Introductory Lecture

TO A

COURSE OF GENERAL PATHOLOGY;

DELIVERED AT THE
GROSVENOR PLACE SCHOOL OF MEDICINE.

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GENTLEMEN,—We meet for the first time to study a very important branch of the profession you are entering upon—General Pathology; a branch, indeed, which, as it was the earliest, so, also, is it the most essential as a stable foundation for erecting the edifice of practical medicine in its most comprehensive import. In this theatre you are to acquire a knowledge of those general principles which, if intelligibly taught, will enable you to survey particular diseases, as it were, from a high vantage ground, and establish for you that character as philosophical observers which it should be your ambitious and conscientious endeavour to obtain. You will thus elevate yourselves above the mere routine practitioner, and acquire a facility in analysing and interpreting the multiform elements which occasionally associate themselves with the simplest diseases.

On the importance of our subject, then, and the necessity of a familiarity with its principles, I will, for the present, no longer dwell. To the earnestness with which you should regard it, and the teachable spirit you should possess, no nobler incentives should be needed. In this department of knowledge, as in every other, let me also inculcate seriousness of purpose, unremitting industry, and perseverance. The trifler neither respects himself nor others. He offers but a mocking worship at the shrine of truth. Remember, that whether the goddess will deign to unveil herself to the questioning of her votary, will mainly depend upon the sincerity and constancy of the appeal. Still, with the highest degree of talent, and the best of intentions, you will, during your pilgrimage, wander through many a Cretan labyrinth of error, unless you advance with order. This is the true thread of Ariadne. Not pathologic science alone, but every other, requires, for its philosophic prosecution, to be studied after a prescribed order or method.

Victor Cousin well remarks: "As is the method of a philosopher, so will be his system; and the adoption of a method decides the destiny of a philosophy." The method you are to employ must be in accordance with the great precept of Descartes: "To commence with the simplest phenomena and the easiest to recognise, gradually ascending to the more complicated phenomena of the series." This precept must be our guiding star—the very essence of our teaching. But, you will naturally ask, Is there a systematic plan whereby to detect these simple phenomena, the verification of which is so indispensable for the formation of the general notions and principles of pathology? Three principal means of investigation are afforded us—*Observation*, *Experience*, and *Analysis*. These, according to Lord Bacon, are the instruments with which we are to interrogate nature.

With regard to *Observation*, Zimmermann, in his treatise on *Medical Experience*, observes that "It was observation that first gave rise to the art of healing, and has since led it on towards perfection. Physic, without observation, is only an empty sound. The first care of physicians was to form ideas of individual things; after which they began to reason on these, and then, deducing the consequences of each, they gradually went from particulars to general ideas. Observations are therefore the basis of all our reasonings. If they are good they are acknowledged as data."

Let me give one more quotation, from the Roman Hippocrates, Baglivi:

"The two chief pillars of physic are, Reason and Observation. But Observation is the thread to which Reason must point. Every disease has, not a fictitious, but a certain and peculiar nature, as well as certain and peculiar principles—*increase*, *state*, and *declination*. Now, as all these are brought about independently of the mind, so, in tracing their nature, we have no occasion for a subtle and disguised way of disputing, but only for a repeated and diligent observation of what happens

to the several sick persons, and such an acuteness of mind as is conformable and obedient to nature's measures."

These extracts strikingly exemplify the value of a habit of faithful and correct observation. Nothing can compensate for its deficiency or supply its place. Unless this habit be sedulously cultivated, our mental powers would languish or be misapplied. Medicine as a science has its foundations based upon the observations of centuries. What made the great physicians of antiquity models for all coming ages? Is not the name of Hippocrates a household word? Is he not the Genius we invoke when we would excite in others the desire to work out an imperishable reputation? Mere theories and systems vanish, like the shifting scenes of a drama, in rapid succession. Many fall still-born, or, at best, rarely survive their originator, however dazzling the eloquence by which they were supported. But the history of well-observed facts lasts through all ages, and is read and re-read with an interest ever fresh and a result ever profitable.

Gentlemen, I cannot here suffer the opportunity to pass of recalling to your mind that portion of the introductory lecture, in which the eloquent lecturer, by a happy use of the figure of contrast, described the changeable face of science. He spoke of the days of Richard the First—of the cloistered schoolmen—of their ardent gaze at the nocturnal Heavens—and their belief that the music of the spheres was to them an audible language, proclaiming that "to-morrow would be even as to-day." He then skilfully changed the scene, and disclosed the vanity of their life's dream. But this is the heritage of humanity—to be by hope beguiled. How often does the speculative philosopher of the hour believe that his life comprises the Alpha and Omega of science. Our sphere is not speculative *rêverie*, but actual observation. Our task is to chronicle from the living book of nature. Time may, and will, add to the page without essentially varying it; and the transcript will still be a true record, despite all mutations of time and opinion. Let me attempt to sketch one instance of this truth. Go back, in thought, to a time yet more remote than that of the lion-hearted king; and, if you will, to a scene as fair. Near to the sunny banks of the Euphrates, where the warm rays were fostering into life and strength the infant sun of science, a medical Zeusis—Aretæus—was painting from nature, and the schoolmen of his day looked on and recognised her priest. Revolving ages have transmitted to us the pictures which he drew; and again, our *savans* look and own that time has not dimmed their beauty, and that no colour has faded, and no touch has been destroyed. They live, Hebe-like, in their freshness and their truth; and, in their grandeur, pyramid-like and time-defying. Study, then, with unremitting attention, like Aretæus, the phenomena of disease; note down every incident connected with the malady; omit none, however apparently insignificant; continually retest the accuracy of your observations, lest a glowing fancy should permit its pictures to usurp the place of simple fact. By this means, and generalising your observations, you will acquire that ready tact in recognising particular diseases, without which no one can ever become a successful practitioner, and without which, no amount of reading will avail. The cultivation of this talent will also render you self-reliant and independent, when placed under circumstances of difficulty and doubt.

Never forgetting, then, that observation, by discovering the spontaneous movements of nature, has ever been the principal instrument in perfecting our knowledge of diseases, we proceed to the consideration of the second instrument, *Experience*. This term comprises a twofold division; Medical Erudition, or the knowledge of what has been done by our predecessors, constituting the purely historic portion; and the Experimental portion or study of the phenomena designedly developed either in the healthy or diseased subject or in animals. With regard to the first division, *Medical Erudition*, I would beg you to bear in mind that, as the object of general education is not so much to charge the mind with particulars as to ensure the requisite discipline for subsequent intellectual activity, so, in the more limited field of medical study, the great object proposed should be to exercise the judgment for observation in its appropriate sphere. Your memory must of necessity be taxed, but should not be too heavily burdened. Overcharged with detail, it scarcely permits, unless to a gifted few, the full exercise of the judging faculty; and this to you, emancipated from mere scholastic thrall, and seeking now the wisdom of the sage, is a point to be constantly borne in mind. There is an important distinction laid down with respect to memory by writers upon intellectual philosophy—namely, between philosophical and mere

local memory. The latter faculty is the gift of nature and common to all, though in varying degree. The former is the kind most to be coveted by those combating in the intellectual arena. Its element is the contemplation of universal truths, general principles, and of the facts which illustrate them. This is the kind of memory you should chiefly cultivate as best befitting the scientific position you will hold in your special sphere. It will be greatly promoted, first, by endeavouring to obtain distinct impressions of the phenomena submitted to your notice; secondly, by a clear conception of the objects of knowledge; and, lastly, by constantly essaying to reduce such observed phenomena to general fixed principles. Unless these points be attentively regarded, your laboriously acquired knowledge will be submitted to the law of mere local association. The general principle upon which such knowledge depends not being mastered, the mere "pictures drawn in the mind are laid in fading colours," and consequently soon disappear. Remember, then, that the learning which really deserves the name, depends rather upon the harmonious appliance of other faculties than upon a mere treasury of things or events.

Kant says: "Although education may furnish and, as it were, ingraft upon a limited understanding rules, borrowed from other minds, yet the power of applying these rules correctly must belong to the pupil himself; and no rule which we can prescribe to him with this purpose is, in the absence or deficiency of this gift of nature, secure from misuse. A physician, therefore, a judge, or a statesman, may have in his head many admirable pathological, juridical, or political rules, in a degree that may enable him to be a profound teacher in his particular science; and yet, in the application of these rules, he may very possibly blunder, either because he is wanting in natural judgment (though not in understanding); and whilst he can comprehend the general *in abstracto*, cannot distinguish whether a particular case *in concreto* ought to rank under the former; or because his faculty of judgment has not been sufficiently exercised by examples and real practice."

You see, by this extract, how flimsy and unsubstantial Kant thought a mere series of rules learned by rote, unless combined with those higher qualities which judgment implies. Therefore, whether your reading be on an extended or limited scale, let the material be methodised, reflected upon, melted, as it were, in an intellectual crucible, in order that the metal may be purified from dross, and made your own by the best of claims—a right comprehension of your subject. To suggest your working at present in the rich mine of ancient medical literature would, I think, be misdirection. Such a step should be the compliment rather than the initiative of your practical career. By and by, when you become familiarised with disease, and the judgment is matured, you will be well repaid by a careful digest of the literature of medicine, comprising the works of the great masters, both of ancient and of modern times. There is enough in the ordinary *curriculum* of study to challenge all your attention and memory. A very few books will satisfy the requirements of the student. His reading should be rather *multum* than *multa*; and you know how much of truth there is in the old maxim, "Cave hominem unius libri."

We come now to speak of *Experiment*. Should observation, and a knowledge of the past, light insufficiently our future course, we are at times compelled to resort to the torture of living animals. But let me dissuade you, gentlemen, from having recourse to such procedure until after a conscientious consideration of the result to be obtained. Ever "let the end justify the means." We have urgent motives deducible from our moral nature, to refrain from wanton abuse of experiment upon living animals. The care we see bestowed, even upon the meanest, by our common Father, is a cogent reason to pause ere we torture one of his creatures unjustified. The ordinary feelings of humanity, instinctive in all well regulated minds, revolt from any unnecessary infliction of suffering. Still, as I have stated, occasions do exist, and vivisections constitute a particular branch of physiology. We will make only a passing allusion to those very cruel old gentlemen, Herophilus and Erasistratus, who, as Celsus tells us, "Nocentes homines, a regibus ex carcere acceptos, vivos inciderunt." Haller may with propriety be considered as the father of modern experimental physiology; and he certainly has had some most energetic disciples. Results full of importance to science have been obtained by various experimentalists. From Magendie we have gained clearer views of the process of absorption, the action of poisons, and the nature of injuries of special parts of the nervous centres. In this latter department, also, Flourens has gained a well-merited reputation. With the view to determine the functions of the medulla spinalis, and of

particular nerves, Longet, Müller, Reid, Marshall Hall, and others, have instituted well planned experiments. From Hope, Williams, Chauveau, and Halford, we have obtained a clearer insight into the mechanism of the heart's play. Valentin, Bischoff, and others, have shed a new light over the mysteries of generation. To Claude Bernard also, experimental physiology is largely indebted. And, lastly, our able colleague, Dr. Richardson, has taken very original views connected with the coagulation of the blood.

The last instrument for medical scientific research—*Analysis*—is used, as you will imagine, for the purpose of decomposing a complex pathologic principle into the simple elements. By such operation we are enabled to examine the elements more minutely, and to estimate more satisfactorily their relative influence when acting in concert. In scarcely any science is this proceeding more valuable than in pathology. Our constant aim should be to separate the essential from the accidental elements of disease, and to reduce each to a separate category. By the concurrence of this method of elimination, with the others indicated, we arrive at those generalisations which form the great scaffolding of applied medicine. But, notwithstanding the temper of our instruments, and despite a certain facility in using them, we are still liable to be taunted with the uncertainty of our art—that it merely deals with conjectures. Many a pointed shaft has been launched at us by the dramatist, many a weapon of ridicule forged by the satirist, and much well meant advice given by those who never need us to "throw physic to the dogs". Some of this banter has originated from a want of consideration of the actual nature and capabilities of our science; and some of it, I fear, we have drawn upon ourselves from the outward signs of a weak faith in our principles. How many offshoots from the parent tree of medicine have dwindled into deformed or unhealthy branches! Bassanio's speech applies as well to medicine as to theology:

"What error, but some sober brow
Will bless it, and approve it with a text?"

But even if the reproach were merited, and our art, in a certain sense, were really a conjectural one, the objection applies with equal force to all other sciences which depend upon probable evidence; and politics, law, and physic, are the triumvirate under ban. It is possible that they may never attain the precision of the physical sciences.

In the latter we are, in general, able to explain their characteristic phenomena by means of comparatively simple laws. Think, for example, of the mechanism of the heavens in connection with gravitation. We see distant orbs, age after age, pursuing their course in obedience to its law, so that their actual position in space at any given time can be predicted with unerring certainty. Now, think again of the characteristics of your science; here, in addition to physical, calculable forces, you have also vital ones simultaneously at work to confuse your problem and complicate its results. You cannot coerce the vital elements into an algebraical formula: their unstable nature deludes the craft of the mathematical analyst.

Take one single example—continued fever. At its advent, calculate as you may, you cannot predict unerringly its course, or tell by numbers what *must* be its issue. It may be fatal by exhaustion, by syncope, by coma, by inflammation, by hæmorrhage, or some other intercurrent or accidental change, or may resolve into health with or without crisis. Which of these given results is to happen you can, at the beginning, at best but wisely conjecture. It is simply a calculus of probabilities brought to bear upon the particular case; and this makes the art of conjecturing with wisdom and sagacity peculiarly your province. Moreover, being founded on a large induction, you obtain at last an amount of probability so strong, that it approximates to certainty, and is, at all events, sufficiently strong for you to act upon. For should you fail of actual demonstration, yet if you leave no room for the application of the adage "*non crimen artis quod professoris est*," you may console yourselves with the feeling that the source of error does not rest with you, but is inherent in the very nature of the subject matter you investigate.

Having thus, I fear too imperfectly, attempted to sketch the mental training and method to be pursued in the investigation of facts, and the subsequent verification of general principles, we arrive at the consideration of the science it is our privilege to unfold—*General Pathology*.

Like most branches of human knowledge, general pathology has had to pass through its embryotic or preliminary stage prior to a state of scientific development,—a stage in which the true science was obscured by ignorance and superstition.

Almost, indeed, to our own times it has continued under the influence of this double thralldom. As astronomy was the offspring of astrology, and chemistry of alchemy, so, in like manner, pathology was the child of a very unnatural parent—superstition. In the earliest times, the offended deities of the heathen world, having the attributes of human infirmity, were supposed, in fits of spleen, to visit the erring children of earth with "pestilences dire."

In Lord Bacon's day, jail fever was supposed to owe its exciting cause to witchcraft; while, in the more polished times of a later generation the royal touch for king's evil and old women's amulets to cure the ague were important constituents of the popular medical creed. This is in entire accordance with the views entertained by a distinguished French philosopher but just deceased, Auguste Comte. To paraphrase them from the excellent work of Mr. Lewes: every branch of human knowledge passes successively through three definite stages; the supernatural or fictitious; the metaphysical or abstract; and the positive or scientific. In the first or supernatural stage, final causes take the place of physical or efficient ones. The mind aspires to know the essences of things; it regards all effects as the immediate productions of supernatural agents, whose intervention is the cause of all apparent irregularities and anomalies. Any unusual phenomenon is a sign of the pleasure or displeasure of a god. The characteristics of this stage I have just indicated. In the metaphysical stage, which is a modification of the former, and important as a transitional one, the supernatural agents give place to abstract forces (personified abstractions), supposed to inhere in bodies, and capable of engendering phenomena. Such, in pathology, would be the "Nature" of Hippocrates; the *Vis Medicatrix*; the *Archæus* of Van Helmont; the rational soul of Stahl; and the "Vital Principle" of Barthez and later writers. The terms "effort of nature," "vital power," etc., are hallowed by long usage; nor is there any objection to their use, provided you entertain proper ideas of their import; and, instead of regarding them as separate entities or "personified abstractions," view them as a mere formula for expressing the general reactive effort of the entire organism. In the third, or positive stage, the mind, persuaded of the futility of all inquiry into final causes and essences, applies itself to the observation and classification of laws which regulate effects; that is to say, the invariable relations of succession and similitude which all things bear to each other; so that we no longer seek to fathom the essences of life, disease, gravitation, electricity, or galvanism, but only the laws that they obey. It is in the direction of this last stage that, I need not say, you must work if you would clear away the mists which hang partially but heavily over much that should interest you.

Now, a point of direct importance at this very onset of our journey is to possess a clear idea of the nature and purpose of the subject we propose to study, as also of the limits within which such subject should be restricted; otherwise we might trench upon ground that does not come within our scope; and, although it may be somewhat difficult to fix a definite landmark to our wanderings, it seems tolerably broadly mapped in the distinction drawn between the general and special departments. Our science is appropriately designated *General Pathology*, as it contemplates morbid manifestations in general, and all that is correlated to them, whether as cause, complication, or cure, without taking cognisance of particular affections. It is conditional upon general physiology, and is co-ordinate with this science. For, inasmuch as physiology is the study of all that concerns man in health, so is pathology to be considered as embracing all that characterises man in a state of disease. It is therefore no isolated branch of science, but one claiming direct kindred with nearly all other departments of knowledge, and making incessant demands upon them for its constructive material. It may, for example, enter the domain of astronomy, to ascertain how far solar, lunar, stellar, or other occult planetary influence can excite convulsive disorders or modify the periodical uterine function of the female. Professor Schönlein is the great modern advocate of such influence. Esquirol, also, whose experience in mental aberration was immense, has witnessed severe paroxysms of the malady in lunatics when the moon was at her full, and has thus directly vindicated the accuracy of Shakespeare in the opinion that she may

"Come more near the earth than she was wont,
And make men mad."

The late Dr. Gall made a long and curious series of observations respecting the influence of the moon upon the catamenia.

Pathology creates, as it were, the necessity of a Medical

Geography, by its inquiries respecting the direct influence of soil and climate upon the duration of life, as well in accelerating as retarding the progress of given diseases. Indeed, this latter science bids fair to take a position of the highest order, and has already determined some remarkable results. I shall cite one or two of such from the recently published work of Boudin. He says there are some types of races which appear to adapt themselves to climatic change in a wonderful manner, while others again scarcely endure the slightest alteration of habitat. The Jews may be cited as examples of the first order. They are, at present, spread over all parts of the world. In Europe they are found from Gibraltar to Norway; in Africa, from Algiers to the Cape of Good Hope; in Asia, from Cochín to the Caucasus, and from Java to Pekin; in America they are met with from Montevideo to Quebec. For the last half century they have become residents of Australia, and have given proof of being thoroughly acclimatised under the tropics where a population of European origin have constantly failed to perpetuate themselves. The Jew has also lived through a long series of ages, and still lives, upon the only point of the globe, the valley of Jordan, situated more than 4000 *mètres* below the level of the sea; a spot where it becomes matter of doubt whether the European could ever propagate his race. Finally, wherever the Jewish race has been studied to the present time, the statistical laws of births and deaths, proportion of sexes, etc., which affect it, have been proved to be completely different from those which preside over other nationalities in the midst of which it resides.

In opposition to this cosmopolitanism of the Jewish race, look, on the other hand, to the continuous decrease of an European population in all tropical countries, and to the impossibility, hitherto ascertained, of perpetuating itself in Egypt and several other parts of Africa. In the tables published by the French Minister of War, the mortality of the population, which, in France is 24 in 1000, and which, in 1849, notwithstanding the cholera, did not even attain the proportion of 28 in 1000, has increased in Algeria in the following proportion:—

	Deaths in 1000.
1848	41
1849	101
1850	70
1851	64
1852	55
1853	47

And so late as 1854, the last year that reports have been published, the deaths among European population amounted to 7025, while the births were only 6111. Still to linger in this interesting field one moment longer; how curious is the law of antagonism that appears to exist between ague and consumption. Dr. Green, of Whitehall, in the province of Washington, United States, where intermittents are of unusual frequency, declares that there did not exist one single instance of phthisis developed in the district; and that the consumptive invalids arriving there experienced a relief as decided as it was permanent. The same author also states that a morass near Rutland, having been converted into a pond, the intermittent fevers disappeared from that part of the country, and were replaced by pulmonary consumption. The population having solicited and obtained the suppression of the pool, or, what amounted to the same thing, the re-establishment of the morass, the original agues returned and antagonised the development of phthisis. These facts are supported by the experience of many other competent observers. I need not say that they demand your serious consideration, especially at a period when human migration is going on on so large a scale.

Pathology, again, seeks the aid of the Zoologist, and asks him whether there are grounds for the opinion that peculiar epidemics are caused by the periodic increase of certain microscopic organism—the so-called animalcule theory. It also requires from him a reason why one species of tape-worm is endemic in Switzerland, Germany, and Sweden.

From Chemistry, also, we seek an analysis of certain deleterious gases and other agents; as, for instance, the exact chemical constitution and relative properties of the peculiar element of the atmosphere, ozone, recently discovered by Professor Schönlein; and whether, in point of fact, there exists any casual relation between the augment and decrement of this element and the corresponding augment and decrement of catarrhal and bronchial affections.

From Meteorology we learn the remarkable influence of storms, both upon men and animals, and also of the modifica-

tions produced in those great forces of nature—magnetism and electricity.

From the science of Physics we draw our *quotum* for the groundwork of physical diagnosis.

Again, we derive from the science of Mathematics our formula for the calculation of probabilities. This has been already extensively applied in the statistics of disease and death. Its application to the influence of the various agents of the *materia medica* upon the system is, however, still a desideratum. Many of these agents have obtained their degree on a very slight examination. A medicament was administered, a change followed, and the *post hoc, ergo propter hoc*, at once inferred. Too often a general conclusion was drawn from a particular premise, thus sinning against logic, and almost against common sense. Although, with reference to this branch, as Hippocrates declared, *Experience* is deceitful, and *Judgment* difficult, still we, in common with all dependent on probable evidence, must acknowledge certain laws. If any one, knowing these matters, were asked the degree of probability of relief being obtained by the use of iodide of potassium in any given case of painful disease of the periosteum in tertiary poisoning, he would estimate it as very high. Ask him again, the degree of probability with reference to the action of juniper or other diuretic in a case of dropsy, and he would probably be at a loss to find a place upon the scale; and so on with many other agents. Our notions of probability do not, however, differ so greatly from those of the mathematician as to preclude all hope of our deriving assistance from him.

La Place, than whom none knew better the limits of the application of the calculus of probability, states, with reference to therapeutics, "To know the best treatments in use for the cure of a disease, it is necessary to try each of them upon the same number of patients, under perfectly corresponding circumstances. The superiority of the most advantageous treatment will manifest itself more and more in proportion to the increase of this number; and the calculus will show the corresponding probability of its advantage, and of the respect to which it is superior to the others."

By this method, we speak from *data* rather than from mere impressions; and if any one demur to this attempted application of the calculus of La Place, and argue that no cases can be "*exactly corresponding*," he must bear in mind that he is, at the same time, dealing a death blow in argument to all other conceivable ways of estimating the action of medicine in disease.

Lastly, I may say that from Philology and Logic we gain a basis for scientific nomenclature (a subject said to call loudly for revision), and from the development of the formal laws of thought a basis for constructing our arguments for the purpose of instruction and self-improvement.

These few illustrations, drawn from the respective sciences, show how discursive a subject is General Pathology. Our subject matter will naturally fall under the subjoined heads, which we shall study together in the following order, making such subdivisions as will bring the science more fully and instructively under your notice:—(a) The General Literature of the science—the nature of disease; (b) Etiology or doctrine of the Laws of Causation; (c) Semeiology and Symptomatology; (d) Progress and Termination of Diseases; (e) General and Physical Diagnosis; (f) Prognosis; (g) General results of *Post mortem* Examinations; (h) General doctrine of Therapeutics; (i) General principles of Hygiene; (k) Medical Geography.

I propose to depart from this general arrangement in one branch alone, and that is physical diagnosis. No department finds a more entire application of the truth, "*Experientia facit artem, exemplo monstrante viam*." So that, with the permission of the lecturer on medicine, I shall teach you this subject practically, by cases; for, without these, all lecturing would be worse than useless. I mentioned to you, but a few moments ago, that general pathology presupposed an acquaintance with general physiology. But such a proposition must be interpreted in its broadest sense, not as synonymous with the positive physiology of to-day, but rather as implying that familiar knowledge of the outward signs of health accessible to ordinary acute observation. It is certain that the ancients, the founders of pathology, could have had no deep insight into those problems which an advancing physiology has in some measure solved. But they apprehended most perfectly what healthy breathing was; and what a tranquil circulation, and what a bright eye, clear complexion, clean tongue, healthy appetite, natural and regular secretions, etc., imported; and on their altered types they founded a science many of the leading truths of which comprise the principles of the moderns. So that it is obvious

general pathology may be profitably numbered among your earliest studies. With regard to the second portion of the course—pathological anatomy—it is so essentially dependent upon an accurate knowledge of descriptive anatomy, that I think it would be wasting your time, until you have made this necessary acquirement; so that I shall not hesitate to postpone it until a later period of the course.

Such, gentlemen, is the nature and extent of the domain you have to explore. Let your preparations for its survey be of commensurate magnitude. Regard your course of study as a duty, and it will soon become a pleasure. And should the original lustre shed by Hippocrates over our art be somewhat dimmed by the destroying rust of Time, seek from the *living* lights of medicine, new rays to kindle your enthusiasm.

What made Andral and Louis such authorities in our art? Was it not, in great part, their accuracy as morbid anatomists, and their fidelity as observers? You may each enjoy a reputation upon any subject you choose in pathology, if you will but cultivate that spirit of patient and untiring research which pre-eminently characterises them. In this consists their solid worth. In the every day practice of your profession, gentlemen, a species of dilettantism may and does exist. Alluring theories, polished manners, the advocacy of fashionable remedies, may gain an ephemeral reputation—may open a road to lucrative practice by dazzling the non-professional judgment; but, gentlemen, to pathological fame, even in these quick travelling times, there is not yet obtained a Bill to construct a royal road; the one you *must* tread is toilsome, at times even repulsive, *inter tædia et labores*; but be assured, the journey cheerfully, resolutely performed, you will eventually reach the "land of promise". The hours lost to your profession in less worthy pursuits may yield a certain amount of gratification, but they often leave a fevered body, and, what is more distressing, a fevered conscience. How different the results that follow the calmer, holier pursuits connected with the profession you have chosen! If the Father of Medicine declared that a philosophical physician resembled the gods; and if even Galen, surrounded as he still was by the atmosphere of a false religion, could regard the study of physiology as "an eternal hymn to Deity,"—you have still higher reason to regard it in a solemn point of view. You will find, in the late evening of the long career I most sincerely wish you, that, if you have been faithful to your trust, the retrospect will bring no pang; while the direct gratification has been of the most ennobling order, and the best calculated to develop the true dignity of man; for what sweeter reward can you desire than the blessing, breathed at times by grateful lips for lost health restored, under Providence, by you?

Reviews and Notices.

TABLES OF DIAGNOSIS OF DISEASES OF THE BRAIN. By J. RUSSELL REYNOLDS, M.D.Lond., Fellow of University College, Assistant-Physician to the Westminster Hospital. London: Churchill. 1857.

DR. REYNOLDS has grouped the more common diseases of the brain in four tables, under the following heads: viz., 1. The Acute Febrile Diseases; 2. The Apoplectic Diseases; 3. Acute Convulsive Diseases; 4. Chronic Diseases of mixed character. The object of the author is not to describe all the features of the diseases, but to place in opposition those which present the most striking differences. The work will, no doubt, be of utility in aiding the student and the practitioner in the diagnosis of cerebral disorders.

ON PLASTIC OPERATIONS FOR THE RESTORATION OF THE LOWER LIP, and for the Relief of several Deformities of the Face and Neck. By THOMAS P. TEALE, Surgeon to the Leeds General Infirmary. pp. 32. London: Churchill. 1857.

MR. TEALE describes several plastic operations for the relief of deformities of the face and neck, and relates six cases of persons whose visages, sadly marred by burns, were restored by his skill to more comely representations of the "human face divine." Photographic representations of each patient before and after operation are given. The results, as illustrated, are highly creditable to British surgeons in general, and especially to Mr. Teale.