. The study and practice of the

profession require certain qualities ; and, if these be absent, a successful career is hardly a possibility. They are, of course, partly moral and partly intellectual ; and it would be difficult to say which are the more important, either to the student or the practitioner himself, or to those whose lot it is to fall under his ministrations. Deficiency, when met with, is more frequently in relation to both than to either singly ; and ignorance is usually as much dependent upon idleness and carelessness as upon stupidity.

It is a necessary condition of success, in any calling, that it should be followed with due diligence and for a sufficient time ; and hence, in any fair calculation of chances based upon Sir James Paget's figures, it is proper to leave out of account the persons who turned away to other occupations, and those who died either before or shortly after they became qualified as practitioners. By doing this, the total number is reduced from 1,000 to 776, out of whom only 56, or 7·2 per cent., are recorded to have failed entirely. One hundred and twenty-four, or 16 per cent., had a very limited success ; and the remaining 596, or 76·8 per cent., obtained respectable positions and comfortable maintenance, increased, in the cases of 66, or 8·5 per cent., to 'considerable,' and, in the cases of 23, or 3 per cent., to 'distinguished' success. Sir James mentions in

his paper that he is not aware of the existence of analogous statistics in relation to the students of any other calling ; and I do not know that the indicated deficiency has been supplied since he called attention to it. Still, if we bring experience and observation to bear upon the question of the relative prospects offered by medicine as a profession, if we think of the proportion borne by briefless barristers to King's Counsel, by poor curates to bishops and deans, by qualified solicitors who do not rise above paid clerkships to their more prosperous brethren, by the lower grades of commissioned officers in the navy and army to those who attain ranks which enable them to retire upon comfortable incomes, I think it will be conceded that medicine fully holds its own in the race of professional life, and that it may be embraced, by any young man possessed of moderate talents, and of a moderate degree of energy and perseverance, as a calling in which, if he fail, his failure will be due to faults or shortcomings of his own, rather than to any circumstances peculiar to the profession which he has chosen.

An important element in the suitability of medicine as a life pursuit is the great variety of work which it affords, and the opportunities given by this variety to persons of very different tastes and qualifications. The studious man, whose inclinations are in the direction of research, will usually

find no difficulty in attaching himself to some medical school at which those inclinations can be at once utilised and gratified; the man of accomplishments and *savoir faire* will as naturally find his opportunities among the more wealthy and refined circles of great towns; the man of country tastes and habits may indulge and follow them in rural practice; the more adventurous spirits may find their most appropriate sphere of action in the navy or the army, or in the new fields of discovery which are perpetually being thrown open by English enterprise. In some cases, men of high capabilities are wanting in the flexibility, in the power of adapting themselves to circumstances and to people, which is so important to the family practitioner, or even in the services to those who are brought into personal contact with the sick; and such men may now find many openings suited to them in the public sanitary service of the country. There seldom need be a question, in the profession of medicine, of putting a square peg into a round hole. The holes are not only numerous, but they are of all conceivable shapes and sizes; so that the young doctor who cannot find one to fit him must be either exceptionally angular or exceptionally unyielding, or both. The greatest difficulties of this kind are those which arise when opportunities point clearly to one description of career, while inclination and capacity point

to another. From difficulties such as these no occupation can be said to be exempt.

The consideration of ways and means is as important and necessary in the medical profession as in any other. The young doctor has to live while he is making his way; and, if he is to live with clean hands, he must have command of a certain amount of capital. The more he has, comparatively speaking, the more free will he be to select the line of work best suited to him; but in medicine, as in other callings, enough money to weaken ordinary motives for exertion is more likely to lead to failure than to reputation. On the other hand, no error is more certain to entail disastrous consequences than that of engaging in practice, of any kind, without sufficient means to wait a proper and reasonable time for returns. A young man who is tempted to this course can hardly do better than look at the question through the spectacles of a very keen observer. He or his friends should read George Eliot's 'Middlemarch,' and should well consider the lesson which it conveys.

Whatever circumstances may lead to the decision that a boy shall seek to enter the medical profession, the requirements first made upon him will be in every case the same. He must be fully seventeen years of age, and he must have passed a 'preliminary' examination intended to test his pro-

iciency in general knowledge. This examination may either be one specially conducted for the purpose, or it may be a 'leaving' examination at certain schools, or it may be the matriculation examination of a University. Its nominal requirements are:—

- (a) English language, including grammar and composition.
- (b) Latin, including grammar, translation from specified authors, and translation of easy passages not taken from such authors. In the case of natives of India, or other Oriental country, whose vernacular is other than English, an examination in a classic Oriental language may be accepted instead of an examination in Latin.
- (c) Mathematics, comprising (1) Arithmetic; (2) Algebra as far as simple equations inclusive; (3) Geometry, the subject matter of Euclid, books I, II, and III, with easy deductions.
- (d) An optional subject, which may be either Greek, French, German, Italian or other modern language, or Logic.

There is much reason to believe that most of the hostile criticism of the medical profession which sometimes issues from the public may be traced, in

so far as there is any ground for it at all, to the inadequacy of this examination for the purposes which it is supposed, and was probably intended, to fulfil. These purposes should, indeed, be met by the ordinary teaching of any school for the sons of gentlemen ; but it is only too well known that a large number of the schools so described cannot safely be relied upon to produce the desired effect. Some conjecture may be formed as to the causes of their failure, by reading between the lines of the following quotations from an essay lately published by Dr. Dukes, the well known and highly experienced physician to Rugby. He writes :—

‘I have no hesitation in saying, from a wide experience, that a due amount of care has never yet been bestowed upon the young human being.

‘In the process of education, which in its proper sense necessarily implies both physical and mental development, the teacher too frequently ignores the former factor. It is the physician’s province to point out that education must not be pursued at the expense of physical welfare. Though his advice may be too generally ignored or contemned, he must yet insist that his office is to guide the schoolmaster in his duties so far as they concern the health of the pupils ; nay, even in respect of the teaching itself—so disastrous is the assumption that teaching needs no technical training—less serious consequences

would ensue to the young were the physician's advice more frequently sought and adopted.

'The worst feature in the prevalent method of education is that the long hours and clumsy educational methods compel the work to be performed under a sense of fatigue, so that the work itself is not of lasting value, and the brain may be damaged in the process. These imperfect methods of education are likely to continue until teachers receive a technical training in their duties, or at any rate until they cease to despise and abhor it. *The education of the youth of the upper and middle classes in England is the only business for which a man is not trained.*'

The method of education which has given England the majority of her greatest men, the old method of public school and university teaching, was no doubt responsible for a certain proportion of very imperfect success; but it accomplished one thing which it may be desirable to remember. A young man thus educated, if he knew anything at all, would know the Latin language thoroughly and completely, alike in its construction and in the meanings of its words. To know a language thoroughly and completely is the first essential of mental training, without which there can be no real education, and no power of knowing accurately anything else. Language is the instrument of thought,

and imperfect acquaintance with language implies the imperfect formation of ideas. The ordinary preliminary education of a medical student, commenced, as it often is, at a school not of the highest class, with a so-called 'modern side' to which much attention is directed, and only seldom receiving completion at a university, does not imply a thorough knowledge of Latin; and it therefore leaves in the foremost place, as the most important element in Paley's definition of education, 'every preparation that is made in our youth for the sequel of our lives,' that which is put forth as the first requirement of the preliminary examination, a knowledge of the English language, including grammar and composition. This is of as much educational value as, and is of far more practical utility than, a corresponding knowledge of Latin, because the English doctor has to learn and to practise his profession in English. In order that he may do so, in order that he may learn it thoroughly and may practise it intelligently, it is essential that he should obtain a mastery of the language in which its principles and its doctrines are conveyed, that he should know the precise meanings of words, so that he may not be liable to misuse or to misunderstand them; and that he should know, for example, the proper connection between the relative and the antecedent, so that he may establish and maintain

due harmony between the several clauses of his sentences, and may express his meaning coherently. These accomplishments are less common than might be supposed, not because they are particularly difficult of attainment, but because the acquirements by which they are afforded are less widely diffused, even among schoolmasters, than they ought to be. Not many years ago, in connection with circumstances which directed attention to one of the greatest of our public schools, the head master thereof, who afterwards became a bishop, thought fit to write a letter of defence and explanation to a newspaper. Finding that his letter had provoked unfavourable comment, he applied to a friend of some literary skill, and asked what fault could be found with it. 'I could hardly explain,' was the reply, 'but I will try my hand at translating it into English.' I once heard a reverend schoolmaster preach a sermon, in the course of which he said '*the higher we advance.*' He was by profession a teacher not only of boys, but also of men and women, and he did not know the simple meanings of the common words he used, although, if they had been Latin or Greek, he doubtless would have done so. He did not know that, although we may *rise* 'higher,' we can only *advance* 'farther.' Not long ago, I saw a book written by a medical man for the guidance of nurses, which, among other curiosities, contained the following

passage: 'The nurse should always change her dress before leaving the sick room (which should be of cotton).' The writer probably meant that the dress should be of cotton, but he did not know how to say so. It would be wearisome to adduce instances of the employment of such senseless and illiterate coinages as 'reliable,' or, still worse, 'unreliable,' or of the misuse of common words like 'fallacy' or 'phenomenal,' or of people who write and talk about being 'under' circumstances, apparently not knowing that 'circumstances' are things that stand around, and that it is manifestly impossible to be 'under' them. The important consideration is that the future of medical science, as of all other sciences, is indissolubly connected with the precise and accurate statement of facts and inferences, and with the accurate comprehension of them by those whom they concern; so that knowledge can only be acquired or extended by those who are acquainted with the meanings of the words they use. It is useless for an illiterate speaker or writer to know his own meaning or intention, unless he also knows how to convey the same meaning or intention, and not some different one, to other people. The thoughts of a philosopher cannot be expressed in the phraseology of a charwoman. Insistence upon this point is the more necessary, since, not only in a large number of modern publications, but also in

much that passes muster for conversation, accuracy of expression is habitually sacrificed to current slang or to fancied picturesqueness. The late Mr. John Bellows, in his admirable Pocket Dictionary of French and English, explains for French readers the meaning of the word 'awful,' and then adds that this word has come into general misuse in the slang of the vulgar rich, among whom it fills the same place that another offensive word, a contraction of the mediæval oath '*By 'r Lady,*' fills among the vulgar poor.

A generation or two ago, young people who wished to read were practically compelled to read literature, and to form their style upon good examples, among which would be prominent the Bible and the Liturgy, those noble monuments of English composition. In this respect times have wholly changed. It was once my lot to come daily to London from a suburb by train, and the majority of my fellow passengers were accustomed to read upon the journey. I have seldom seen the old men, and never the young ones, reading anything which a person of literary taste would stoop to pick out of the gutter. The tendency of feeble novels, of inferior newspapers, and of hasty and ill-considered publications generally, is to encourage a slipshod use of language which must be fatal to accuracy; for it is as impossible to nourish the intellect upon mental

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food of this description as it would be to nourish the bones and muscles upon a diet of water gruel. The only method of overcoming the evils referred to would be by such a systematic teaching of English, as it has been used and perfected by its greatest masters, as would at least be sufficient to confer the power of recognising imperfection and incorrectness. There is, of course, a question of taste involved, which it would be foreign to my purpose to discuss; my sole object being to lay stress upon the fact that a doctor is called upon to obtain clear, exact, and definite ideas, and to give utterance to them in correct, simple, and intelligible language. He is called upon to realise Cobbett's description of an English sentence, that it 'should be as clear as a pebbled brook, and not only not liable to be misunderstood, but not capable of being misinterpreted.' The boy who is destined for the medical profession can learn nothing more important, or more certain to be valuable, than the power of saying or writing exactly what he means, and the power of perceiving the exact meaning of what he writes or says. Whoever can do these things is much protected against muddle-headedness for the remainder of his life. I would therefore strongly urge that the use of English should be systematically taught and practised as part of the education of intending medical students, and that any deficiencies of the school in this

respect should, as far as possible, be supplied by the influences of home.

The other subjects of preliminary education are comparatively unimportant. The choice among those which are optional will often be determined by circumstances, but it is certain that the present requirements with regard to them are too small. Greek, it need hardly be said, is invaluable to all who study it with sufficient thoroughness to derive benefit from the mental exercise involved, but it is a snare to the feet of the smatterer. A doctor who combines a smattering of Greek and Latin with an imperfect knowledge of English, and who is tempted to write upon any medical subject, is almost certain to air his supposed acquirements by the coinage of horrible verbal compounds, monstrosities misbegotten of classic tongues, which are usually intended to express very simple facts or conditions, but which require to be explained in a footnote before they convey any idea to the average reader, while they are calculated to make the scholar 'stare and gasp.' Quite lately, in a medical book professedly written in English, I have seen the coinage 'syndroma,' which, if it mean anything, means only concurrence or coalescence, used to express the totality of the symptoms in a given case of disease. I have seen 'dacryocystosyringokatakleisis' used to express obstruction of the tear duct, and 'amphiblestroiditis'

to express inflammation of the retina of the eye. The originator of the last compound seems to have regarded ἀμφιβληστρον as a more sonorous equivalent to 'rete,' and not to have known that it means specifically a casting net. I once met with a country cabinet maker, who constructed wooden frames covered with needlework for the purpose of surrounding polished fenders and protecting them from the feet, and who sought a name for his contrivance from a local schoolmaster, who furnished him with 'antitribospodothecidion,' and with the translation, 'An against friction of the ashes receptacle.' This is very much like a great deal of the medical Greek of the present day; and I object to it, not only because it is unintelligible, and because it ought to be left to advertising tradespeople, but also, and far more, because it is calculated to degrade the profession in the eyes of educated persons, and to cause those who use it to be regarded as illiterate and impudent pretenders to knowledge which they do not possess.

The present inadequacy of the preliminary education of many medical students can only be justified, if at all, on the ground of pecuniary saving. It has been argued that the necessities of the public require a large number of doctors, and that, as these necessities, in an overwhelming preponderance of instances, occur to persons of comparatively small means, it is needful to supply the doctors as cheaply

as possible, so that they may be content, or at all events prepared, to work for scanty remuneration. There seems to be somewhere a flaw in the argument, but its acceptance by the medical authorities and corporations is perhaps assisted by the fact that these bodies derive a large portion of their respective incomes from the conduct of examinations and the granting of licenses, and that they may not unreasonably be unwilling to place a barrier of requirement in the way of those who might otherwise seek their doors. However this may be, it is assuredly too certain that many of the accepted preliminary examinations are not of a character to afford convincing evidence of an education really calculated to prepare the minds of those who receive it for engaging in studies of an abstruse and difficult nature, in which an absence of proficiency might easily lead to disastrous consequences. Unfortunately it is by no means certain that the General Medical Council, the body to which a limited amount of control over medical education has been committed by the Legislature, has even that limited amount over the scholastic education which should precede it.

## CHAPTER III

## PROFESSIONAL EDUCATION

THE school education having been completed, and the preliminary examination in 'Arts' having been passed, the future doctor is next called upon to enter as a pupil at a school of medicine, and to become a distinctively 'medical' student. Schools of medicine are institutions attached to, and practically inseparable from, great general hospitals. They are inseparable from them for two reasons: first, because the work of medical education could not be effectively conducted without the presence of the sick; secondly, because the work of the wards could not be carried on without the assistance of students. The course of instruction at a medical school should cover a period of five years; and students often spend a still longer time before they succeed in passing the final examinations by which legal qualifications to practise are obtained. The first two years of the course are devoted to studies which might perhaps be equally well carried on elsewhere. These include anatomy and physiology—that is to say, a knowledge of the structure of the body and of the

functions of its several parts, together with the elements of physical science in its known bearings upon the phenomena of life. At the end of about two years, the student is permitted to present himself for examination in these introductory subjects; and it is not until after he has passed this examination that he is brought into contact with patients, and is allowed to commence work in the out-patient departments and in the wards.

I do not know that any medical school lays down a hard and fast line with regard to the age at which pupils are admitted; but no qualification is conferred upon any person below the age of twenty-one, and it is obvious that, in order to attain one at this age, the professional studies must be commenced at sixteen. An ordinary boy of sixteen is, I think, too young to enter profitably upon a course of medical study. His acquirements in other directions are too slender, his mind is not sufficiently mature, for the work of the medical school to be undertaken with advantage; and I am strongly of opinion that seventeen is the earliest age at which, with a view to the quality of the ultimate results, a commencement of medical study should be attempted. The previous time may be more profitably devoted to studies more germane to the wants and capacities of boyhood.

It would be wholly foreign to the purpose of these

pages if I were to enter into any details with regard to the course of professional instruction, further than to say that, as now carried on in London, its effectiveness is impaired by serious defects. As with many other things, its most important part is its foundation, and this foundation is too often insecure. There are in London eleven great hospitals, each with a school of medicine attached; and not one of these schools, taken alone, is sufficiently large or sufficiently remunerative to be able to secure teaching of the first class in the earlier subjects. It must be remembered that the teachers of medicine and surgery, the physicians and surgeons to the hospital, look to be repaid for their work in the wards by reputation and practice; but with the teachers of anatomy and physiology this prospect is at best remote, and they have no immediate recompense beyond their actual shares of the school fees—shares usually very modest in amount. The preliminary subjects, therefore, are in some danger of being taught in a languid and perfunctory manner, by junior members of the hospital staff, who in the meanwhile are counting the days which stand between them and their emancipation from a drudgery which they may well regard as a mere step on the ladder they are compelled to climb. If it were possible—and in the near future it may be rendered possible by the New University of London—to withdraw all this

preliminary teaching from the hospitals, and to conduct it at a single institution, there would be students enough to supply a sufficient income to a really brilliant teacher of anatomy, or of physiology, or of physiological chemistry, and to render these chairs places of distinction, in which men of great abilities would be content to abide. Something in this direction is already being done in some of the great provincial cities, in which schools of medicine, with central laboratories and lecture rooms for the preliminary subjects, have been equipped by a combination among the staffs of the local hospitals, with the result that these schools, often better furnished with apparatus and with teachers of the preliminary subjects than the school of any single hospital in London, are attracting large numbers of students who, but for such advantages, would as a matter of course have come to the metropolis, which now, for want of effective organisation, is in some danger of ceasing to be the great centre of medical education in this country.

I have already expressed the opinion that the value of the antecedent school education is not so much to be estimated by the moderate acquirements which are calculated to satisfy the examiners in 'general knowledge,' as by the degree in which it trains the pupil to observe, to remember, and to reflect; and the same principle applies with even

greater force to the special teaching by which that of the boys' school must be succeeded. Both, so to speak, must be alive. We have at present comparatively little evidence of what real teaching might effect in a so-called 'dull' pupil; although perhaps it might be somewhat more than most people would expect; but we have plenty of evidence that the routine of make-believe teaching is of very small efficacy as far as the mental faculties are concerned, so that, at least with some classes of learners, it will 'run through their heads like water through a tin pipe, leaving them as empty as it found them.'

Let us assume that the school education has on the whole been satisfactory, in so far, at least, as that the student understands the construction of the English language and the meanings of many of its more common words; so, for example, that he will not be likely to say or write 'phenomenal' when he means 'unusual,' or 'fallacy' when he means 'error,' or 'theory' when he means 'hypothesis.' He will soon find that the one object of medical study is to discover and establish what is true, and then to apply the truth to the preservation of life and the relief of suffering. In this respect medicine stands almost alone. The professional politician lives more or less in bondage to fools, and must render their folly articulate, must sometimes even appear to believe in it, as the only condition upon which he can retain

their valuable suffrages. The advocate must often feel that the establishment of truth would be fatal to his contention. The theologian must often glide swiftly over the thin places of his argument. The shopkeeper, to quote the words applied to him by Bishop Earle in the seventeenth century, 'tells you lies by rote, and not minding, as the phrase to sell in, and the language he spent most of his years to learn.' Even the supposed philosopher does not always 'love truth better than his system,' and does not always turn an impartial ear to arguments destructive of his hypothesis. To the doctor, everything which is not true is useless. His knowledge, although constantly expanding, is still confined within narrow limits; but within those limits it is trustworthy and complete. Like other men, he is often compelled to guide his actions by high probability; but he need not mistake probability for demonstration; and he should not be able to conceal his own ignorance from himself. He is perpetually 'wanting to know;' and, whether he devote himself personally to research, or is content to assimilate the results of the research of others, the conditions of his utility are the same. If it be true that a given cause will produce given consequences, then he can confidently proceed, in fitting circumstances, to bring this cause into operation for the attainment of his ends. If the connection between

the presumed cause and the presumed effect be doubtful, or if it be dependent upon conditions which are wholly or partially unknown, medical action is so far rendered halting and uncertain. The doctor, in the course of his daily life, is brought into frequent contact with extremely difficult problems—problems in which the most recondite facts of physical science are complicated by the ever varying physical and moral conditions of the human patient. Much of his work is of necessity empirical in the strict sense ; that is to say, it is based upon experience of what has happened in apparently similar circumstances on other occasions, and without full knowledge of all the factors by which the ultimate result was brought about. By some men, perhaps by many, this empirical knowledge will be accepted as sufficient ; by others it will be accepted only provisionally, and used chiefly as a stimulus to investigation. Where adequate mental capacity does not exist, no education can confer the power of weighing evidence, the power of correct observation, the power of drawing sound inferences, the power of maintaining a suspended judgment when the evidence is insufficient to justify a conclusion. Education can, however, do much to arouse whatever capabilities of this kind may be dormant in the learner ; and, inasmuch as the discovery and establishment of truth are the highest functions of which the human mind is

capable, the functions which differentiate a Newton or a Faraday from those who argue without being able to reason, so it is of the highest importance that medical education, throughout its whole course, should be directed in such a manner as to develop, to the fullest possible extent, whatever qualities, in the direction indicated above, the pupil may be so fortunate as to possess.

As these pages may not impossibly fall into the hands of the parents or guardians of medical students, or even into those of medical students themselves, it may not be superfluous to say something about the spirit in which the work of such students should be approached and conducted, and about the faculties of mind which that work should be so directed as to cultivate. Among these I should give the first place to the faculty of accurate observation; not only because it supplies the foundation of all knowledge, but also because, as a matter of fact, most of the mistakes into which medical men fall in early life are dependent upon imperfection in this respect. When I was a student, we used to hear a great deal of the extraordinary and as it were intuitive rapidity of diagnosis by which an eminent surgeon, now many years deceased, was distinguished above his contemporaries. There were students who were unwise enough to set him up as a standard for imitation in this particular. They did not see that he had

acquired the art of rapid diagnosis by the patient care and thoroughness with which, for many years, he had investigated every detail of every case presented to him ; and they aimed at the attainment of a similar result by neglecting everything which did not lie upon the surface of the cases presented to them. They cultivated, in short, a faculty of arriving quickly at erroneous conclusions ; and, when they became practitioners, their sins were not slow to find them out. The way to avoid similar discomfiture is to cultivate the faculty of observation, by which I mean the power of noticing and remembering, not only the salient, but also the seemingly subordinate features of everything to which the attention is directed, together with the habit of looking again, to see that nothing has been overlooked in the first instance. A student need not be too much discouraged by finding that he is often wrong in his inferences ; but he should take himself to task, very seriously indeed, if he often fail to see, until it is pointed out to him, something that is lying under his eyes. A branch of study which comes almost first in the medical curriculum—that of the structure and peculiarities of bones—is especially calculated to be useful in training and improving the power of observation. The labour of many generations of anatomists has constructed a description of the bones of the human skeleton from which no single

particular has been omitted ; and the student who first hears or reads an account of one even of the simpler bones will be astonished to find how much it offers to be noticed and remembered. The tendency of the natural man is to regard some of this minuteness as redundancy ; but it should rather be regarded as furnishing a standard by which the powers of observation may be tested. To take a bone, without previous minute knowledge of it, to write the best and most careful description of it that can be compassed, and then to compare this description with that which is given in a text-book, is a most useful, but generally a somewhat humiliating, exercise. The more humiliating it is, the more the student's account falls short of what has been done by others, the more reason he will have to be dissatisfied with his own powers of observation, and, being dissatisfied, to cultivate them assiduously, and to test them often. But the bone is only a single example from which to learn how carefully and how minutely the whole body should be studied in health, how carefully and how minutely it should be examined for the changes which constitute disease. The first step to this study is anatomy, not only the comparatively coarse anatomy of the relations and distribution of parts, but also the fine anatomy of structure. To a knowledge of anatomy, of the inert machine, it is necessary to add, by means of physiology and chemistry, a

knowledge of the machine in motion, of the functions to which the several organs are subservient, of the degrees in which they are dependent upon each other, of the mechanical and chemical changes which are produced by or concerned in their activity. In this way are laid the foundations of the art of physical diagnosis, which reveals alterations in the conditions of parts that are concealed from view. The first steps in this direction will usually be made in the comparatively simple domain of surgery, by the assistance of sight, touch, and hearing; and afterwards, when attending the practice of the physicians, the student will be aided by contrivances which enlarge the domain of the senses, as well as by others which measure and record movement and temperature. He will learn how to discover, with a minuteness and accuracy which even a few years ago were unhopèd for, the way in which internal organs are doing their work, and the degree and manner in which their performances depart from the healthy standard. In such investigations it is the safest course, at first, to confine the attention to facts, and to leave inferences for a later period. In other words, it is best to do one thing at a time. The temptation, on hearing that a patient has some given malady, will be to associate, as an act of memory, a changed physical condition with the morbid state by which such a change is usually

wrought, and thus to learn by rote what may be regarded as the physical signs of particular diseases. In the degree in which this is done, those who do it will become inaccurate observers, and will waste valuable opportunities of education. A physical sign should at first be looked upon only as the exponent of a physical condition, although the presence of that physical condition should lead to reflection upon what it may denote. In listening to the sounds of the chest, for example, it is occasionally found that those commonly associated with particular diseases may be brought about by other states, by states which have produced certain physical conditions, although different from those by which the conditions in question are produced in the ordinary way. Hence, if the learner begin by thinking of a sound only as the sign of a disease bearing a certain name, he will be permitting himself to jump to a conclusion instead of reasoning it out, and will thus not only neglect the cultivation of the judgment, but may also fall into an error of diagnosis whenever an ordinary chest sound is produced in an unusual way. The first care, in dealing with sounds, should be to know all the facts about them, as, for instance, where and within what limits they are audible, and what relations, in point of time, character, and frequency, they bear to the normal sounds of the same region. Next, an endeavour should be made to refer

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every sound to the physical conditions—that is, to the relations between air, fluid, and tissue, which may produce it; and only lastly should it be considered how these conditions have come to be fulfilled in the particular case under examination. To take an example from another sense, and from another region of the body, the ophthalmoscope, by which we inspect the interior of the eye, will sometimes display the existence of a rhythmical pulse in the larger retinal arteries, the blood entering them in waves, instead of flowing, as in vessels of such calibre is more usual, in an even and continuous stream. Such a pulse may be dependent upon an affection of the eye which is called glaucoma, or upon certain changes in the valves or orifices of the heart, or upon increased tension of the arterial system generally; and, to a skilled observer, it might at once declare the presence of one or other of these conditions. But its immediate cause, in every case, is a disturbance of the due balance between the force with which blood is propelled into the eye, and the resistance which is opposed to its entrance by the tissues. The force may be diminished, as in heart disease, or the resistance may be increased, as in glaucoma, but in some way the balance is disturbed. Before thinking of heart disease or of glaucoma, it is necessary to think of a resistance to the entrance of the blood which the propelling power

cannot altogether overcome. It is necessary to say, in the first instance, 'Here is a certain physical condition,' and only afterwards to look farther, and to find what is the explanation of its occurrence: the learner thinking out his way, from a fact which he can ascertain, to any inferences which that and its related facts may justify. In no other manner is it possible to arrange symptoms and diseases in an orderly sequence, or to be preserved from errors of diagnosis in the presence of exceptional conditions.

In the formation of inferences, however—that is to say, on the very threshold of the clinical study of cases as distinguished from the clinical study of facts—will arise the necessity for a faculty of mind which comes next to that of observation—the faculty of imagination. Those who have paid attention to the meaning of words will require no definition of imagination; and to others I can give none more suggestive than that of Shakespeare, that it 'bodies forth the forms of things unknown.' The scientific uses of imagination have been very clearly described by an author now too much neglected, Dugald Stewart, and were made the subjects of eloquent discourse by the late Professor Tyndall. They depend upon the fact that actual knowledge on every subject, whether it be human knowledge in the aggregate or the knowledge of any individual, is

separated from the darkness of the unknown by an intermediate region, so to speak, into which some light has penetrated. It is this intermediate region which is the province of imagination, or, in other words, of disciplined and rational conjecture; and it is only by means of such conjecture that the boundaries of exact knowledge are extended, and that the intermediate region itself is pushed farther and farther into the unknown. Our minds in this respect may be likened to the explorers of a strange country, who are fully acquainted only with those portions which they have actually traversed, but who have obtained such general notions of the belt separating them from the horizon as will enable them to determine the directions in which they will endeavour to make further progress. As soon as we have possessed ourselves of certain facts, we call upon the imagination to account for their occurrence, and it furnishes us with some suggestion upon the subject. This suggestion is an hypothesis, which may or may not be verified by further examination. Its proper use is to determine the direction in which we shall pursue our inquiry, and we should hold ourselves ready to adopt or to abandon it, according to the results which such inquiry may produce. It once happened, I have been told, in a London hospital, that two students examined, in succession, the same patient, in order to compete for a clinical

prize. The first of them, on removing some of the clothing, saw a remarkable discoloration of a portion of the surface of the body. This student possessed great powers of observation, but his imagination was for the moment dormant. He accepted the presence of the discoloration as an ultimate fact, and carefully described it in his account of the case. He made a sketch of its irregular outline, and took measurements of its principal dimensions. The second student, when he came to the bedside, also saw the discoloration, but he was more imaginative than his predecessor, and his imagination led him to frame the hypothesis that the discoloration might be due to the presence of dirt. He tested the accuracy of this hypothesis by means of a sponge and warm water, and established it by washing the stain away. The incident was trivial, but it is none the less instructive, and it may well serve to teach the attitude of mind in which it is necessary to approach the investigation of disease. As soon as we have possessed ourselves of the chief facts of a case, we form some hypothesis about its nature, and this hypothesis is then to be made the subject of inquiry. It serves to economise time, to restrain attention within definite limits, and very often to save suffering to the patient. Take, for example, the case of some distortion of a limb produced by injury. We start with a knowledge of the natural

shape and relations of the injured parts. We endeavour to ascertain what was the position of the limb when the injury was received, and in what direction the injurious force was exerted. We notice the character of any obvious departure from the natural outline, and on these data we frame an hypothesis as to the probable character of the hurt. We then consider how we can test the accuracy of our hypothesis; in what directions, supposing it to be correct, mobility will be increased or diminished, by what movement evidence of fracture will be afforded, and by what extension the proper shape of the limb will be restored. We do not manipulate the limb in a vague and objectless way, but only in such a manner as to test our hypothesis; and, if we find something inconsistent with the hypothesis, we modify it before we pursue the inquiry. By this course the patient is spared rough or prolonged manipulation, and the mind of the surgeon anticipates and guides his hands. Proceeding to a less simple example, let it be supposed that a man comes to us who professes to be blind, but whose eyes present no superficial evidence of disease. A first conjecture might be that his blindness was due to causes lying deeper than the eyes—to disease of the brain, for example—and when, on inquiry into the history, he is said to have been ‘shaken’ in a railway collision, the second conjecture might be that

he was an impostor. Neither conjecture can be acted upon prior to careful examination into its probability. It is necessary first to ask, supposing either to be true, what other truths it would involve, and then to call upon the imagination for the symptoms that would be likely to attend upon a disease of the brain capable of causing blindness, and for the peculiarities of conduct that would be likely to attend the simulation of blindness by a cheat. If the manifest conditions of the problem were not sufficient for its solution, it would be necessary to vary and enlarge them by experiment; and the ultimate conclusion might be that neither of the original conjectures could be sustained. The care bestowed upon such a case would depend, probably, upon the magnitude of the interests at stake, and upon the amount of injury which an erroneous decision might inflict. But the temper of mind which these considerations would call forth is that in which all conjectures about the unknown should be weighed and regarded; and the caution which would be dictated by the special circumstances of the case supposed should be equally observed on all occasions, in order to maintain a high standard of mental activity for ourselves. It is manifest that, the more we cultivate the faculty of imagination, the more definite and clear will be the hypotheses that it will enable us to frame, and the

more easy will it be to bring these hypotheses to such tests as circumstances may require.

Notwithstanding our best efforts, however, we shall find ourselves confronted by questions concerning which certainty is not attainable. The facts, as far as they are known to us, may baffle conjecture absolutely, or they may appear to admit of two explanations, between which it is not possible immediately to decide. Such positions will be still further complicated by this, that medical practitioners are not merely philosophers, seekers after truth, but emphatically men of action, who are called upon to know whenever knowledge is attainable, but always, and in all circumstances, to do. Now it is only the philosophical mind, which, as a rule, means the trained mind, that can consciously preserve an attitude of intellectual uncertainty, receptive of all fresh evidence by which that uncertainty can be lightened or removed, while, at the same time, it is prepared to act with promptitude and decision upon the balance of probabilities. The vulgar mind is constrained, generally speaking, to assume the truth of some conjecture before it can go out in action at all; and it remains bewildered, and helpless for practical purposes, until the conjecture, whether it be true or false, has been fixed upon and adopted. We may sometimes see that a practitioner who starts with an erroneous diagnosis will continue in error to

the end, notwithstanding the daily pressure of evidence which ought to undeceive him ; because, in order to act upon his first conjecture, he has been compelled to assume its correctness, and thus to close his mind against the entrance of considerations which would be opposed to it. Hence the light so often thrown upon a case by a consultant, who is said to regard it from a fresh point of view, but who, in reality, only brings an unbiassed mind to bear upon the accumulated data. It is manifest that the first attendant, if only he can avoid the premature adoption of an hypothesis, should be enabled, by his more complete and exact knowledge of the facts, to correct others, instead of being liable to be corrected himself. In these considerations may be found a clue to the uses of what is called experience, which is invaluable when it is used to train the mind, deceptive and misleading when it encourages imperfect methods of investigation or faulty habits of thought. The power of maintaining a suspended judgment, of knowing when the data present will not justify the formation of an intellectual conclusion, and hence of being prepared to examine all fresh data as they arise, and to range them on the side of the conclusion towards which they tend, is one that is absolutely essential to the philosophical inquirer, and that may perhaps best be cultivated by work in the domain of physical science—work which should always, I think, be based

upon some knowledge of the principles of mathematics. Sir William Hamilton once objected to mathematics, as an instrument of education, on the ground of its supposed tendency to render the learner dissatisfied with anything short of demonstration; whereas, in life, demonstration is rarely attainable, and the course of ordinary conduct is necessarily determined by the existence of high probability. I do not see why the mind that can appreciate the force of demonstration should on that account be less able to appreciate the value of probability; but I see abundant reason why the mind that has never realised demonstration should be misled by probability, and should mistake it for certainty. There is a homely Devonshire saying which well expresses this kind of error, which testifies to its frequency, and which attaches it to one of those elderly members of the female sex for whose judgment proverbial wisdom has shown so little respect. The small and decayed town of Crediton, or, in the local language, 'Kirton,' possesses the remains of past grandeur in a fine old collegiate church, which towers over the buildings of its single street, as the cathedral towers over the buildings of Exeter. And the saying is, 'That's Exeter!'—'as the old 'ooman said, when her seed Kirton.' It is necessary for medical students to be very careful not thus to take the presence of 'Exeter'

for granted. In other words, it is necessary for them habitually to analyse their impressions, to endeavour to separate their knowledge from their conjecture, and to inquire what amount and kind of additional evidence would justify the acceptance of the conjecture as knowledge. It is only in this way, by systematic examination of his own mental acts and attitudes, that the learner can attain to certainty that he is using his opportunities in the manner most conducive to the full development of his intellectual powers.

For all these acts of mind, for careful observation, for disciplined imagination, and for the maintenance, when necessary, of a suspended judgment, the love of truth is one of the first and most essential conditions, and the love of truth is pre-eminently a result of careful mental training. It is an error to think that truthfulness is something easy and natural; for, in fact, and in its widest sense, it is one of the last attainments of the disciplined and cultivated intellect. Children, and servants, and imperfectly educated people generally, are as little able to adhere strictly to truth as they would be to walk along a tight-rope. Even when they have no disposition to deceive, they have still no power to be accurate. Among the classes who are said to be educated we often find, when we come to test the narratives of patients, that these narratives are very little to be

trusted, and that the modicum of truth which they contain will often be overlaid or distorted by a variety of erroneous impressions. If we look around at society in general, it will be impossible not to perceive how much more active is the desire to know what is said than the desire to know what is true. But it is only the desire to know what is true that will furnish an adequate motive for the careful investigation of disease, or that will enable the student or the young practitioner to resist the temptation of floating easily along the current of the fashionable doctrine of the day. Those who are careless about truth will be ready to adopt whatever medical superstition may for the time be prevalent among the profession or acceptable to the public. They will, for example, extol alcohol as a panacea, or will denounce it as a poison. They will perhaps frame some new hypothesis about some common malady, and will employ themselves in sustaining and defending it, before it has been subjected to any real or searching investigation. They may even sink to the degradation of calling themselves homoeopaths. But it is characteristic of the philosopher to love truth better than his hypotheses; and all who wish to do work that will live after them, and that will place their names among those honoured by future generations, must cultivate the love of truth during the period of their studies, and must

keep the attainment of truth ever present before them, throughout their whole lives, as one of the chief ends to be desired.

In order to accomplish this, it is necessary to obtain a clear idea of what is meant by 'truth,' a question which has exercised the minds of many persons both before and since the time of Pilate. We may define 'truthfulness,' without difficulty, as 'habitual adherence to truth;' but then, 'What is truth?' Dr. Johnson's first definition is 'the contrary to falsehood,' and we have only to inquire farther, 'What is falsehood?' in order to discover that the explanation leaves us precisely where we were before. Dr. Johnson's second and, as I think, better definition is: 'Conformity of notions to things;' and on this basis it may not be impossible to arrive at a proper understanding of what we mean. I do not think we are entitled to say of any proposition that it is 'true' unless, firstly, it is expressed in absolutely clear and definite language, which must convey the same idea to every person who hears it—language, in short, which fulfils Cobbett's already quoted description, in not only not being liable to be misunderstood, but in not being capable of being misinterpreted. When we have such a proposition as this, which so far may evidently be either true or false, the further requirement is that it shall be capable of proof, of experimental demon-

stration. If it be true, certain consequences must follow from it under given conditions; and, when the conditions are fulfilled, the consequences will follow invariably. It is manifest, I think, that what is true in the sense of this definition is placed beyond the reach of controversy, can be proved to be true at any time, and cannot be disputed by any sane and adequately instructed person. No one doubts or disputes the universality of the law of gravitation; no one attempts to set it at defiance in practice; no one doubts or disputes that a terrestrial body, which is free to obey this law, will be attracted towards the earth's centre at a definite and constantly accelerating rate of movement. Until within quite a recent period, the human race has had very little experience or knowledge of truth as thus defined. A few great natural phenomena, such as the recurring changes in the appearance of the heavenly bodies, and the certainties of mathematical demonstration, the latter known only to the learned, furnished the sole examples of truth which our ancestors once possessed. Beyond these the sum of human beliefs was composed of what are properly called 'opinions'—that is to say, of 'persuasions of the mind, without proof or certain knowledge'—and these opinions have always been, and are at present, largely made up of erroneous interpretations of familiar facts. We need not go back for an illustration to the time when the rising

and setting of the sun, and the succession of the seasons, were attributed to the personal activity of the deities of a heathen mythology; but may find one, within the memories of people not far advanced in life, in the circumstance that the variations of the barometer were, until recently, attributed solely to differences in the actual density of the earth's atmosphere.

Now the primary and essential condition of truthfulness, in the sense in which I use the word, is that the mind should be conscious of the character of its own beliefs and impressions, and should distinguish those which are certainly true from those which are in various degrees possible or probable; and that this distinction should be prevented from drifting out of sight by being constantly embodied in language, and expressed in the words and phrases which are habitually employed. It is impossible to think clearly and truthfully as long as we speak carelessly and obscurely. The tendency of the mind, unless constantly watched, is to lose sight of the difference between truths and opinions, and, without any necessary moral delinquency, to put the latter in the place of the former. An endeavour to describe events which had strongly excited the emotions would be fatal to the scientific veracity of any one but a philosopher.

Among the many conditions which have served

to impede the general diffusion of scientific truthfulness, we must, I apprehend, give a very prominent place to the confusion which frequently exists between accurate descriptions of events, and erroneous conjectures about the causes to which these events should be ascribed. For a convenient example I may return to the variations of the barometer. It was discovered by Torricelli, some two hundred and fifty years ago, that the weight of the atmosphere exerts an appreciable degree of pressure upon the earth's surface, and that the amount of this weight, and hence the degree of the pressure, may be measured by the height of the column of mercury or other fluid which it will sustain. The height of the mercurial column was found to vary freely, in these latitudes, between about twenty-eight and thirty-one inches; and it could be demonstrated that, when the barometer was high, the atmospheric pressure was greater, the superincumbent column of air heavier, than when the barometer was low. In my youth, or even when I was no longer young, it was considered an adequate explanation of the facts to conjecture that not only the superincumbent column of air, but the air itself, was heavier at some periods than at others, that the air was more or less dense, that a cubic foot of it at certain times would weigh more or less than the same quantity at other times. It was even experi-

mentally determined that air containing much moisture is actually, bulk for bulk, lighter than dry air. Without entering into details, I may say that the present belief is that this explanation was erroneous—at least in the sense of being insufficient—and that local variations in the weight of the atmosphere do not depend entirely upon the air being heavier at one time than at another, but also, and in a far greater degree, upon there being more of it, a higher column, over the spot where the barometer is high, and less of it, or a lower column, over a spot where the barometer is low. In other words, if we could stand outside the earth's atmosphere and look down upon it, it is believed that we should see its surface exhibiting, on an enormous scale, irregularities something like those which we see upon the surface of the ocean when we look down upon it from the deck of a ship—that is, we should see the crests of waves separated by intervening depressions. A high barometer is now held to mean that the spot where the barometer is high is beneath the crest of an elevation; a low barometer that the spot is beneath the bottom of a depression. The proper mental attitude on this question, before the investigations of comparatively recent years had been carried to a successful issue, would have been for each person to recognise that his knowledge of the occurrence of barometric varia-

tions, and his knowledge of the immediate cause of these variations, in commensurate variations of the total weight of the superincumbent column of air, was something quite different from his opinion or supposition that the latter variations were entirely dependent upon changes in the density or weight of the air itself. When a fact has been observed and established, the next step in dealing with it is to form some conjecture as to the causes which are in operation; and this conjecture will be more or less probable, according to the knowledge and sagacity of the person by whom it is formed. In relation to its subject matter, it is properly called an hypothesis, or supposition, something postulated in order to explain something else, and it is accepted only provisionally, in order that it may serve as a standard to which new facts may be brought, either to confirm or weaken it, and in order that it may suggest experiments of such a nature that certain results must follow if the hypothesis be true. If the expected results do not follow, if the new facts are in opposition to the hypothesis, it must be abandoned, and a new one advanced in its stead; but, if it be tried by every test and is confirmed by all, it ceases to be an hypothesis and becomes a theory—that is, a generalised expression of facts, or, in other words, a truth. When the nature of light was doubtful, when some people thought it might

consist of fine particles, the suggestion that it was an appearance produced by wave-movement in a universally diffused medium finer than the atmosphere was called the undulatory hypothesis. The hypothesis was ultimately found to satisfy all the conditions of the problem, and hence we now speak of the undulatory theory.

Unfortunately, however, many provisional hypotheses find their way into text-books and manuals, and are copied without due precaution from one into another, until it is often made to appear that the hypothesis, and the occurrences which it was intended to explain, stand upon the same level and are certainties of the same order. Those who thus receive them will possibly discover, sooner or later, that the hypothesis is erroneous; and, if they should be persons of inferior culture, the discovery, instead of only leading them to distrust hypotheses until they are proven, will be likely to render them distrustful also of facts. An instrument somewhat analogous to the barometer, the thermometer, has of late years come into extensive use in medical practice, and constantly affords highly valuable information. The thermometers which existed when I was a student were not of such a character as to register variations in the temperature of the human body, and it was not known that any such variations occurred. The accepted doctrine was

that the temperature did not vary, that manifest surface heat was only of the skin, not extending to the deeper tissues or to the mass of the blood, and that there was an extraordinary provision by which the latter was preserved at all times in a state of uniformity. With better thermometers came ascertainment of the facts, and we now know as an absolute truth that variations occur over a range of several degrees, and also that any considerable rise or fall usually indicates danger to life. We have hypotheses also as to the ways in which elevation or depression of temperature may be brought about ; but I do not know that any one of these has been so far subjected to the test of experiment as to justify us in saying that it is true. With regard to each of them, we must still be content to limit ourselves to a form of speech often used by one of the greatest of English philosophers, Michael Faraday, and to say 'It may be so.' It is only by thus holding apart in the consciousness that which we actually know and are sure of, such as the variations of temperature themselves, from that which we only think possible or probable, such as some particular explanation of the way in which the variations may be produced, that we can keep ourselves in a condition of mind favourable to the increase of knowledge. With regard to all of which we are certain, we may rest satisfied ; but, with regard to all of

which we are uncertain, we should constantly recognise our uncertainty, and should be prepared to reconsider our opinions whenever fresh evidence which bears upon them can be placed before us.

The greatest help towards the attainment and maintenance of this condition of mind is to be found in the correct use of language, in the habit of saying that which is true, and that only. If we say, 'This patient's temperature has increased since yesterday, because he took such food or medicine,' we shall be mixing up that which is certainly true with that which is possibly untrue; and our opinion concerning the cause of the rise of temperature will be supported—that is, we shall be less ready to abandon it upon cause shown, because it has been identified and blended in our minds with actual truth by the employment of an incorrect form of speech. But if we say, 'This patient's temperature has increased since yesterday, and *I think* the change must be due to his having taken so and so,' then we shall be speaking the truth. We shall mention as a fact that which we know, and as an inference that which we suppose; and hence, because we recognise the character of the latter half of the proposition, we shall at all times be ready to reconsider it. This may illustrate what I mean by the difficulty of truthfulness; for it is only by the greatest circumspection that we can

accustom ourselves habitually to keep apart in our minds the known and the conjectural, and to assign their respective places and limits to each. It is only by so keeping them apart that we retain consciousness of the limitations of our knowledge, or that we become properly desirous to extend that knowledge into regions which are still only the subjects of conjecture. If we suffer ourselves to speak of the two things in similar language, and if we thus forget or neglect the difference between them, we shall run great risk of insensibly placing the conjecture upon the same level with the fact, sometimes by attaching too much importance to the former, but often by attaching too little importance to the latter, and in either way we shall be likely to sink into a state of satisfaction with imperfect knowledge. We shall, indeed, cease to realise that it is imperfect, and may thus come to accept the most baseless hypotheses as if they were truths. Against this danger, what is popularly called education, as it is commonly conducted, affords scarcely any security; and thus it is that we see such a frequent abandonment of truth by many of those who would at first sight seem likely to adhere to it. People become unconscious of the difference between truth and falsehood; as a natural result of uttering one as if it were the other, or of the practice of repeating assertions, surmises, and conjectures in phraseology which would only

be appropriate in relation to facts. They insensibly lose sight of a difference which their words never bring into prominence; and, by thus forgetting the distinctive characteristics of truth, they prepare themselves to give credence to any fool's story which may be laid before them.

The slipshod forms of common talk, which fail to make any distinction between what we know and what we conjecture, or to attach any definite meanings to words, as in the inferior newspapers in which every vulgar crime is a 'mystery,' or every piece of commonplace evidence is a 'startling revelation,' are not only destructive of the power, which we should all possess and cultivate, of accurately defining the limits of our knowledge, but they also tend to diminish the confidence which will be placed in our statements by any who listen to them carefully. An important part of medical duty consists of replying to the questions of the patient or his friends—people whose perceptions will be sharpened by anxiety, and who will be likely to note the full significance of modes of speech which might escape their attention at other times, but which indicate that the speaker only speaks certainly of that which is certain, and always doubtfully of that which is doubtful. The habitual use of such forms as 'I cannot tell,' or 'I do not know,' or 'I am not sure,' for the many occasions on which such forms will be

true and applicable, has an inevitable tendency to assure listeners that, when these forms are dispensed with, it is because they are applicable no longer, and that the speaker is on firm ground. The last fifty years have been fruitful in the demonstration and establishment of truths, chiefly in the domain of physical science; and these truths are of daily and constantly increasing applicability in all departments of the healing art. It is the privilege of doctors to have a more effectual grasp of certainty, a larger experience of truth, than perhaps falls to the lot of the members of any other calling, and also to have corresponding opportunities of learning to recognise its value. The history of medicine is full of records of erroneous conjectures which, by reason of insufficient investigation in the first instance, have prevailed for a time, which have influenced practice more or less prejudicially, and which have then fallen into merited oblivion. It is also full of the records of discoveries which have stood the tests of time and trial, which, in other words, have been proved to be true, and upon which, therefore, we may confidently rely. In many other professions some kind of purpose may be fulfilled; some temporary or even permanent victory may be won by the successful promulgation of error, as when an unjust decision is obtained in a court of law by skilful misrepresentation of the facts of the case. In

medicine and surgery there are none of these delusive triumphs, for the ultimate condition of the patient is a touchstone which never deceives. To doctors, therefore, more than to any other large class of the community, it is given to have not only abundant experience of truth, but an equally abundant experience of its value; and I hold it to be their duty to sustain its banner high above the dust and turmoil of the controversies of the day. For all who are engaged in the treatment of the sick, I hold that a scrupulous truthfulness is the most essential of all qualities: and I look upon disregard or perversion of truth, on their parts, much as I should look upon cowardice in a soldier, or upon want of chastity in a woman. The necessary truthfulness cannot be practised without that habitual circumspection in the use of language to which I have referred, or without the habitual employment of words in such a manner as to distinguish what we know from what we have only more or less reason to think probable; nor can it be practised unless we also cultivate what I may call a tender conscience with regard to the operations of the intellect and the conditions of assent. For my own part, I think it is morally wrong to allow the mind to fall into confusion between proof and probability, or to accept the latter, other than provisionally, as a substitute for the former. I think

intellectual dishonesty is as bad as dishonesty in any other form. It would not be suitable, in this place, to enter into moral considerations ; nor will I do so farther than to say that we live in a time in which an increasing disregard for truth, or even an increasing prevalence of mendacity, as displayed (for example, at election times) by many who belong to what are called the educated classes, appears to me to be little short of a national calamity and disgrace. This increasing disregard and increasing prevalence are largely due, I think, to the enormous recent increase in the quantity of printed matter which is daily issued for our perusal ; insomuch that we are overwhelmed by assertions which are unsupported by evidence, and we are tempted, by sheer weariness of the task of scrutiny, to hope that those by whom these assertions are made have ascertained that they are true. In this hope we are sometimes induced to give them a temporary credence, or even to repeat them as if they rested upon our own knowledge. At any rate, from whatever cause, I fear there can be no doubt that the standard of national veracity has been appreciably lowered during recent years ; and I am of opinion that doctors might do something to restore it to its right position by a constant effort to speak the exact truth upon all scientific or professional topics. May we not hope that, among other good consequences of such an effort, those who

do not deal in scientific topics, and whose so-called minds are preserved from starvation only by a thin diet of random assertion and of baseless surmise, may nevertheless in time learn to exercise caution in distributing this diet among their friends, more especially when the materials of which it is composed are calculated to injure the reputations of others. There are more than twenty thousand British members of the medical profession, most of whom are brought into frequent and intimate relations with the sick and with their families. If these men, commencing the practice as students, will habitually so use language as to emphasise the distinction between knowledge and probability, and to remind their hearers of the advantages which will follow from keeping this distinction ever before their thoughts, I cannot believe it possible that so good and wise an example will be in any danger of being wholly thrown away. Its fruits may not be realised speedily ; but it is necessary to use care and diligence in seedtime if we would hereafter obtain a harvest.

The reader who has followed me through the foregoing observations will have perceived that I have assumed a certain separateness and distinctness of acts of mind which, in our daily conduct, are usually so connected or blended that we scarcely realise their original individuality. We see a fact, we form a conjecture about its cause, and our judg-

ment becomes satisfied with the correctness of the conjecture, with, as we say, the speed of thought; and it is only seldom that we are conscious of the essential differences between the three consecutive operations. It may appear to the student, at first sight, that he will be able to form his conclusions about medical problems in the same rapid and unconscious way; and no doubt this may be done in time. But the analogy afforded by complex physical acts throws great light upon the manner in which we perform complex acts of mind. In the former, as, for example, in learning to play upon a musical instrument, the rapidity and skill ultimately attained are the results of the combination of separate movements, originally distinct, and each needing to be separately acquired and perfected. It is not too much to say that the mechanical skill of a musician will greatly depend upon the pains he has taken to arrive at perfection in the single movements that he afterwards learns to combine; and, if he slur over these single movements, as beneath his notice and unworthy of his ambition, his performance will never attain the highest excellence. Precisely the same principle will apply to acts of mind. The medical student has to learn a new mental accomplishment, or a new kind of mental activity. If he first learn to observe, and then to conjecture, and then to judge, and if he scrutinise narrowly the nature and

quality of his own performances in each of these different ways, learning much from mistakes and failures, tracing them back to their original sources in the mind, and trying to guard in future against the recurrence of similar errors, forcing himself, as a rule, to do with especial care that which he finds himself most prone to neglect, then, by-and-by, he will not fail to reap a rich reward for his labours, and to attain to that unity and rapidity of mental action which, when they are combined with accuracy, constitute the highest perfection of skill. On the other hand, those who slur over the elementary acts, and strive to combine them prematurely, will surely lay the foundation of vicious habits of mind, from which it will be very difficult, even if it be possible, that they should ever completely free themselves. The student who so misuses his opportunities may be compared, when he enters into life (to borrow a simile from Bishop Earle), to 'a bird not yet fledged, that hath hopped out of his nest to be chirping on a hedge, and will be straggling abroad at what peril soever.' He may have read many books, and may retain a fair recollection of their contents. He may have gained prizes by the aid of memory, and may have testimonials enough to clothe himself. He may talk like an angel about the latest views of the most advanced scientific inquirers. Notwithstanding all this, when he begins to treat the sick he will

make blunders, and his blunders will presently declare themselves. The saying I have already quoted, 'That's Exeter!' might fitly be inscribed as an epitaph over the ashes of his intellectual failure.

In considering the precise method in which the periods devoted to professional study may be most profitably employed, it is well to remember Lord Bacon's apophthegm that 'Reading maketh a Full Man; Conference a Ready Man; and Writing an Exact Man. And therefore, If a man Write little, he had need to have a Great memory; If he Conferre little, he had need have a present Wit; And if he read little, he had need have much Cunning to seeme to know that he doth not.' I should be inclined, nevertheless, to take exception even to a great memory as a valid reason for omitting to write; for my observation of students enables me to recall many instances of men who have trusted unduly to such a memory, and who have found to their cost that it was easy to retain things for a time, but less easy to place them upon a mental shelf from which they could always be taken down when wanted. I regard note-taking, alike of what is seen, of what is heard, and of what is read, as the surest basis of medical education; and hence, next to a knowledge of English, a boy can scarcely bring with him from school any more useful accomplishment than moderate proficiency in the practice of shorthand.

The Medical Council has more than once been urged to admit shorthand as one of the optional subjects, and there is much to be said in favour of the recommendation.

Into the details of medical education it is in no way necessary that I should enter, if only for the reason that they would not be readily intelligible to non-medical readers. My chief object has been to set forth principles, and to show that the curriculum, in the hands of capable teachers and of earnest learners, is calculated to develop a high kind of general mental activity, and to produce a profession composed of men the great majority of whom would be accustomed to think as well as to act. It is only by such a combination of capacities that the public can secure the possession of ready helpers in time of trouble, while at the same time the conquests of science over disease are daily both extended and rendered more secure.

## CHAPTER IV

## MEDICAL DESIGNATIONS

THE various designations which are applied to members of the medical profession, such as 'Dr.' or 'Mr.,' 'Physician' or 'Surgeon,' and which in certain cases afford some indication of the nature of the duties which they are severally prepared to undertake, are occasionally perplexing to patients and others who desire to apply these designations with courtesy and propriety. It may therefore be worth while to give a brief sketch of their histories and of their meaning.

At the beginning of the nineteenth century, and for a long time previously, the profession in England was composed of three classes—physicians, surgeons, and apothecaries.

Before the Norman Conquest, the Anglo-Saxon word 'leech' appears to have been used as a general term to denote any practitioner of any department of the healing art; and it was gradually superseded, after the Conquest, by the Norman-French 'physician,' which was applied in an equally extended

sense. I have been favoured with a detailed memorandum on this word, kindly prepared by Dr. Murray, the learned Editor of the Oxford Dictionary, who says:—

‘The word was taken by us from Norman French in or before the thirteenth century, in the form *fisicien*, and in its present sense of “practiser of the healing art,” the only sense which it had in contemporary French. It has never had any other sense in English, though one or two writers have expressed a desire to convert the word back to the sense of Latin *physicus*, Greek *φυσικός*, “student of nature, naturalist, natural philosopher.” Hume did this, but only as an etymological fancy. In French it has been different, *médecin* has successfully ousted *physicien*, and the latter, in modern French (since 1640), has meant “physicist.” According to Du Cange’s “Lexicon of Mediæval Latin,” the regular mediæval Latin sense of *physica* is “medicine,” and of *physicus* is “medicus.” But in classic Latin, and as late as the Latin Lexicons come down, i.e. to the fifth century or so, *physica* in Latin literature meant “natural science,” and *physicus* a “physicist.” What is wanted is to show how Latin *physicus* and *physica* passed, between the fourth and fifth, and say the eighth or ninth century, during the very midnight of the middle ages, from the ancient to the mediæval and modern sense. This is an inquiry which belongs

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to the general history of the Latin language during the period of the break up of the Roman Empire and civilisation, for which *perhaps* no materials exist; and all that can be said is that the change took place, and was a very natural and intelligible one. Probably even in the third century the common peasant of Italy or Gaul thought a *physicus* must know something about the "influence" of stars and planets, and mysterious "influentias" or "influenzas" generally, and about the positions of bones, and the virtues of herbs, the only practical use of *physica* to him; and so, thinking the *physicus* a *medicus*, he called the *medicus* a *physicus*. Does not the ignorant nineteenth century Englishman call a *drug-seller* a "chemist" for the same reason, and does not the drug-seller find it profitable to call himself a *chemist* (which he is much less than a baker or a whisky-maker is)? Well, when the Roman civilisation perished, all the literary class (as a class) perished, and the peasant survived, and his Latin became the language of the modern world. He did not call in a *medicus* to use his *medicina* to cure his bad *crura* or his aching *caput*, but got a *physicus* with his *physica* (*fiscus* and *fisica* he wrote them when he could write) to attend to his *gambas* (pins or hockey-sticks) and to his *testa* (shell or cocoa-nut).'

Dr. Murray's view is confirmed by Littré, who

gives 'Au moyen Âge, nom du médecin' as his third explanation of the word 'physicien;' and in English the word retained its general sense, including surgery, down to a comparatively recent period, as may be shown, among many other examples, by Pope's well-known line :

A wise *physician*, skilled our *wounds* to heal.

The same usage still obtains in the United States, insomuch that I lately read, in an American medical journal, 'None but *physicians* should do the operation, as it is a *surgical* measure, and surgical asepsis should be carried out.' But in this country, and in our own time, it has been chiefly used to denote a practitioner who devotes himself to the treatment of internal ailments by the use of diet or of drugs, to the exclusion of mechanical or operative procedures, and hence to the exclusion of what is now called 'surgery.' It seems to have acquired this restricted sense as a description of the practice pursued by the Fellows and Licentiates of the Royal College of Physicians of London, a body which was constituted by a charter granted by King Henry VIII., and which has ever since occupied a position of great dignity and importance. The College possesses, and has always asserted, a right to practise surgery as well as medicine, but this right has seldom been exercised. The early

'physician' regarded surgery as an inferior or mechanical business—a sort of handicraft—and was usually content, when any surgical interference was required, to send for a surgeon to act or operate under his direction, and to depart without further responsibility for the progress of the case.

Under its original charter the Royal College of Physicians was composed of three classes of persons: the Fellows, who were the owners of the corporate property and privileges; and the Licentiates and Extra-Licentiates, who were permitted to practise as physicians, and were eligible for admission to the Fellowship in due course. The permission of a Licentiate extended to all parts of England and Wales; that of an Extra-Licentiate did not include the area of the metropolis. All three classes were commonly known in England as 'physicians,' and the term became practically restricted to them in common use, so as to lose its original and more extended signification. A physician, as thus understood, was a practitioner who confined himself to the prescription of remedies for internal maladies, and by common consent was held to represent the highest class of the medical profession. In almost every case he was a Doctor of Medicine of Oxford or Cambridge—sometimes, possibly, of a foreign university of the first rank, such as Leyden—and it was held by the College that its Fellows

should aim at a very high standard of Latin scholarship. The orations and lectures delivered on public occasions were all in Latin; and, whatever might in any case be thought of the substance of the discourse, its form was usually such as to attract the most learned and most fastidious scholars from other callings and professions. No doubt there were some exceptions, as shown by Bishop Earle's description of the 'meer dull physician,' who is 'only languaged in diseases, and speaks Greek many times when he knows not,' or who, after examining his patient, furnishes 'a writ to his druggier in a strange tongue, which he understands, though he cannot conster.' Notwithstanding gibes of this description, the College was emphatically a 'learned' body; and hence, both as a Corporation and as represented by its individual Fellows and Licentiates, it held in the estimation of the public the position which admitted learning never fails to confer upon the members of any civilised community.

In the meanwhile, the separation between the *physicus* and his *physica* had become practically complete; and the calling of the physician, who prescribed medicine, entirely distinct from that of the apothecary, who prepared it, and to whom it will be necessary to return hereafter.

The second class of practitioners referred to, the surgeons or chirurgens, were distinguished from

physicians as persons whose business it was to cure local diseases and injuries by manual operation : and it is now impossible to say by what steps a word which, in its original, signified only *handworker*, came to be restricted to persons who worked in this manner and with this object. The word, in the form 'cirurgian,' is found in the English of the end of the thirteenth century, and has long been hopelessly corrupted into surgeon. 'Surgery,' says the 'Encyclopædia Britannica,' is in all countries as old as human needs. A certain skill in the stanching of blood, the extraction of arrows, the binding up of wounds, the supporting of broken limbs by splints, and the like, together with an instinctive reliance on the healing power of the tissues, has been common to men everywhere.' In England, in early times, the crafts of surgeon and barber were united ; and there was a Company of Barber-Surgeons which held a good position in the metropolis. A tradition of the union is still preserved by the 'barber's pole' so commonly exhibited as a sign over the doors of hairdressers. It represents a staff which was to be grasped in the hand of a patient who was being bled, and the stripes painted on it represent the bands by which the incision was secured. The surgeons, as a separate body, received their first charter from King Henry VIII., and the Charter of Incorporation of the present Royal

College was granted in 1800, and has been modified by subsequent or supplementary charters on three or four occasions. As now constituted, the Royal College, like the Royal College of Physicians, consists of two orders—the Members, who are admitted by a ‘sufficient’ examination and are declared to be qualified for the ordinary demands of family practice, and the Fellows, who are admitted by an examination of a much more stringent character, and are declared to be qualified for hospital and consulting practice—that is to say, for the decision of the nicest surgical questions and for the performance of the most serious operations. The governing body or council of the College is elected by and from the Fellows, the Members having no other privileges than their title to practise, and the right of using the Library and the Museum of the College.

The apothecaries have existed in England from time immemorial, both as sellers and compounders of drugs, which would appear to have been their original avocations, and also as medical practitioners, a function probably thrust upon them by the public, who, then as now, were apt to believe that the mere handling of medicines must convey, by absorption through the skin presumably, some information with regard to their characters and uses. In what way the word ‘apothecary,’ a word as general in its

original sense as 'chirurgion,' became appropriated to a shopkeeper of a particular kind, a druggist, we have now no means of knowing; but the appropriation dates from a remote period. Public records show that money was paid to an apothecary for his medical services with the English army which fought on Flodden Field; and Henry VIII., after he had granted a charter to the College of Physicians, appointed an apothecary to the Princess Mary, at a salary of forty marks a year, '*pro meliore curâ et consideratione sanitatis suæ.*' In 1617 the apothecaries of the City of London were formed into a separate Company by a charter from James I.; and, during the seventeenth century, they were engaged in almost constant litigation with the College of Physicians on the subject of their right to practise. The question was finally settled in their favour by a judgment of the House of Lords in 1703, which declared that the duty of an apothecary consisted not only in compounding and dispensing, but also in directing and ordering the remedies to be employed in the treatment of disease.

At the beginning of the nineteenth century (to repeat in somewhat greater detail what has been said in the Introductory Chapter), the medical profession in England and Wales consisted of a very limited number of physicians, Fellows or Licentiates or Extra-Licentiates of the Royal College, who were

only found, with a few exceptions, in the metropolis or in large provincial cities ; of a larger number of surgeons, Members of the Royal College, who had passed through some kind of pupilage before they were admitted to membership, and of a vast residue of persons who had no qualifications, and many of whom were uneducated and illiterate. The Society of Apothecaries, under an Act of 1748, was empowered to appoint examiners, without whose license no one was permitted to dispense medicines in or within seven miles of London ; but the rest of the country was unprotected. The 'general practitioner' or family doctor of those times was sometimes a Member of the Royal College of Surgeons, in which case his surgical education had to some extent been provided for ; and, whether or not, he generally styled himself, and was styled by others, 'surgeon.' But, then as now, the greater part of his practice was purely 'medical,' and the medical side of his education had often been wholly neglected, inso-much that this neglect, and the inefficiency resulting from it, became a matter of public scandal, which called for the intervention of the Legislature. The College of Physicians, although appealed to by the Government, declined to accept responsibility for any class of practitioners inferior to their own body ; and the work which they refused was offered to, and undertaken by, the Society of

Apothecaries, who received the necessary authority from an Act passed in 1815. By this Act the Society was entitled to confer a 'license' to practise as an apothecary, according to the decision of the Lords in 1703, in any part of England or Wales; and practice without the license was prohibited. The licentiates did not become members or freemen of the Society, and had no further connection with its affairs. They were required to have been 'apprenticed' to a Licentiate, to have passed through such a course of study as the Society might from time to time prescribe, and to have been examined with sufficient stringency. They were then entitled to practise, and to take 'apprentices' in their turn.

Under this arrangement the state of the medical profession in England underwent, in the course of a few years, a great and highly salutary revolution. The Society of Apothecaries proved itself eminently worthy of the trust which had been reposed in it, and its license was deservedly and highly valued. For many public offices, however, such as the medical charge of the poor, and various others, it was necessary to be qualified as a surgeon in addition to being a Licentiate; and hence young medical men almost invariably obtained the so-called 'double qualification' at the conclusion of their professional education, and started in life as Members of the

College of Surgeons, and Licentiates of the Society of Apothecaries. For these men, who were soon to be found in almost every locality, the ordinary and accepted description was 'surgeon,' and the word apothecary fell into complete disuse, although the Licentiates of the Society were still apothecaries in the eye of the law, and in that capacity were compelled, under penalties, to compound and dispense medicines on the order of any physician legally qualified to act as such. They were seldom graduates of a university, and were styled simply 'Mr.'

In the meanwhile, the education and licensing of medical practitioners in North Britain had rested mainly in the hands of the Scottish universities, which, instead of granting 'licenses,' or creating 'members,' conferred 'degrees' carrying with them the title of 'Doctor.' This title, in England, was surrounded by all the associations arising from its having for many years been the distinguishing mark of the 'physician,' the man of the highest academic rank and position in the profession, and it was therefore very highly esteemed. Somewhat more than fifty years ago, it suddenly became not unusual for a young general practitioner, a member of the College of Surgeons and a Licentiate of the Society of Apothecaries, instead of being contented with the designation and position thus conferred, to proceed to a Northern university which was so indulgent as

to grant its M.D. degree to qualified men without residence, and after an examination which was not reputed to be of extreme stringency, in return for a moderate payment. He returned home as much entitled to call himself 'Dr.' as if he were M.D. of Oxford or Cambridge; and occasionally paraded his title in a manner which was not at all satisfactory to his professional neighbours, over whom he was wont to assume a superiority which nothing in his studies or his career would justify. His degree was genuine enough in one sense; but it did not imply either a scholastic training or any great amount of professional knowledge. 'Doctors' of this description, engaged in general family practice, became every day more common; and the difficulty of distinguishing them from those who had for so many years constituted the highest rank of the English medical profession became every day more insuperable to the public. A serious professional grievance was established, and a demand for a degree in medicine which every practitioner might acquire was speedily put forward as a desirable reform in the medical profession. Medico-political associations and societies of various complexions were formed; and the need for legislation in the interests of medical practitioners was strongly pressed upon the Government and upon Parliament.

Neither the Government nor Parliament cared

one straw about the grievances, real or imaginary, of the medical profession; but the agitation with regard to them called attention to the fact that medical qualifications were only valid in the division of the kingdom in which they were conferred, and it was felt that such a limitation of their character could scarcely be defended. A Bill was introduced into Parliament for the main purpose of enacting that a qualification, in whatever division of the United Kingdom it might be granted, should confer the privilege of practising in the other divisions also; and a 'Medical Council' was constituted, having for its chief function to secure that the pass examination, by which a license to practise was granted, should be as nearly as possible of the same value, wherever or from whatever body it was obtained. For the information of the public, and in order to enable them to distinguish qualified from unqualified practitioners, a 'Register' was ordered to be kept by the Council, and to be issued annually.

In these totally changed circumstances, the old forms of medical nomenclature were soon almost entirely swept away. So large a number of Scottish and Irish medical graduates entered England, and established themselves as general or family practitioners, that the exclusive meanings of the titles 'Dr.' and 'physician' were soon merged in their more general applications; and 'Doctors,' instead of

being represented only by the Fellows and Members of the College of Physicians, became scattered broadcast over the land, as representatives of the ordinary or necessary medical education without which no title to practise could be obtained. At the same time, the College of Physicians, repenting of their original refusal to supervise the education of general practitioners, converted their Licentiates and Extra-Licentiates into 'Members,' whose position was the first step towards the Fellowship, and formed an entirely new order of Licentiates, who had no other connection with the College than to receive from it a permission to practise medicine. In other words the College entered into direct competition with the Society of Apothecaries for the fees which were to be gained by licensing general practitioners; and the gentlemen so licensed speedily began to assume the title of 'physicians,' and, when they were also members of the College of Surgeons, to put the legend 'physician and surgeon' upon their door-plates. The associations of the College of Physicians were more dignified than those of the Society, and the right to use the title 'physician' appealed to great numbers of young practitioners. The Society had nothing to offer except a somewhat cheaper qualification, and was rapidly distanced in the struggle which ensued. Its license, which was once almost universal in England, was scarcely sought for, while

that of the College of Physicians was in constant demand. It was the business of the Medical Council to secure that the two licenses should stand on a footing of equality as regards the education and the attainments which they represented; but, in spite of this, the Licentiates of the College continued to look down upon those of the Society, and to stigmatise them as 'an inferior order of practitioners.'

In the year 1886 a still further step was made in medical legislation, and it was enacted that no person should be permitted to be registered as a legally qualified practitioner until he or she had passed examinations in the three main departments of practice—in medicine, surgery, and midwifery. It was no longer possible to be registered as a 'physician' alone, or as a 'surgeon' alone; and the examination in midwifery, which had previously formed only an accidental part of the medical examination, was rendered separate and compulsory.

Inasmuch as the nineteen licensing bodies existing in the United Kingdom were not all of them in a position to institute a complete qualifying examination, the Colleges of Surgeons, for example, having no authority to examine or license in medicine, nor the Society of Apothecaries in surgery, the new law provided that two or more bodies might combine to render themselves complete for examination purposes,

and might form 'conjoint Boards;' and also that an incomplete body which could not gain admittance into any such combination might apply to the Medical Council to provide it with examiners in the subject or subjects to which its own rights did not extend. When the Bill was in progress, the English Colleges of Physicians and Surgeons strove to bring the career of the Society of Apothecaries as an examining body to a conclusion; and, by virtue of their representations to the Government, the Society was not included as a licensing body in the first form of the Bill. It was, however, ultimately confirmed in its original position; but, even then, the Colleges of Physicians and Surgeons refused to admit it into their own combination, and it was left out in the cold, to be ultimately rescued by the Medical Council under the provisions of the Act. After much debate, and considerable opposition from some quarters, the Council resolved to furnish the Society with surgical examiners; and its own rights were complete in the remaining branches of knowledge.

The present condition of affairs is that a young man who has passed through his five years' curriculum of study, at a recognised school of medicine, is entitled to present himself for examination to any one of a large number of licensing bodies; in England, for example, to the Conjoint Board of the Royal Colleges of Physicians and Surgeons, to the

Society of Apothecaries, or to any university entitled to grant medical degrees, usually seeking from the latter a bachelor's degree in medicine or surgery, or both. The necessary license or degree having been attained, he is entitled to place his name on the Medical Register, to practise his profession, to give valid medical certificates, and to give medical evidence and recover charges in a court of law. Whatever he may have become entitled to call himself, whether 'physician and surgeon' or 'apothecary,' or 'M.B.' or 'C.M.,' letters which are generally held to justify a courtesy title of 'Dr.,' he has passed through the same course of professional study, and has undergone an examination which, so far as the Medical Council may be supposed to fulfil its most important duty, is everywhere of the same character and of the same stringency. The inspections of the Council are intended to prevent any improper lowering of the standards of the pass examination; and the competition between examining bodies is too acute to permit this standard to be raised. When once the qualifying examination has been passed, it is open to every examining body to confer its higher titles on its own terms, and without any interference from the Council. It would be invidious to attempt to discriminate between the respective values of the Fellowships of the several Royal Colleges, and of the higher medical

and surgical degrees of the several universities, although these differences are well understood in the profession itself. It may, however, be remarked that the Fellowship of the College of Physicians represents mainly a standard of conduct, while that of the College of Surgeons represents mainly a standard of attainment. Nothing but irreproachable professional behaviour will open the door to the former, while no one who can pass a very stringent examination is likely to be excluded from the attainment of the latter.

In the meanwhile, for all the practical purposes and courtesies of life, the proper style of a practitioner may be gathered from his card or his doorplate. If these bear the title of 'Dr.,' it may usually be held that he is entitled to use it; and, if they bear the letters M.B., the title of 'Dr.' is usually conferred by courtesy. If they only bear the words 'physician' or 'physician and surgeon,' then 'Mr.' is likely to be the correct designation. The worst case is that of the Licentiates of the Society of Apothecaries, who are in much perplexity as to what they ought either to call themselves or to be called by others. In the general and proper sense of the words, men who have passed examinations in medicine and surgery are clearly entitled to call themselves, and to be called by others, physicians and surgeons. But the Royal Colleges claim a monopoly of these

designations for their Members and Licentiates ; and the law, so far as it has yet been tested, appears to uphold their claim. Legally, the Licentiate of the Society is an 'apothecary,' and nothing else ; but the word is archaic, and conveys no meaning to the public. In relation to this question, some very unseemly and foolish prosecutions have been instituted, usually at the instigation of rival practitioners who were more desirous to seem than to be, more solicitous about what they were called than about what they were ; and such scandals must now and then occur, until the whole question of nomenclature has been settled by Parliament. Any one who could invent a single word which should comprise every class and description of medical practitioner would deserve well both of the profession and of the public. In the meanwhile, and since the greater part of this chapter was written, the Society of Apothecaries has decided to assert and uphold the right of its Licentiates to style themselves either 'physicians' or 'surgeons,' or both. The Society has publicly undertaken to defend, at its own sole cost, any Licentiate whose employment of either of these titles may subject him to legal proceedings.

## CHAPTER V.

## THE AIMS OF MEDICINE

MR. HALLAM, in his brief description of the medical literature of Europe during the latter half of the sixteenth century, while speaking of the manifest growth of a more scientific spirit than had formerly prevailed, justly remarks that 'the observations made in this age, and the whole practical system, are not exempt from considerable faults; the remedies were too topical, the symptoms of disease were more regarded than its cause; the theory was too simple and general; above all, a great deal of credulity and superstition prevailed in the art.' The account thus given of the mental attitude towards their calling of the most eminent physicians of three hundred years ago appears to me to represent, very fairly, the present mental attitude towards medicine of the great majority of the public. I will not say of the 'educated' public; because, in the first place, very little education is necessary in order that such an attitude may be assumed, and, in the second

place, a great deal that passes for education has little or no tendency to correct it.

The aim of medicine, using the word in its widest sense, is to arrive at a complete understanding of the structure and functions of the human body, and of the various ways and degrees in which they are related to or dependent upon one another, as well as of the circumstances by which any one of them primarily, and others as a secondary consequence, may be compelled to depart from natural conditions, and to display aberrations which we recognise as disease. Such aberrations may be of a kind to impress themselves at once upon the consciousness of the patient; or, even when very serious in their character, they may only be discoverable by some one or more of the methods of examination which are at the command of a trained and careful observer. Conditions of the former kind may be illustrated by the occurrence of pain, or of manifest changes in the outline or colour of some portion of the body, or by incapacity to see, or to hear, or to walk, or to perform some other natural and ordinary function. Conditions of the latter kind may be illustrated, as a mere example, by that gradually increasing and often unsuspected fragility of blood-vessels which is the ordinary forerunner of apoplexy.

As familiarity is said to breed contempt, so the very commonness, the universality, of many vital

actions is apt to conceal from us their recondite and complicated character. We see a child eat and drink heartily, and steadily increase in weight and stature ; and we are apt to take these occurrences as matters of course, without bestowing a thought upon their essential complexity, or upon the obscurity by which many steps of the process are still enshrouded. As a matter of fact, physiology is but upon the threshold of knowledge, even if there, with regard to the reactions between food and tissues by which the body is increased or sustained, and by which its exhausted portions are removed for future utilisation elsewhere. Medical opinions about diet are largely derived from each man's interpretation of his own necessarily limited and possibly deceptive experience, and seldom rest upon such actual knowledge of the digestive processes as would serve for the practical exclusion of error. The respective shares in these processes of chemistry, of electricity, of temperature, of environment, have yet to be worked out in the laboratory of the physiologist by careful and assiduous experiment ; the only means by which conjecture can be verified or overthrown, or by which the physician can so come to understand the operations of the body as to be able to modify or control them at his will. And what is true of digestion is also true, in a more obvious and striking manner, of that great element in the human

organism which ministers to movement, to sensation, and to thought, which mainly differentiates the human race from the lower animals with which we have so much in common, which confers upon one man the capability of being a politician, and upon another the capability of being a philosopher, and which, even in its most highly developed forms, can be thrown into a state of temporary incapacity by a dose of alcohol, of chloroform, or of morphia. If we really understood the nervous system, we should understand all the limitations of human faculty, the fears of the brave, the follies of the wise, the obstinacy of the stupid, the exaltation of the fanatic. We should know, in all probability, the precise value of every human intelligence, and should be enabled not only to seek from each individual the work which he or she was best fitted to accomplish, but also to save from shipwreck the countless brains which are now cast uselessly upon the shores of time. Instead of 'asylums' for the insane, we should have medical treatment for the earliest indications of intellectual disorder.

If we remember that the science of physiology is but a few years old, and that its practical pursuit requires the conduct of investigations of extreme difficulty and delicacy, in which the most refined instruments are employed, and in which the most trifling error or neglect may totally vitiate the con-

clusion, we shall not feel dissatisfied with the results which these few years have afforded, however much they may fall short of our ultimate desires or expectations. Two classes of facts have been brought into remarkable and previously unexpected prominence, one being that health is liable to be influenced, even in an extreme degree, by defective or perverted action of certain small portions of the organism, so insignificant in appearance that their very existence is only known to anatomists, and concerning the uses of which, only a short time ago, scarcely even a conjecture was entertained. The portions referred to are the organs collectively described as ductless glands; that is to say, they are apparently of glandular structure, but are unprovided with any manifest channel through which their secretions are discharged; but it has recently been shown that they either withdraw from or supply to the blood highly important ingredients, and that serious and even fatal diseases are to be attributed to the suspension or the imperfect performance of their respective offices. More than this, in the case of one of them, the 'thyroid' gland, it has been shown that the consequences of its defective action can be averted by feeding the patient with the thyroid glands of sheep or other animals, or by the administration of thyroid extract as medicine. The other great fact is the liability of the body to be invaded

by minute vegetable organisms, collectively called microbes, many of which are probably essential to the proper conduct of vital operations, while others, by virtue of poisons which are formed as the results of their own living and multiplying, are the immediate causes of many formidable diseases, especially of those which are liable to become epidemic. Of such, plague, cholera, fevers, diphtheria, influenza, are familiar examples; while special microbes are also known to be the causes of tuberculosis, of erysipelas, and of suppuration. One of the latest achievements of research has been the reference of the malarial fevers to minute animal parasites which inhabit the corpuscles of the blood, and are communicated to the human subject by the agency of the mosquito; while, as one general result of inquiry into facts of this order, the conclusion has been reached that the immunity from small-pox conferred by vaccination, and once regarded as an isolated fact in medicine, is but a single illustration of a widely pervading principle. The 'toxins' produced by microbes, and widely destructive to human life, are being neutralised and rendered harmless by 'antitoxins' derived from the same microbes or from their congeners.

In this state of rapidly increasing knowledge of causes and realities the intellectual aim of the physician, when he is summoned to a case of sick-

ness, is to look beyond the manifest occurrences by which the sickness is expressed, and to ask himself where and in what condition the train of perverted action has originated. The patient has pain, or he has disturbance of some function, and it is perhaps manifest that the immediate cause of either one or the other can be referred with tolerable accuracy to some particular organ, and may even be relieved, for the time at least, by some treatment locally directed to the seat of nature's outcry. But what then? Where did the trouble begin? What has the patient been doing to himself, or by what evil influence has he been invaded, which can afford a real and sufficient explanation of his state? It is only in the answers to questions of this class that cures, as distinct from palliatives, can be found.

Compared with the delicacy and complexity of the human body, the most elaborate watch ever manufactured is a simple and clumsy instrument; and a watch admits of being taken to pieces for examination, while the body, outside of very narrow limits, does not. The owner of a perfect watch might one day find that it had stopped; and a possible explanation of the circumstance might be that a particle of some foreign substance had been suffered to fall among the works, and had lodged in some position in which it arrested movement. It would be conceivable, in such a case, that a smart

shake might so displace the intruder that for the time it would no longer produce the same effect, and it might then be thought that a drop of oil might be useful in diminishing friction. The possessor of a watch so 'relieved' would probably find that the particle, whatever it might be, would again make itself felt before long; and he would reasonably fear that its presence might in time strain or cripple delicate parts, and occasion serious or permanent mischief. He would be likely to go to a skilled watchmaker, whose business it would be, whether his customer understood watchwork or not, to ascertain and remove the cause of the difficulty, and to rectify any disarrangement which it had produced. It might be his business to point out that the disordered action of the watch had been due to some wholly unsuspected cause, such, for instance, as the magnetisation of some of its parts by accidental exposure to an electric current, and to make its owner understand that, if he wished to be sure of the time for the future, he must avoid the conditions under which such exposure was likely to occur.

There is no such thing as a complete analogy; but, roughly speaking, the man who shakes the watch may fairly represent the quack, or even the imperfectly skilled medical practitioner, while the watchmaker represents the physician. Any sort of hit or miss makeshift in an emergency is the

primary, and often the sole, conception of the former ; while nothing short of complete investigation and effectual remedy can satisfy the mental requirements of the latter.

The attainment of such satisfaction, it is hardly necessary to say, does not always fall within the limits of human knowledge and human endeavour ; since the actual initial point of a morbid process may be lying behind facts which are still unknown to science. When nothing was known, for example, about the functions, or rather the uses, of the thyroid gland, no one could possibly have attributed myxœdema to its defective action ; and, in like manner, there may be many morbid processes of which the origin and true nature are entirely concealed from us, even if we know something of the conditions or habits of life which seem to foster or promote them. We are probably not far from the possession of actual knowledge concerning the origin of gout and the origin of cancer ; and it is further probable that the knowledge, when attained, will display the groundless character of a good deal of widely accepted speculation, or even of much positive assertion. The roads leading to precise knowledge are littered with the fragments of confidently expressed hypotheses ; although, in many instances, hypotheses founded upon analogy have ultimately been recognised as expressions of the truth. Thirty

years ago, for example, it was the received opinion that tuberculosis of the lungs, or 'consumption' as it was commonly called, was a disease liable to be inherited from parents, and dependent upon a constitutional taint, insomuch that a single case of consumption in a family would often seriously militate against the marriages of its other members. Yet even then the late Dr. William Budd of Bristol, who afforded one of the most perfect instances in history of the application of a thoroughly philosophical mind to the study of medicine, had convinced himself, by mere examination of the facts relating to the diffusion of the disease, and to its spread in countries into which it had been newly introduced, that it was in no sense hereditary or 'constitutional,' but that it was, to use his own words, 'an infectious fever with a long period of incubation.'

The errors of physicians on this and other subjects have frequently, when rendered manifest by the progress of time, been used by ignorant scoffers for the purpose of depreciating the value of our methods and results; and no doubt there may be much in history which is well calculated to teach modesty to the members of our calling. But it is worthy of being remembered that history, taken as a whole, represents an advance in medicine all along the line; that the errors of physicians have always

been discovered and rectified by other physicians, never by those who have afterwards criticised them; and that the results of medical labour, in the direction of curing diseases once considered incurable, of relieving suffering, of preserving and prolonging life, and of raising the standard of public health in general, have been at least as noteworthy as the advances made in any other department of human effort, as in locomotion for example, or in the application of electricity to purposes of public usefulness. At the time of the Queen's Jubilee, in 1887, it was shown that, during the five years from 1838 to 1842, there was in London an average annual mortality of 2,557 persons in every hundred thousand living. In the five years from 1880 to 1884, in a population which had more than doubled in the interval, the annual mortality had fallen to 2,101 in every hundred thousand. If the mortality in the latter quinquennial period had been equal to that in the former, 17,328 people would have died in the metropolis in each of the five years, who, as events actually occurred, were preserved alive. 'Yes,' reply some of our critics, 'but the change has been largely, perhaps mainly, due to better dwellings, greater temperance in eating and drinking, and greater cleanliness.' To some limited but unknown extent this may be true, although there are quarters in the poorer and more crowded portions of many

towns and cities into which some at least of these improvements have only superficially penetrated; but even then it is entirely to physicians that the public are indebted for the knowledge that cleanliness, temperance, and ventilation are conducive to the maintenance of a high standard of public health. 'Sanitary reformers' and 'sanitary engineers' are mere interlopers, who found the physicians bathing and ran away with their clothes. Our knowledge of the channels of diffusion of disease, and of the importance of closing or obstructing these channels, was due to Snow, to William Budd, to Netten Radcliffe, to Simon, to Buchanan, and to others their fellow workers, long before sanitary engineers had come into existence, and long before the discovery of noxious microbes had enabled us to trace the knowledge gained by these pioneers to its foundation in the facts of organic life. The problems which remain are numerous and complex; and, in proportion as they receive solution, others will come into view. The boundary of exact knowledge is always separated from the absolutely unknown by an intermediate tract which furnishes the proper sphere of hypothesis and of conjecture; but of conjecture which must be based upon what has already been ascertained, and of hypothesis which must be verified by the most stringent tests before it is accepted as truth. The conjectures must be

made, the hypotheses must be verified or rejected, by knowledge and not by ignorance; and the light of the future, like that of the past, will be derived from the careful and conscientious work of medical investigators.

In the conduct of such work the methods most in vogue differ greatly in different countries. On the continent of Europe, and probably also in the rapidly growing civilisation and enlightenment of Japan, research is hardly regarded as the duty of a practitioner, and customarily falls to professors who make it the business of their lives. In England, at the present time, there are some indications that such an arrangement would be regarded with favour in many quarters; but the rule has hitherto been that research has been the leisure occupation of comparatively young men, whose qualities and opportunities have justified them in the hope of attaining high positions as practitioners, and who have used the laboratory as a training ground for the subsequent pursuit of the art of healing. As their powers have been made known to the profession and the public, and as the consequent calls upon their time and strength have become numerous and exacting, the laboratory has been deserted for the bedside, and their places in the former have been taken by those who looked forward to succeeding them also at the latter. The system, like many other

English systems, is indefensible, or nearly so, in theory; but it has been found to succeed admirably in practice. Notwithstanding foreign endowments and professorships, the advances of medicine and surgery made in the United Kingdom, during the first fifty years of the late Queen's reign, were described by a competent authority as having been greater, not only than those of any other country, but than those of all other countries put together. Since those words were written, the increased development of the surgical methods introduced and perfected by Lord Lister has rendered them more conspicuously true, and has brought within the reach of easy and successful operation large numbers of diseased conditions at which the surgeons of even a dozen years ago could only look with a regret arising from their powerlessness to save. The methods in question are now followed in every portion of the civilised globe; and, wherever a surgeon's knife is lifted, the subject on whom it is employed has reason for grateful recollection of the name of the great Englishman.

There is therefore one vast department of medical thought and knowledge which may be called the *rational*, and which busies itself not only in tracing manifest departures from health to their immediate causes, but also in tracing these again to others which may be underlying them, so as to reverse the

steps by which disease has been developed, and ultimately to relieve the organism from the presence—or the operation of the real source or origin of its trouble. There is yet another department, which may be called the *empirical*, or that which is founded upon observation or experience without knowledge or research, and which busies itself with a recollection of the observed effects of drugs or other remedies in varying conditions of the system, and with the application of such remedies in conditions which seem to call for them, apart from any appreciation of the nature of their action. For example, it has been known for many years that quinine is a potent remedy in many forms of the so-called 'malarious' fever or ague; and, after it had been administered in various ways and doses, by and to a great number of persons, experience showed in what dose and at what period of the illness it was most likely to be efficacious. Nothing was known, or until lately even conjectured, with regard to its mode of operation; and a physician, called upon to treat a case of ague, was mainly required, apart from complications, to remember the best way of giving quinine. It has now been discovered that ague is produced by parasites which live and multiply in the blood, and that each successive paroxysm of the disease is coincident with a particular stage in the life history of a fresh swarm of these parasites. It has also

been discovered that the curative action of quinine depends upon it being destructive to the parasites ; and that, in order to produce its full effect, it must be administered at such times and in such doses as to be present in the blood in sufficient quantity at the time when these parasites are in a certain definite stage of their existence. By these discoveries the employment of quinine against ague has been removed from the domain of empirical into that of rational medicine ; and, in all probability, the conditions of its occasional real or apparent failure, or of the occasional greater potency of other medicines, such as arsenic, will before long be revealed by microscopic examination of the living parasite, as it may be seen in a drop of blood taken from the finger of the patient. A similar transference is steadily taking place in other directions ; and thus the range of empirical medicine is being contracted in precise proportion as that of rational medicine is enlarged.

While this change is being carried into effect, it is manifestly fair and reasonable to expect from a medical practitioner a working acquaintance with each of these two great divisions of the healing art. It is fair to expect from him a preparedness to employ the resources of rational medicine when they are available, and to fall back, when these resources are still undeveloped or defective, upon those which

have been handed down by experience or tradition. There may be many states in which the precise seat and nature of the malady are unknown to him ; but in which, nevertheless, the traditional lore of his calling points out the way to useful activity. When science brings him more light, he will be the first to welcome and to use it ; but, in the meanwhile, he is ready to do all that the comparative darkness will allow. It may be that the light, when it comes, will only show him that the path into which he has been led by experience was one eminently calculated to conduct him to his wished-for goal. It may be that it will display pitfalls which hereafter he may be able to avoid. At all events, it cannot fail to impart firmness to his tread, and to increase both the speed and the certainty of his progress.

Perhaps one of the greatest evils incidental to the empirical stage of medicine is the liability which it entails to the misinterpretation of experience, and to the consequent enunciation of erroneous hypotheses, which sometimes sink deeply into the minds of the profession, and often still more deeply into the minds of the public, and serve both to perpetuate error and to retard the acceptance of truth. The path of the physician is constantly encumbered by difficulties hence arising, and by the incapacity of patients to clear their minds of the *idola* bequeathed to them by former generations. Of this truth the

department of ophthalmic practice furnishes an abundance of illustrations, and so, I have no doubt, would other departments with which I am less familiar. There is a diseased condition of the eyes called glaucoma, which is most frequently met with in persons past middle life, and which, prior to the discovery that it could often be controlled by operation, led inevitably to total blindness. One of its early symptoms is frequently that vision of near objects, such as a printed page, is temporarily improved by stronger and stronger spectacles. This stage of the condition was well known and recognised at a time when the proper uses of spectacles had not been made a subject of medical investigation, and when 'advice' with regard to these useful articles was commonly sought from the tradesmen who retailed them. The retailers observed, as a matter of experience, that Mr. A. and Mrs. B., who had applied to them at short intervals for stronger and stronger glasses, were apt in the course of a short time entirely to lose their sight; and they jumped to the conclusion, not unnaturally, that the strong glasses had exerted a hurtful influence. The error was not an unprofitable one to the retailers, because it led to an increased sale of weak and intermediate powers; and, at any rate, it survives. Nothing is more common than for a patient, for whom effective glasses have been medically prescribed, to say, 'Oh! but will

they not be *too strong*?' In like manner, at a time when the causes of inflammation in an operation wound had neither been brought under control nor even discovered, such inflammation was very apt to follow operations upon the eye, and to defeat the best endeavours of the surgeon. Hence it was not only thought prudent, but became almost a maxim of practice, not to operate for cataract until it was said to be 'ripe'—that is, until it had produced such a degree of blindness that the state of the patient would not be rendered worse by failure to obtain a successful issue. Until there was no longer anything to lose, it was not thought legitimate to strive after gain. The advances of asepticism in surgery have destroyed the foundations of this opinion, and have rendered it as safe to operate at a comparatively early as at a later period; but the tradition, based upon a misinterpretation of experience, still holds its ground. Purlblind patients, for whom an operation is advised, asked piteously, 'But is it ripe?' and a failure due to some totally different cause is certain, by the friends of the sufferer, to be attributed to the operation having been 'done too soon.' In such matters every bystander fancies himself to be a competent critic; and his criticism will usually be founded upon conceptions of disease which passed into his mind in the nursery, and which had come down to the nursery maid from her grandmother.

Superstitions or survivals of an analogous kind are of potent influence in respect of sanitation. It has been made known by experience that the inhabitants of badly drained and badly scavenged districts are specially liable to suffer from cholera, from typhoid fever, or from consumption; and scientific medicine has shown that accumulations of filth and moisture afford fertile cultivation beds for the several microbes by which these diseases are produced. At present, nothing analogous is known about the habitat of any saprophytic form of the microbe of diphtheria; but, nevertheless, every outbreak of that disease in a locality is sure to issue in the discovery of 'bad smells' by amateur local sanitarians. These discoverers resemble Mr. Meek, a simple-minded medical student who was introduced to the British public, many years ago, by the amusing writer who first popularised Mont Blanc. Mr. Meek was one of a class of students attending a 'coach,' or, as he was in those days called, a 'grinder,' to be prepared for final examination. The grinder had been explaining the treatment of poisoning by corrosive acids, and had said that the best antidotes were alkaline carbonates, such as chalk. If there were no chalk at hand, the students were to say that, in an emergency, they would scrape a whitewashed wall with a fire shovel, and would administer the scrapings. 'It sounds practical, and will please the

examiners.' 'Now Mr. Meek,' continued the grinder, 'what would you do if you were sent for to a man who had hanged himself?' 'Please, sir,' replied Mr. Meek, 'I would scrape the wall with the fire-shovel!'

For the consolation of the public, however, Mr. Meek, even if he 'pleased' the examiners, would probably fail to satisfy them, and is hardly likely to be encountered in practice. His companions, who have deserved and enjoyed better fortune, and have entered upon their work in life, may properly be regarded, in general terms, as men who recognise, in any case of illness, a problem to be solved rather than a condition to be altered. A patient is not a man or woman *plus* pleurisy, or rheumatism, or pneumonia; and the diseased conditions so called are not, in the happy phrase of Miss Nightingale, 'entities, like dogs or cats,' but are changes in the performance of complicated vital processes, and are rendered even more complicated and more obscure by the personal equation of the sufferer, by the inexhaustible variability of the human organism, and by the infinitely different reaction of different individuals to the several forces which may be brought to bear upon them, whether for their extinction or for their preservation. The first duty of the practitioner is to learn that behind the sickness there is the sick man, and that no two sick men are alike. The physical

changes incidental to illness are discernible to every one of ordinary intelligence who has been trained to observe them. The readings of the thermometer, the rapidity of the pulse, the frequency of the breathing, are matters which appeal only to the senses, and about which no mistakes should be possible. It is the power of interpreting them, and of acting upon the indications which they afford, which constitutes the difference between the capable and the incapable practitioner.

It would be obviously impossible adequately to consider the aims of medicine without at the same time taking note of its limitations, of the impediments which may prevent the aims from being fully or even partially realised. The greatest of these impediments is obvious. The primary objects of medicine are to preserve life and to restore health; and, once at least in the case of every patient, the attainment of these objects must be prevented by death. A French physician, proud of his skill in the management of an intractable disease, is said to have exclaimed, over the corpse of one of his patients, '*Il est mort guéri*;' but such a victory would not usually be thought to repay the toil of achieving it. And, as we may regard death as the inevitable goal of existence, so there are many forms of disease which are scarcely other than milestones on the road by which that goal is reached. Even the hale man

of the later period of middle life always becomes conscious of a gradual diminution of his powers, usually in more than one direction; and it is not uncommon for those around him to remark that he 'is not what he was,' in relation to physical strength, or to the memory of events, or to the ready assimilation of new conceptions. A late distinguished physician was accustomed to speak of 'a diminished capability of adjustment to environment' as the true criterion of old age; and this diminution is at once an effect and an indication of a gradual change in the elasticity and vitality of the tissues of which the body is composed. When this change is met with a resigned acquiescence in its inevitable character, and with a proper 'adjustment' of acts to capabilities, it may escape the observation of others for a very considerable period; but when the flagging powers are spurred by a determination to maintain or surpass the activities of the past, when the elderly man refuses to allow himself a few more minutes in which to reach his morning train, or when he continues the daily consumption of an amount of food which would not have been excessive twenty years before, he precipitates a catastrophe which might otherwise have crept on by almost imperceptible degrees. He sends for the doctor, dolefully demanding to be 'cured,' and complaining, almost with an air of martyrdom, that he should suffer from

troubles which ordinary care and prudence would have avoided. In such conditions it is manifest that the power of medicine must not only be extremely limited, but that it must be absolutely contingent upon the adoption of a more rational rule of life when some improvement has been effected. Again, it constantly happens, of course, that the force which tends towards the extinction of some human life may be such as instantly to overwhelm the resistance of the system. The microbes of an infective disease may find entrance in unusual number or in a condition of unusual virulence ; or an injury may be essentially ' mortal ' in its character ; or the situation of some morbid change, not necessarily in itself important, may be such as to impede or arrest the performance of a function necessary to life. Such conditions do not present themselves in the practice of any other profession. An advocate, for example, is not under the necessity of losing one suit for every client ; if he were, the uncertainty of the law would become even more proverbial than it is at present. And yet it is on this particular limitation, imposed by the necessities of things, that more than half of the popular criticism of medicine and of those who follow it has been founded. Its actual achievements have been decried, only because they have not transcended conditions which are imposed upon mortal existence by the laws of nature.

There are, of course, other limitations, not in their essence insurmountable, but nevertheless imposed by the conditions under which the physician is compelled to act. Some of them are mentioned by a very wise man, one William Clowes, who was surgeon to St. Bartholomew's Hospital in the reign of Queen Elizabeth, and who lived in close friendship with Sir Walter Raleigh. Clowes was in many respects in advance of his time, most notably perhaps in his recognition of the true character and causation of some of the effects of overcrowding upon wounds, effects which were then commonly attributed to the employment of poisoned bullets or other weapons. He wrote works on various surgical subjects, and, among others, a 'Treatise on Gun-shot Wounds,' which was published in 1591, and to which there was added, as a sort of Appendix, certain 'Precepts meet for young Students in Chirurgerie' expressed in doggerel rhyme. In the course of these precepts he says :—

He that setteth a day, when his patient shall be cured,  
Is but a childish Surgeon, you may be well assured.  
Hippocrates in his 'Aphorisme,' as Galen writeth sure,  
Said foure things are needful to every kind of cure.  
The first, saith he, to God belongeth the chiefest part.  
The second to the Surgeon, who doth apply the Art.  
The third unto the Medicine, that is Dame Nature's friend.  
The fourth unto the patient, with whom I here will end.  
How then may a Surgeon appoint a time, day, or houre,  
When three parts of the cure are quite without his powre ?

Clowes was very specific in his requirements from the patient, who was not to swerve from the precepts of the surgeon, and, touching all the cure, to yield due obedience. The demand is not only reasonable, but necessary, and requires to be enforced now, just as much as it did three hundred years ago.

Apart from the foregoing limitations, there are those also to be considered which arise from the natural tendencies of the intellectual faculties of mankind, as these are present or developed in the great majority of the so-called educated classes. We are all more or less governed by what South described as 'the terrible imposture and force of words;' all more or less under the dominion of what Bacon meant by *idola*. Hence in the domain of medicine, as, I think, in all other forms of human employment, we see errors, and consequent limitations of fruitful activity, arising from endeavours to extend the applications of certain doctrines to phenomena which they are not calculated to embrace; or we see the pre-occupation of the mind by some hypothesis rendering it unconscious of the true character and bearing of events which are occurring within its observation. A doctrine which is true within limits, or with qualifications, is for a time supposed to be true universally; and, under the influence of this delusion, a familiar fact which might serve to

call attention to these limits or qualifications fails to impress upon us its true significance. There is in all but the very highest intellects a bias, usually an unconscious bias, disposing them to give greater weight to certain classes of considerations than to others ; just as, among politicians, there are some who would attach more importance to the blessings of liberty than to those of order, while there are others by whom the latter would be put in the foremost place. A highly accomplished physician, the late Sir Thomas Watson, who lived at a period when there were great differences of opinion in the medical profession with regard to questions of contagion, was accustomed to say that these differences were on distinct lines of cleavage which applied equally to many other matters of dispute ; and that, if informed of a physician's views on contagion, he would undertake to say whether he were a Whig or a Tory. ' Who shall say,' wrote Faraday, in that Lecture on Mental Education which may perhaps be described as the most comprehensive utterance of his genius, ' that new matter is not presented to us daily, passing away unrecognised ? ' and there can be few more suggestive illustrations of the question than the fact that a writer in the ' Edinburgh Review,' in the year 1822, in a notice of an Italian book on Malaria, mentioned its having been ' lately noticed that some persons who had slept in one of the most

pestilential spots in Italy under a *conopeum* or mosquito net, for the purpose of keeping off these troublesome animals, escaped the effects of the *miasma*, while others, unprovided with this expedient, took the disease.' The mind of the writer was so fully occupied with the idea of a 'miasma' that, with the facts under his eyes, he utterly failed to appreciate their significance, and thus, eighty years ago, possessed and failed to grasp an opportunity of anticipating one of the most remarkable discoveries of modern science. He went on to speculate on the possibility that the *conopeum*, by retaining certain exhalations of the body, might confer upon the air inclosed beneath it some physical properties antagonistic to the penetration of the *miasma* to the sleeper, and never thought of the exclusion of the mosquito itself as even a possible factor in the result. It is true that, eighty years ago, there were no microscopes by means of which the life history of the mosquito parasite could have been studied; but the practical means of preventing intermittent fever were as much within reach as they are at present.

I think it is fairly evident that errors arising from such causes as those which have been glanced at above cannot be attributed to any special defects, either of intellect or of training, in the medical profession regarded as a whole, but chiefly, if not

entirely, to the nature of the facts and problems with which that profession is called upon to deal. The profession has contained, I believe, quite its fair proportion of men of the very highest mental capacity; but its members cannot reasonably be expected, on the whole, to stand appreciably above the intellectual level of their period, or to escape from classes of error to which their occupations render them especially prone. It is in such causes as these, in all probability, that we should seek for an explanation of the fact that, in medicine, we not unfrequently witness revivals, perhaps in slightly altered forms, of beliefs which have prevailed in earlier times, have been regarded as of general instead as of limited application to the facts of life, and have fallen into oblivion as a result of having disappointed hopes or expectations which ought never to have prevailed. It is among people who are ignorant of the real powers of medical science, as well as ignorant of its limitations, using the word ignorant strictly in its proper sense to denote the absence of a particular kind of knowledge, that we find beliefs as to the wonderful man, or the wonderful medicine, or the wonderful cure, or the wonderful treatment, which is tolerably certain to come into notoriety with every recurring London season. Of such bubbles on the stream of time there has never yet been one which has deserved the confidence reposed

in it, or which has rested upon any assured basis of skill or knowledge.

Neither must it be forgotten, in considering the claims of mere 'physic' upon the confidence of the public, that in many instances its aid is, to say the least, superfluous, and scarcely, if at all, contributory to the cure. In a not inconsiderable proportion of the ills which afflict mankind, there is a tendency to recovery which seldom fails to assert itself, and which is quite as likely to be hindered as to be helped by injudicious or over-assiduous treatment. If we take, for example, the large class of infectious maladies which are known to arise from the invasion of disease-producing microbes, we shall find that the issue often depends, broadly speaking, upon the relation borne by the number or the virulence of the assailants to the defensive powers of the system. These defensive powers are of two principal kinds, residing first in the endeavour of the white corpuscles of the blood to consume and destroy the intruders, and secondly in an antidotal influence which appears to be exerted by substances contained in the blood serum itself. When the microbes are introduced, a certain interval, called the period of incubation, occurs before any consequences of their presence are displayed; and it is in any case possible that during this interval they may be consumed or destroyed, and that they

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may perish without producing any changes by which either the fact of their intrusion, or their specific character, can be recognised. 'During the period of incubation,' writes Professor Fischer, 'the invading bacteria are multiplying and struggling for mastery with the invaded organism. The struggle may go on without any outward signs at all, or it may be accompanied by slight disturbances of health. If the tissues conquer at the very commencement, the disease never breaks out. It is quite possible that many a temporary indisposition and fleeting local pain may be the expression of such a conflict, in which the defeat of the bacteria prevents the onset of grave illness; for it is certain that pathogenetic bacteria enter the body far more often than the number of actual illnesses we are subject to would lead us to suppose. If the first attempts at defence on the part of the body are futile, and the bacteria are able to multiply, then the disease breaks out, and severe symptoms show that the struggle between host and parasite has become more intense. Of these symptoms it is now no longer possible to say which are measures of defence on the part of the tissues, and which are signs of defeat.'

It follows that, in all cases of the former class—that is to say, whenever the resisting powers of the body are sufficient to defeat the invaders—recovery may take place without the aid of drugs, although

it will unquestionably be promoted by conditions which allow the resisting powers in question to be applied without interruption to the task which lies before them. Bodily rest, a salutary and equable temperature, and a regimen which neither deprives the body of support nor casts undue work upon the digestive system, may be mentioned as the chief of these conditions ; and it may very well happen that, in the supposed trifling indispositions which are treated by these means, probably with the addition of some so-called 'remedy,' the remedy, if not absolutely injurious, is at least in no way contributory to a recovery which yet will very frequently be ascribed to its operation. Sometimes, indeed, the 'remedy' may be distinctly injurious. In many of the struggles between the body and invading bacteria an elevation of temperature, always attended with much discomfort, is a common symptom, and is believed to play a very important part in the destruction of the invaders. This elevation of temperature may be reduced, in most instances, by the administration of certain drugs obtained from various aniline compounds, and fancifully named 'antipyrine,' 'antifebrine,' and by similar appellations. By lowering the temperature, the drug relieves the actual discomfort attendant upon its elevation, and the patient, saying that he 'feels better,' is often tempted to abandon precautions

which it is essential to his safety to observe. He is said to become convalescent from influenza ; and he dies a few days later of pneumonia. The ignorant administration of a noxious 'remedy,' for a condition in which no remedy but time was required, has turned the scale in favour of the invaders, and has enabled them to storm the citadel of life. On the other hand, of course, if the body should triumph in the ordeal, and any 'remedy' has been administered, some portion of the credit is certain to be assigned to it, whether it were administered by an over-anxious doctor or by the most ignorant and most unprincipled of quacks. In such circumstances, as Sir Thomas Watson said, the doctor, like Belinda's Betty, is praised for labours not his own. And so, while on the one hand there are innumerable conditions in which judicious treatment may turn the scale in favour of the powers of resistance, and in which injudicious treatment may turn it as powerfully in the opposite direction, so there are a vast number in which no treatment of any kind is necessary, and in which nothing but the conditions of living need be considered. In many of such instances there will, as Professor Fischer has observed, be 'local pains,' usually affecting muscular structures ; and these pains the patient will describe to his family or friends as 'rheumatism.' They have no sort or kind of resemblance to, or affinity

with, real rheumatism; but it is necessary to the comfort of the sufferer that they should be called by some name which appears to convey an idea, and, when this name is given, the next step will often be to resort to a druggist for something which is 'good for' rheumatism, or to buy and swallow some quack medicine which is advertised under the same pretence. Such medicine, if not of a nature to be actively injurious, may put the seller or the advertiser in the position of Dr. Earle's physician, who, 'if he be even present at a recovery, will be slandered with it although he be never so innocent;' and the patient, if he be a sufficient fool, may even go the length of writing a 'testimonial' of its efficacy. In a very large proportion of the cases of slight bacterial invasion the resisting forces of the healthy body are sufficient for the destruction of the invaders; and in such the functions of the doctor should be limited to a recognition of the character of the struggle, an estimation of the relative strengths of the forces which are engaged in it, and a prescription of such conditions and precautions as may assist in conducting it to a successful issue. It is only when this issue is doubtful that the more powerful resources of his art require to be called into play; and what is then to be hoped for is not the 'cure' of a 'disease' by a 'remedy,' but the careful guidance and control of antagonistic forces by the use of every means which

can turn the scale to the side for which victory is desired. Regarded from this point of view, the recovery of the patient may easily be a triumph only to be secured by the constant exercise of the most consummate skill, alike in the interpretation of symptoms, and in the application of the resources of medicine to meet their successive variations as they may arise. In too many cases, however, the ignorant impatience of the sufferer, to be 'cured,' to have something 'done' for his relief, serves to induce the physician to prescribe some innocuous medicine, and thus to confirm by his acts the popular superstitions with regard to the nature and action of 'remedies' upon disease. Every one who is tempted to do this should remember that, by yielding to the temptation, he will do no good to his patient, while he will injure his profession by playing into the hands of the quack, and by adding strength to the delusions by virtue of which that pest of society continues to exist.

## CHAPTER VI

## THE WISHES OF THE PATIENT

THE patient, as a rule, has but slender comprehension of the aims of medicine, and is therefore little likely to be in sympathy with them. He is usually a person suffering under some pain or disability from which he wishes to be relieved, and to be relieved speedily; but who seldom wishes to make any change in the ordinary course of his life, or in the ordinary conditions of his activity. He has, say, a headache; and he regards the doctor chiefly as an agent whose business it is to remove this headache, and who, if he be of competent skill, will remove it without delay, and without insisting upon any tiresome conditions, or upon any inconvenient sacrifices. A headache to him is what the primrose was to Wordsworth's hero. A doctor ought to know what is 'good for' a headache, and ought to provide something in a bottle or in a pill-box which, being duly swallowed, will not only serve a notice of ejection upon the headache, but will also see that the notice is complied with. It does not enter into the

thoughts of the average patient that headaches may arise from a great number of widely differing causes and conditions, that they may be comparatively trivial consequences of departures from physiological methods of living or of working, or that they may be storm warnings of the gravest character; but he will be distinctly cheered and comforted, and will think that he has learnt and understands something, if he be told that his particular headache is 'neuralgic,' or that it is merely 'suppressed' or 'latent' gout. If 'neuralgic' were translated into 'nerve-painic,' and if he chanced to know that nerves are the only bodily structures in or through which pain can be experienced, he might possibly arrive at the conclusion that the former explanation had not thrown any large amount of light upon the subject; but the blessedness of suppressed or of latent gout is not thus easily to be taken away. The words at once clear up the whole question at issue. His doctor, of course, knows what is 'good for' suppressed or latent gout; and the antidote will speedily arrive in the bottle or in the pill-box. The patient has always heard that a 'touch' of gout clears the air, and marks the commencement of a new term in which to cultivate and practise those habits by which the *morbis dominorum* is supposed to be produced. He is going out to dinner next week, and will not only be 'all right' by then, but will be

able to indulge with safety in a little more champagne than he has during the last few months felt quite able to take with impunity.

If this be in any degree a fair picture of the prevailing state of popular feeling with regard to illness (and I think there are not many practitioners who would deny its general accuracy), it is manifest that such a state points to a survival of thoughts and impressions which have almost passed away from the mental conceptions of the physician, although they are still prominent among those of the public. It goes back to a time when any symptom to which a definite name could be given was believed to represent an equally definite thing, an isolated perversion of some organ or derangement of some faculty, and when the art of medicine was believed mainly to consist in the employment of some drug as an antagonist to the malefic influence which thus displayed itself. Given such a survival, and it is clear that the patient would have no sympathy, perhaps even no patience, with minute inquiries into the causes by which the disturbance of his health had been produced, and would regard such inquiries as a waste of time, even if not as a cloak for ignorance. 'A good doctor,' he would say to himself, 'would "give me something" and cure me, while this man is bothering about all sorts of questions which have nothing to do with the matter. What difference can it make

to him what my father died of? I want him to cure my headache. If he does not do that soon I shall be compelled to go to somebody else. It is all nonsense for him to say that I must give up my work and take a month's holiday. I want to get on with my work, and I cannot be spared from it just now. It is all nonsense to say that I mustn't smoke my cigar. I have smoked five or six a day for the last dozen years. It is all nonsense to say that I mustn't take my whisky and water at night. I always take my whisky and water. The fellow is a muff, and I don't believe he knows what is the matter with me. He doesn't understand my "constitution," and I shan't put up with this sort of thing much longer. If my head is not better to-morrow I shall seek further advice, or I shall doctor myself. I know very well what will "agree with me," and what won't. It is just "liver," and nothing else. I will take a couple of my wife's pills to-night, and then there will be an end of the trouble.'

If we ask ourselves how it happens that bases of thought which had begun to give way in the medical profession two or three centuries ago, and which have been totally exploded, say for the last fifty years, are still active and predominant among the public—remnants of barbaric ignorance which have survived unaltered amid the progress of science and the changes wrought by time—I fear it will have to

be confessed that the profession itself has not been wholly blameless in the matter. Even within living memory it has not been an unknown thing for doctors to cultivate airs of mystery, suggesting that they could tell great wonders if they would; nor have they been free from the imputation of inventing and popularising question-begging epithets and phrases, such as 'impurity of the blood' and the like, which have never at any time represented knowledge, and which have soon been turned against those who framed them, and made to serve as the almost impregnable strongholds of ignorance and fraud. Doctors themselves have in too many instances concealed their want of knowledge of the nature of this or that phenomenon behind clouds of shallow or meaningless claptrap; and such claptrap has come to represent medical science in the estimation of vast numbers of people. It is easily picked up even by persons who are totally unacquainted with the first principles of the art of healing. Rectors' wives and country Ladies Bountiful disseminate it in rural districts; worthy cits employ it in order to discuss each other's ailments as they go to business by railway or by omnibus; and druggists use it liberally when they are invited by some credulous customer to 'put up' something 'good for a cough,' which shall not be detrimental to the customer's 'constitution.' Such phrases, like

noxious weeds, are not only useless or injurious in themselves, but they hinder the growth of useful products in the soil in which they take root.

It is curious to trace the origin and growth of claptrap. Sometimes a happy phrase suggests itself to a really able man as an easy way of escape from importunate demands for an explanation which it is impossible to give ; sometimes a sounding sentence is the embodiment of an hypothesis which the facts as then known may appear to justify. When I was a lad, a friend in our vicinity, who may be called Mr. A., was a candidate for the coronership to a western county, and employed a very shrewd and ready election agent, who came down from London. As I knew the locality and a good many of the voters, I was asked to drive round with the agent and to introduce him on his canvass. We called upon a sturdy farmer, who received us very civilly, and heard what the agent had to say, but expressed his intention of voting for our opponent, Mr. B. He had thought about the question, and told us that Mr. B. was a man of extensive legal experience, who had been for several years clerk to the county magistrates, and was accustomed to the conduct of judicial inquiries. He had nothing to say against Mr. A., but had made up his mind that Mr. B. was the best man for the post. 'Your sentiments, sir,' said the agent, 'do equal credit to your head and to your

heart, but there is still one consideration which I must urge upon you. Mr. A. *is against selling the bodies.*' A choleric exclamation burst from the farmer. 'Be he?' he shouted. 'D—— it, I should be agen that myself. You may tell Mr. A. I'll vote for un.' And he did. A good many accepted medical phrases have no better justification.

The survival in words of an erroneous conjecture, which at one time could not be considered unjustifiable, may be fairly illustrated by the use of quinine in ague, already referred to in the last chapter. It has long been common knowledge that attacks of ague occur at regular periods, separated by intervals of equal duration, although before the discovery of the parasite, and of the several stages of its life, nobody could give any explanation of the facts. It was common knowledge that quinine cured ague, or at least greatly relieved it, although nobody knew why; and so it was thought explanatory, as it was perhaps convenient, to describe quinine as an 'anti-periodic.' Then it had been found by experience that other medicines, especially arsenic, were sometimes useful in ague. The whole of them were elevated into a sort of class, and were solemnly described as 'anti-periodic remedies.' 'Periodicity' of illness came to be regarded as a phenomenon of the human organism, and as a phenomenon to be opposed by particular medicines. The whole hypothesis has

fallen to pieces like a house of cards before the discovery of the truth ; but it is not improbable that the nomenclature in which it was expressed may still be written and printed, especially in the advertisements of quacks and of quack medicines, when our descendants are dating their letters in the twenty-first century.

It is one of the characteristics of claptrap, and perhaps not the least remarkable, that it is seldom successful in its endeavour to masquerade as knowledge, but comes somehow to give itself away even at an early period of its currency. Nearly all claptrap must be the expression of some hypothesis ; and it seldom, or indeed never, happens that the hypothesis fits all the facts of the case, and is applicable to all the circumstances in which they may occur. If it did, it would cease to be an hypothesis and would become a theory—that is to say, a truth, a generalised expression of facts, a statement of the conditions under which specified events not only occur, but are certain to occur whenever the conditions are reproduced. If the reader will test current claptrap about health or disease in this way, he will hardly fail to find that, even to his own knowledge and within his own experience or observation, it is at least not universally true ; and he may depend that, if it be not universally true, it is not true at all, but is the mere crystallisation into words of an erroneous assumption

or belief. Not a few of such beliefs have become incorporated in the language, are learnt by every child who learns to talk, and are only abandoned, if at all, as a result of instruction received or of investigation undertaken later in life, of such a nature that comparatively few persons ever either receive the one or undertake the other. The common saying that So-and-so 'has caught cold' not only implies in its construction that some evil has befallen him as a consequence of exposure to a low temperature, but embodies that belief in the minds of the great majority of the persons who use it. Applied in what may be called its strictest sense to catarrh of the nasal mucous membrane, it has this meaning almost invariably; and its use will be constantly followed by a sympathetic inquiry as to the circumstances in which the exposure to 'cold' occurred. Common observation teaches all who are able to exercise it that catarrh of the nasal mucous membrane constantly occurs when no previous exposure to a low temperature can be traced; and also that exposure to a low temperature constantly fails to produce it. It is believed by physicians, with very good reason, but as yet perhaps without absolute proof, to be an ordinary infectious disease, produced, like its congeners, by its peculiar microbe, so that 'cold' has nothing whatever to do with it. The popular belief probably arose from the feeling of chilliness and the

inclination to shiver which are often experienced at the onset of catarrh—sensations which, although superficially resembling those which exposure to cold produces, are not only common to some stages of all febrile illnesses, but are usually attended with a quite perceptible elevation of bodily temperature as ascertained by the thermometer. Not one single clause of the old scholastic definition of a cause, *præsens facit, mutata mutat, sublata tollit*, is even approximately fulfilled. Hence, even the dullest non-medical person must often come to perceive that the customary medical claptrap does not apply to some particular case to which it would usually be regarded as appropriate; and, if he regard the claptrap not as a mere form of words which has survived from a period of less accurate knowledge, but as a veritable expression of medical belief as to the nature or causes of certain phenomena, he will naturally take the farther step of becoming sceptical with regard to the very foundation of medical knowledge. He will say, 'I don't believe that doctors know any more about the matter than other people, and that is very little.' Such scepticism, moreover, is usually attended by an absolutely boundless credulity—by credulity, for example, which permits a belief that gout, or rheumatism, or some other malady, can be kept at a distance by such an expedient as carrying a potato or a knuckle-bone in the pocket. In its

more ordinary forms it permits a belief in the efficacy of some so-called 'simple' remedy, or possibly of some advertised quack medicine, for some given form of illness, altogether irrespectively of the person in whom the symptoms are displayed, or of the real nature of the conditions underlying them.

Next, perhaps, to the desire to be 'cured,' to be relieved without loss of time of the particular inability or discomfort which is experienced at the moment, comes the wish of the average patient to be told what is the matter with him, and then, what is 'the cause' of it. It must not be supposed that he has any wish to be initiated into the physiology of his own organism, but he wants to be put into possession of a name, the name of some recognised 'complaint' which he may spread abroad for the information of his friends. Almost any name will do; but, as a rule, the longer it is the better it is liked. He wants to be able to regard himself as *Ego, plus* malady. When supplied with a name to suit him, comes the almost inevitable question, 'But what is the cause of it?' One of my earliest medical teachers tried to impress upon me that, when asked for an explanation of anything by a patient, the simplest and best way was to repeat the statement in words derived from another language. If asked what was the cause of the patient being so hot, to say, for example, that the cause was elevation

of temperature. In later life I have come to regard 'explanations' of this kind as claptrap, and claptrap itself as a thing which is better avoided. A busy man is greatly tempted to use it as a defence against troublesome questions; but its inevitable tendency is, I think, to set up a barrier of erroneous impressions or beliefs between the mind of the doctor and that of the patient, and to postpone that more correct appreciation of medical aims and methods by which, if it could be brought about, the realisation of these aims would be greatly promoted. It is impossible not to admire the readiness of the physician who told a great lady, curious to know 'what was the matter' with her, that she was suffering from 'a wave of debility;' but the mischief of all such phrases is that people come to receive them as if they really meant or explained something, and hence they form an aggregate of error which may constitute a serious impediment to the reception or comprehension of truth. I have occasionally ventured to meet an inquiry about a 'cause' by replying, 'I don't know the cause of anything: do you?' and have sometimes been rewarded by finding a patient who liked sincerity better than rigmarole.

The foundation of the whole difficulty is, of course, that the science of medicine, unlike its practice in pre-scientific days, rests upon an enormous

mass of data gradually collected together by the patient investigation of phenomena, by investigation conducted by the aid of chemistry, electricity, measurement, illumination, all of kinds reconдите in their several departments, and conducted by means of instruments and appliances the very nature and objects of which it would be difficult to render intelligible to the ordinary unscientific 'educated' person. 'I should like to discuss that question with you, doctor,' I once heard a prosperous city man say to an accomplished physician. 'Very likely you would,' was the reply, 'and I should be very happy to meet you. But the first essential would be for you to devote something like a twelvemonth to an endeavour to understand the phraseology which I should have to employ, and to gain some approach to knowledge of the nature of the problems which we should be called upon to consider.' This is a new aspect to the average man. He would, as a rule, admit his inability to discuss the more abstruse details of electrical or of chemical operations; but he thinks himself qualified to discuss medical topics on no better foundation than a collection of words, most of which are obsolete and many unmeaning. His misconception is a survival of the time when medicine was itself almost entirely empirical, and when the vocabulary which concealed the ignorance of the practitioner was abundantly

sufficient to express the supposed knowledge of the patient.

I do not for a moment wish to suggest that even the majority of medical practitioners, as such, are accomplished chemists, or profound electricians, or eminent investigators in any department of physical philosophy. Such positions are only for a few in any calling, although it is noteworthy that, among these few, medical practitioners will be found to hold a very conspicuous place. What I do suggest is that investigations into the processes which constitute life, and into the processes which constitute disease, have now for many years been conducted upon strictly philosophical lines, and that surmise and conjecture with regard to them have been very largely superseded by knowledge, and by knowledge which cannot fail to be itself fruitful of new discoveries. In these circumstances medical students are necessarily rendered familiar with the bearing of physical science upon the problems connected with vitality, and learn to think of these problems in terms of physical science. The majority, who are not able, whether from want of opportunity or even from want of special ability, to conduct original investigations for themselves, and whose highest ambition it must remain to apply to the relief of mankind the truths brought to light by others, have still received an education of a kind which prepares

them to appreciate these truths, to perceive the nature of their applicability to the facts of function and of its disturbances, and to recognise the side-lights which they may often throw upon conditions of very various kinds. Their minds are more or less in tune with the scientific work of the day; and they are quick not only to perceive its value, and its bearing upon their peculiar duties, but also to bring it into practical application for the advantage of their patients. There could hardly be a more signal example of this than has been furnished by the discovery of the cause and the means of propagation of ague. Medical men, all over the world, have at once recognised the prodigious importance and the almost universal applicability of the discovery, as well as the light which it may possibly be made to throw upon the diffusion of other diseases the methods of propagation of which are still unknown to us. The only note of opposition has come from the unscientific public, and especially from the unscientific traveller, who has risen in his wrath to dispute the conclusions at which Dr. Ross and his fellow-workers have arrived, and to write silly letters on the subject to non-medical newspapers. One such correspondent has been in a place where there are innumerable 'mosquitoes' but no 'fever;' another has been in a place where there are no 'mosquitoes' and where there is plenty of 'fever.'

The innumerable 'mosquitoes' may or may not be of the particular species of *Anopheles* to which alone, at present, the conveyance of the malaria parasite has been traced; and the 'fever' may or may not be of the type called malarious, which alone the *Anopheles* is known to convey. These are regarded as only minor points, matters of unimportant detail; and so the tendency to 'presumptuous judgment,' which Faraday deplored as the special vice of the classes supposed to be educated, and which has certainly not become less prevalent since his day, displays itself in its full luxuriance. The correspondent is perfectly ready, on a basis of inadequate knowledge and of careless observation, to dispute conclusions which men of science have reached by the toilsome paths of labour and of research; and when he is engaged in this congenial occupation, the very last idea to find entrance into his mind is the first which would suggest itself to a competent and impartial observer: the idea, namely, that he is making a fool of himself. He is perfectly happy; but, at the same time, he unfortunately appeals to a vast number of people whose mental qualifications are such as to bear some resemblance to his own; and so, like Newton's dog Diamond, he may easily do more mischief than he is able to understand or appreciate.

The patient whose chief desire it is to recover

from his malady, and who, as a means of attaining that primary object, desires to do all that is within his power to contribute towards its attainment, will usually act wisely if he abstain from endeavours to seek popular explanations of physiological doctrine, and is content to submit himself resignedly into the hands of the doctor whom he has selected, and in whom he has confidence, and to do and avoid what he is told to do or to avoid, without disturbing his mind as regards either nomenclature or causes. His doctor will analyse his state more easily, and will ascertain it more exactly, if he be relieved from the burden of trying to find descriptive words intelligible to the non-medical mind. One thing may be asserted with considerable confidence; and it is that a doctor, whenever it is his misfortune to be ill himself, is the most submissive of patients, and is the very last person in the world to perplex his medical friends with useless argument or with embarrassing inquiry.

## CHAPTER VII

## MEDICAL GRIEVANCES

THE efficiency of any profession, and its fitness to discharge the duties which devolve upon its members, must to some extent depend upon the position which it holds in the estimation of the public, and upon its contentment or the reverse with the legislative and other conditions under which its work is carried on. Regarded from this standpoint, the practice of the healing art is beset with grievances which often press hardly upon large numbers of those who may be called the rank and file of the medical army. The leading practitioners of London and other great centres of population, whether they be those who have won their *status* by work of a kind appreciated by their brethren, or whether they belong to the order of Dr. Flapdoodle, whose great discovery it was that most of the ailments of fashionable people were curable by poultices of crumpled rose-leaves, which only his 'own' nurses were able to make and to apply, have indeed little to complain of as regards

either prosperity or consideration—due allowance being made for the fact that the nature of the consideration differs in its character in the very different cases. In every large provincial town it is easy to find one or more men of extensive practice and good local repute, and a stratum of others who are in fairly comfortable circumstances; but underneath this stratum there will usually be at least some for whom existence is a struggle, for whom the proper education of their children is a matter of great difficulty, whose families would be left destitute by the father's death, and whose sense of professional honour and rectitude is liable to be blunted by the conditions under which their lives are passed, or by the oftentimes degrading character of the competition to which they are exposed. In these circumstances the shifts and the dishonesty of a trade are apt to be imported into a profession which should be wholly exempt from them, and the occasional misdoings of sorely tried individuals are then apt to be taken by a very uninstructed public as evidences of the moral tone of the profession as a whole. The general conclusion thus arrived at is not materially altered by the fact that people will usually make exception in favour of their 'own' doctor, who is a person selected by their sagacity, and therefore free from the errors or tendencies to error which beset his brethren. When Mr. Burdett-Coutts

rushed into print about the alleged shortcomings of the military hospitals in South Africa, nothing was more common than to hear it said, even by apparently respectable people, who would presumably have been wounded if their own honour or honesty had been impugned, that 'of course' all doctors who either knew the facts at first hand, or who became acquainted with them afterwards in an official capacity, would seek to place them in the light most favourable either to their own profession or to their official superiors, and would be likely to conceal or to pervert the truth for the purpose of effecting this very inconsiderable object. A learned professor of surgery, it will be remembered, was gravely objected to as a member of the Commission of Inquiry, on no other ground than that he had formerly earned money from the Government as an examiner into the acquirements of young men desirous of entering the Army Medical Service. It is perhaps contributory to such a view of the case that a tone of systematic depreciation of 'doctors' has become an important element in the stock in trade of a great variety of rascals, who live by swindling the public out of their money under false pretences of selling 'remedies' for this or that, as well as of a large number of the accomplices of these rascals, accomplices who are often, it may be, ignorant and unthinking rather than actively dishonest,

but who at least have not either the humour or the imagination to realise the full absurdity of their own pretences to criticise men who are conversant with the subjects on which they speak, and who, as a rule, are better educated and of better capacity than the critics.

As one element tending towards excessive competition and its consequences, it is unfortunately true that the numbers of the medical profession have at least kept pace with the increase of the population, and have sometimes even outstripped it; while, at the same time, the improvements in medical science have greatly diminished the number and the duration of cases of illness. Tubercular disease of the lungs, commonly called 'phthisis' or 'consumption,' has diminished by almost one half in the last half of the century; and the death-rate from the various maladies classed together as 'fever' has diminished in a still greater ratio. Both phthisis and fever are diseases of long continuance, requiring constant medical care over considerable periods of time; and, with regard to the former, not only has its prevalence diminished, but its treatment is now largely conducted, perhaps with less marked advantage than was at one time expected, in nursing homes called 'sanitaria,' which are not without points of resemblance to those 'hydropathic' establishments once described by the first Lord Lytton as 'ill-assorted unions between medicine and hotel-keeping.'

In surgery the change is even greater than in medicine. Women, for example, are liable to internal tumours called 'ovarian,' which, if left alone, usually wear out life in about four years. Fifty years ago, a woman with ovarian tumour might expect to languish for about the ordinary period, throughout the whole of which she would require unremitting medical attendance, directed to the sustentation of strength and to the relief of pain. All this would fall within the natural province of the family doctor, who would become indispensable to the sufferer, and whose ministrations would be valued accordingly. In the present day, as soon as an ovarian tumour is discovered, it is removed by operation, and the patient usually returns within a month to her accustomed pursuits. As a rule, the family doctor does not perform the operation, but transfers his patient for the purpose to some surgeon in London or in some neighbouring provincial city, so that his share in the attendance is almost limited to his discovery of the nature of the malady. As compared with the past, he loses both in income and in opportunities of rendering valuable service to the patient, by whom his contribution to the cure is very apt to be overlooked or forgotten. Such illustrations might be almost indefinitely multiplied; and the changes all tend in the same direction, that of leaving the family doctor with less to do, and of

rendering him a less important personage in the family history. As a net result the general practitioner earns less money than his father did, and seldom occupies so good a position in the estimation of his patients. He has also to contend against a great deal of mistaken or misdirected 'charity' in the way of hospitals, which offer gratuitous attendance to the nominally poor, and only seldom surround it with any safeguards against its being obtained by many people who are well able to pay for it at ordinary rates. From these conditions, taken together, it follows that the general practitioner may consider himself very lucky if he be not confronted with a sort of competition which ought to be confined to trade, and of which one of the first effects is to awaken a spirit akin to that of trading in his competitors. The so-called 'working classes,' among whom there are but few individuals who do as much work in a week as every busy doctor does in a day, unite into associations called 'clubs,' bodies which receive weekly or monthly contributions from their members, and pay them stipends during periods of incapacity produced by illness, besides being subservient to various political or 'trades-union' ends. These clubs usually appoint a doctor to attend the members, and to give certificates of illness on which sick pay can be drawn; and this system would be beneficial to all concerned if the clubs were to pay a proper rate of

remuneration. They are restrained from doing this, partly by competition among rival practitioners, who underbid one another for their suffrages, and partly by invincible ignorance of any standard by which the value of medical services can be correctly measured. To them one 'doctor' is as good, and one 'bottle of stuff' as valuable, as another. If they have a prejudice, it is in favour of a doctor who gives them plenty of physic, and who is ready to talk about illness down to the level of their superstitions. Even such a prejudice will give way to considerations of price; and a new-comer in a town, who lets it be known that he will 'take clubs' at sixpence per head per annum less than the current rates, is quite certain before long to find himself in possession of some. The clubs, on the other hand, are naturally desirous to increase the respectability and prosperity of their membership, and they spare no pains to enrol retail tradesmen and other comparatively well-to-do persons, who are quite able to pay for medical attendance, but who are by no means superior to the temptation of obtaining it for next to nothing, and who expect to receive more attention and more 'stuff' than would content mere labourers. The existence of the 'clubs,' which embraced only men, and in a few cases women working at certain trades, suggested to a country doctor, some fifty years ago, the establishment of similar organisations to include

women and children, and to these he gave the name of 'Provident Dispensaries,' and took considerable pains to get them set on foot in various parts of England. His idea was that suitable persons should pay each one penny per week during health, or in the case of children dependent upon their parents one halfpenny, in order to secure medical attendance and medicines during illness. He admitted the principle of charitable contributions from the more wealthy, but the income thus derived was to be applied solely to establishment expenses, leaving all the pence and half pence to the doctors. The originator of the scheme desired that every doctor in a locality should take part in the work, and that every subscriber should be entered upon the list of such doctor as he or she might select, with liberty to change once a year, but in the meanwhile to have no claim for services except upon the one selected. The founder believed it would be possible to obtain the small payment from nearly every one who was too poor to pay ordinary medical fees, and that not only would the aggregate of medical receipts be increased, but that the profession would be relieved from an immense burden of bad debts, of useless book-keeping, and of practically unremunerated attendance which now falls upon them. His expectations were not realised, partly because the more prosperous practitioners were at best lukewarm with regard to the

scheme, and partly because the number of subscribing members was generally insufficient. The project was then taken up by philanthropists, who blundered over it as they do over most things; and it finally passed into the hands of speculative persons, who saw their way to making a profit. For this purpose, having obtained a certain number of subscribers in any populous locality, they hired a doctor at an annual stipend to attend the members of the 'association,' and then proceeded to enlarge this association, by the bait of practically free doctoring, as much as the population of the district would allow. The doctor engaged was usually debarred from other practice, and the association provided a house, drugs, and a dispenser. Everything which was obtained from the subscribers in excess of the doctor's stipend and the other expenses represented clear profit; and some of these associations obtained in this way quite considerable amounts, so that they were able to purchase the freehold of the 'dispensary' premises, and even to divide a bonus among the contributors; the doctor, by whose work all this was done, having only his salary, with no participation in the gains, and no voice in the management of the business of which he was the sole support. If he grumbled, he was dismissed, and another appointed. In some towns the operations of such associations became so extensive as to

gather the whole of the medical attendance upon people below the rank of gentlefolk into their hands, and to drive away medical men who had previously been well established, but whose patients left them as soon as they could obtain visits and medicine for a nominal sum. It was alleged by the opponents of the system that, even at a penny a week, the attendance given was not always worth the money which was paid for it; and it is certain that the so-called 'appointments' were not generally attractive to young men of promise. Most of them were held, in all probability, by persons whose qualities would have found more appropriate spheres of activity in the pursuit of trade, and who could not refrain from carrying the principles and the proceedings of traders into a profession which, before all other things, should be characterised by unselfishness.

Perhaps it would not be wholly unjust to say that the taint of trade has fallen upon the medical profession from circumstances in its history which may be regretted, but which cannot now be changed. Among these, perhaps the most powerful in the long run has been the exaggerated importance which in former times was ascribed to the 'remedy,' and the inadequate importance ascribed to the skill required in selecting and in administering it. Among the peasantry, at least, it was to the 'stuff,' and not to the doctor, that the cure of the malady was

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commonly attributed. The doctor was considered to be entirely subordinate to the 'medicine.' The doctor himself, to a very great extent, was directly to blame for this valuation. The general practitioner was paid, until quite recent times, only by the amount of physic which the patient could be persuaded to swallow; and he not unnaturally sought to attach supreme importance to that which was highly charged for and extremely profitable. Even a physician, if called in by a general practitioner who supplied medicine, was compelled to shape his course accordingly. Before the consultation, the patient would receive daily a six-ounce 'mixture,' containing four doses, and for which the charge might be half-a-crown. After the consultation, this would be changed to four separate bottles, each containing a 'draught,' and the four charged at six shillings. It was quite right that the general practitioner should receive additional payment for the extra trouble involved by the consultation, and only the way in which this was done was wrong. The necessary medicine for the case would perhaps be mercury, given by pill or by inunction; and the 'draughts' would be of diluted infusion of roses, flavoured by a trace of sulphate of magnesia, or of diluted infusion of rhubarb, with a few grains of bicarbonate of soda. Flavour was essential, because it was an article of popular belief that all medicine

must be nauseous. I knew in my youth a gentleman who was in large general practice in the city, and who frankly said he could not afford to go into a patient's house for less than ten and sixpence. His right to receive ten and sixpence no one would dispute; but his right to charge for a visit was not recognised, and 'medicine' had to be sent to make up the amount. Some of it, no doubt, was necessary or beneficial; but the doctor had to insist that it should all be swallowed. The fiction governing his charges prevented him from saying, 'You must take the pill, but you need not take the draught,' or *vice versa*, and so the efficacy of treatment was represented to the public as turning upon a large consumption of medicine. In other words, the administration of drugs came to be regarded as comprising the whole art of the physician.

The death knell of this system was rung by homœopathy, which gave practical demonstration to the public that they could get well without the amount of drugging to which they had become accustomed; but the change was attended by circumstances which prevented the destruction of the old superstition, and only changed its form. The so-called homœopathists were either too ignorant to know, or not sufficiently honest to confess, the absolute inefficacy of their 'dilutions,' and these were gravely held up to the public as 'remedies' for

their diseases. Patients were told, and were expected to believe, that it was physically possible to administer a 'decillionth of a grain' of something in a globule; and that this decillionth of a grain, when administered, was capable of effecting some change in their bodily condition. In other words, the old faith in the 'medicine,' instead of being weakened, was confirmed under another form. Much was done to shake belief in earlier methods of medication; much to shake belief in the soundness of accepted medical doctrines; but nothing to emancipate the great body of the public from their belief in 'remedies,' or to give them a more correct notion of the meanings of illness and recovery. It was not the doctor, but still the medicine, to which recovery was ascribed in common belief and in domestic parlance. Superstitions, cognate to the widely spread belief that a raw potato carried in a pocket will prevent rheumatism, fairly enough represented the state of general enlightenment on all medical questions. It was a natural or even an inevitable consequence that one compounder of 'medicine' was as highly regarded as another. It was by reason of the doctor's 'medicine' that the patient got well, and he would be just as likely to get well if the 'medicine' were that of a quack or of a druggist. Such at any rate was the condition of opinion, not only among old women who believed in witchcraft,

but in the House of Commons which passed the Medical Act of 1858, and which sympathised with the desire of the Government 'jealously to guard' the right of unqualified persons to practise medicine.

There is a homely Turkish proverb that 'a fish stinks from its head;' and, wherever we find objectionable conditions affecting large bodies of people, it becomes permissible to inquire how far the governing authorities of those bodies may be responsible for the origin or for the continuance of the conditions. I have very little knowledge of what has been done in Scotland or Ireland; and from the English universities, which minister to many interests besides those of medicine and surgery, I do not think that much can reasonably be expected. But we have in England two great corporations, the Royal Colleges of Physicians and of Surgeons; and it does not appear to me that either of them has taken any really important step towards asserting, maintaining, or still less towards increasing the dignity of the profession which they jointly constitute and represent. Within the last fifty years, medicine and surgery, in the hands of their chief practitioners, have been raised from the position almost of handicrafts to that of true science, and little or no note has been taken of the fact. Nothing has been done to bring that fact home to the

understandings of the people; and not much, in my humble judgment, to secure that the rising generation of general practitioners shall be so educated as to render them men of science, as distinguished from men engaged in carrying into their daily work the often ill-understood precepts of their teachers. A stranger who is taken ill in a remote village, and who sends for the doctor practising there, scarcely even expects to be visited by a man of science. He only expects a village doctor, who will apply the routine treatment for his 'disease' with the accustomed verbal formalities. The patient could not supply the medicine, but, if he were possessed of a little experience of life, he would be able to predict with some confidence the nature of the observations which would be made to him. A common omnibus advertisement, of a doctor feeling a sick man's pulse and recommending a quack medicine, is sufficiently like the ordinary routine to pass muster as a transcript from life among those whom it is intended to deceive. The resemblance is increased by the melancholy fact that during late years medical men have largely abandoned the practice of prescribing individually for their patients. They frequently suffer the prescribing to be done for them by an advertising manufacturing druggist, whose 'tabloids' or other messes are made to suffice for every case which presents itself. The

medicine is no longer adapted to the patient, but the patient is expected to adapt his ailments to the medicine.

The 'Times' paper, about two years ago, contained a weighty letter from Professor Armstrong, commenting upon an address given to the students of St. George's Hospital by Sir Michael Foster, and saying with regard to chemistry that it has never yet been taught to medical students, that the medical examinations in so-called practical chemistry even at the London University, are beneath contempt, that the knowledge gained is of no permanent value, and that the educational discipline is *nil*. Almost contemporaneously, Dr. Penrose, in his introductory address at the same hospital, told the students that no object was of more importance to them than a knowledge of that special branch of chemistry which is often distinguished as 'physiological.' They would, he said, have many most difficult chemical problems to solve, and it would be absolutely impossible for them to handle these efficiently unless they had been thoroughly well trained in the principles of the science, and in the *technique* required in chemical investigations. Where, it may be asked, is such training to be obtained? I believe that students are suffered to enter the profession as qualified men, without having attained a sufficient knowledge of chemistry to enable

them to understand, I will not say the chemistry of digestion, but the very words in which the conclusions of that chemistry would be technically expressed.

Partly because, from a very remote antiquity, medical men have tended to pose rather as men of mystery than as men of science, while mystery is becoming more or less exploded, and partly because the authorities who have controlled medical education have taken no sufficient care that it should be conducted in a scientific rather than, as Professor Armstrong says, in a didactic manner, and hence have failed to produce men whose clinical work has been based on the lines of scientific investigation, the general public have never realised the knowledge that medicine is a science at all. It is because those who are said to be educated, members of Parliament and such like people, regard it mainly as a mechanical art or handicraft, to be followed according to certain rules by persons of imperfect education and moderate capacity, that it is held in such small account by the vulgar as to be exploited for profit by the managers of sick clubs and benefit societies. If the upper classes of society could once be made to understand the nature and extent of the knowledge required, and of the mental operations concerned, in the proper investigation of a single case of illness, that understanding would in time

percolate through the lower social strata also, and would bring about a total change of view with regard to the value to be attached to medical work, and with regard to the only conditions under which it can be successfully and properly conducted. Even benefit societies would come to be aware that it was mistaken economy to employ a doctor of inferior type, who was willing to work for an inadequate remuneration.

In order that such a change might be brought about, it would be necessary, in the first place, to educate the public to a comprehension of the nature and aims of medicine ; and, in the second place, so to reform the profession itself that these aims should be steadily pursued.

About forty years ago, at a time when the weekly Journal published by the British Medical Association, and intended only for the perusal of its members, had touched a very low point of illiteracy and inefficiency, I urged upon the Association that this publication should be abandoned, and that its place should be taken by a quarterly journal of the highest class, calculated to stand on the same plane with the 'Edinburgh' or the 'Quarterly,' and addressed by the medical profession to the public. I suggested that there should be a named editor, of very high professional standing, who should not himself write, but should be confined to the proper

editorial function of judging; and that all articles should be anonymous, so that no contributor should write with any indirect view to his own advancement. The function of the Journal so conducted was to be the diffusion of information concerning all matters relating to medicine which were calculated to be of general interest, or to display the real character of the highest class of medical work; as well as to speak *ex cathedra* upon the very large number of social questions relating to education, sanitation, dietetics, clothing, exercise, recreation, the training of the senses and physical powers, and other kindred subjects, which rested in the main upon physiology—that is to say, upon systematised knowledge of bodily function, and of which only those who possessed such knowledge could by any possibility be adequate exponents. I am even now fully convinced that such a journal, if it could be set on foot and appropriately sustained, would in a few years greatly modify the popular conceptions of medicine and of medical practitioners, that it would compel, by the force of an enlightened public opinion, very extensive changes in the range and in the conduct of medical education, whether preliminary or actual, and that it would strike a death-blow at quackery, whether rampant in the advertising columns of newspapers, or lying delicately concealed within the ranks of the profession itself. Forty years ago the

fates were hostile to the enterprise, and they would probably be equally hostile to-day. The members of the Association preferred to receive every week the twaddle to which they had become accustomed, and to retain their opportunities of placing on record, from time to time, any interesting experiences which might fall within their respective areas of observation.

As time went on, medical grievances multiplied, and were mostly capable of reference to two distinct sets of causes: first, to undue competition between practitioners who were more numerous than the requirements of the public rendered necessary; secondly, to the unduly low estimate of the value of medical knowledge which arose from the ignorance of the public, and was reflected in the acts of nearly every department of the State. A large number of medical men in private practice found it hard to obtain a decent living, and the position occupied by the members of the public medical services was in many respects unsatisfactory. The circumstances were ripe for agitation, and were not long in producing it; but it fell into bad hands and was guided into wrong directions.

Taken collectively, the public are by no means deficient in the power of forming fairly correct opinions about those with whom they are brought into direct and frequent contact; and the common tendency to run agape after some futile politician is

mainly due to the haze through which he is seen, and to the fact that the contact with him has been insufficient. Roughly considered, the competitions of medical practice lead to the success, and hence to the contentment, of the fittest, of the men who give the largest amounts of time and care to their duties, and who bring the soundest judgments to bear upon the performance of them : so that the leisure and the inclination to agitate are found almost exclusively among those who are at least comparative failures as far as the daily applications of their art are concerned. To a rank and file of this description there come, of course, appropriate ' leaders ' of a kind not to be confounded with the heads of the profession in the ordinary sense ; and of such ' leaders ' at least two types have of late years become familiar. There is the rising consultant, not without a certain sort of coarse ability, who is not fastidious about means, who does not care two straws either for the status of the profession or for the prosperity or failure of any member of it but himself, and who is perfectly well aware of the absurdity of his own claptrap, but who sees a royal road to consulting practice through a diligent reproduction of the episode of Codlin and Short. There is the loquacious person of inferior education and unbalanced judgment, who is never weary of being in evidence, and who is not in quest of a devious path to professional success, but whose

vanity will not allow him to remain contentedly in the obscurity which would seem most suited to his parts and to his attainments.

Under such leadership as this, a numerically not inconsiderable section of the profession, instead of reflecting on the real foundations of the evils of undue competition, of quackery, and of comparative disesteem in the public services, evils of which they complain with only too much reason, have been clamouring for legislative or administrative changes which they have not the most remote chance of obtaining, and in striving for which they are only beating the air. Their professed hope is first in the General Medical Council, and, secondly, in Parliament.

The General Medical Council has already been mentioned as a body created by Parliament in 1858, to which was committed the charge of the Medical Register, or official list of legally qualified practitioners, for the purpose of seeing that the conditions of admission to it were practically the same at each of the nineteen portals through which entrance might be gained. The members of the Council were originally appointed by the nineteen licensing bodies, with the addition of six nominees of the Crown; and, although they had no actual authority over studies and examinations, they were expected to be able to influence them by recommendations which

represented agreement among themselves. As a natural corollary to what was at least an apparent control over admissions to the Register, they received power to remove from it the names of persons who after admission were shown to be unfit to practise the profession—persons who had been convicted of crime in an ordinary court of law, or who were found, on inquiry by the Council itself, to have been ‘guilty of infamous conduct in any professional respect.’ These ambiguous words passed through Parliament unchallenged and unexplained, but they may fairly be taken to express a belief that a qualified practitioner might act in such a manner as to show, while escaping the meshes of the law, that he was unfit for the duties and responsibilities of his calling, and that he ought no longer to be protected or privileged by the law in pursuing it. The object of the Register was stated to be to enable the *public* to distinguish qualified from unqualified persons; and the power of removal from it was quite clearly given for the protection of the *public*, and not at all for the protection of the profession.

Notwithstanding the very manifest intention of the law, a persistent attempt has of late years been made by agitators to induce the Council to use its power of removal from the Register for the diminution of professional competition, and to declare it ‘infamous’ to be medical officer to such

an association as that described upon page 160 : with the further suggestion that, if such action of the Council were on appeal reversed by the Judges, as it assuredly would be, Parliament *must* legislate in the desired direction. The Council has not yet ventured to pursue the course thus urged upon it, but it has gone the length of advising practitioners who have been complained of on the indicated ground to reconsider their line of conduct, with the result that some appointments of the kind have been relinquished. But the idea that the King's Bench Division would sustain the Council in removing a man whose sole offence was his refusal to submit to their dictation, or the idea that Parliament would ever pass a law rendering it penal for a free-born Englishman to bring his knowledge and skill into the open market, and to sell them on any terms he chose to accept, is too absurd to be seriously entertained outside a nursery.

The truth is that the agitators about this and other real or alleged medical grievances are mere trade-unionists, whose remedies would be far worse than the evils against which they are directed. The adoption of these remedies would not only hopelessly degrade and vulgarise the profession, converting it into a body pursuing sordid ends by unworthy means, and turning its thoughts away from the high standards of knowing and acting towards which

they should be habitually directed, but it would also place its members in a position of antagonism to the public, as persons who were seeking their pound of flesh by any methods which might offer themselves. In such a contest the weight of numbers and the power of the purse would always prevail, and the profession would emerge from it not only defeated but disgraced. The only effective means for the redress of medical grievances would be by a very extensive reform alike of preliminary and of professional education, by an abolition of the system under which nineteen different bodies compete for the fees of licentiates, and by an active determination, on the part of medical practitioners, to strive by word and deed to accomplish the education of their masters.

The labours of such men as Manson, and Ross, and others their congeners, as a knowledge of the nature and the significance of these labours becomes gradually spread abroad, will do more to put the profession in its proper place in the estimation of the public than could ever be done by laws or law-makers, or by the most rigid enforcement of rules founded upon trade-union principles. Any such rules must indeed be absolutely opposed to the highest ideals of professional conduct, and the observance of them would be fatal to that increase of knowledge which is the first and most important of

all requirements, and for which freedom of thought and action form the most essential condition.

While a certain proportion of the members of the medical profession, a proportion which might perhaps be best described as commercially rather than scientifically minded, is laboriously striving to bring down their calling to the level of a trade, the essential difference between the two is yet more or less dimly perceived by the public; and one of the needs of the day is to render this perception clear, and to place it upon a secure foundation. The medical trade-union leader is fond of comparing himself to a baker. 'Why,' he asks, 'should the doctor concern himself at all about the supply of medical attendance to the sick poor? The baker does not concern himself about supplying the hungry poor with bread, but he sells his bread to the local authorities at the highest price he can obtain for it, and leaves the distribution to be done by them at the public expense. If I am summoned to a poor man, why should I not insist upon being paid beforehand, lest I should never be paid at all; and, if the patient dies while the money is being sought for, why am I to be blamed? The baker would not part with a loaf until he received the money for it; and why should I extend my help to a patient except under the same condition?'

The average man who hears this argument is

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probably conscious that it is fallacious, even although he may not be able at the moment to put his finger upon the fallacy. His instincts will probably induce him to wish that the speaker were not only a baker, but a baker in Turkey, where, in the probable event of his being detected in giving short weight to a customer, he would have one of his ears nailed to his door-post, and would be furnished with a knife with which to release himself when so disposed. The unsoundness of the argument depends upon the falsity of the assumed analogy between things so diverse as skill and merchandise. Skill is a gift, by the cultivation and exercise of which it is honest and honourable to live and to prosper; but which it is neither honest nor honourable to withhold from suffering fellow-creatures in their time of need. It is part of the common heritage of mankind, of which, by every principle of charity, those who are richly endowed with it are bound to give out of their abundance. Merchandise is a matter of human invention, intended to be bought and sold as a means of getting gain.

It would be very well if the members of the medical profession and the public would alike recognise that the money gains of skill must, as a rule, be less than those of merchandise, if only by reason of the limitations of the field over which the skill can be exerted. Skill is a personal matter; and in this

mainly consists the difference between a profession and a trade. The professional man must do his work himself, or at least with a very limited amount of help from others; while the tradesman can multiply his assistants indefinitely, and each of them will be equally capable of representing or replacing the principal to a customer. The tradesman who invents a new adulteration of tea, or of jam, or of tobacco, and who covers blank walls with flaming posters, may become a millionaire with no addition to his personal efforts, and obtains his percentage of profit upon every pound of the mixture which is sold through any of his possibly numerous agencies. He has his reward. The doctor who, like Lord Lister, for example, removes the incubus of fatality from surgery, or who, like Sir Patrick Manson, points the way to the extinction of diseases which have rendered many of the fairest portions of the world uninhabitable, obtains no greater pecuniary recompense than that which he can gain in the limited field of his personal exertions; and to mankind in general he imparts his knowledge without price. Money is too necessary for many purposes ever to hold anything but a high place in the estimation either of the public or of sensible individuals; but this should not render us blind to the fact that other things also are worthy of esteem, and that large numbers of doctors, who exercise their vocation in

circumstances which render it impossible for them to become rich, are nevertheless sources of more benefit to their neighbours and to the community than any stray plutocrats of which the locality may be able to boast. On this account, if on no other, it would seem that doctors are entitled to an amount of social consideration which is not always extended to them, and which indeed such of them as are content to be compared to bakers can hardly expect to receive. As a body the profession can never be wealthy, and it ought therefore to protest effectively against any estimation of its merits by a standard of wealth alone. Except among mere social parasites, there is even now the dawning of a tendency to estimate the plutocrats themselves less by the number of their millions than by the uses to which the millions are being applied; and, with regard to the doctors, the genius of Charles Dickens long ago struck the keynote of the truth in the words which he put into the mouth of his heroine, the doctor's wife:—

‘ We are not rich in the bank, but we have always prospered, and we have quite enough. I never walk out with my husband but I hear the people bless him. I never go into a house of any degree but I hear his praises or see them in grateful eyes. I never lie down at night but I know that in the course of that day he has alleviated pain, and soothed

some fellow-creature in the time of need. I know that from the beds of those who were past recovery thanks have often gone up, in the last hour, for his patient administration. Is not this to be rich ?'

I do not think that the doctor described by the great novelist could have had many grievances, or that the comparison between him and the baker could have been so sustained as to cover many points of resemblance. I should even conjecture that he would have felt for the medical trade-unionist the sort of compassion with which we sometimes recognise that a person, not wholly without claims to some merits or good qualities, has been so unfortunate as to drift into a calling for which he is unfit, and in which his unfitness is not only disastrous to himself but tends also towards the depreciation of his brethren.

With regard to the professional grievances which arise in connection with the public services, naval, military, sanitary, or poor-law, they are nearly all directly traceable to the ignorance of the authorities on scientific questions, and on the nature of scientific evidence and of scientific work—ignorance which would be removed by that education of our masters to which, as I have already said, we ought diligently to apply ourselves. The average politician who is responsible for the framing of Acts of Parlia-

ment, and sometimes for their administration, has been nurtured from his youth upon compromise, which he usually regards as the highest development of human wisdom; and he seldom has sufficient knowledge to be aware that he cannot by any compromise evade the laws of physics or of biology, through which coaches and six cannot be driven. The doctor perhaps wishes to close the channels of diffusion of typhoid fever in some locality, and the owner of insanitary property wishes to leave them as they are. There is a perfectly clear issue; and the politician decides that both of the disputants must concede something, that some of the channels must be closed, but not all of them, which would be an 'extreme' measure; and he thinks both sides unreasonable if they are not pleased. As a result, neither is pleased; the spread of the fever is unchecked, and the politician turns upon the doctor and says that the preventive measures carried out at his desire have done no good. Not long ago I heard of a country town where a labourer travelling in search of work obtained it in a business wherein fifteen or twenty other men were employed in the same building, and in close juxtaposition to one another. On the day after his arrival, the new-comer was discovered to have small-pox, mild in his case, but as virulently contagious as if it had been severe. The man was promptly isolated, and the doctor told

the local authority that the other workmen in the place had not been vaccinated since infancy, and that, unless they were revaccinated immediately, some at least of them would be certain to develop the disease. The men were willing to be vaccinated, but only on condition that wages should be guaranteed to them by the local authority for any time during which they were disabled from work by the state of their arms. The local authority refused to assent to this proposal on the ground of expense; and so, in spite of the doctor, nothing was done. Twelve days later, six of the men showed the first symptoms of small-pox, others followed, and the resulting outbreak cost the locality over two thousand pounds, all but a few pounds of which would have been saved if the doctor's advice had been followed. Vaccination is more rapid in its action than small-pox; and hence, if it had been performed on the day after exposure to small-pox contagion, the latter would have been overtaken and neutralised.

A local authority such as this, rendered rash and dogmatic by ignorance, reminds me of a conversation I once had with a peasant in a midland county. On a fine and bright day, with a large eclipse of the sun impending, I walked along a country road, and found the man busy ditching in what I thought to be his dinner-hour. I asked if he were getting on with his work because it would soon be dark. He

stared at me in bewilderment, and I continued, 'You know there is going to be an eclipse of the sun, and that it will be nearly dark at two o'clock?' The man turned round in surly fashion, and struck his spade vigorously into the ground, saying only, 'I reckon not, mester.' He thought that, as he would himself have phrased it, I was 'making game of him.'

Action of the kind described is by no means confined to small municipalities; and in this respect again it sometimes happens that the fish 'stinks from the head.' It was at least commonly believed that, after the passing of the Public Health Act of 1872, the one function which the President of the Local Government Board was expected by the Cabinet to discharge was that of taking care that the Act should not be so administered as to imperil the support which the Government was accustomed to receive from the usually 'liberal' owners of nuisances and of insanitary property; and this belief was certainly not weakened by events. Attempts at impossible compromise were the order of the day, and commonly resulted in futile half-measures which were worse than complete neglect. They did nothing to protect the public health, and only served to cast doubt upon the usefulness of the more complete proceedings of which they were but faint and feeble imitations.

The grievances in the army were of much the same type as those in the civil administration. The commanding officer was possessed by some fad, 'a poor thing, but his own,' in relation to marching, or to diet, or to dress, or to some detail of military life, and it became the duty of the medical officer to warn him that, if the fad were brought into operation, certain consequences would follow. The commanding officer became angry, was determined to have the fad, the whole fad, and nothing but the fad, anathematised the medical officer and the laws of nature with equal and sublime impartiality, and at once issued his orders. The laws of nature were not disturbed by the anathema, and the consequences followed in due course. If they had not followed, the commanding officer would perhaps have been good-natured, and at all events he would have had an opening for graceful 'chaff' of the doctor in the presence of the subalterns. That they did follow, converted the warning into an offence; and an offended commanding officer has many opportunities of diminishing the comfort of those around him. Friction followed, and the 'military' authorities duly 'supported' the commanding officer. Conditions arose in the service which rendered young medical men of ability and promise unwilling to enter it; and it is more than probable that some of those who did enter laid themselves open, from

time to time, to various sorts of animadversion. Their position was often rendered extremely difficult by the kind of antagonism which at one period had sprung up between the medical and the 'combatant' branches of the service, and which rendered the former quick to take offence, and jealous of the privileges of the class to which they belonged. The experience of the war, by bringing the two classes more closely together, and by displaying their mutual dependence on each other, did much to remove the antagonism, and, it may be hoped, to remove it for ever. It is therefore unnecessary to pursue the topic, more especially as the conditions affecting the Royal Army Medical Corps have lately been entirely remodelled, so that it is wiser to turn hopefully towards the future than to dwell upon the regrettable incidents of the past.

Another medical grievance of some reality depends upon the extent to which Parliament has called upon the profession to render public services for which no remuneration is provided. The most conspicuous example of this is afforded by certificates of the cause of death, which the practitioner in attendance upon the deceased is bound to furnish, and for which printed books of forms are provided by the State, but for which no fee is paid, presumably because the Legislature was ignorant of the trouble which must sometimes be taken, and the

care which must always be exercised, in order to render the document available for any other purpose than the compilation of erroneous statistics. Medical men have submitted, in lamblike fashion, to the burden thus imposed upon them ; but they none the less feel that no such demand would ever be made upon the members of any other calling, and they have only too much reason to fear lest this one should be employed against them as a precedent. The laws regulating the registration of deaths have now been in force for more than sixty years ; and they afford large chances of impunity to poisoners, while their defects render it impossible to tabulate the causes of mortality with the accuracy which the public interests demand. It is inevitable that they must be amended before long ; and it is to be hoped that, whenever the time comes, our legislators will so far have mastered the elementary principles of honesty as to give effect to the precept that the labourer is worthy of his hire.

The most conspicuous medical grievances of the present day will admit of arrangement under five heads, which are, briefly, the permitted practice of unqualified persons ; the abuse of medical charity at hospitals and dispensaries ; the diversion to the service of the comparatively wealthy of plans devised for the assistance of the poor ; the scanty respect shown for medical attainments and medical work in

a variety of enactments, as well as in the administration of many of the public services ; and, lastly, the hindrances consequent upon the prevalence of 'anti-ism' and of quackery. The first and last of these are of sufficient importance to deserve separate treatment, and to afford the subject matter of chapters devoted to them.

## CHAPTER VIII

## THE HINDRANCES TO MEDICINE : (I.) 'ANTIS'

WINWOOD READE, in 'The Martyrdom of Man,' speaks of medicine as 'a science which has made much progress, but which is yet in its infancy, and which will some day transform us into new beings.' While the infancy is tending towards maturity, and while the indicated goal is still distant, it is worth while to inquire what are the chief hindrances to its attainment. Speaking collectively, they may all be summed up in the one word ignorance—in the sense of ignorance of the aims of medicine, and of the methods by which alone these aims can be realised—combined, of course, with that absence of sympathy, on the part not only of the public but also of persons in eminent positions, which such ignorance would almost of necessity entail.

We find, however, that the widely diffused ignorance of the public generally, in itself a hindrance not to be despised, but still operating in a passive rather than in an active sense, has in recent times

become crystallised into certain forms of low organisation, which are intended to offer more than a passive opposition to the advancement of science and the increase of knowledge. Such low organisations or societies have usually adopted titles commencing with the word 'Anti,' as anti-vivisection society or anti-vaccination society; and hence their members have come to be collectively described as 'Antis.'

The most frequent motive power of what, for the sake of convenience, may perhaps be called 'Anti-ism,' and may be defined as the profession of convictions differing from those which are founded upon the knowledge of experts, and ratified by the common sense of mankind, is at least as old as human nature, and was candidly expressed at Ephesus by one Demetrius, a maker of silver shrines for Diana, who declared that by this craft he 'had his living,' and who became an Anti-Paulite in consequence. Anti-ism is largely organised by agents who are in the position of Demetrius, although they can seldom lay claim to his sincerity.

An 'anti' anything society will usually be found to consist of a small number of active promoters, who may often have no other visible means of support than such as may accrue to them from their secretarial or other salaries, and who have to obtain these salaries by working upon the credulity of

ignorant people—ignorant, that is, in relation to the particular matter in hand—often without regard to the truth or falsehood of the assertions by which their objects are to be attained. The first of these objects is, of course, to make out a sufficient semblance of a case to attract pecuniary contributions from persons of a humble order of intelligence, such as feeble-minded old ladies or half-educated preachers, and also to win over to their side a certain number of enthusiasts in foolishness, such as the gentleman who used to go about lecturing for the purpose of convincing his hearers that the earth was not a globe but a plane surface, or such as the gentleman who periodically proclaims his inability to understand the nature of the moon's rotation. Reinforced, it may be, by a few fifth-rate professional men, doctors, barristers, politicians, or what not, in search of a possibly profitable notoriety, they open a campaign of agitation against the procedure, whatever it may be, which they have undertaken to oppose. Itinerant spouters are hired. Pamphlets and leaflets are printed and distributed. Meetings are held and advertised. Inferior newspapers are 'approached.' By these and other well-understood methods, a sort of fictitious semblance of public opinion is produced, first in one locality and then in another; and all converts are duly bled for the continued furtherance of the 'cause.' It is said to be

the ordinary calculation of a London street beggar that he can traverse one hundred streets in a day, and that each street will yield at least a penny. In like manner, the secretary of an 'anti' society is supposed to calculate that every provincial town, however small, can be made to yield some contribution towards his annual stipend. '*Le jour va passer,*' as Robert Macaire said, '*mais les badauds ne passeront pas ;*' and it is the prevalence of the *badaud* which chiefly secures the sinews of war to the various 'anti' agitations.

If we come to the rank and file of Anti-ism, to the people who provide the salaries of the secretaries, the hire of the spouters, and the money for the printer's bills, we find ourselves in the presence of an (intellectually) ragged regiment of the most curious description. We have no precise English equivalent for the sense in which the word 'crank' is used in the United States, but such an equivalent would be very useful if we possessed it. It would be inaccurate to describe any particular form of anti-ism as a monomania ; because the afflicted persons, speaking generally, although specially predisposed to favour some particular form, and to consecrate their main energies to its service, are, as a rule, benevolently disposed towards all other forms also. An 'Anti' possessing only a single mental twist would be looked upon as rather a poor creature by the

great bulk of the fraternity; and a typical example, supposing him or her to be primarily an anti-vivisectionist, would be expected to be also an anti-vaccinationist, to put trust in spirit-rapping and palmistry, to believe in divination by 'crystals,' to advocate legislative prohibition of the use of alcohol, to view with pleasure the unchecked dissemination of various diseases, and to be convinced that the plays of Shakespeare were written by Bacon. It is by virtue of this comprehensiveness of anti-ism that its various representatives are able to combine for what is called in America 'log-rolling,' and to extort from weak-kneed parliamentary candidates all manner of promises of opposition to this, that, and the other—promises the fulfilment of which has often been claimed at unexpected or inconvenient times, with the result, in at least one instance, of seriously diminishing the efficiency of the army, and with it the safety of the Empire.

Perhaps the best-known form of anti-ism, and also, with a possible exception in favour of the anti-vaccinationists, the most mischievous, is that exhibited by the society, or the societies (for I am not sure whether the original people have been suffered to keep so profitable a field wholly to themselves), which have been formed with the professed object of placing difficulties in the way of scientific experiments on living animals, or even with that of for-

bidding such experiments altogether. I do not propose to waste many pages upon a controversy in which the objectors are intellectually beneath contempt, and in which morally they have disgraced themselves by the continual repetition of statements which have as continually been proved to be false ; but, nevertheless, a few words may be written on the chief aspects of the questions at issue.

In the first place, it is absolutely certain that every advance of knowledge by which the medicine of to-day is distinguished from that of the physicians described by Molière or Le Sage, or by which the surgery of to-day is distinguished from that of the time when the dames of crusaders were accustomed to apply healing ointment to the weapon with which a wound had been inflicted, and to leave the wound itself uncared for, has been the direct result of experiments conducted upon living animals, and, in the great majority of instances, could have been arrived at in no other way. About this there can be, I will not say no difference of opinion, because opinion signifies an impression made upon the mind in the absence of certain knowledge, but no doubt on the part of any one who is competent to speak with authority. Every physiologist could point to a large number of discoveries of the highest value and importance, equally beneficial, in many instances, to mankind and to many of the lower animals them-

selves, which have been the direct fruits of experimentation; while no 'anti' could point to any considerable advance which has been made independently of experiments, or in any other way than by their guidance. The illustrious Harvey left it as his last injunction to the Fellows of the College of Physicians that they should 'search and study out the secrets of Nature by way of experiment;' and the equally illustrious Boerhaave, more than fifty years later, when he resigned the Rectorship of the University of Leyden, delivered an oration in which he 'declared, in the strongest terms, in favour of experimental knowledge,' and reflected with just severity upon those 'who are too easily disgusted with the slow method of obtaining true knowledge by frequent experiments, who rather choose to consult their own imaginations than to inquire into Nature, and are better pleased with the amusement of forming hypotheses than with the drudgery of making observations.' The years which have since elapsed have brought nothing but confirmation of the truths which these utterances expressed, and justification of the wisdom by which they were dictated.

It has never been disputed among sane people, at any period of history, that it may be justifiable to inflict suffering, or even death, not only upon animals, but also upon human beings, for the attain-

ment of any sufficient compensating advantage. On this principle the soldiers of the Empire have recently been exposed to wounds and death in South Africa ; and, although British soldiers are obtained by voluntary enlistment, it must not be forgotten that, in most civilised countries, military service involving similar risks may be obligatory upon every able-bodied citizen. Not to speak of the amount of suffering annually inflicted upon vast numbers of birds and animals under the name of sport, or of the slaughter of animals for food, few would dispute that a horse may properly be pushed to the full measure of his powers, or ridden until he drops dead, in order to procure help for human beings who are exposed to mortal perils from fire, from shipwreck, or from criminal violence. Few would deny that a dog may be properly urged, in defence of his master, to encounter an adversary of greatly superior power, and to engage in a contest which can have only one issue. No one, on the other hand, could be excused for riding a horse to death for amusement, or for sacrificing the life of a dog merely for the pleasure of seeing him attack an antagonist more powerful than himself. In other words, it is legitimate to inflict pain or death upon sentient beings, not excepting mankind, for the attainment of adequate ends ; and it is not legitimate to inflict pain or death for the attainment of inadequate ends. No right-

mind man would hesitate to prick the skin of a rabbit with a needle for the sake of saving hundreds of children from death by diphtheria ; and no right-minded man would subject hundreds of rabbits to cruel torture for the sake of saving one child from a scratch. There can be no absolute right or wrong in the matter, and the question must always be purely one of balance, only to be correctly determined by an accurate knowledge of the amount of suffering likely to be inflicted on the one hand, and of the amount of benefit reasonably to be expected on the other.

If this be so—and the proposition appears to me to be self-evident—it is plain that no one is able to judge of the propriety of performing a certain physiological experiment unless he or she be thoroughly well informed with regard to the nature and the importance of the problem which the experiment is intended to solve ; and it is equally plain that this condition can only be fulfilled by a very small number of specially trained people. To be a physiologist of the first rank requires mental endowments at least as considerable as those which are required in order to be a mathematician of the first rank ; and even a very moderate extent of physiological knowledge is far less generally diffused, as part of an ordinary liberal education, than an equally moderate degree of mathematical attainment. It is,

in all probability, by reason of the comparatively wide diffusion of the latter, that we do not find the average curate, or the average single lady of more advanced years, in the least inclined to dispute the conclusions of Sylvester or of Cayley, or to question the utility of their work; while they fancy themselves quite able to deal trippingly with the conclusions or the work of Harvey or of Claude Bernard. It should be remembered, moreover, that an experiment, like a single step in a mathematical analysis, is usually only a link in a prolonged chain of investigation, and can only be properly regarded in relation to all that has preceded, and to all that is likely to follow it. To take a single example, it would probably be admitted, even by a physiologist, that the determination by experiment of the laws governing one single step of the digestive process might not in itself be of any great value or importance. But the digestive process, regarded as a whole, is that by which the food we consume is converted into the various tissues of the body; and in the course of this conversion there are many possibilities of disaster which it is the province of science to obviate. For example, instead of healthy tissue, nerve or muscle or what not, a portion of the food may be converted into cancerous growth, which, after prolonged suffering, will destroy the life of the individual in whom it occurs. Cancer, indeed, appears to be more frequent

in this country than it was a generation ago ; and there is some reason to connect the increase with an increased consumption of highly nutritious food, such as the national prosperity has rendered generally accessible to all classes. We do not know whether the primary change in cancer is to be sought in one or more of the numerous transformations which food undergoes in the alimentary canal ; or in the secretions of those ' ductless glands ' which contribute important materials to the general constitution of the blood ; or in some change in the tissues by which, although receiving due supplies of nutriment, they convert it into morbid growth instead of into their own proper substance. Some day this knowledge will be obtained ; but it can only be obtained by tracking the whole process of nutrition from the mouth to the tissues, by noting every change which occurs during its course, and by discovering every condition by which these changes may be modified or controlled. The most apparently trivial fact may easily afford the clue to the removal of all the difficulties by which, in dealing with the causation and prevention of cancer, surgeons are at present hampered. In relation to such an inquiry, indeed, no fact is trivial ; and no one can venture to predict at what point of the research the investigator may be brought within sight of his reward.

In relation to questions of such a kind as this—

and it would be easy to cite many similar ones—it is manifest that the element of knowledge, which I have asserted to be necessary to the formation of a sound judgment concerning the propriety of any given experiment, must be almost entirely absent from the majority of people. In such a case nothing can be settled by mere plausibility of statement in the absence of special learning, because the question is one which only special learning can decide. The ignorance of an ordinary 'anti' in relation to such matters—nay, even the ignorance of a large proportion of 'educated' men and women—would scarcely be exaggerated by comparing it to the ignorance of horned cattle. The ox 'knoweth his owner,' and follows the herdsman by whom his stall is supplied with fodder, just as an 'anti' suffering from cancer would hasten to a doctor in the hope of securing release from pain or prolongation of life. But the 'anti' is incapable of appreciating the value of the researches through which alone the benefits that he seeks can be conferred upon him, just as the ox is incapable of appreciating those studies and experiments of the agriculturist by which the quantity and the nutritive properties of fodder are increased. Equally ignorant, they are equally thankless; but it is reserved for the human animal to revile his benefactor.

The restrictions under which experiments upon

living animals are performed in Great Britain are such as ought entirely to satisfy the demands of all persons who are desirous of preventing needless suffering, and are not made matters of complaint by any instructed physiologist, except in so far as their enforcement is liable, from time to time, to be injuriously modified in response to the outcries of 'antis' who are supposed to possess political influence. I have heard of an instance in which an experiment of pressing importance was nearly being postponed because the Home Office was unwilling to grant an additional license until after the annual report on the subject had been presented to Parliament; and it is probable that this instance has not been an isolated one, and that delay injurious to the public interests may more than once have been thus occasioned. This was not the case in the instance referred to; because the experimenter, instead of waiting, proceeded at once to a foreign country, and was able, in the course of two or three weeks, to determine the question at issue. But to the restrictions themselves, assuming them to be properly carried into effect, there is no real objection. The qualifications necessary to make a successful experimenter cannot be regarded as common; and physiological laboratories, if no license were required for them, might possibly be established in excess of the requirements of science, as well as in excess of the available men

competent to conduct them, and might be used by persons whose announced results would fail to carry conviction to the scientific world, or, at least, would require to be verified by repetition before they could be received. It is said that, with a sufficiently defective microscope, and with adequate unskilfulness in its employment, it is possible to make unlimited discoveries in the domain of bacteriology; and the same general principle would doubtless apply to research of other kinds. It is also unfortunately true that a certain proportion of human beings find pleasure in the infliction of suffering, and would be cruel to animals, as they often are to their fellow creatures, or even to their children, for the sake of mere amusement. On all grounds, therefore, it is eminently desirable that no more experiments should be performed than are necessary for the legitimate purposes of scientific research, that these should be performed with the smallest possible amount of pain to the animals employed, either during the course of the experiment or after its completion, and that they should be performed only by persons of skill and experience, capable of doing what is required in the best possible way. On all these points the law makes complete provision.

It is not uncommon among 'antis' to denounce experiments for their alleged cruelty; but the de-

nunciation seldom, if ever, rests upon any basis of fact. I have never myself performed an experiment on a living animal, but I have witnessed some, and in those in which the subjects were suffered to survive, and to recover from the anæsthetic, there was certainly no cruelty at all. It is well known that most of the lower animals are less sensitive to pain than mankind; and even in mankind there is little or no pain from an operation wound which has been dressed antiseptically. A dog or a monkey just recovered from chloroform will usually take food with eagerness, and will respond to notice as if nothing had been done to it; while rabbits will munch lettuce with the utmost unconcern as soon as they are released from the hands of the operator. Most of the experiments at which I have been present were performed by the late Sir Benjamin Richardson, and had for their special object the prevention of cruelty. They were undertaken as part of his endeavours to discover an absolutely painless method of slaughtering animals for food; and at least one outcome of them has been the lethal chamber, in which thousands of dogs, whose brains would otherwise have been beaten out with bludgeons, have been suffered to pass quietly from their after-dinner sleep to a death of the very approach of which they were unconscious. It must also be remembered, in comparing the lower animals to mankind, that the

former are at least comparatively free from the mental pain which is produced by illness or physical incapacity. A man with a crippled leg will remain sadly in his bed, often much troubled by anxieties about the probable duration of his illness or the probable extent of his recovery. A dog with a crippled leg will be off upon the other three, in brisk search either of food or of the companionship of others of his species.

It has often been observed of the most conspicuous 'antis' that they do not object to cruelty unless it be calculated to be useful to mankind; and that, when it is practised under the name of 'sport,' it not only receives from them no censure, but is justified or even extolled. It is obvious that this line can only be taken for the purpose of conciliating influential people, who would be unlikely to countenance an organisation by which their own amusements were condemned. A society which persuades a noble duke to take the chair at one of its meetings, and in doing so to declare himself a 'sportsman,' must be quite prepared to go any possible length in the direction of 'swallowing the camel,' for it is unquestionable that more suffering is often inflicted upon living creatures under the name of sport in the course of a single day than would be inflicted by all the experimenters in England between January and December. There is a pursuit

of which the late Mr. Arthur Orton, better known as the 'Tichborne Claimant,' was an eminent patron and professor, and of the ordinary effects of which I was one day forcibly reminded. In the course of a country walk I picked up a blue rock pigeon, which had been so maimed by some unsuccessful shot as to be incapable of either flying or of obtaining food, and which was reduced to extreme weakness by slow starvation, which must have continued over many days. I put the poor bird out of its misery, and it felt like a mere skeleton under its feathers. Mr. Hardy, in one of his most powerful descriptions, writes as follows :—

'In the midst of these whimsical fancies she heard a new strange sound among the leaves. It might be the wind, yet there was scarcely any wind. Sometimes it was a palpitation, sometimes a flutter ; sometimes it was a sort of gasp or gurgle. Soon she was certain that the noises came from wild creatures of some kind, the more so when, originating in the boughs overhead, they were followed by the fall of a heavy body upon the ground. Had she been ensconced here under other and more pleasant conditions she would have become alarmed ; but outside humanity she had at present no fear.

'Day at length broke in the sky. When it had been day aloft for some little while it became day in the wood.

‘Directly the assuring and prosaic light of the world’s active hours had grown strong she crept from under her hillock of leaves, and looked around boldly. Then she perceived what had been going on to disturb her. The plantation wherein she had taken shelter ran down at this spot into a peak, which ended it hitherward, outside the hedge being arable ground. Under the trees several pheasants lay about, their rich plumage dabbled with blood; some were dead, some feebly moving their wings, some staring up at the sky, some pulsating feebly, some contorted, some stretched out—all of them writhing in agony, except the fortunate ones whose tortures had ended during the night by the inability of nature to bear more.

‘Tess guessed at once the meaning of this. The birds had been driven down into this corner the day before by some shooting party; and while those that had dropped dead under the shot, or had died before nightfall, had been searched for and carried off, many slightly wounded birds had escaped and hidden themselves away, or risen among the thick boughs, where they had maintained their position till they grew weaker with loss of blood in the night-time, when they had fallen one by one as she had heard them.

‘She had occasionally caught glimpses of these men in girlhood, looking over hedges, or peering

through bushes, and pointing their guns, strangely accoutred, a bloodthirsty light in their eyes. She had been told that, rough and brutal as they seemed just then, they were not like this all the year round, but were, in fact, quite civil persons save during certain weeks of autumn and winter, when, like the inhabitants of the Malay Peninsula, they ran amock, and made it their purpose to destroy life—in this case harmless feathered creatures, brought into being by artificial means solely to gratify these propensities—at once so unmannerly and unchivalrous towards their weaker fellows in nature's teeming family.'

I am not a sportsman. Brought up as a country boy, I was taught the use of a gun as soon as I was big enough to hold one; and my boyhood was certainly responsible for some consequent destruction of birds and ground game. When I came to man's estate, opportunities of shooting no longer came in my way; and I did not care for them enough to seek them out. I am not sufficiently acquainted with all sides of the question to form, still less to express, any general opinion as to whether the evils or the advantages of 'sport' are on the whole preponderant. Not being an 'anti,' I have comparatively little inclination towards presumptuous judgment on subjects concerning which I am imperfectly informed. I will not even stigmatise as cruelty the pain inflicted in the

name of sport ; nor will I venture on any sweeping assertion to the effect that persons who defend sport while they condemn experimentation must, whether they be dukes or costermongers, be contemptible hypocrites. I will not even say that the sportsman inflicts pain for the pleasure of inflicting it. I leave this style of conducting a discussion to be the undisturbed monopoly of the 'antis' by whom it has so long and so zealously been practised. The sportsman may be able to urge pleas in extenuation of his conduct which have not occurred to me, and of which, if they were set forth, I might feel bound to admit the cogency. I have neither the desire nor the intention to condemn him ; and still less again, not being an 'anti,' have I either the desire or the intention to injure him. I am content to point out that the pain which he inflicts exceeds, by many thousandfold, that which is inflicted by the experimenter ; and I am quite willing to admit that his own deficiency of imagination may hinder him from perceiving the full effects of his amusement. As Mr. Lecky pointed out, many years ago, the amount of conscious cruelty displayed by amusements that inflict suffering on animals bears no kind of proportion to the intensity of that suffering. Could we (he wrote) 'follow with adequate realisation the pangs of the wounded birds that are struck down in our sports, or of the timid hare in the long course of its flight, we

should probably conclude that they were not really less than those caused by the Spanish bull-fight, or by the English pastimes of the last century. But the excitement of the chase refracts the imagination, and owing to the diminutive size of the victim, and the undemonstrative character of its suffering, these sports do not exercise that prejudicial influence upon character which they would exercise if the sufferings of the animals were vividly realised, and were at the same time accepted as an element in the enjoyment.' But, whatever may be the deficiencies of the sportsman's imagination, the suffering which he inflicts remains, and seems to me entirely to justify a demand that he, like the experimenter, should be prepared to defend, by incontestable facts and valid arguments, the line of conduct which he sees fit to pursue. If such facts exist, and such arguments can be adduced, the position of the sportsman should be an easy one, because it is certain that, unlike the experimenter, he will not have to seek his justification in what will be practically unknown territory to the great majority of his hearers. The case of the 'antis,' on the contrary, rests largely upon their own absolute ignorance of the issues really involved in the discussions into which they rashly plunge, and still more largely upon their confident expectation of a corresponding ignorance among the classes and persons to whom they chiefly desire to appeal.

P

The passage which I have quoted from Mr. Lecky was written more than thirty years ago, and had, of course, no special reference to the question with which I am now endeavouring to deal. In one of his later works, however, he treats of this question explicitly, and in terms as strong as any which I should feel inclined to employ myself. Referring to the probable consequences of the increased activity of women in the sphere of politics, he points out that one of these consequences may be to accentuate tendencies which are already dangerously powerful in English legislation. 'Women, and especially unmarried women, are on the whole more impulsive and emotional than men; more easily induced to gratify an undisciplined or misplaced compassion, to the neglect of the larger and more permanent interests of society; more apt to dwell upon the proximate than the more distant results; more subject to fanaticisms, which often acquire almost the intensity of monomania. We have had a melancholy example of this in the attitude assumed of late years by a large class of educated Englishwomen on the subject of vivisection. That a practice which may be and has been gravely abused is properly subject to legislative control will probably be very generally admitted. But it would be difficult to conceive an act of greater folly or wickedness than to prohibit absolutely the most efficient of all methods

of tracing the origin, course, and filiation of disease, the only safe way of testing the efficacy of possible preventives and remedies which may either prove fatal or be of inestimable benefit to mankind. What tyrant could inflict a greater curse upon his kind than deliberately to shut it out from the best chance of preventing, alleviating, or curing masses of human suffering, the magnitude and poignancy of which it is impossible for any imagination adequately to conceive? What folly could be greater than to do this in a country where experiments on animals are so guarded and limited by law that they undoubtedly inflict far less suffering in the space of a year than field sports in the space of a day?'

Of the chief remaining forms of 'anti-ism' it is hardly necessary to speak at any length. They are alike in being the outcome of the grossest ignorance, often stimulated into activity by the coarsest and most sordid greed; and they have for their avowed objects to promote the increase and diffusion of loathsome diseases, by which grievous mortality is occasioned, and by which the efficiency of many of those who survive them is seriously diminished, not only in the persons of the original sufferers, but also in their offspring for a succession of generations. Unwomanly women in search of notoriety, and mountebanks making a trade of religion, find in these lower forms of 'anti-ism' congenial fields of

activity, and will continue, until the public are more enlightened than at present, to accomplish a certain proportion of the mischief at which they aim. It is manifest that their tenets and opinions are in direct conflict with the conclusions of medical science and with the aims of medical practice, and that their objects can only be attained by bringing these conclusions and these aims into disregard. The very existence of 'anti-ism' rests upon an assumption that, in such matters, persons who are unskilled in medicine are better and more competent judges than those whose lives have been devoted to its study; and a paradox which, in relation to any other kind of knowledge, would be at once rejected on the ground of an absurdity not to be rendered more manifest by argument than by the simplest and most barren statement, is gravely put forward, occasionally in the pulpit, often in the boudoir, and sometimes, either directly or by innuendo, in the inferior press, as a proposition that should be gravely entertained, and seriously acted upon, by persons who profess to be in possession of the faculty of reason. It is mainly in this way, by a constant endeavour to undermine and disparage the authority of 'doctors,' that all the forms of 'anti-ism' become impediments to the attainment by medicine of that position as a guide to the conduct of life which it will one day certainly assume. In the meanwhile there is not,

as far as I am aware, any instance on record of the most inveterate 'anti,' when suffering from disease or injury, failing to submit instantly to medical control, even in cases in which the knowledge calculated to restore him to health had been entirely gained by some of the methods which it was the chief aim of his own particular delusion to abolish or suppress. In regarding the question as a whole, we may find comfort in those teachings of history which point quite plainly to the evanescent character of un-reasoning fanaticism. The outcries of the 'antis' are not more foolish than was the clamour raised against the drama by the Puritans in the reign of Charles I. ; and, as the drama has survived to be one of the great sources of pleasure and instruction in our own day, so will medicine survive the attacks of foolishness, and will ultimately fulfil its destiny as the great source of physical welfare to mankind. The basis on which the greater part of aggressive 'anti-ism' rests is even now mainly and obviously venal, and the public cannot long continue to regard with toleration the teaching of those who are paid for the special purpose of misleading them.

## CHAPTER IX

## THE HINDRANCES TO MEDICINE : (II.) QUACKS AND QUACKERY

THE amount of impunity enjoyed by quacks, and the extent of the prevalence of quackery, in any country, must largely depend upon the provisions of the law ; and, in considering these provisions as they exist in England, where they are at least likely to be in general harmony with public opinion, it is impossible not to be struck by the contrast they present to any which have reference to the discharge of clerical or legal functions. In medicine and surgery the quack not only has a free hand, but he is practically assisted and encouraged by the State. In relation to the Church and the Law he is in every case forbidden to take effective action ; and in many cases any attempt to do so would bring him under the operation of penal enactments.

When the Medical Act of 1858 was introduced into the House of Commons, its principal sponsor, the Rt. Hon. W. Cowper, felt it necessary expressly

to disclaim any endeavour to hinder or prevent illegal practice. He said that the projected Register would enable the public (if they were so disposed) to distinguish (not qualified men from quacks, but) qualified from unqualified *practitioners*, and that it was proposed that public appointments should, *generally speaking*, be held only by the former ; but that he 'was disposed *jealously to guard* the right of private individuals to consult whomsoever they pleased, whether they happened to be learned or unlearned.' In saying this he was no doubt appealing to the public opinion of the House, and he knew very well that any endeavour to prohibit unqualified practice would be unsuccessful. The second reading of the Bill was opposed by Mr. Black, then one of the members for Edinburgh, on the express ground that it 'contained no provision to do away with quacks.' Mr. Black had no support, and did not attempt to divide the House.

At the very time when this was occurring, and for many years previously, the practice of unqualified persons as solicitors was and had been strictly forbidden, with the complete approval both of public opinion and of the Legislature. In other words, the public were fully aware that the acts of sham lawyers, if permitted, would be attended with danger to the security of property ; but they were not aware, or did not realise in any effective manner, that the acts

of sham doctors would be attended with danger to the security of life. They did not want the sham lawyers: they did want the sham doctors. The difference between the two cases is clearly brought out in two proverbs of approximately equal currency. One of them is that 'every man is either a fool or his own physician at forty;' the other is that 'every man who is his own lawyer has a fool for a client.'

If we ask ourselves what can be the reason for this difference, I think we shall trace it to the fact that the validity of anything purporting to be a legal document is constantly being tested, and conspicuously established or overthrown, by the decisions of courts of law, in a way which not even the most ignorant or most stupid can overlook or mistake; so that all persons have been rendered solicitous that any documents in which they may be interested should be prepared with the aid of the best skill that is available for the purpose. The validity, so to speak, of the doctor's prescription, its fitness for the accomplishment of its intended purpose, can only be tested in a very uncertain manner; and the result is always liable to be attributed to causes which had no share in its production.

The reader on whom I have in any degree succeeded in impressing the wide difference which exists between the aims of medicine, as they are in

reality, and as they are understood by the average patient or by the majority of the public, will have no difficulty in perceiving to how great an extent the avenues of knowledge upon the subject are choked up by vast accumulations and survivals of error and absurdity. It is not surprising that this should be so, or that it should be so in a degree which is without parallel in the case of any other department of learning. Considerations relating to health become potent in the nursery, and the doctrines of the middle ages are early implanted in the minds of children. Every other branch of knowledge is limited in its influence and its applications to a comparatively small number of individuals, and seldom affects even these sufficiently early to become incrustated with traditions kindred to those of witchcraft. The interest attaching to the avoidance or to the cure of disease commences with the dawn of intelligence, and only ceases with its decay. Everybody has been ill, or is ill, or has friends and relatives who, in the delicious phrase of the West Country, 'enjoy bad health.' Illness breaks up schools, spoils juvenile parties, takes the pleasure out of holidays, and occasions or prevents family trips to the seaside. One of the other great troubles of childhood, the sermon, not impossibly with the Collect for the day or a part of the Catechism in its wake, comes only on Sunday ; but illness comes on all days, and is

associated with physic, which the juvenile sufferer is taught to look upon as bearing some analogy to the spell of an exorcist, as being something by which the illness is to be conquered and driven away. A link is formed between the name given to a supposed condition, and the name given to a supposed 'remedy,' a link which is seldom completely broken, even by the experience of after life. The conception of disease as something extraneous by which the body is invaded, and the conception of a 'remedy' as something by which the intruder may be expelled, are strengthened and confirmed by what South happily called 'the terrible imposture and force of words,' and will be found, not seldom, to cling, either actually or by manifest implication, to the language employed by members of the medical profession itself. They indeed know better; but they are often tempted to employ a dialect which custom has rendered familiar to their patients.

The sum of life is made up of a vast number of operations, which are more and more being referred to physical laws, and less to vital endowments. Disease, speaking generally, is derangement of one or more of these operations, or loss of harmony between them, occasioned by some change in the conditions under which they are performed, but leaving them subject to the same physical laws as they were aforesaid. If the physics of the animal

body were as well understood as the physics of the stellar universe, physiologists would be able to explain the perturbations which constitute disease, just as Adams and Le Verrier were able to explain perturbations in the movement of the planet Uranus. Disease is but the operation of ordinary law under changed conditions—the changed conditions, for the most part, being such as to lead to the excessive, defective, or perverted performance of some natural function. The consequences may be trivial or severe, localised or diffused, according to the character of the changes or to the part in which they originate. In many instances the changes are now known to be due to the intrusion of living organisms. In many they are due to the arrest, by external conditions, of the function of some organ, and to the consequent oppression and failure of some others, by which that function has been performed vicariously. Thus, exposure to severe cold may be followed by disease of the kidneys, which have been injured in their endeavour to compensate for the arrest of the function of the skin. In others, again, the changes are due to the habitual overtaxing of some organ by its owner, as when the brain gives way under the stress of over study, or when gout is an effect of too much eating and drinking, coupled with insufficient exercise; the patient in the last-mentioned case being poisoned by an accumulation

of waste materials which, through his own method of living, have been produced in excess of the power of his body to cast them off. However occasioned, the changes which constitute disease possess the common characters of having been produced by some violation of physiological laws, and of being subject to the same conditions as those by which bodily changes and operations are governed when in health ; insomuch that the chief clue to the nature of disease is furnished by research into the nature of healthy function. The facts of what is called ' pathology '—that is to say, the science which takes note of the alterations produced by morbid action—were but a catalogue of curiosities until their significance was elucidated by physiology, the science which takes note of natural structure and of natural function. Pathological facts were diligently observed and recorded at a time when physiology could scarcely be said to have any existence ; but it is only within recent years that the records have been converted into valuable sources of knowledge by the acquisition of a power to interpret them correctly.

Diseases, perhaps even including those produced by the intrusion of living organisms, are therefore properly described as being states, and not things ; and these states have a general tendency to return to the ordinary course. On this tendency depends the power of recovery or repair which exists throughout

animated nature, which seems to be a residue, so to speak, of the power of growth inherent in the germ, and which is preserved, other things being equal, in very close proportion to the youth of the individual, and in almost inverse proportion to the elevation of that individual in the scale of living creatures. Certain worms not only survive division into parts, but each part may become capable of independent existence. Crustaceans reproduce entire limbs. The human species is able to heal wounds, even of great severity, especially if they are kept in an aseptic condition by the exclusion of bacteria or their spores, to survive large loss of blood and to repair the loss, to survive great temporary derangement of function, to survive changes incidental to the introduction, multiplication, destruction, and expulsion of living organisms, and to recover when the disturbed functions are once more performed in a natural manner.

'Disease,' then, is simply 'variation,' variation from an ideal standard of health ; and this variation, according to its kind or its degree, or to the part in which it exists, may tend either to recovery or to premature dissolution, and may be more or less controllable by the external influences which are collectively described as 'treatment.' But, as no two human bodies are in all respects the same—nay, as even the same body is not at any given time identical with its former self—and as the external

forces operating on two individuals, climatic, seasonal, and other, can only seldom be the same, it follows that no two cases of disease can be alike. Inasmuch, however, as certain departures from physiological modes of life are common, forced upon mankind by stress of circumstance, or pleasant as matters of indulgence, the variations from health which these departures are likely to produce are also common, and bear a general resemblance to each other. Hence, such variations may be classified for the sake of convenience, and may be described under general names, as rheumatism, gout, and so forth; but no two cases of rheumatism or of gout are precisely alike, or call for precisely the same treatment, even when occurring at different times in the same individual. The highest skill of the physician is to see the personality of the sick man through the malady, and to recognise that he is called upon to *treat a patient*, not to *cure a disease*.

Now the general basis of what may be comprehensively called quackery consists in ignoring the actual patient in order to confine attention to the supposed 'disease.' In other words, it unduly exalts the so-called 'remedy,' and as unduly depreciates the skill required for its effective application. To this extent it is a survival of mediævalism, of a time when the efficacy of the remedy was what it still remains, while the skill of the physician was rudi-

mentary or non-existent. In the course of centuries the relative importance of the two has been reversed.

It cannot be denied, of course, that the 'remedy' has a certain value. For example, there can be no question that the introduction of the salts of salicylic acid has very materially facilitated the cure of acute rheumatism, presumably because they are destructive to the bacillus by which the affection is produced. These salts have furnished the physician with agents potent for good, of which, in a general way, it would be unpardonable if he were not to avail himself. But, in order that the good may be attained, it is necessary that certain conditions should be fulfilled. In the first place, the state of the patient must be such as to justify or demand the administration of the 'remedy;' and, in the second place, the method of administration must be governed by the special requirements of the individual. Even in a case calling for their employment, the salicylates may be so given as to be ineffective, or they may be so given as to be injurious. The fact that some rascal, who has heard of their efficacy, makes and sells a weak solution of one of the cheaper salicylates, and advertises it as a 'cure' for 'rheumatism,' generally with the addition of 'or rheumatic gout,' a malady which has nothing in common with rheumatism but its popular name, is not at all calculated to benefit

either the public or the sufferers from rheumatism, or anybody but the rascal immediately concerned.

The whole subject of advertised quack medicines is one which may be very briefly dismissed. They are all composed of cheap and common drugs, the properties of which are universally known to medical practitioners, and they generally originate in a prescription which has been given by some physician to a patient, and which afforded relief to the condition for which it was prescribed. If the original prescription contained an expensive ingredient, something less expensive is usually substituted in the course of wholesale manufacture; for the sale will depend, not upon the properties of the compound, but chiefly upon the extent and the character of the advertising. There is no such preparation which, in any general sense, really possesses the qualities that are attributed to it; and it is a very open question whether the sellers of any quack medicine, if an analysis of its composition were contrasted with the claims put forward on its behalf, might not be successfully prosecuted for obtaining money under false pretences. It throws a somewhat lurid light upon popular standards of honesty and morality to reflect that many of these quack medicines have been used as the foundations of limited companies, and that people, apparently and professedly respectable, have not hesitated to take shares in such companies in

the hope of deriving profit from participation in their dishonest trade.

It is much to be regretted, from the point of view of public morals, that the State should be an accomplice in the frauds of patent medicine vendors, and should consent to derive a contemptible revenue from their preparations. The amount of this revenue, when the stamp duty is compared with the total price charged for the several compounds, appears to show that the public expend annually about three millions of money in the purchase of useless or injurious so-called 'remedies,' and apply them, for the most part, to the cure of imaginary 'diseases.' If the fiction of the stamp must be continued, it would surely be possible for the Legislature to enact that the composition of the 'medicine' should be declared, and that the seller should be liable to penalties in the event of its being shown by analysis that the bottle or box sold by him did not contain the ingredients set forth in the declaration.

It may be urged, of course, in defence of the existing system, that nobody is compelled either to buy quack medicines or to believe the statements publicly made by their vendors; and that it would be impossible, by any amount of legislation, to protect fools against the consequences of their folly. It may also be urged, and is probably in some cases true, that the vendors of quack medicines, even

when they use drugs of any potency, use them in such small quantities that the dose directed to be taken is seldom likely to do harm. The latter statement, however, is not true universally, because a large number of advertised quack medicines are composed of cheap and common purgatives, and would not be continually bought and swallowed if they did not produce very manifest effects, which those who take them have been brought up to regard as salutary, but which, on the contrary, are often highly injurious. It is perhaps only the surgeons who are much engaged in certain lines of practice who have any adequate notion of the injury annually inflicted by purgatives upon the health and comfort of the community.

Apart from such direct injury, it should not be forgotten that the use of quack medicines is a common cause of the neglect of proper treatment until the time at which it might have been useful has passed away. A person has, let us say, pains in his limbs, pains which a medical examination would discover to be symptomatic of spinal mischief. He decides for himself that his case is one of 'rheumatism,' and he buys and swallows bottleful after bottleful of some advertised preparation, which, in all probability, would contain as its only active ingredient a half-pennyworth of saltpetre in each half-pint. In the meanwhile, his disease is steadily progressing

from bad to worse; and, when he too late seeks competent advice, it is no longer possible to save him from hopeless paralysis.

Such histories, of course, are mostly met with in quite humble life; and a consideration which should have weight with the Legislature is furnished by the extent to which quack medicines are means of plundering the poor, who, in all probability, are often induced to believe the lies of an advertisement by reason of the 'Government stamp.' It is rare to find, in any hospital, a victim of chronic and perhaps incurable disease who has not been deprived, not only of timely and proper treatment, but also of much-needed comforts, or even of necessary food, in order to purchase the rubbish advertised on placards and in omnibuses; and this statement does not apply to medicines alone. A few years ago, a man who had been a salesman in a fancy goods warehouse in the city, who was said not to know the difference between an anode and a cathode, or between one end of an electrical machine and the other, and who certainly could not know anything more of medicine than a few words which he had possibly picked up from the advertisements of other people, started in business for himself as a seller of electrical apparatus for the cure of all diseases, and for a considerable period drove a thriving trade. He obtained from manufacturers cheap and worthless

electrical instruments, affording currents which produced a definite thrill when applied to the body, and sold them at enormous prices. He hired a broken-down medical man, who sat in a room behind his shop, who conversed with each applicant, and advised him, as a rule, to purchase an instrument at the highest price which the poor wretch could by any possibility scrape together; stimulating him, of course, by expectation of cure, whatever might be the nature of his malady. A physician to one of the hospitals for the paralysed assured me that it was scarcely possible to find in their wards a patient who had not thus been victimised; and that, even in the most hopeless cases, promises of certain cure had been made, as inducements to purchase, at prices running into pounds, so-called instruments which were mere toys, not worth as many shillings, and utterly incapable of doing good or harm to anybody. This particular enterprise was at last exploded by a scientific journal, which called attention to the true character of the instruments supplied, and successfully defended a consequent action for libel. At the same time the Medical Council dealt with the medical accomplice by removing his name from the Register for his share in the transaction, and the whole undertaking immediately collapsed. I am informed, however, that something which is described as 'electricity' still holds a place in the advertise-

ments of impostors, and that strenuous efforts are now being made to bring it into repute with the public as an agent to be employed in the 'cure' of cancer. If this can be effected, the money of dupes will roll in merrily.

The evils wrought by quack medicines and advertisements descend to the very humblest strata of society. Advertisers who cannot command the capital necessary for the payment of stamp duty are not on that account deterred from putting forth their preparations, and their advertisements are numerous and prominent in many of the cheap newspapers which are purchased by the uneducated, and which often command an enormous circulation. Most of these advertisements are specially addressed to the female sex, and are, in reality, scarcely veiled promises to destroy unborn children by 'medicines' which are, in consequence, largely bought and taken by poor women, both married and single, who desire to attain that object. It was shown at a recent trial that one such advertiser offered medicine at 3s. 6d., with the statement that, if it did not have the 'desired effect,' a stronger preparation at 11s. should be had recourse to, and that, if this also failed, the strongest of all, at 21s., would be 'found infallible.' It was further shown that all three bottles contained the same harmless ingredients in the same proportions, that there was

no difference between them in any respect but price, and that none of the three would have had any influence at all in the direction indicated. It is, however, perfectly well known in the medical profession, as well as to the police, that advertisers of this class are usually in league with persons still worse and less scrupulous than themselves, and that, after having plundered their victims as far as possible, they will usually be prepared to pass them on to others, with consequences which not seldom call for the interposition of a coroner, and which occasionally, although less often than could be desired, bring the quack himself within the grasp of the criminal law.

The influence of quackery and of the sale of quack medicines in preventing the attainment, by the public generally, of a correct understanding of medical aims and tendencies, and of the character of medical science, depends mainly upon the circumstance that many who ought to be disseminators of truth are brought to have a direct and very considerable pecuniary interest in the dissemination of falsehood and in the encouragement of fraud. The great agency of quackery is, of course, advertisement, and advertisement is largely carried on by means of newspapers. The owners of newspapers which derive a considerable revenue from the prevalence of quackery are seldom unwilling to do what

may be in their power to assist it, with the result that, in addition to the obvious and declared advertisements, we frequently see others which have the appearance of ordinary paragraphs, and in which wonderful cures of this or that are related as having been effected by A's syrup, or B's pills, or C's oil, in cases which have for years 'defied the best skill of the faculty.' Side by side with these will be other paragraphs of oblique denunciation of scientific medicine, or containing accounts of pretended 'scandals' in some hospital. The insertions of these abominable lies are mostly paid for, and they are to be found in practically nearly the whole of the inferior newspaper press; but they attain their greatest development in the inferior examples of what is called the 'religious press,' where they are supposed at once to satisfy the nonconformist intelligence, and to glide harmlessly from the nonconformist conscience. However this may be, the general result is that the influence of a large number of newspapers is exerted, by considerations of profit alone, in endeavours which have for their aim the depreciation of medicine as a means towards the exaltation of quackery and imposture.

An influence in the same direction, less important but not entirely to be neglected, is that of the printing and advertising trade generally, which, as a whole, derives an enormous amount of employ-

ment from quackery ; while another is that of the various retailers by whom quack medicines are sold to ordinary consumers. When the retailer is a grocer or a stationer, or the keeper of a 'general shop' in a country village, we perhaps cannot wonder that he should be ready to obtain and sell anything that his customers desire ; but the case of druggists, who often are large purveyors of quack medicines, may be thought to rest on somewhat different grounds, and to call for the attention of the principal members of the trade, or of the Pharmaceutical Society, by which its members are examined and licensed. A qualified dispensing or 'pharmaceutical' chemist would, as a rule, and always might, know of what ingredients any particular quack medicine was composed, and would therefore know that it was not calculated to produce upon the human body any of the effects claimed for it in the advertisements by which it was recommended to public notice. It is said that the reasonable objections which, on this score, he might feel towards becoming an agent for its dissemination are to some extent met by allowing him a larger measure of profit on the transaction than he could obtain by the sale of the same ingredients in any other form. The ordinary worthlessness of the stuff, and the price at which it is offered to the public, admit of discounts which bear a very considerable proportion

to the whole. Hence the druggist, who could himself make up a bottle of A's Blood Potion, or of B's Real Cure, and sell it at a profit for threepence, is tempted instead to sell the 'genuine' article, and to make a profit of ninepence by doing so.

Notwithstanding these influences, there is perhaps reason to hope that the reign of quackery is drawing towards its close. As compared with national life, its great activity has not been of long duration, and the currency of any particular advertised preparation is always short. Quackery has existed for ages; but, if we contrast Addison's almost solitary notice of it in No. 240 of the 'Spectator,' with the place it holds in Goldsmith's 'Letters from a Chinese Philosopher,' we shall perhaps arrive at the conclusion that it did not spring into great prominence in this country until towards the middle of the eighteenth century, and there is some evidence that its prosperity is on the decline. The writer has lived to see one much advertised universal remedy give way to a second, and the second to a third; the ingredients of the successive 'medicines' being probably much the same, and the demand for them being mainly a consequence of continuous advertising. In 1850, when preparations were being made for the first Great Exhibition, a notorious quack medicine dealer applied for space in which to exhibit the advertisements of his wares

which would naturally appear on May 1, 1851. He said that they would be conspicuous on that day in every printed language in the world, and in every newspaper and magazine published in the world, and that he wished to exhibit them as a 'commercial engine.' The desired space was not conceded, and the statement made in the application was probably not true; for, a few years afterwards, the applicant defended an action brought against him by a man who had undertaken for a fee of five hundred pounds to obtain permission for the sale of his pills and ointment in France, where, if he could not previously sell them, it would not have been worth his while to advertise. The permission was obtained, but it was a permission to sell the '*Pommade dite*' so and so, which was described as consisting of lard and beeswax in stated proportions. The disclosure of the composition, it was maintained by the proprietor, deprived the permission of all value, and he declined to pay the negotiator, I forget now with what result. One advertiser of patent medicines, who conducted his business on an enormous scale, brought about the curious result that, when the Rev. Mr. Green was a self-incarcerated prisoner in Holloway gaol, an account of the transaction, given in a German newspaper, described Holloway as 'a town near London, famous for its pills.' Another member of the fraternity, as I was told

many years ago by a wholesale druggist in the city, went to his establishment to purchase a hundred-weight of gamboge, one of the most irritating of purgatives. There was a short delay in supplying it, and the purchaser undertook to call again in half an hour. He did so, and occupied the intervening time in going to the Mansion House, where he swore before the Lord Mayor a volunteered affidavit to the effect that there was no gamboge in his advertised medicines. I am somewhat inclined to think that the modern quack, as compared with his predecessors of periods within my recollection, is, as a rule, deficient either in capital or in audacity. It is at least certain that much of the quack advertising of our own day has been half-hearted and ephemeral, and that the preparations advertised have soon passed away from public knowledge; while in some cases, I am happy to believe, limited companies for the sale of them have entailed serious loss upon the shareholders. There is, in fact, some reason to think that the public is becoming distrustful of advertisements generally, and is awakening to a perception of the fact that they must, in every case in which they are successful, be eventually paid for by the consumer, in the shape either of unduly enhanced price or of unduly depreciated quality.

Advertising quackery has probably been carried to greater lengths in the United States of America

than in any other country, and several American quacks have tried to push their fortunes in London. One of these, who not only advertised very largely, but who invited correspondence from the sick, and whose vice paid to virtue the homage of announcing that a qualified medical man perused all letters, and selected from among a large number of 'remedies' those which were appropriate for each case, became the subject of notice from the Medical Council. He had engaged a qualified medical man as an assistant, one of the unfortunate waifs to be found among the failures of every profession, and this man was called before the Council to show cause why he should not be removed from the Register. He had to admit that he did not know what any of the so-called 'remedies' contained, or what effects, if any, they were calculated to produce. He had to admit that he did not attempt to read the letters of applicants, but that he simply endorsed each one, at haphazard, with the distinguishing letter or number of some 'remedy,' and sent it to the packer as his instruction. He was, of course, deprived of his medical qualifications, and soon afterwards started in business as a quack on his own account. For a time his advertisements were frequently painted or stencilled on the pavements of Oxford Street, but during the last year or two I have not seen them.

The attitude maintained towards quackery by qualified medical practitioners has often been attributed, by the more ignorant and credulous of the public, to what they have been pleased to call 'jealousy,' as if the doctor regarded the quack as in some proper sense a rival, contending with him for the prizes of popularity and success, and having some basis of knowledge or of usefulness underlying his contention. I have written to very little purpose if I have failed to show that our hostility to him and to all his works arises from a reasoned conviction of his invariable futility and of his frequent dishonesty. At the very best he is seeking unattainable ends by foolish means; at the worst he is a knave of the meanest and lowest description. As an advertiser, he can be freed from the charge of dishonest lying only by the plea of abysmal ignorance; and it is a painful sign of the times that lying for the sake of selling worthless articles is regarded with much indulgence by the public. Many of the advertised forms of so-called food or nourishment, for example, stand in a sort of illegitimate cousinship to quack medicines, and are owned by limited companies upon the direction of which may be found persons who, if we are not too strict in our adherence to the proper meanings of words, might be described as gentlemen, but who, nevertheless, habitually put forward in advertisements statements

concerning the merits of their wares which they can hardly believe to be justified by facts. Few of these preparations are of any considerable nutritive value, and some of them contain waste material which is calculated to be injurious when swallowed, insomuch that one of the chief living authorities on the subject of diet, when asked his opinion of one of the most largely advertised of them, which was mentioned to him by its trade name, is said to have replied, 'It is a new way of spelling poison.' It is not uncommonly assumed that lying for trade purposes is more or less conventional in its character, and that the most unrestricted practice of it may not necessarily destroy the foundations of morals and of honour; but the hypothesis is perhaps to some extent a risky one. Personally, I should be reluctant to accept the word of the owner of a 'pill,' or of the director of an advertising company, in any matter in which a declaration of the truth might come into collision with his personal or pecuniary interests.

Closely connected with the consumption of quack medicines is the constantly increasing practice of self or domestic medication in its various forms—a custom which of late has assumed very large proportions, and the evils of which it would be difficult to exaggerate. Many years ago I was present at an extended course of gunnery experiments con-

ducted on the trial range belonging to the late Herr Krupp at Meppen. The experiments were attended by a large number of visitors, including not only artillerists from almost every country possessing them, but also steel-makers, journalists, and politicians. A remarkable feature of the proceedings was furnished by the extreme care taken by the artillerists, who knew the possible dangers of the position, to seek timely shelter in the casemates or other protections which had been provided, while journalists and politicians ranged about at large, and were the frequent recipients of warnings from the officials on duty. Much the same statement would apply to the habitual consumption of drugs in any form; for it is quite certain that, whoever may take them, doctors themselves do not—except, of course, in conditions of real illness, and then only under the advice of other practitioners. They are too well aware of the evil consequences which may attend upon the unnecessary introduction of disturbing agents into the economy. I am acquainted with people who are actively engaged in business or in professions, and who are neither old nor likely to become so, but who swallow every month a larger amount of drugs than I have swallowed myself in the course of a long lifetime. A little while ago I saw an advertisement addressed to this class, and headed in large type, 'We must All take Something,'

the corollary to which monstrous proposition was that we ought to 'take' some mess provided by the advertiser. If I recollect rightly it was not a quack medicine, but merely a form, supposed to be convenient, in which some named drug was put up for the consumer. We are all familiar with the statement that cancer has been increasing in prevalence during recent years, that the consumption of food has increased also, as a consequence of general national prosperity, and that the former increase is a direct consequence of the latter. 'Well,' as Faraday used to say, 'it may be so,' although the surmise is at present unproven. But it may be argued with equal or, in my judgment, with still greater probability, that the increase of cancer is a consequence of increased drugging. The Ladies Bountiful of our grandmothers' days had, indeed, their medicine chests and their recipes, and were fond of ministering, according to their lights, to the wants of the sick and needy; but they seldom went beyond 'teas' or 'simples' of unquestionable nauseousness indeed, but of doubtful potency for either good or evil. The present is the day of 'phenacetine' and its allies, or of other powerful drugs which can be bought by any one in portable and stable forms, ready for administration in any circumstances which may be ignorantly supposed to call for them. It is impossible to believe that they do no mischief, and there

certainly is not a scintilla of evidence that they do good. It has been mentioned in a former chapter that the lowering of temperature effected by phenacetine and kindred preparations is frequently dependent upon the arrest or interruption of curative processes set on foot by nature.

Whether among quack medicines commonly so-called—that is to say, preparations with titles which do not disclose their composition—or among the named drugs which recent developments have rendered easily accessible to the public, there can be no question that the most dangerous class of all is composed of those which are sold for the ostensible purpose of subduing cough or of relieving pain. It was discovered, several years ago, that the bitter and nauseous taste of morphia could be concealed by mixing it with glycerine, chloroform, and peppermint, and the discoverer unfortunately felt sure, with, as the event proved, only too much justification, that, when thus disguised, it would be eagerly taken by the public as a remedy for a variety of discomforts, both physical and moral. He added a little prussic acid and Indian hemp to the mixture, took out a 'patent' for it, and issued it for general sale under a name which, if translated, appears to mean 'green pain'—that is to say, 'chlorodyne.' In this form it was the means of first introducing morphia into many homes, and it has served to lay

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the foundation of the so-called 'morphia habit' in a very large number of instances. I think it would be difficult to mention any other single agency which has had, during the last thirty or forty years, an equally disastrous effect. Many who would have shrunk from buying morphia, or from displaying it if they had bought it, made no secret of the 'chlorodyne' bottle, and produced it upon all occasions when they supposed something 'soothing' to be required. From this point the descent would be easy and rapid; and the constantly increased dose of chlorodyne would before long be supplemented or replaced by the morphia syringe. Other advertised 'pain-destroyers' presumably owe to the same agent any effectiveness which they may possess, and their use would be likely to entail similar dangers. In the case of medicines for subduing cough, which also as a rule are opiates, their employment has often been followed, not very remotely, by fatal consequences; for the arrest of cough, with the consequent retention in the lungs of secretion interfering with the admission of air, is a matter which experience has shown to be attended by very serious risks, and which is only attempted by physicians with the greatest possible circumspection. But the quack rushes in where the physician fears to tread; and the consequences of his activity are too often irreparable as well as deplorable.

It is not among the objects of this book to give advice on the treatment of illness, but I have been for more than half a century in medical practice, and I will venture to tell my readers what I do myself. If I do not feel well—not equal, that is, to the proper fulfilment of my daily duties—the very last thing that would occur to me would be to dose myself with physic. I go to bed, and restrict myself to such diet as mutton broth and custard pudding. If nature has taken my case in hand, as she generally has done, I am giving her all the help she wants, in the shape of warmth, rest in the recumbent posture, and diminished work for the digestion. The next morning I wake up recovered; or, if I do not, I send for a doctor and do obediently as I am told, taking physic if it be given to me. Of course, if the original attack appeared to be severe, or if it were attended by acute pain, I should send for the doctor in the first instance. But, in all trivial or commencing ailments, I know quite well what nature will do for me; and in the course of my life I have learnt at least sufficient wisdom to be able to refrain from spoiling her work.

## CHAPTER X

## PROFESSIONAL 'EMINENCE'

IF we may believe certain professed exponents of public opinion, the quality of 'eminence,' in relation to the practice of medicine or surgery, is very widely diffused—so widely, indeed, as to render it difficult to understand any disparaging references to a calling which contains so many eminent persons. It would not be easy to examine any one of the weekly publications which devote a large amount of their valuable space to a record of the acts and movements of Society (with a large S), without finding mention of the indisposition of some more or less distinguished ornament of that body, coupled with a statement that the lady or gentleman referred to was making satisfactory progress towards recovery, under the care of the 'eminent' physician, Dr. X., or of the 'eminent' surgeon, Mr. Y.; and it would usually appear, on further inquiry, if such were practicable, that the test or evidence of 'eminence,' in the mind of the writer of the paragraph, was either the fact that the ornament of Society in

question had selected Dr. X. or Mr. Y. as the recipient of his or her confidence, or else the fact that Dr. X. or Mr. Y. was kindly communicative with regard to the nature and the probable result of the illness. 'In the learned world,' wrote Dr. Johnson, 'reputation must be the effect of industry and capacity,' and it might be added that a position of 'eminence' in a supremely difficult pursuit would scarcely be accorded to more than a few. In sections of the world which have no valid pretensions to learning it is manifest that reputation may rest upon various foundations, some of them more, and others less, calculated to sustain its weight; and it therefore becomes a matter of some interest to inquire into the methods by which a station of 'eminence,' even if we only regard the word as indicating celebrity or notoriety, may be acquired in the medical profession. Few things can be more important to the members of any calling than to ascertain, by observation of the conduct and lives of the successful, through what avenues success may be most rapidly and most surely attained.

The most exalted function which the human mind is capable of discharging is the enlargement of the boundaries of knowledge by the discovery and establishment of new truth. Compared with this, all other intellectual exercises are trival in their character and evanescent in their consequences.

Contemporaries admire the dexterity with which the politician preserves his balance upon the slack rope of uninstructed popular opinion; but the passage of a single generation is usually sufficient to dispel the hopes which he encouraged, and to falsify the predictions in which he indulged. The vanity of literature is at least as conspicuous as its glory; and art, in any one of its numerous phases, appeals rather to a school or a fashion than to mankind. The landmarks of conquest are speedily effaced by the growths of time; and the rivalries or enmities of one generation disappear beneath the friendships of the next. A new truth is eternal in a world where all else is transitory; the extent or nature of its ultimate value or utility can seldom or never be foreseen; and its discovery implies a form of mental activity which is superior to all other forms in kind, even when not in degree, just as the smallest mammal occupies, in the order of nature, a higher place than the most gigantic saurian.

The only pursuits in which the attainment of truth can be regarded as the one aim of the investigator, and in which all other attainments, or all mere conjectures and plausibilities, may be not only valueless but injurious, are mathematics, physics, and biology. In these, everything which can be proved to be true is true universally, and without exception. A formula, if such there were, which

held good in ninety-nine cases and broke down in the hundredth would not fulfil the requirements of the mathematician; a physical principle which failed in the hundredth case would reduce the order of nature to chaos; and the almost infinite variety of vital operations presents no real exceptions to the laws by which that variety is controlled. In almost every other department of intellectual activity men are habitually and rightly governed by high probability, because in these there are innumerable cases and circumstances in which nothing more definite than high probability is attainable. In physics and biology, at least, the proper use of high probability is as a guide to experiments by which the probable conclusion may be either established as a truth, or finally and conclusively rejected as an error.

Inasmuch as the aim of medicine, using the word to include every department of the healing art, is nothing more, in reality, than the practical application of physics and biology for the purposes of restoring or of preserving health, its study would appear calculated to afford the very highest form of intellectual discipline, and to attune the mind of the student to the pursuit of truth as the chief end and purpose of his career. In medical practice, everything which is not true is either valueless or at least of greatly restricted value. Aseptic surgery, for example, and the results, in the shape of the

preservation of thousands of human lives, which it has already yielded, depend entirely upon its being true, absolutely and without exception, that a wound not necessarily mortal in its nature, from which all noxious bacteria are excluded, will heal uninterruptedly, not only without danger to life, but without discharge, without fever, and without constitutional disturbance. The truth is so certain that, in the event of a wound being followed by such consequences, the surgeon does not merely conjecture, but *knows* that, through some channel or other, the bacteria in question have gained access to it. He may not be able to detect the channel; but he no more doubts that it has existed than an astronomer would doubt the physical causes of events which his science had enabled him correctly to predict. His question to himself would be, not 'Did bacteria gain access to that wound?' but 'How did they gain access to it?' and he would reconsider its history and management solely from this point of view.

Notwithstanding what might reasonably be expected as the practical effects of experience of this kind, it cannot be said that intellectual devotion to truth is a necessary consequence of medical education as now conducted. In the first place, an unqualified recognition of truth as the supreme good is only to be expected from minds of the highest order, from the Harveys, the Newtons, the Pasteurs, the Listers,

of whom but a few appear in each generation, towering above the level plain of average human capacity. Moreover, the effects of training in biology and physics are often to some extent counteracted by those of antecedent training of an opposite tendency. Children are taught from their earliest years to disregard evidence and probability, and to believe in the literal truth of fictions of various kinds, perhaps originally composed as fables for the inculcation of moral lessons; or to hold dogmatically expressed opinions about questions which lie beyond the limits of human experience and human knowledge, and concerning which no veracious person could make any stronger assertion than Faraday's already quoted formula, 'It may be so.' There are many men, wrote Bishop Butler, 'who have a strong curiosity to know what is *said*, who have no curiosity to know what is *true*;' and Dugald Stewart, commenting upon this statement, points out that palpable and ludicrous misrepresentations of facts, to which we are accustomed from infancy, gradually unhinge our faith in accuracy of statement, until the falsehoods, which we are every day accustomed to see, we cease in time to regard with due abhorrence. Adam Smith, again, tells us that, 'notwithstanding the lessons of caution communicated to us by experience, there is scarcely a man to be found who is not more credulous than he ought to be, and who

does not, upon many occasions, give credit to tales which not only turn out to be perfectly false, but which a very moderate degree of reflection and attention might have taught him could not well be true. The natural disposition is always to believe. It is acquired wisdom and experience alone that teach incredulity, and they very seldom teach it enough. The wisest and most cautious of us all frequently gives credit to stories which he himself is afterwards both ashamed and astonished that he could possibly think of believing.' In such conditions it is evident that the love of truth is a plant which must struggle for existence against weeds of every description, and that an intellectual training only commenced in early manhood may often be powerless to counteract the effects of one which was commenced almost with the dawn of consciousness. Without the love of truth, however, as a guiding and ineradicable principle of his nature, no man can become 'eminent,' in the proper sense, in any of the pursuits in which truth is frequently attainable. He may be eminent as a scholar, or a preacher, or a politician, or in that art of pouring forth strings of orderly sentences which is by some called eloquence, or in many other departments of human effort; but, without a preference of truth to all other things, eminence in the branches of knowledge which permit of its attainment must be denied to him.

In medicine, as in other pursuits, there are many questions as to which a knowledge of truth is not at present attainable, and with regard to which those who are called upon to act must be content with high probability. It is their business, nevertheless, clearly to distinguish between the two, and constantly to recognise the essential difference which separates them. Sleep, for example, appears to be immediately due to a diminution of the amount of blood circulating in the brain; and it is probable that certain drugs which produce sleep act by bringing about such a diminution. Why the diminution naturally occurs at regularly recurring periods, or how it is brought about, or through what agency drugs produce it artificially, or why the tendency to sleep which it produces becomes, before long, irresistible, we do not at present know, and indeed cannot do more than conjecture. If we knew the entire and absolute truth, as at some not distant day it will probably be disclosed to us by physiological experiment, we should probably know also the various modes of action of different narcotics, and should be able, in any given case, unerringly to select and administer the one which was best suited to its requirements. At present our knowledge in this direction is imperfect, tentative, empirical, and mainly depends upon the power of recognising, by virtue of acute and carefully trained observation,

points of difference between one patient and another, and of remembering, by the aid of a disciplined and cultivated memory, the precise effects which were produced by this or that preparation in cases analogous to, or differing from, the one which is at the moment to be considered.

Professional 'eminence' in medicine, then, in its true sense, should denote a combination of the greatest attainable knowledge of truth, in relation to the problems presented by disease, with the most carefully trained powers of observation and of recollection. It can only be attained by a small number of persons, and can only be fully appreciated by knowledge and powers possibly far inferior in degree, but nevertheless of kindred character. In other words, it can only be certainly predicated by the medical profession itself. It finds opportunity for display in the large amount of public work which falls to the lot of every hospital physician or surgeon ; in teaching, in lecturing, in writing, in the treatment of sickness in the out-patient department and in the wards ; and I think it may fairly be said that it never fails to secure prompt and generous recognition at the hands of competent observers. It would be invidious to take an example from among living men ; but, among the recently dead, I should be inclined to select, as the most conspicuous with which I am acquainted, that of the late Sir William

Jenner. His examinations left no fact unascertained; his observation permitted nothing to escape unnoticed; and the inexhaustible stores of his knowledge and of his memory were always ready to his hand and under his control. It was by virtue of these powers and attainments that he obtained, in comparatively early life, a reputation at his hospital, and among his colleagues and his students, which ultimately led to his being selected, by the late Sir James Clark, for that medical office which was at once the most responsible and the most honourable in the kingdom, and the duties of which, for so many years, he discharged with such admirable fidelity and such unimpeachable discretion.

The qualities which render the attainment of eminence possible to a physician will, of course, be equally necessary and equally efficacious in the case of a surgeon; for whom, however, some people would be inclined to add a demand for a high degree of mechanical dexterity. This demand, in the present day, would perhaps be hardly warranted by facts. It would have been entirely justifiable before the introduction of anæsthetics, because the attainment of great rapidity in operating was then of high importance for the abbreviation of pain, and considerable skill was necessary in order to do what was required at once thoroughly and well, and very quickly. Thanks to the use of anæsthetics, however,

modern surgery is deliberate and careful, and manual dexterity has become proportionately subordinate to knowledge. There is no place, admittedly, for the man who has two left hands, and whose fingers are all thumbs; but, apart from him, sufficient skill for the requirements of an operator may be attained by any one of ordinary presence of mind and self-possession. Whether an operation be done a little more quickly or slowly, a little more or less neatly, is not likely, on the whole, to exert any appreciable influence on its ultimate results; and the best and most successful surgeons of the last few years have sometimes been men whose manual dexterity, if alone regarded, would not have been sufficient to place them definitely in the first rank.

Assuming that we may rightly put the 'eminent' members of the medical profession in a position by themselves, and may seek to rescue the word from the hands of the common paragraphist, we shall still find many, of somewhat lower professional rank and station, for whom it may fairly be claimed that they are 'distinguished' above the majority of their brethren. In many instances, without yielding to the temptation to become so-called 'specialists,' they have nevertheless sedulously cultivated some particular department of medical or surgical knowledge, and are known in the profession as being exceptionally competent to deal with cases which fall within

its limits. This sort of modified specialism, if it be restrained within reasonable bounds, and if it be redeemed from narrowness by a sufficiency of more general work, is often highly useful to the sick, and highly valuable to practitioners who avail themselves of its assistance in consultation. Then, again, a claim to 'distinction' may properly be advanced in favour of men whose abilities and industry have been sufficient to win for them excellent consulting positions among their hospital colleagues and their former students, although possibly not sufficient to enable them to override this limitation, and to appeal strongly to the profession at large or to the world in general. Within this category would be included a considerable number of good, sound, careful, conscientious workers, upon whom the average patient might safely rely as being certain to do for him everything of which his case admitted.

If we now return for a moment to the 'eminence' of the paragraphist, or, as it might perhaps occasionally be described, of the *boudoir*, we shall find that it usually depends upon qualities valuable in themselves, but which are readily discernible without the aid of professional knowledge on the part of the observer, and may even conceal its absence or deficiency on the part of the observed. A good appearance, an ingratiating manner, a power (which, by the way, Sir William Jenner never possessed) to

suffer fools gladly, a capacity for coining phrases which tickle the ear, even if they make but a shallow impression upon the understanding, the careful tact which seizes all opportunities of giving pleasure, and avoids all risks of giving offence, the knack of remembering the tastes or peculiarities of the patient, and of prescribing or advising in such a manner as to do no violence to them, a facility for writing little magazine articles upon profoundly interesting questions, such as 'On the earliest indications of crows-feet in young grandmothers,' these and such as these are advantages which appeal to very large and influential circles, and which, in the opinions of many people of an infinite incapacity for judging, may tend to place their possessor on the same plane with a Jenner or a Paget. In some truly remarkable instances the magazine articles have even been expanded into actual volumes, which have not infrequently had, as their chief characteristics, denials of all the positions relating to their subject matter which had previously found favour with practitioners of more ordinary type. An injunction to a patient to do, to eat, and to drink, everything which he had previously been advised to avoid, and to avoid everything which had previously been permitted to him, was once quoted to me as the latest and most admirable development of the healing art.

Upon the subject of magazine articles and little

books in general, in relation to medical science and practice, it may be said that the class of readers for whom they are chiefly intended cannot possibly derive from them any conclusions which may safely be accepted as guides to conduct either in sickness or in health. All publications of this class may be described as appeals to an incompetent tribunal, presided over by judges who are powerless to test the credibility of the evidence. As a rule, nothing more can be found in them than the commonest books of reference could supply, or the least ingenious minds discover; and the only inquiry which can profitably be made by the public, with reference to any such endeavours to engage their attention and to win their confidence, is whether the doctrines taught have been subjected to the ordeal of skilled professional criticism—whether, that is, they have been put forward in medical journals, or subjected to the consideration of medical societies. If they have not been subjected to such an ordeal, or if they have failed to emerge from it with credit, the best way of dealing with them is to ignore them.

Very much the same thing applies also to the various special forms of 'treatment' for this or that which are now and again advocated by a few individual members of the profession, and eagerly caught at by large sections of the public. To mention a recent example, the heart is a muscle, which

differs from voluntary muscles in being unresting, but which resembles them in its capacity to be strengthened by modifications in the manner of its exercise. On this ground it was long ago pointed out by a very eminent Irish physician that there are states of disease or debility of the heart in which certain forms of exercise are better and more advantageous than rest; and his teaching to this effect was well known, and in proper cases was often acted upon by practitioners. Suddenly there arose a doctor at a foreign watering-place whose practice tended to popularise a 'movement treatment' for 'heart-disease,' and eventually rendered it 'fashionable.' Statements for which the doctor in question was probably not responsible, and of the accuracy of which it was impossible for non-medical persons to form any sound opinion, were widely circulated in this and other countries, with the result that hundreds of people flocked to the watering-place in question to be 'treated.' Nine-tenths of them, in all probability, had nothing the matter with their hearts at all, but would be likely to improve in health by rest and plain living, and would come back to describe to their friends the wonders of their cure. Of the residue, with real heart-disease, probably not more than half would be suffering in the particular way which skilfully conducted movements would alleviate; and not much less than half would

be in conditions which such movements could scarcely fail to aggravate, or, at least, only deceptively to improve. More than one sudden death has occurred, to the personal knowledge of the writer, among people who had been relieved by the 'movement treatment' of symptoms which they had themselves felt to be oppressive, and who had thereupon returned to the freedoms of health under a mistaken belief that they were 'cured.' The only common-sense criterion which I can suggest for the fleeting forms of 'eminence,' and especially of 'eminence' in some so-called 'specialism,' or 'special treatment' which is to be applicable to all and sundry, is that such things are always with us, and that they vanish and decay as quickly and easily as they arise. They are seldom even original, except in so far as they may admit of being described in some new form of jargon; and the ruling medical folly of to-day is frequently only a restoration to activity of one that flourished in the same fashion fifty years ago. The people whose ideal of existence is fulfilled by wearing fine clothes and by wasting time in frivolous amusements must, among the latter, have a new medical craze for each recurring season; and, wherever the leaders go, the rank and file will hasten to follow. The truth may be, in all probability, that a life of social excitement is incompatible with high health, and that it produces a

variety of minor discomforts, relief from which can only be afforded by medical science at the cost of abandoning their causes, while it is promised by quackery, whether obvious or veiled, even although these causes remain in operation. For those whose health is really valuable to them, the only safe rule is to avoid all the transitory forms of 'eminence,' and all the 'fashionable' modes of 'treatment,' and to confine themselves within the safe paths of recognised medicine. It is especially desirable to exercise caution in dealing with real or supposed novelties, which have yet to be placed by experience in what will be their eventual position; and it is generally prudent, in all professions, to give a wide berth to every man who is regarded with pronounced disfavour by the members of his own calling. The cry of such is invariably that they are the victims of 'professional jealousy;' and the proper answer is that, in every profession, men are not jealous of those who add to the repute and credit of the calling to which they belong. They are more inclined, as a rule, to exaggerate than to decry the extent of their powers and the value of their work. 'Professional jealousy' is the parrot cry of incompetent pretenders, who for some brief space have managed to obtain from the public an amount of credence which would never be extended to them by any who were capable of exercising a sound judgment with regard to the validity

of their claims. It is said that an illustrious personage once taxed Sir William Jenner with being 'jealous' of a physician of *boudoir* fame, of whom he had expressed no very flattering opinion. 'About as much, sir,' was the reply, 'as you are jealous of the heir apparent to the throne of the Cannibal Islands.'

It could no doubt be maintained, and perhaps with some show of plausibility, that the really capable medical practitioner is certain, in the long run, to establish and to maintain his ground in the estimation of all sensible people, and that the medical butterflies of each succeeding season, whose 'specialism' becomes fashionable, and who rise, decline, and are forgotten, without the profession at large ever having become aware of their existence, may be neglected as mere parasites of 'Society.' On the other hand, in view of the confidential character of the relations constantly existing between doctor and patient, it must be remembered that the maintenance of a high standard of professional knowledge, honour, and integrity, is of the greatest possible importance, and is seriously endangered by the success of those who notoriously fall short of it. The prosperity of the unworthy, even if it be only temporary, may nevertheless be a snare to the feet of the more commercially minded of the physicians and surgeons of the future. It is lamentably true that the difference between the professional and the

fashionable standards exists not only in relation to skill and knowledge, but also in relation to conduct, concerning which the writer has lately had occasion to declare that 'the public, and especially what may be called the fashionable public, is very much less exacting than the profession.' 'In these circumstances,' continues the article from which I quote, 'it can hardly be a matter for surprise if we find a few medical men whose aim it is to satisfy the popular standards rather than the professional ones; and, if the number of these men be actually small, the consequences of their acts are often unfortunately conspicuous. It follows that the highest standards of professional conduct, instead of being invariably supported by the public, are forced to maintain themselves as best they can against a not inconsiderable weight of hostile social influences. Few things could be more disastrous than the spread of an impression, among young medical men and students, that a plausible manner and an easiness with regard to scruples were shorter roads to professional prosperity and success than those which are opened out by unblemished integrity and assiduous study.' It is certain that there are many who would resist any temptations of this kind to which they might be exposed, but it is no less certain that some at least might fall before them; and it may rightly be expected from the public, or at

least from those sections of the public who admit the existence of moral responsibility, that they should seek to exercise a certain amount of discrimination with regard to the validity of the claims of those whom they honour with their confidence.

## CHAPTER XI

## SPECIALISM

AN aspect of medicine or of surgery which looms largely before the imagination of the public is that of 'specialism,' and it is therefore one which cannot be passed over in absolute silence. Two definite branches of the healing art require an intimate knowledge of scientific questions which have no bearing upon general medicine, because these branches deal with organs having special physical functions, totally unlike those of any other part of the body. The eye is at once a living organ and an optical instrument; and its physical conditions and requirements in the latter capacity constantly complicate, and sometimes even tend to produce, the diseased conditions to which it is subject under the former. The ear, in like manner, is an acoustic instrument; and it is necessary for the ophthalmic surgeon and for the aural surgeon to be respectively well acquainted with optics or acoustics, as the

governing conditions of many departures from the natural state concerning which they are called upon to advise. Practitioners who follow either ophthalmic or aural surgery are therefore required to possess knowledge which has no application to the diseases of other parts of the body, and which is rightly described as 'special' in its character. But the eye and ear, as living animal structures, are subject to most of the disturbances incidental to such structures, to inflammations of different kinds, to impairments of nerve power, to senile deterioration, to participation in various constitutional diseases, to bacterial invasions, to the effects of poisons such as alcohol or tobacco, and to the effects of mechanical injury. It follows that the ophthalmic or the aural surgeon, in order to be able to do what is best for his patients, must be thoroughly well acquainted with the general principles of medicine and surgery, and with the treatment of constitutional maladies, and must keep himself well abreast of all the new knowledge or new resources which may be gained with regard to them; while he must at the same time be conversant with a class of facts and of phenomena of which general medicine or surgery is not called upon to take account. The natural result is a 'specialist,' a practitioner who confines himself, or who is sometimes confined against his will by the public, to the

treatment only of the maladies of the eyes or of the ears. Many surgeons who have become widely known as ophthalmic specialists have rebelled against the limitations imposed upon them by public opinion, and have vainly desired to be regarded as authorities upon affections of other kinds, while some have actually combined general with special practice. It cannot be said that the aspirations of the former class have been at all generally responded to by patients; nor, I think, that the success of the latter has been such as to encourage imitation.

At the same time, the eyes and ears are of such importance in the animal economy, and are subject to so many of what may be called 'non-special' departures from the healthy state, that it would be nothing less than a public calamity if practitioners generally were even supposed to be incapable of dealing with their diseases. On this ground, and to a large extent in consequence of the greatly increased knowledge of the affections of the eye which followed the invention of the ophthalmoscope, the instrument by the aid of which the interior of the organ is rendered visible, it came to be felt, about five and thirty years ago, that the facilities then existing for the study of eye disease by medical students should be increased. King's College Hospital was, if I am not mistaken, the first to appoint a special 'ophthalmic surgeon,' and the example thus

set was followed by St. George's, St. Bartholomew's, St. Thomas's, and ultimately by every hospital of importance in London. At the present day, therefore, there is no excuse for any general practitioner who fails to recognise, and to treat in an effective manner, any of the more common departures from health, or defects of function, to which the eyes are liable; although, at the same time, there is ample room for the more extensive and more exact knowledge of the specialist in dealing with occasional difficulties or complications. In whatever degree the general practitioner may fall short of completeness in his knowledge of what is comprehensively called ophthalmology, the fault, if fault there be, rests mainly with the examining bodies. The necessary instruction is abundantly provided at all the schools of medicine, and students who neglect to avail themselves of it usually do so in the hope and expectation that they may not be questioned on the subject. They say that time spent in the eye wards does not 'pay' in an examination.

The appointment of special 'aural' surgeons at the various hospitals followed soon after the similar appointments in relation to the eye; and hence instruction in the diseases of the ears is practically everywhere an integral part of medical education. I have no facts before me to show to what extent the instruction is valued by students, or to what extent

the first medical man whom one may chance to encounter is likely to be able to render it available for the advantage of his patients. The appointments, at the very least, secure that a considerable number of highly skilled specialists should be constantly accessible to the public.

In addition to ophthalmology and otology, which, for the reason already given, may be called the two necessary and legitimate specialisms, a variety of others, some more and some less justifiable, have been brought into existence by circumstances. The work of hospitals, whether in respect of attendance upon patients or in respect of teaching in the connected medical schools, can only be carried on by the aid of division of labour. The lecturer on midwifery, for example, is naturally placed in charge of the maternity department, so that he may have facilities for illustrating his precepts at the bedside; and, equally naturally, his pupils, who have become qualified and have gone into practice, would be likely to turn to him for help in any difficulties which they might be called upon to encounter. He thus acquires greater experience in the management of difficult cases than falls to the lot of the average practitioner, and he becomes a recognised 'consultant' in relation to a department of which every qualified man is supposed to know enough for the requirements of ordinary cases. Something of the

same kind may be held to apply to diseases affecting the skin. Sometimes, again, in the course of the progress of science, a new method of investigation is introduced, as was the case with the throat mirror in the sixties ; and this method is in the hands of a few men, who render themselves expert in its employment, long before similar expertness becomes the common property of the profession. In such conditions there may often be justification for a sort of temporary specialism, which is useful or even necessary for a period, but which is lamentably liable to be continued, as a purely mischievous survival, long after its original usefulness has disappeared. There is a microscopic organism called an amoeba, which in a quiescent state would be spherical, but which, when it encounters a morsel of food, pushes out a protrusion which surrounds and envelops the morsel, and which is then gradually withdrawn into the general outline. The progress of medicine should, I think, be something of this kind. New knowledge presents itself here and there, and the arrangements by which it is captured and assimilated may be compared to the protrusions of the amoeba, and, like them, should all return to augment the general bulk and to restore the original symmetry. If they remain permanently as specialisms they are liable to become deformities ; and they are not quite free from a tendency to

separate by fission, and thereafter to lead a separate existence as charlatanisms.

One of the great evils of special hospitals is, I think, their undoubted tendency to perpetuate the separateness of methods either of investigation or of treatment, which, within a short period after their introduction, should fall into line with ordinary professional work. I have often wished that the great general hospitals would act on the principle of the amoeba, and would throw out, so to speak, temporary special departments from time to time, to be abandoned as soon as their function had been fulfilled, and to be replaced by others as occasion might arise. Such an arrangement would provide abundantly for the utilisation of new knowledge, and for rendering it generally accessible to the profession, and it would avoid the permanent establishment of an unnecessary annexe to the general hospital system of the metropolis. A 'special' hospital, once founded, is only too likely to continue in operation long after the real or ostensible need for it has passed away; and it is, of course, always an enormously expensive establishment. Its twenty or five and twenty beds require a secretary, a matron, and other establishment expenses, such as would suffice for a hospital with five hundred; and there is no special hospital in existence the work of which would not be as well or

better done at any general one. The special hospitals which receive a large number of patients, such as the eye hospitals, and which may therefore be thought to some extent to justify their existence, as well as to afford the conditions necessary for economical management, are, in my estimation, the greatest evils of all. Their principal effect is to deprive the general hospitals of cases which are required for the purpose of medical education, and thus to starve the means of teaching upon which the public are entirely dependent for their supply of good doctors, without any compensating benefit to any one. The men who hold surgical appointments at the eye hospitals, or at least all the more considerable of them, hold office in the eye departments of general hospitals as well; and it must therefore be a matter of indifference to a patient whether he sees Mr. A. at the special or at the general institution. On the whole, I think the patient is likely to receive more careful attention at the latter, where the presence of students, anxious to learn and eager to ask questions about any symptoms or appearances which are unfamiliar to them, exerts a powerfully stimulating effect upon the teacher, and compels him to avoid the errors which are always liable to spring from haste. It would be an excellent thing for the community if all the eye hospitals in London were closed, and if

their funds and their surgical officers were divided among the general hospitals in proportion to the number of cases resorting to their respective ophthalmic departments. A very large pecuniary saving would be effected, the same work as at present would be done by the same men, and the teachers of ophthalmology in the medical schools would never be at a loss for illustrative cases, by the aid of which to demonstrate to students the points of difference between conditions bearing a deceptive resemblance to one another.

In addition to the forms of specialism recognised by the profession, and arising almost of necessity from conditions easy to be understood, there is a sort of pseudo specialism sought for and believed in by the public, but which has no foundation either in facts or in knowledge. The question is often asked, 'Who is a good man for the liver?' or 'Who is a good man for the lungs?' or 'Who is a good man for the stomach?' the inquirer presumably deciding for himself, in the first instance, the often profoundly difficult question of the identity of the peccant organ. He does not stop to ask what would happen if he went to the 'liver' man, and if, after all, it was mainly his heart or his stomach that was at fault. An intending patient once called at the house of a surgical friend of mine, who chanced to be absent at the time. 'Can you tell me,' said the

intending patient to the servant who opened the door, 'whether your master has ever paid special attention to the diseases of the great toe?' An American writer once described the English social system as a gigantic machinery for the purpose of putting inferior people into prominent and responsible positions; and an affectation of some sort of specialism may be said to fulfil the same function in the medical world. As a rule, it would not be an unsafe conclusion that a man who professes to be a 'specialist,' on some subject which the profession generally would not recognise as suitable for the purpose, is more likely to know less than others about medicine generally than to know more than others about the particular department in which he aspires to shine. The ideal of a genuine specialist is, of course, that he should know medicine or surgery comprehensively, and that he should know everything knowable about some portion of it. Hence it follows that specialism, to become a force for good in the management of disease, must be based upon adequate observation and experience of a more general kind. A young man who enters the profession with the intention of devoting himself from the first to some single branch, is practically certain, before very long, to fall into mistakes for want of comprehensiveness of knowledge. Specialism which is entered upon too early in life, or which is not

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founded upon studies and experience far transcending its actual limits, might perhaps with greater propriety be described as narrowness ; while professing specialism which deals with matters having no real separateness of character, or which rests mainly upon little books and magazine articles, might perhaps with greater propriety be described as charlatanism—that is to say, as the quackery of the qualified practitioner. Except within the limitations already mentioned, the wisest course for a sick man is to avoid ‘specialists,’ and to seek the advice of a physician or of a surgeon who regards his calling as one and indivisible, and who recognises that the whole is greater than any of its parts. Dissection is not practicable until death has occurred ; and the human body, whether sick or well, is a coherent organism, every portion of which exerts an influence upon all the rest. It is not, as the public seem sometimes to suppose, a merely fortuitous assemblage of independent organs.

## CHAPTER XII

## SPEECH AND SILENCE

'THERE is a time to keep silence, and a time to speak,' said the Preacher; and there is no calling in which a prompt recognition of both these times is more important than it may often be in medicine. The conditions usually attendant upon illness render it inevitable that every medical practitioner should not only see many households and individuals in what may be described as undress, but also that he should become intimately acquainted with the skeletons in many cupboards, and with a variety of minor circumstances, in the past or present lives or conduct of many persons, which it would be displeasing, or possibly injurious, to them to publish to the world, or even to make known to the purveyors of local gossip. On all such matters, public and professional opinion were once alike in requiring the doctor to maintain absolute silence as a condition of the continuance of the trust reposed in him; and not the least of the advantages of that domestic

pupilage to a practitioner which, as has been said, was formerly the first step in medical education, was that the necessity for such silence was learnt so early in life that its maintenance became instinctive in later years. Partly, perhaps, from the changed method of education, and partly also, there can be no doubt, from a change in the public mind which it would be difficult to regard with any satisfaction, the passing generation has witnessed an increasing tendency to disclose the details of illness for the gratification of vulgar curiosity. The newspapers which exist by the publication of what is called 'personal' intelligence constantly contain paragraphs about the maladies of distinguished or notorious people; and these paragraphs frequently supply information which, even if accurate, is eminently unsuitable for general reading. The raw material for such paragraphs would sometimes appear to be furnished by practitioners of boudoir 'eminence,' who, in their turn, are rewarded for their complaisance by advertisements congenial to their tastes. It is believed that there are patients who do not object to the consequent publicity, and who would rather see a description of their ailments in print than be left even for a time unnoticed.

Notwithstanding these occasional evidences of a morbid desire for notoriety, it is not uncommon to hear that the secrecy of the doctor should be like

the secrecy of the confessional ; but the analogy breaks down in one important particular. The doctor has no privilege before the law, and is bound as a witness, like other people, to declare ' the truth, the whole truth, and nothing but the truth,' however the facts may have come to his knowledge. In other words, the duty of the citizen overrides that of the practitioner ; and hence persons who break the law must be as careful to conceal incriminating facts from a medical attendant as from any other bystander. Opinions differ as to the duty of a doctor to disclose such facts voluntarily : to inform the police, for example, that he had been summoned to a wounded man whose wound was such as to justify the suspicion that it had been received in the commission of crime or in escape from justice ; but there is probably no difference of opinion as to the duty of giving such information if it be called for ; and the absence of ' privilege ' on the part of medical witnesses has again and again been declared from the bench, and is now the unquestioned law of the land.

Apart from criminality, however, the law supports the right of a patient to require secrecy from his doctor, who, if he made any indiscreet disclosure by which the patient sustained injury, would be liable to be cast in damages. Among recorded cases in which such damages were awarded

there is one of a doctor who was attending a gentleman suffering from defective hearing, and was approached by a professedly sympathising friend of the patient, who expressed great interest in the case, engaged the doctor in conversation, and obtained from him an unfavourable opinion, the effect of which was to prevent the patient's intended marriage with a wealthy heiress. In another instance the doctor replied to the questions of a mistress, touching the illness of a domestic servant, in a manner which caused the latter to lose her situation. The only safe rule is to refuse all information about an illness to third persons, unless with the previously obtained consent of the patient, given either in writing or before a credible witness. In the case of patients under age, parents or guardians have, of course, a right to be told whatever is necessary for their guidance; but, in all other circumstances, although speech may be silvern, silence is golden. It is especially necessary to be careful in speaking to an employer about the health of persons in his employment; and the fact that the employer may pay the fee is wholly unimportant. The doctor is paid to advise or to cure the patient, not to talk about him in a way which may possibly be prejudicial to his interests.

Among the many difficult questions which often present themselves in the course of medical practice,

few are more difficult, independently of legal liabilities or obligations, than those which turn upon the extent to which an opinion, especially an adverse opinion, concerning the probable issue of an illness, ought to be communicated to the patient or his family. Sir William Jenner once laid down the proposition that it might often be proper for the doctor to communicate that of which he was certain, seldom or never that of which he was uncertain. It must be borne in mind that an adverse medical opinion is a distinctly depressing agency, and that the business of the doctor is to sustain the vital powers, and to obviate, as far as possible, the tendency towards death. It must equally be borne in mind that there are conditions in which the knowledge of an impending fatal termination might enable the patient to give full consideration to the testamentary and other dispositions which his state might render desirable, and to effect them in an orderly and methodical way. In the case of an advancing malady, therefore, of which the end is not doubtful, although the course may not promise to be rapid, it is right, in the majority of instances, that the patient should be informed of his state and prospects. To this rule, however, there are a certain number of exceptions. There are people upon whom the fear, or even the prospect of death, exerts a distinctly paralysing influence, of such a nature and

extent that the doctor, if aware of the personal equation involved, would hardly be justified, in any circumstances, in allowing such a prospect to be presented to the sufferer. Many years ago, soon after commencing practice, I had a patient who was also a very intimate friend. He was a retired officer, a man only of middle age, but whose health had long been hopelessly broken by a complication of chronic maladies. A time came when his usual rallying power seemed to be deserting him, and when, month by month, it became more and more manifest that his life was slowly ebbing away. I told his sisters of his condition, and they wrote a letter about him to a brother in a distant part of the kingdom, between whom and the patient there had been differences which had suspended friendly intercourse, and who was a man holding strong opinions on religious questions. This brother, without giving any warning of his intention, immediately hastened off to visit the invalid, and arrived unexpectedly at his house late in the evening. He went at once into the sick room, where he so spoke and acted that I was sent for. As soon as I arrived, the patient directed every one else to go away; and then, saying that his brother had talked to him in such a manner as to indicate that his death was imminent, added that he relied upon me to tell him the exact truth. I said it must be

manifest to his own consciousness that he was losing ground. He asked how long he had to live, and I replied that it was impossible to say. He rejoined that I must have some idea in my own mind—that I must think of his prospect of living in terms of days, or weeks, or months. I said that I thought of it in terms of many weeks, but not of many months. He was sitting up in bed, talking in a perfectly quiet and natural way, and, on receiving my last answer, said that it was enough. He apologised for calling me out at the late hour, thanked me for answering his question frankly, and held out his hand to say good-night. As he grasped mine, his head drooped, and he died instantly, without a sound or a struggle, killed by the shock of the intelligence as effectually as if he had been shot through the heart. In another instance which fell under my observation, a young man of large property, a minor, had symptoms of chest trouble, and was taken by a clerical tutor, under whose charge he had been placed, to a London physician. The physician told the tutor in confidence that the patient would not be likely to live more than two or three years, and advised that he should travel in warm climates. The tutor, either from a mistaken sense of duty or from the mere leakiness of his mind, forthwith repeated the confidential communication to the patient, with the result that the poor boy curled himself up in

bed, refused his food, and died in the course of a few days. Incidents such as these convince those who witness them of the necessity for caution in all their communications with the sick, and for even greater caution in speaking to third persons, who may repeat indiscreetly or inaccurately what has been said in their hearing.

In any case of serious illness, in which the doctor thinks there may be a fair prospect of recovery, or even a reasonable chance of it, and in which he steadily endeavours to support the courage and strength of the patient by keeping this prospect before his eyes, he is liable, in the event of his hopes or expectations being disappointed, to adverse criticism at the hands of the family of the deceased, or, still more often, at the hands of friends or neighbours. Such criticism is apt to rest upon a basis of theological opinion; and we often hear that the doctor 'ought' to have told poor Mr. A. of his approaching end, or, at all events, to have warned Mrs. A. more clearly of her husband's danger. The proper answer to all such criticism is that the doctor, like his critics, is liable to err in his anticipation of events, especially when they depend upon the interactions of forces none of which can be precisely measured or estimated; and that his first, if not his sole duty, is to save life or to prolong it. He would be absolutely wrong in spontaneously

conveying to a sick man, either by speech or manner, his own opinion that the issue of the case would probably be fatal ; and he would usually be equally wrong in conveying such an impression to the relatives of the patient, by whom it would more or less certainly be communicated in a depressing manner, and whose usefulness might be seriously impaired by the diminution or the withdrawal of hope.

Sir William Jenner's maxim, already referred to, has reference chiefly to the early stages of obscure forms of illness, before certainty as to their nature is attainable. For example, a doctor may have strong suspicion that the apparently not very grave symptoms of a patient may be produced by the beginnings of a cancerous growth affecting some internal organ, or by some other morbid process of a progressive and ultimately fatal character. Time will confirm or dispel this suspicion ; and in the meanwhile he has no right to communicate it to the patient, who cannot possess the knowledge which alone would enable him to judge how far it might be well founded. Sometimes such a case may justify an exploratory operation, but such an operation should be advised on the ground of uncertainty only, and not on account of suspicions of this or that, suspicions which might be entirely groundless, but which, if they were once laid before the patient, it might afterwards be difficult or impossible to dispel.

A few cases have been recorded, and only a few, in which knowledge of the probable imminence of death has aided the patient to collect his forces of resistance, and has roused him from a state of comparative apathy to an earnest desire to get well, and to a determination to do everything in his power to promote the wished-for result. I remember one such case being reported from the military hospital at Scutari during the Crimean war. The patient was a sergeant, and the surgeon in attendance upon him was induced, by some reason or other, to tell him that his end was drawing near. The brave fellow pulled himself together, and said, 'I won't die if I can help it. I will live for the sake of my wife and family.' How far his volition really acted upon his weakened body, or how far the doctor had overestimated the danger of his condition, it would now be impossible to say; but, at all events, he recovered. It is none the less true that ordinary experience would not encourage any hope that a similar result would frequently be obtained.

With regard to the innumerable inquiries about other people by which the family practitioner is beset in the course of his daily rounds, it soon becomes second nature to him, as to William of Orange, 'to baffle curiosity by dry and guarded answers,' and to say nothing, or at most very little, when he appears to be most communicative. He

has to be careful that nothing which he says should easily admit of being twisted into a precise statement by inaccurate repetition ; and for his own sake he will do his best so to envelop his designed obscurity in unmeaning phrases as to avoid betraying his want of confidence in the discretion of his questioner, but always remembering that it is better to say nothing than to say too much. A friend of mine once sought to explain his reticence on a particular subject to a northern yeoman, who had fancied himself entitled to information with regard to it, and finished by quoting the proverb, 'A still tongue makes a wise head.' 'Noa, mester,' said the farmer, ' 'tis the t'other way round. 'Tis the wise head makes the still tongue.'

## CHAPTER XIII

## MEDICAL 'ETIQUETTE'

A SUBJECT which oftens looms large before the imagination of the public is that of so-called 'medical etiquette,' a phrase popularly believed, if I may judge from the manner in which I have heard it employed by non-medical persons, to express an elaborate system of arbitrary rules, by which members of the profession are more or less restrained from doing many things to which the non-medical mind sees no valid objection. It will possibly be a surprise to some to be told that, among themselves, doctors never talk of 'etiquette' as governing their relations with each other and with their patients, but only of 'ethics'; and that the object of the various codes of ethics which at one time or another have been prepared for medical use, or for the regulation of medical conduct, has been mainly to assist in the easy application of the golden rule, the rule to do as one would be done by, to conditions commonly or occasionally arising out of responsibility for the

treatment of the sick. A doctor may be asked, for example, to busy himself in some way about a patient who is under the care of another practitioner; and he would know very well, if he stopped to think, that he would not like any similar interference with a patient of his own. It is good for him to be reminded, even if it be by the pressure of an imperfectly comprehended 'rule,' that he ought only to comply with the request under conditions calculated to remove any reasonable cause of offence.

In one of *Æsop's* fables it is related that a man and a lion chanced to meet in a place where a statue of a man subduing a lion had been set up. They discussed its merits; and the lion said that if he had been the sculptor he would have made the lion subduing the man. Now suggested codes of medical ethics, or rules for medical conduct in such or such circumstances, have always, so far as my knowledge extends, been drawn up by doctors without the aid of patients, and never by patients without the aid of doctors. It is perhaps not altogether surprising that, in such codes, the rights of patients have not in every case received adequate recognition.

The doctor goes into the market with his skill in his hand, wishful to exercise it in exchange for money; and the patient goes with his malady, willing to give money in exchange for cure. It is his unquestionable right to give his money where he

pleases ; or, in other words, to have all the advice for which he is able and willing to pay.

But this right, like many others of equal validity, is one which calls for discretion in its exercise ; and it is also to some extent limited by the corresponding right of the doctor to refuse to apply his skill in circumstances which would involve any dereliction of his own duty to his (medical) neighbour, or any diminution of his own self-respect. And, inasmuch as such circumstances are not very uncommon, so certain methods of dealing with them have come to be recognised as correct.

In the legal profession, the right of a client to change his solicitor is undoubted ; but it is tempered by the correlative right of the solicitor to be paid for his past services before he surrenders documents necessary for the conduct of the case ; and the equally undoubted right of the client to 'a second opinion' is one which can only be exercised with the solicitor's knowledge and co-operation. In medicine, the patient himself is the important document, and he can transfer himself, at his own pleasure and without restraint, from one consulting room to another. His liberty in this respect is apt to degenerate into license, unless he has come to recognise that, while the doctor owes a binding duty to his patient, this duty involves reciprocal obligations, and cannot be fully discharged if they are ignored or

neglected. If a patient were to say plainly to his doctor that he was either unable or unwilling to follow the course laid down for him, it would be open to the doctor either to retire from the case or to suggest a consultation ; and, however the question might be settled, everything would be above board, and nobody could have any just ground of complaint. But a more common course of events is for a patient of a sceptical or dissatisfied turn of mind, after habitually neglecting the precepts of his family doctor, and after endlessly cross-examining him about technicalities, to carry his dyspeptic person and his muddled head to some celebrated physician in search of 'further advice.' This he is entitled to have, to the extent of a prescription, of directions for the management of his life, and of an opinion on the probable issue of the case. But his common practice is to put into his own words an inaccurate version of opinions or directions previously received, and to ask the new adviser whether he agrees with them. If there be an appearance of dissent, the patient will return home and tell his friends that Dr. A. pronounced Mr. B. to have been quite mistaken in his view of the case, and highly injudicious in its treatment. On the strength of this misrepresentation, Mr. B. may lose credit or patients in his own neighbourhood ; and, when the story comes round to him, as it almost certainly will, he

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will be angry with Dr. A., and will seek to shun him as a consultant for the future. It is in order to avoid such consequences that a consultant acts prudently when he inquires the name of the customary medical attendant of a new patient, and declines all discussion of the case except by correspondence or interview with the gentleman so mentioned to him. Often, however, the name of the customary attendant is the very thing which the patient most desires to conceal.

It has frequently happened that a stranger has come into my room with the question, 'Do you think I require an operation?' I should usually reply, 'Who has advised one?' and the dialogue might continue by the patient refusing to say. My refuge then was to explain that, as I neither knew by whom the operation had been proposed, nor the grounds of the proposal, nor the precise nature of the intended operation, I must decline to discuss the question, or to give any opinion upon it, except after consultation with the original adviser. The patient has probably gone angry away; but I have abstained not only from giving an opinion where the facts were not fully known to me, but also from saying anything that could be used unfairly to the depreciation of another practitioner.

When a family medical attendant is himself in any abiding doubt concerning the nature of a case,

or concerning the best course to be pursued with regard to it, it is proper that he should ask for a consultation; and it will generally be well that he should select the consultant, whose business in such circumstances will be to confer and advise with the doctor, not to advise the patient independently. It may be an important part of the duty of the family attendant, in such circumstances, to withhold the patient from a consultant whose opinion would be a foregone conclusion, and to take him to one who will carefully weigh and consider all the aspects of the question at issue. Many men of great popular repute are known in the profession to be strongly prejudiced in particular directions, as in favour of or against particular operations or modes of treatment; and their opinions require to be discounted accordingly, in a manner and to an extent plainly beyond the capacities of the public. An old lady once consulted me, to whom I said that she must undergo an operation without avoidable delay, and who replied that she could not consent to so serious a proposal until she had taken a second opinion. I applauded her decision, and urged that the second opinion should be taken immediately. She assented, but went on to ask me to whom I should advise her to go. I was obliged to say that the answer must depend upon the opinion she desired to receive. If she wished for one which would encourage her to

undergo the operation, I could tell her where to get that. If she wished for one which would encourage her in letting things drift, I could equally well tell her where to get that. She was a shrewd old lady, and, after looking at me for a minute with a rather puzzled expression, she said, 'Perhaps I had better have it done.' I thought so too; and the 'second opinion' was not obtained.

When the family medical attendant has no perplexities, it will, nevertheless, sometimes happen that the sick person or the relatives may be impatient or dissatisfied and may wish for further advice. In such circumstances they should not hesitate to say so, nor should the doctor hesitate for a moment about assisting to give effect to their desires. But here again the golden rule comes into play. A doctor who is called in as a consultant must be assumed to have valid claims to the position—claims based upon at least an assumption of a larger experience or of a more minute study of cases of the class under consideration. A family doctor of good standing cannot be expected, and ought not to be asked, to accept as a consultant any but a man of mature age and recognised professional status, such as is conferred by holding office in a well-established medical school, or in a hospital of acknowledged repute. No barrister would be 'led' by one who stood below him in point of precedence; and a

general practitioner is fully justified in refusing to meet any proposed consultant whose position he does not regard as at least equal to his own. It may also be his duty to protect his patient as far as possible against a too hasty acceptance of some proposed method of treatment which may be recommended chiefly by its novelty; and, while he takes care to preserve an open mind, he should remember that he must continue to accept his full share of responsibility for any course which is pursued under his presumed sanction.

It will every now and then happen that a practitioner is requested to meet some wholly impossible person, such as a 'homœopath' or a quack; and then, as a rule, it is his duty absolutely to decline. In the case of a quack, the refusal is, of course, merely like declining to take a hand at cards with a cheat; and in the case of the homœopath, who may be a legally qualified practitioner, the refusal may properly rest upon the absence of any common ground of practice or belief. If the homœopath really believe in the doctrines which he professes, it is better that he should have undivided responsibility in their application; and, if he does not believe in them, the inference is an obvious one. I felt myself compelled, a few years ago, to withdraw from the Ophthalmological Society of London on account of the implied sanction to consultation with homœo-

paths which was given by the Council ; and I did this as a matter not of 'etiquette,' but of ethics. Regarding homœopathy as a delusion or a fraud, I would not incur the risk of being considered either a victim or an accomplice.

To the general rule in such cases, as to most general rules, there may be exceptions ; but, if so, they must be founded upon what should always be a paramount consideration, the welfare of the patient. By 'welfare' I do not mean the gratification of his whims or fancies, but only the maintenance of some condition by which his prospects of recovery may be increased. The best example is one that has become historical. In the spring of 1881 my friend the late Sir Richard Quain called upon me in a state of much perplexity. He said that he had been asked to take charge of the case of Lord Beaconsfield, while a homœopathic practitioner remained in nominal attendance. This gentleman was willing to give an undertaking to leave the direction of the treatment absolutely in Sir Richard's hands, and to abstain from all interference—in fact, to efface himself entirely ; but it was thought that the patient would be disturbed by his absence if he did not make his accustomed appearances in the sick-room. Lord Beaconsfield's condition was so critical that a small matter might turn the scale against him, and Sir Richard was disposed to put aside the

objections to the presence of the homœopath which in ordinary circumstances he would have entertained. He had been to Sir William Jenner, who advised him to refuse to enter into the proposed arrangement, and to Sir James Paget, who advised him to consent. I agreed with Sir James, on the simple ground that it was the duty of the physician to think first of the patient, and only secondarily of any misconstruction to which his own conduct might be liable. Our counsels prevailed, and Sir Richard remained in attendance upon Lord Beaconsfield to the end ; but he did not escape an amount and kind of criticism which might have been very injurious to any one whose position was less assured than his own.

It is, perhaps, inevitable that difficulties should sometimes arise between medical men whose areas of work are conterminous or overlapping, so that one of them may occasionally be called upon to attend the patients of the other in cases of accident or sudden emergency. Many unfortunate disputes have thus arisen, and many well-meant endeavours have been made to provide by 'codes' against the probability of their recurrence. The general applicability of any possible 'code' is much diminished by the infinite possibilities of variation in the circumstances of different cases ; but there are general principles common to all. If the services of Mr. A. are for any reason not available at a time when one

of his accustomed patients sustains an accident, or is attacked by sudden and alarming illness, and if Mr. B. is called in to deal with the emergency, it is for the patient to decide by whom the attendance shall be continued. One patient will prefer the presence of his accustomed doctor; another will feel, with President Lincoln, that it is undesirable to change horses when crossing a stream. The patient is not the property of the doctors, and cannot be disposed of at their pleasure; any assumption to the contrary which may be found in 'codes' notwithstanding. It is their duty to assent to whatever arrangement for the future the patient may desire; but, in the majority of instances, the retirement of the comparative stranger should be the rule, unless the patient definitely decides to the contrary. Practitioners who are neighbours, and on friendly terms, often have an arrangement that each shall act for the other in case of need; and, when this is so, the retirement of the substitute would be still more a matter of course unless he were specially called upon to remain.

In the case of a patient who desires to change his medical attendant in the course of an illness, there need be no friction if there be honesty and plain dealing. When a doctor undertakes a case there is an implied contract that he will do his best for it, and there should also be complete recognition

of a corresponding contract on the part of the patient that he will second the doctor's endeavours. Either party is fully entitled to terminate the contract at any time; but neither has any moral right to disregard it so long as it continues. The patient would be morally wrong in sending for a second doctor behind the first one's back, and in either concealing from the first that he had done so, or in concealing from the second that the first was in attendance. He would not only be morally wrong, but he would be very likely to suffer for his wrongdoing, as he might possibly endeavour to combine incompatible methods of treatment. Hence it is the well-established custom of the profession that a doctor who is called to another man's patient shall satisfy himself that the former attendance has been definitely and properly concluded before he will consent to undertake the case. The patient must be off with the old love before he is on with the new.

We have, in all this, nothing more than the practical application of truthfulness, common sense, and ordinary good feeling, to the control of the relations between the sick and their medical advisers. If patients choose to call this 'etiquette,' there can be no other serious objection to the term than that which naturally arises from its silliness. A patient who hesitates about some course which he desires

to take, lest it should lead him into unconscious transgression of unknown and mysterious rules, will not go far wrong if he endeavour to put himself in the doctor's place, and to consider how he would desire to be treated in similar circumstances.

## CHAPTER XIV

## DOCTORS AND THE INSANE

THE relations between medical science and insanity, or between medical practitioners and the insane, as these actually are and as they might become, constitute a topic of supreme national interest and importance. For many years past, insanity in the United Kingdom has been steadily increasing; and its prevalence is such as to justify very grave anxiety. According to the last report of the Lunacy Commissioners for England and Wales, there were 113,964 certified insane persons under restraint within their jurisdiction on January 1, 1903; being an increase of 3,251 in twelve months; and a similar rate of annual increase has been continuous for many years. It is exhibited in the following table, for three decennial, one quinquennial, and afterwards for annual periods:

Year			Number of Insane	Year			Number of Insane
1859	...	...	36,762	1897	...	...	99,365
1869	...	...	53,177	1898	...	...	101,972
1879	...	...	69,885	1899	...	...	105,086
1889	...	...	84,340	1900	...	...	106,611
1894	...	...	92,067	1901	...	...	107,944
1895	...	...	94,081	1902	...	...	110,713
1896	...	...	96,446	1903	...	...	113,964

We have seen, of late years, a very large amount of attention directed to the prevalence of cancer and of tuberculosis; but the evils arising from these maladies, great as they undoubtedly are, must be regarded as insignificant when compared with those arising from insanity. The asserted increase of cancer is more than counterbalanced by a generally diminished death-rate; and the mortality from tuberculosis is scarcely half of what it was only a few years ago. Insanity, in the meanwhile, is not only increasing after the manner shown in the preceding table, but its admitted prevalence, as measured by the number of persons in confinement, only discloses a portion of the injury which it inflicts. For every manifestly insane person there are probably many more whose judgments are abnormally feeble or whose emotions are but imperfectly controlled, and who form, in the aggregate, no inconsiderable source of weakness in a democratically governed community. They not only maintain the supply of such social nuisances as furious motorists and 'passive resisters,' they not only support anti-ism and swallow quack medicines, but they furnish the audiences to which quacks of every sort, social, religious, or political, know that they may with confidence appeal. In the meanwhile, from the operation of peculiar circumstances, the diseased conditions of the brain which threaten or constitute

insanity have practically been left almost uninfluenced by the advance of medical science. Speaking generally, that advance has been the work of hospitals, and the insane have been denied participation in its benefits because they have been relegated to asylums.

The functions of the brain, numerous and complicated as they are, may yet be roughly classified under the three heads of movement, sensation, and thought, all of which are liable to be perverted by disease. There are diseases of the brain which produce disturbances of movement, as in the various forms of convulsion or paralysis; there are diseases which produce disturbances of sensation, as in neuralgia and other painful affections; and there are diseases which produce disturbances of thought; while there are some which, especially in their more fully developed forms, affect all three classes of function simultaneously. The diseased conditions which primarily produce disturbances of movement, and the diseased conditions which primarily produce disturbances of sensation, have of late years been studied with very beneficial results; especially in the direction of enabling physicians to discover the precise locality, as well as oftentimes the nature, of the morbid process; and these conditions, although there is still very much to be learnt regarding them, are beginning to be amenable to treatment in various

ways, and to an extent which, even a very short time ago, few people would have ventured to anticipate. But the diseased conditions affecting thought have been practically excluded from the range of the inquiries by which the improvements referred to have been brought into operation. The inquiries in question have been conducted in hospitals, institutions of which the primary object is to heal the sick; and nothing analogous to them can be conducted in 'asylums,' institutions of which the primary object is to dispose of the insane in such a manner that they may injure neither themselves nor others, and may be permitted to recover if they will.

It is true that public asylums, now for many years, have in this country been placed under what is called medical superintendence; but this superintendence, as far as any progress in the direction of increased knowledge of the actual causes of insanity is concerned, must be regarded as almost wholly ineffective. It has been productive of enormous improvements in the treatment of insanity as regarded from a purely humanitarian point of view, but has been almost entirely barren as regards the advancement of science. Everything has been done in the asylums which could render the lives of the inmates brighter and more pleasant, everything has been provided which experience has shown to be conducive to spontaneous

recovery. The walls of the rooms have been made gay with pictures; the fields and the workshops have afforded a thousand facilities for wholesome work or wholesome recreation; the tyranny of attendants has been kept under control with a firm hand; and nothing has been wanting which kindly and careful observation could supply. There has been, of course, some medical supervision of inter-current ailments, but of scientific investigation and medical treatment of the brain diseases underlying the thought disturbance there has been none, or next to none; and our knowledge of the essential nature of insanity, of the causes which foster and produce it, of the means by which, no doubt, it could often be prevented, and of those by which it might sometimes be cured, is scarcely greater now than it was a hundred years ago.

The advancement of knowledge with regard to the nature, prevention, and cure of disease depends upon the fulfilment of conditions which are now perfectly well understood, and which asylums for the insane have never been so organised as to supply. There must, in the first place, be continuous research, chemical, physical, microscopical, into the nature of the changes which are produced by disease in the blood, the tissues, or the secretions of the living body, as these changes are discoverable either during life or after death; and there must, in the second

place, be continuous study of the symptoms with which the changes are associated—study which can only be carried on by the trained sight, touch, hearing, observation, of the thoroughly accomplished clinical physician, whose life is devoted to bedside work, and whose faculties are kept on the alert by the ever-pressing duty of explaining to students the phenomena which he assists them to notice and to recognise. This is the work daily carried on in hospitals; and it is in precise proportion to the excellence and thoroughness of its accomplishment that ignorance with regard to morbid changes is dispelled, and that victories over disease are gained. It has not been, and cannot be, carried on in asylums, because they possess neither the necessary organisation nor the necessary men.

Although, in the absence of the managing committee, the supreme officer of a public asylum is a 'medical' superintendent, who must always be a legally qualified medical practitioner, the real authority is vested in a body of gentlemen, formerly a committee of the county magistracy, now a committee of the county council, who might usually be described as capable and intelligent men of business, thoroughly desirous to do their duty according to their lights, but neither conversant with the methods of scientific research, nor with any details of the benefits to mankind by which those efforts have

been rewarded. Promotion in the medical service of the asylum rests in their hands, and the testimonials they give are naturally accepted by others like themselves as the best recommendations which candidates for appointments can possess. The 'medical' superintendent is not only a doctor, but he is the head of a great establishment, embracing gardens and a farm, as well as the staff and buildings of the asylum itself. The managing committee value him for the sake of the qualities which they can appreciate, not for the sake of those which they cannot. He must primarily be a firm and strict but just master, an administrator, an organiser, and only secondarily a skilled physician. The application of the kitchen waste to the support of an increased number of pigs would make a far greater impression upon the minds of his committee than the most brilliant discovery with regard to the functions or the nutrition of a nerve-cell.

Moreover, it is a feature of the asylum medical service that men enter it early in life, and grow up subject to its conditions. A student who has obtained his qualifications will announce that he means to 'go into insanity,' and he will look out and compete for any junior asylum office which may become vacant. If successful, he will in due course feel himself eligible for promotion, either in the same asylum or in some other in which an opening may occur; and

he will find that the essential requirement from candidates is 'asylum experience.' In other words, the future superintendent must not only have been put into a groove early in life and have remained there, but the groove must have been of such a character as strongly to divert his attention from medicine, and to direct it towards administration. The public asylums of the United Kingdom contain many thousands of people who are not only insane, but are from time to time the subjects of various common maladies; and I do not recall a single instance in which a suggestion tending to elucidate the causes, or to improve the treatment, of any common malady has proceeded from an asylum. The only great reform in the management of the insane which was brought about in the course of the last century was produced by the fact that the justices of Middlesex, some sixty or more years ago, so far departed from established custom as to elect the late Dr. Conolly, who was without 'asylum experience,' and had previously been in general practice as a physician, to be the superintendent of Hanwell. In that capacity Dr. Conolly was shocked and startled beyond measure by practices to which asylum officers in general had been accustomed from their youth, and which custom had persuaded them to consider necessary. He absolutely abolished the employment of mechanical restraint, of fetters and

shackles, for the insane ; and the example which he set has been almost universally followed, and with the best possible results. But the fortunate accident which led to his appointment has never been repeated ; and for many years our public asylums have been conducted, medically speaking, under the cold shade of an ' experience ' which has become crystallised into habit.

Moreover, the scientific study of insanity, in so far as it can be said to have existed, has been far more directed to the observation of superficial phenomena than to the investigation of the causes underlying them ; and it is only these causes which are of any real significance, as far as either prevention or cure are concerned. No insane person is assisted to get well by its being written down that his case should be included under such or such a head of a classification founded upon the character of his delusions or the peculiarities of his conduct ; while the real basis of physical disease on which his condition depends is very liable to be buried underneath a nomenclature which is apt to degenerate into jargon. Many ' alienists,' as they style themselves, find as much comfort in the derivatives of ψυχή as the old woman did in ' that blessed word Mesopotamia ; ' and much that is written about insanity is little more than the mere dregs and sweepings of that so-called metaphysic, which has

been happily described as 'the art of talking grave nonsense about subjects beyond the reach of the human understanding.' Insanity in all its forms is as purely physical as lameness or measles. A man walks lamely because he has a weak or diseased or injured leg; and he thinks lamely because he has a weak or diseased or injured brain. A man is rendered delirious by certain toxic substances circulating in his system; and, if his delirium be long continued, some manifest degenerative changes are found in his brain when he dies. As long as there is only disturbance of nutrition there may be a possibility of recovery; but, when the disturbance of nutrition has produced change of structure, the period for recovery or cure has presumably passed beyond recall.

When the London County Council was first instituted, I was asked to contest West Islington in the Conservative interest, and consented. I was mainly influenced by the hope of being able to bring about at least a commencement of some reform in the treatment of the insane; and in 1889 I obtained the appointment of a strong committee 'to inquire into the advantages which might be expected from the establishment, as a complement to the existing asylum system, of a hospital with a visiting medical staff for the study and curative treatment of insanity.' The committee held many

meetings, examined many witnesses, and analysed a large amount of documentary evidence. They reported, unanimously and very decidedly, in favour of the proposal submitted to them ; but the majority of the Council were unable to grasp the merits or the importance of the question, which, in truth, stood a little above the ordinary level of the parochial mind, and the report was disregarded. The evidence adduced appears, nevertheless, to have made some impression upon the asylums committee, for that body soon afterwards obtained the appointment of a highly skilled pathologist to the asylums of the Council, a gentleman charged with the investigation of the morbid changes found in the insane after death. He has, I am informed, obtained some important and valuable results, especially in the direction of showing that the nervous system of the insane frequently displays changes which appear to arise from the inherited taint of a disease which it is the special province of the most malevolent form of anti-ism to foster and promote. But, after all, the office of the pathologist is not unlike that of the detective who visits a house in which a burglary has been committed. He only sees how the entrance has been effected. To render his work useful, it must be carried on hand in hand with that of the clinical physician ; and the clinical physician cannot be

burdened with the cares and responsibilities incidental to the government of a great establishment. His time and his thoughts must be alike free to be devoted to his proper duties, just as the time and mind of the physician to an ordinary hospital are free for the same purposes. Whenever this reform is accomplished—whenever, that is, a real ‘hospital for the insane’ comes into existence, a hospital in which the necessity of taking measures for the safety of the inmates does not throw into shade the still greater necessity of studying and of trying to cure their brain disease—then, and not till then, shall we have a prospect of seeing some lightening of the burden which madness now casts upon the community. The problems presented by insanity call loudly for research; and research can only be conducted to a successful issue by men possessing adequate skill and knowledge, to whom a sufficiency of material has been supplied, and a sufficiency of time afforded. An enormous proportion of those who are now insane have probably passed, not only beyond the reach of cure, but also beyond the stage at which they might usefully be studied by the physician; they are the mere wreckage of human life, and all that they need is to be sheltered and protected. For such people asylums are obviously necessary; but their existence should not lead us to forget that the necessity is largely dependent upon

our failure to deal in curative fashion with a great and growing evil. If the growth is to be arrested, we must strike at the roots ; and we can only do this by extending to insanity, in its early and perhaps curative stages, the methods of observation and of inquiry for the conduct of which hospitals are expressly organised, and by which the general mortality of the country has been reduced to about one-half of what it was fifty years ago, although during the same period of time the prevalence of insanity has been quadrupled. I may not see even the commencement of the much-needed reform ; but its coming is, I venture to think, inevitable ; and, whenever it comes, it cannot fail to afford the means of diminishing what is now one of the chief evils incidental to civilisation.

## CHAPTER XV

## MEDICAL WOMEN

WITHIN the last few years very important additions have been made to the medical profession in this country by the inclusion of women within its ranks. The first English lady doctor was Miss Blackwell, who graduated M.D. at Geneva (U.S.A.) in 1849, and was placed upon the English Medical Register in 1859, under the provisions of the Medical Act of 1858. Her example was followed by Miss Elizabeth Garrett, since widely known as Mrs. Garrett-Anderson, who experienced great difficulty in obtaining the necessary instruction in London, was compelled to incur great expense in attending private courses of lectures, and was refused admission as a candidate for qualification by the Colleges of Physicians and Surgeons and by the London University. The Society of Apothecaries, under the terms of their Act, were unable to make sex a ground of exclusion; and Miss Garrett, after having fulfilled all the statutory requirements, was admitted to examination

and obtained the license of the Society in 1865. She was placed upon the Medical Register in 1866, but proceeded to complete her education and qualifications by obtaining the Doctorate of Medicine of the University of Paris before settling in London to commence practice. Her success from the first was unequivocal, and she speedily applied her energies to the work of enabling other women to follow in her steps, and to the removal of many of the obstacles which she herself had surmounted. Her endeavours in this direction excited considerable opposition and strong expressions of disapproval in many quarters ; but it would be useless to dwell here upon the details of a finished and forgotten controversy. The claim of women to become medical practitioners has been justified by events, and can no longer be disputed. A thoroughly well-equipped medical school for their instruction is now open in Bloomsbury, and female students are received at many provincial schools. The Royal Free Hospital has passed into their hands ; a special hospital for women, entirely officered by women, has been established in the Euston Road ; the London University has accepted them as graduates, and a large number have not only availed themselves of the privilege but have done so with marked distinction ; and between three and four hundred women are now upon the Medical Register. They practise

both as physicians and as surgeons; some of them undertaking operative work of every description, and leaving nothing to be desired in the way of excellence of performance.

While such is the actual position of the 'medical women' question, and while it may be regarded as established that the mere fact of sex does not imply the existence of any positive disqualification for the discharge of medical or surgical duties, it remains to be seen whether there will be any considerable demand for medical women in this country; and, if so, whether the supply is likely to be continuous and of the right quality. On these points it is, I think, impossible to judge; and it would certainly be rash to prophesy. Even within the last few months grave objections have been raised against the appointment of women as house-surgeons to general hospitals, in which they would often be required to extend their ministrations to men by no means of selected quality or character, and it is difficult not to feel some sympathy with these objections. On the other hand it must be remembered that nurses are called upon to encounter the same or very similar difficulties; and it is unquestionable that the public opinion of a male ward affords them almost absolute protection in the discharge of their duties. Moreover, the women who undertake hospital work do so with complete

knowledge of the conditions which it is certain or likely to entail ; and they may fairly claim the right of deciding for themselves concerning any questions of sexual propriety which may arise in connection with it. As between male practitioners and female patients it is certain that the element of sex is, as a rule, completely ignored, excepting in so far as it may lead to the development of greater sympathy and greater tenderness on the part of the doctor, and to a more complete submission and reliance on the part of the patient. There is no manifest reason, when once the element of novelty ceases to be operative, why the relations between male patients and female doctors should not be equally harmonious.

Even persons who are still opposed to the conduct of medical and surgical practice by women under the conditions which obtain in Europe or in America are constrained to admit the magnitude and importance of the field of work which offers itself to them in the East, or wherever women are kept in seclusion from men. The waste of life and the amount of preventable suffering which for years have been permitted to continue unchecked in British India are now in process of being brought under control by the agency of English medical women ; and the name of Lady Dufferin will long be held in grateful remembrance for the part which

she took in rendering their services available. It seems probable that India alone would be able to absorb, for many years to come, the whole or nearly the whole of the available supply ; and all that can be said, in regard to the female doctors who elect to remain in this country, is that they have to justify their presence by their achievements. In order to do this, it will be necessary for them to remember that they are pioneers in a great movement which has for its object to enlarge the opportunities and to increase the independence of their sex ; and that, if this movement is to be completely successful, those by whom it is at first represented must be careful to maintain standards of skill and of usefulness which, at the very least, shall not fall short of those which are maintained by their male competitors.

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