An Address

DELIVERED AT THE

DISTRIBUTION OF PRIZES AT ST. MARY'S
HOSPITAL MEDICAL SCHOOL.

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BY

RICHARD OWEN, D.C.L., F.R.S.,
ETC.

I HAVE been honoured by the request, through the Dean of your School of Medicine, to deliver to the successful competitors the prizes which they have gained by excellence and proficiency in the studies of this school; and here, at the outset, I am led to note the sound judgment which has governed the definition of the field of competition. With a few exceptions, prizes are not awarded for single courses; but classes are grouped in accordance with the curriculum laid down for students of the first and subsequent years; the object being to ensure the general proficiency of the students of each year in their respective subjects of study. I am happy in being permitted to take part in an assemblage and on an occasion that have for their essential cause and condition the increase and diffusion of knowledge. I am favoured in being the instrument of manifesting the satisfaction which the teachers of science in this school feel in the success which proficiency testifies to their endeavours to impart such science. I am glad also to meet fellow-learners of every grade, whose main aim and labour profess to be to gain those steps in science which may lead them to a height whence, in their turn, perhaps, they may discern the signs by which our view of the field of knowledge may be expanded.

In every race, one wins, or a few gain prizes; but every competitor has earned in the course what far transcends in value the mark of some small relative superiority. In the training or preparation for mere physical excellence, the muscular fibre is strung, the capacity of respiration developed, the vigour of circulation increased, the whole bodily health improved; the organism is a better organism, can do greater things, can receive higher enjoyments. But these perfections subside with the cessation of the exercises that educed them. Yours has been a competition of a higher kind; not of the powers of the animal, but of those of the man; not of the body, but of the mind; and the gain in the training and very act of competition must have been proportionate. Moreover, in the friendly endeavours to excel in which you have been engaged, you have done more for your own advantage and that of mankind than merely improve the working of your own intellects. The very exercises by which the acquisitiveness of ideas, retentivity of facts and principles, power of comparison of grounds for this or that conclusion—in short, any of the faculties of apprehending truth, have been improved or educated; have left you in possession—permanent possession, let us hope—of the elements of anatomy, physiology, chemistry, zoology, botany, and other definite kinds or sums of natural science, which go to endow you with the faculty of compre-

hending the nature of injuries and symptoms of disease, and of applying that power in behoof of your suffering fellow-men.

Now, the lowest amount of this intellectual wealth which may have been gained and garnered by the student is to him a prize far exceeding in value the signs and tokens of honour which I have had this day to distribute. Let not, then, any of the so-called "unsuccessful" repine or feel discontent at the issue of the competitions. He has gained a better possession, in whatever measure he may have mastered the sciences which he has had the opportunity of learning; he has succeeded in a far higher matter, if his conscience tells him he has done his best, and has neither wantonly nor wilfully thrown away his opportunities. As our great poet sings:

"Fame is no plant that grows on mortal soil,
Nor in the glistening foil set off to the world, nor in broad
rumour lies;
But lives and spreads aloft in those pure eyes and perfect witness
of th' all-judging Jove:
As he pronounces, lastly, on each deed,
Of so much praise in heaven expect thy meed."

But, to descend from these heights to things of less empyreal concern: let me congratulate you on your being students of St. Mary's Hospital and School of Medicine, and show cause of congratulation by reference to the opportunities, arrangements, and conditions which it affords for a sound and thorough scientific and practical medical education.

[The chief characteristics of these were then defined and commented on.]

It is sometimes asked, Is medicine a science? This question, like many others, is hardly reasonable or fair, the two terms being so unequal in degrees of complexity. So far as medicine knows the cause and condition of a curable disease, and the one infallible cure, to that extent it is "science". If medicine has mastered the nature of a specific malady, if there be a specific malady, and has discovered the specific remedy, if there be such a thing as a specific, it may claim to be a science. I leave to the experienced practitioner to determine what may be the proportion of the field of observation and practice commonly called "medical science" which is in the above defined condition; and what the proportion of that field in which the cultivators differ in their views as to the cause, the nature, and the remedy of disease.

Your excellent professor of chemistry will tell you that, having a special aim in view, he adds a certain reagent to a given solution or mixture, knowing that it will produce such desired result; viz., a certain infallible decomposition and recombination. The prevision and its fulfilment prove that he possesses a science. But, were other chemists to affirm that a different reagent would produce the same result, or that the solution, if left to itself, would produce it by spontaneous decomposition or recombination; and if there were really grounds for such affirmations or diverse views of the case,—you would then conclude that chemistry had not reached the scientific stage, and would hardly expect it to enjoy public confidence.

In fact, we see at the present day that the public confide not so much in medicine as a science as in the particular practitioner. It is characteristic also of the present phase in the growth of medicine, that the public are liable to be deluded and led astray by its shams; and not until medicine becomes a science can such simulacra be expected to vanish, and quacks and quackery to become extinct. Time was when disasters were deemed, in the literal sense of the term, to be the effect of malign influence of stars. Two or three centuries ago, the horoscope was cast, and believed to indicate the future destinies of the heir, by the same classes as now accept, in like faith,

the infinitesimal globule. The astrologer then had leave to move in the same social scale, and to sit at the same tables, as now the homœopathist. Astronomy had not risen to its full development as a science. It is interesting, indeed, to consider how a public, ignorant of and careless about the grounds and proofs of an established science, does in time come to believe in and trust it, to the exclusion of its simulacra, and the utter deposition and extinction of the quack professors of the same. I believe the public gain this faith by what the true science effects, and what it predicts.

By means of the data of astronomy, the seas are navigated, and remote parts of the earth reached with marvellous exactitude. Astronomy foretells phenomena to the day, hour, minute, even second of time: the interval—it may be years—after the prediction passes; and at the very hour, and fractional part of the hour, the event foretold comes off.

The palæontologist, from a fossil fragment, infers that such a form of animal, strange, it may be, or gigantic, has existed in such an island; and commits himself a prophetic sketch of the same. Other parts are afterwards found; at length, perhaps, the entire skeleton. The public knows nothing of the laws of correlation by which the prevision of a form of life long passed away, and never seen by human eye, was gained; but it is struck by the fulfilment, and accepts or believes in the science.

Medicine is occasionally called upon to prophesy in public: the rank of the patient requires a bulletin. Reference to some of these series of predictions and the actual results may partly account for the degree in which medicine still halts, as a science, in public estimation. And so it comes to pass that the question continues to be asked, "Is medicine a science?"

The great question for you, however, is—Can medicine become a science? From every analogy of the progress of human intellectual endeavours to raise, by observation and experiment, a body of facts and phenomena to the status of true science, the reply to the latter question would be emphatically, Yes!

Anatomy, physiology, pathology, or a knowledge of deterioration of structures, to the minutest degree in which the microscope can show such changes for the worse, in the fluids and elementary tissues of organs; chemistry, especially organic; the nature and powers of medicines—in short, all those bodies of doctrine worthy of the name of science, and which bear upon the problem of life, must be cultivated—if possible mastered—as the indispensable basis on which a lasting superstructure of a true science of medicine can be raised. Medicine can only become science by and through the subservient bodies of doctrine that have become science—the unknown must be reached by the known.

In every age, the individual who has effected most to raise medicine and surgery to the rank of sciences, has been the practitioner who was most distinguished for his knowledge of science.

John Hunter, besides being the greatest surgeon of his time, was the best physiologist, the greatest comparative anatomist, and, what was then little if at all known to his compatriots, he held the most advanced views of zoological classification, and was the most experienced palæontologist.

In considering the obstacles that impede the progress of medicine to the scientific status, I have been led to regard in that light, among other opposing influences, "fees" and "examinations".

Taking poor human nature as it is, I suppose that, if the palæontologist were to receive his *honorarium* for every fossil he gave an opinion on, the number of

mistaken determinations would be enormously increased. Were the chemist to make his analysis with a view to the fee, he would be diverted and led far astray from the track of discovery. If the zoologist might claim and receive pecuniary reward for every new insect, shell, or worm, he might characterise, the number of "nominal species" would be vastly on the increase. Nature will not be bribed to reveal her secrets; hardly will she, and rarely, reveal them under the torture of vivisectional experiment. She demands the full and entire devotion of her suitor, in long years of subservient observance; and only to such single-minded worshippers of truth will she whisper a particle of it.

The physician who, in our day, has, perhaps, done most towards rendering medicine a science, is Rokitansky, through the very great proportion of his time devoted to the study of eleemosynary cases.

The same condition of advancement exists in the relations between the patients in hospitals and the medical officers. But for the entire range of maladies, in the various classes of society, one is disposed, in reference to the advance of medical science, to indulge in the Utopian desire of the devotion of some one adequately gifted in mental power and material wealth to the study of disease, exclusively with a scientific aim; able to select his cases; not necessarily diverted from a given and promising line of observation by the calls of remunerative practice.

Thus, in the same malady affecting different individuals under similar conditions of age, sex, temperament, or constitution, the effects might be compared, of the customary or accepted remedies in one case, of the remedies of an opposite kind—conditions of practice which in some instances now divide the medical mind—and of the withholding all medicines: just as the chemist, in quest of discovery alone, perseveres in the pursuance of the analyses of a particular class of compounds, his faculty of insight being sharpened in relation to them, by exclusive study and progressive familiarity with their specialities.

In reference to the second of the obstacles which it has occurred to me to specify, I do not mean "examinations" in the abstract; but the kind and conditions of those tests which more immediately affect the sciences—as taught, *e.g.*, in a school of medicine like St. Mary's—and the ultimate aim which the teachers have in view.

Examinations differ widely, in the work and qualifications of the examiners, in the views and motives of aspirants to the office, in the main end and aim of the test itself. In regard to the latter, the difference is such that it may be expressed by saying that some examinations are conducted to find how much, and others how little, a man knows. In the first category, those examined are ranked in the order of their acquirements; in the second, all alike receive a diploma, signifying qualification. And, as the weakest link in a chain gives the strength of the whole, so the scantiest measure of knowledge that enables the candidate to pass, becomes that of the amount sought for by the examiners, and at the same time a test of their own qualifications for the office, and of the responsibility and trouble which they undertake in its performance.

To exemplify the first kind of examinations, I would refer to the well-known arrangements at our old universities, in principle so pure, so effective in arrangements, as to gain for him in whom the highest amount of knowledge has been found the unhesitating applause of the less successful, which is echoed, without the slightest misgiving, by the country at large.

In the composition of the examining body, old experience is combined with young vigour, soundest knowledge of settled principles, with minds fresh from the latest discoveries and amended views of science. The senior wrangler of one year may be associated with his teachers as an examiner in the next.

The machinery is effective without being cumbersome. There is no inducement to make it so. Four is the usual number of examiners. The administrative authorities of the university, responsible for the well working of the examination, impressed also by its supreme importance, have no other notion than to make it work well. They do not propose to themselves any personal advantage, in purse or dignity, by taking part in the work. They simply elect the best men for it. These, likewise, are moved by considerations far higher than the emoluments of the office; and, indeed, there are none. Such fee as may be offered and received simply nullifies the sense of obligation, on the part of the authorities, for the time and labour devoted by the examiners to the duties confided to them.

The annual lists of the results of the B.A. examinations at Oxford and Cambridge exemplify the operation of this system of examination, in discovering the relative amounts of knowledge in the candidates. The teachers of the required subjects are stimulated thereby to impart the newest discoveries, and to set intelligibly before their pupils the latest phase of their respective sciences. "Examinations" of this nature are helps, not hindrances, to science.

A board of examiners composed exclusively of old teachers or practitioners, and to whose diploma or pass-certificate the bulk of medical students look as a main aim of their metropolitan studies, becomes an influential element in the consideration of the way in which, *e.g.*, anatomical and physiological science is to be presented by the teacher to his class. I believe that I do not err in supposing that, if the examinations in human anatomy and physiology by the board granting the diploma were conducted by a combination of young cultivators of those sciences with the experienced practitioner for the surgical department; that if one or more men of justly merited public repute for their advancement of anatomy and physiology, and in the vigour of their intellectual work of imparting and expanding those sciences, were placed on the board or "court" of examiners—teachers would be stimulated to prepare their pupils to be tested in relation to more advanced conditions of those sciences, than there is any call for under the present state of the "pass-examinations".

The obstacles to such improvement in the examining board may be exemplified in the conditions of its existence at the Royal College of Surgeons of England. The administrative authorities of that College are concerned, both in purse and dignity, in themselves performing the work of examination. In purse, by the way and degree in which they remunerate themselves for such work; in dignity, because no member of the Council is eligible to the offices of vice-president and president of the College until he has been an examiner. As such, his remuneration being in the ratio of the number of persons examined, must now be of material importance.* Accordingly, the Council, twenty-four in number, elect out of their

own body ten to be examiners, reserving to themselves the testing in all the required sciences and subjects, save midwifery, dentistry, and classics.

I note this, therefore, as one of the impediments to the progress of medicine and surgery as sciences: an evil which will be abated in proportion as those to whom the profession confide administrative power may approach in singleness of purpose and motive to the administrative bodies of our universities, in regard to the business of examination for degrees and diplomas.

The Royal Society of Arts has recently given an example which the Royal College of Surgeons would do well to follow. On undertaking responsibilities connected with examinations of candidates, the Council of the Royal Society of Arts at once passed the self-denying ordinance that no member of the Council should be eligible to the post of examiner. Yet the Council always includes men well qualified for the office, but not every man so qualified, and seldom those who are best qualified.

[Professor Owen finally congratulated the students on the choice of their profession; comparing medicine with law, and with divinity as distinguished from religion; pointing out in this comparison the advantages of medicine in the opportunities it gave of acquiring and advancing knowledge of the various forms of the power of the Creator, in the greater freedom allowed in the use of the intellectual instrument, in the exclusively beneficent application of medical science, and the freedom from any calls of its professors to punish or persecute their fellow men.]

METROPOLITAN ASSOCIATION OF MEDICAL OFFICERS OF HEALTH. At a meeting of this Society held on May 20th, Dr. Druitt in the chair, Mr. Haynes Walton read a paper on "The Contagious Affections of the Eye." He said that by the term used he expressed the communication of ocular disease from one individual to another; and he considered that, while the direct effect of contagion on the eye appeared only in conjunctival affections, more injury and loss of sight was produced from this cause than from any other diseases of the organ. He referred to the prevalence of catarrhal ophthalmia in the Central London District Schools; and recommended the following measures to be employed in all such instances. Absolute separation of the diseased persons from the healthy; classification, if severer cases occurred among the diseased; the institution of a rigid convalescent system of probation, to prevent relapsing cases from doing mischief; a morning and evening inspection of the whole establishment, so that there might be the most timely removal of diseased individuals; the strictest attention to the withdrawal of any known or supposed exciting cause of the diseases; and the adoption of the highest hygienic measures among those under surgical treatment. He then went on to speak of infantile purulent ophthalmia; and, after alluding to its frequent origin from the contact of leucorrhoeal discharge and sometimes from gonorrhoeal matter or other sources, he strongly advocated the necessity of early treatment of the eyes of infants thus affected. They should be cleansed early and frequently; and remedies, when required, should be applied without delay. He concluded with some remarks on granular conjunctiva, speaking of it as a frequent source of contagion, even when, from the absence of purulent secretion, it might be supposed that no danger of contamination existed. After the reading of the paper, a discussion followed, which was shared in by the President, Dr. Mapother of Dublin, Mr. Liddell, and Dr. Rendle.

* In the year 1817, the Council determined by bye-law, sect. xxii, that "Every member of the Court of Examiners, who shall be present at the opening of any stated Court of Examiners, shall be entitled to half-a-guinea; every member, who shall be present at the adjournment thereof, shall also be entitled to half-a-guinea. And, for every examination for the diploma, the examiners, who shall have been present from the commencement until the termination thereof, shall be entitled to the division of nine guineas, whether the person examined be approved or referred."