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AN

INAUGURAL DISCOURSE

ON

MEDICAL EDUCATION;

DELIVERED AT THE OPENING OF THE

MEDICAL COLLEGE
OF OHIO,

IN CINCINNATI,

November 11th, 1820.



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President of the Institution,

And Professor of the Institutes and Practice of Medicine, and of
Obstetrics.



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UNIVERSITY OF CHICAGO

PHYSIOLOGY

OF THE

HEART

IN CHICKENS

BY

W. H. HAY

OF THE UNIVERSITY OF CHICAGO

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DISEASE is the appointed inheritance of Man. In that stage of his social existence which is called a state of nature, its forms are few and simple; but as he ascends from this, they increase in number, complication and mortality; and did not the progress of civilization open new sources of happiness, and afford additional means of counteracting both physical and moral evil, it would be deemed a curse instead of a blessing. Among the beneficent fruits of this condition, we may discover his ability to cure a variety of diseases, which, were they to occur in the uncivilized state, would inevitably prove fatal. This knowledge is, indeed, altogether indispensable to the welfare of his race, when associated into compact and refined societies; and may justly be regarded as at once a consequence of their nature and a cause of their continuance.

Among savages the cure of diseases can scarcely be said to be confided to particular and instructed members of the tribe; but in civilized life it has been found necessary to make a specific assignment of this important duty,—and hence the origin of professional practitioners of medicine. It was for the instruction of these, that medical schools were first instituted.

To trace their origin and progress, and contemplate historically their influence on the profession, and on the happiness of society, might be highly interesting; but, on the present occasion, I shall pursue a different course, and proceed rather to call your attention to the principles on which they should be organized; to the nature and prospects of that which we are about to institute; and to the difficulties, importance and dignity, of the Medical Profession.

The end for which medical schools were established being the preparation of young men for the cure of diseases, we cannot adopt a better mode of ascertaining how they should be planned, than to enumerate the branches of science which seem indispensable to that important and difficult object. I shall devote a few moments to each of these.

An inspired writer has exclaimed, *I am fearfully and wonderfully made!* Subsequent examinations of the human frame have fully established the truth of this declaration, and proved that the preëminence of man over the other inhabitants of the globe, is not merely intellectual. His organs are more numerous, more complex and more intricately combined, than those of any other animal. The science which discloses to us this admirable structure, is Anatomy; and for its acquisition every medical school should furnish numerous facilities.

The anatomical study of the human body is the foundation of medical science. The materials of which the superstructure must be composed, are of a different kind. It is not sufficient to be acquainted with the forms and composition of the different organs,

The student must inquire into the various functions which they are destined to perform. He must contemplate them in motion, and not at rest; as living, and not dead; as endowed with attributes, from which result an action among the organs themselves, as intimate and harmonious as their mechanical connexion; and a relation between our intellectual faculties and the surrounding world, more wonderful, perhaps, than any other phenomenon presented to our admiration. To the branch of science which teaches these laws of motion and sensation in the healthy body, the term Physiology, or the Institutes of Medicine has been applied. In the Medical College of Ohio, it has not been made the object of a distinct professorship, but considered as a proper introduction to the Theory and Practice of Physic, and, therefore, confided to the professor of that department.

Without a knowledge of Anatomy and Physiology, no pupil can prosecute the study of the profession; for diseases consist either in alterations of structure, or in disordered and irregular movements in the functions of that structure; and in both cases, without an acquaintance with the *healthy* condition, no degree of genius can enable us to understand the *morbid*. The number of these morbid alterations is so great; the symptoms which distinguish and characterize them so equivocal; their causes so numerous and obscure; their progress so devious, and their terminations so uncertain,—that the study of them, even with the most ample preparation in the branches that have been mentioned, is as difficult as it is important. To this department of science, the term Pathology, or Theory

of Physic, has been appropriated. The Practice of Physic is the application of the means of relief; and, to be conducted on scientific principles, it requires a knowledge, not only of Anatomy, Physiology and Pathology, but of several other sciences, among which the *Materia Medica* is the most important. The object of this branch of the profession is to teach the facts and principles which relate to the operation of the various medicinal agents on the human body, both in health and disease; together with their natural history and pharmaceutical preparation. In the college of medicine which we are about to establish, it is made the object of a distinct professorship, to which, when a hospital shall be properly organized, a subordinate branch, denominated *Clinical Medicine*, will be attached.

Those morbid conditions of the body,—mostly consisting of disorder in its structure—which require manual assistance for their removal, are the proper objects of Surgery. An accurate knowledge of Anatomy is especially necessary in the practice of Surgery, and hence the union which they sometimes exhibit in medical schools. At the present time they are thus associated in this college; but, constituting a professorship too extensive and difficult for one person, they will in all probability, before another session arrives, be confided to two.

Obstetrics is a branch of the profession for which there seems to be no necessity among savage nations; but its importance in civilized life is unquestionable. Its magnitude and difficulties, however, are not such as to demand for it a distinct professor in a school

where it is considered an object not to multiply the teachers; and in that of Ohio it is attached to the professorship of the Institutes and Practice of Medicine.

Chemistry completes the list of sciences which it is essential for the student to learn, before he can attain the rank of an enlightened graduate. It is in some degree auxiliary to all the branches which have been named; but has the most important relations with Physiology, *Materia Medica*, and the Practice of Physic.

Medical Jurisprudence is the application of medical knowledge to the judicial inquiries which the law directs to be instituted, in cases of insanity, and of injury or death from wounds inflicted, or poisons administered, with a malicious intention.

We come now to sciences which lie on the outside of the group. Of these Botany is the most considerable. Its relations are chiefly with the *Materia Medica*, to which it contributes very largely, and in connexion with which it has for ages been cultivated by medical men. In the infancy of our college, it will not, like the branches that have been named, be made an essential study; but the means of prosecuting it will be provided, and, in the general state of the Western Country there is much to recommend its cultivation to every practitioner of medicine.

Mineralogy claims the attention of medical men for similar reasons. As contributing liberally to the *Materia Medica*, it is interesting to the profession in general; but to such as reside in these Mississippi states, where many valuable medicines undoubtedly lie concealed beneath the surface, it is peculiarly

important. Our college has not yet appropriated a professorship to it, but the professors of Chemistry and *Materia Medica* propose to go largely into the natural history of the different medicines derived from the mineral kingdom; and the cabinet of the Western Museum Society will furnish those who are disposed to acquire further information, with every necessary facility.

Zoölogy, or the history of animals, ranks next to Botany and Mineralogy, in its relations to medicine. It contributes but little to the *Materia Medica* proper, though largely to that department called *Materia Alimentaria*. With Anatomy and Physiology, however, it has numerous connexions, and may be made to contribute so largely to their advancement, as to have strong claims on the attention of all the cultivators of medical science. Botany, Mineralogy and Zoölogy appear to me to occupy the first circle exterior to the sciences that are strictly medical, and to have with them a variety of obvious and intimate connexions.

The succeeding circle is occupied with various branches of natural and experimental philosophy, among which the most conspicuous and important are Electricity, Magnetism, Hydrostatics, Geography and Meteorology, with the principles of which every student of medicine should make himself acquainted.

Nor should he stop here. His researches must not be confined to the objects of the physical world. He must extend them to the mind itself, and to its operations and effects, as displayed in the civil history of our race. The endless variety of aspects which the derangements of intellect are known to assume; the

insidiousness of their origin; the melancholy effects which designate their progress; and the dreadful and uncontrollable energy of their violent stages, render them of great interest both to society and the profession. The Philosophy of the Mind should, therefore, be made a part of the elementary acquirements of every physician.

The principal reason that should constrain him to the study of Civil History, is, that without it he must be unacquainted with the progress of his profession, and the manners, modes of living, and diseases of different ages and nations; a degree of ignorance unworthy of the dignity, and incompatible with the fullness of knowledge which should distinguish his official character.

The catalogue of studies is not yet completed. Literature and science are not the same; but a physician should acquire both, and the cultivation of the former ought to precede that of the latter. It is, however, a mortifying fact, that in the United States, and especially west of the mountains, the young men designed for the medical profession are in general destitute of this preparation in literature, so essential to their future acquisitions in science. Commencing the latter while ignorant of the former, their progress is comparatively slow and imperfect; and they learn, when too late, that a magnificent edifice cannot be erected on a narrow and badly constructed foundation. No young man should commence the study of medical science till he is at least sixteen years of age; and unless the preceding time have been devoted to the acquisition of language and the rudiments of general

knowledge, he will neither possess that learning, nor those disciplined habits of application, that are essential to a successful prosecution of medical studies. While the standard of literary and professional excellence necessarily participated in the general imperfection which attended the institutions of our new country, this want of preparation in those who undertook the study of medicine was less striking, and had to be excused, from being unavoidable. The opportunities for prosecuting a better course of preliminary studies have been created, even in the western states, and no young man should hereafter be encouraged to become a student of medicine, who has not prepared himself in a manner corresponding with the vast extent and inherent dignity of that science. This preparation should not consist merely in a detached knowledge of his own language. He should ascend to its ancient sources, and drink deeply at its pure and original fountains. If the principles of medical science, which are now taught, be not the same that prevailed in Greece and Rome, they are partly expressed in the language of those learned and polished nations; and to be thoroughly understood, the words in which they are conveyed must themselves be made an object of study.

So deeply impressed are the Faculty of this institution with the neglect of these studies, and the importance of them to the advancement and elevation of the profession, that they have offered an annual prize medal for the best inaugural thesis in the Latin language; and hope by this measure to excite among the students of the west an emulation for excellence in classical literature.

I have now made a rapid enumeration of the various branches of literature and science, which a physician should regard as indispensable, or important, objects of cultivation. By proper attention to these, the student may become a philosopher and scholar; but something more will be necessary to make him a successful practitioner of medicine. He must not only comprehend the principles of the profession; but, by acute and patient observation at the bedside of the sick, learn how to apply them in the cure of diseases. He has to make himself an artist; but his skill must consist in the practical application of the precepts and maxims of science. Clinical medicine, is an unceasing employment of means for the accomplishment of specific or definite objects: Considered in relation to our knowledge of those means, the profession is a science—in relation to the application of them, it is an art. He who acquires the former only, is learned; he who relies on the latter alone, is ignorant, empirical and criminal; he who compasses both, reaches the highest attainable perfection.

I shall attempt to illustrate and enforce what has been said on the magnitude and difficulties of the profession, by a short history of the employments and responsibilities of a medical man in this country, where the various branches are united in the same person.

Let us suppose him to be called upon as an operator in surgery. He must be able to determine whether the age, health and condition of his patient will admit of the operation; he should have an accurate knowledge of the structure of the parts through which his

incisions are to be made, and be acquainted with the variety of instruments that have been employed, so as to select those which are best adapted to the particular case: he should know the history of the operation, and be qualified to choose from among the various modes that have been proposed for performing it, the easiest and most successful. Should any anomaly of structure lead to the injury of parts which cannot be cut without danger, it becomes his duty, suddenly, to decide upon and employ the means which are necessary to the preservation of life; and this he must do in the midst of general consternation, when deafened with the cries, and drenched in the gushing blood, of his patient—circumstances, which require an accurate knowledge of the surrounding parts and quick powers of invention, not less than a firm and unshaken hand. Finally, the operation being over, and every accidental difficulty removed, he must determine on the means which should be employed to avert the dangerous symptoms that may result from an extensive mechanical injury, and secure the final recovery of his patient.

Suppose at another time he is called to treat a malignant fever. He has then to encounter a case of general disease. All parts of the complicated machine have been invaded; every organ has its functions deranged, and every fibre vibrates with a morbid action. Prompt and energetic efforts must be made, but these according to the causes and character of the disease may be of opposite kinds. What an important and difficult decision is then devolved upon him. The remote causes of malignant fevers must be consid-

ered; but these are uncertain and obscure, and the study of them involves a knowledge of secret changes in the earth and the atmosphere, that can neither be detected nor understood by those who are ignorant of the science of Chemistry. The symptoms of the disease are its language; but they speak intelligibly to *him* only, who has, by a long and arduous course of study and observation, established in his mind the relations which exist between external appearances and internal changes of action and structure; and who, from his previous knowledge of the laws of the human body in health, can determine, from visible signs, how far, and in what manner they have been violated in disease. Having thus, by the lights of Anatomy, Physiology, Chemistry and Pathology, discovered the causes and character of the fever, it remains for him to decide upon its treatment. To fix upon the best, he should previously have acquired an accurate knowledge of the various plans of cure, which have been proposed in different ages and nations. He should be able to choose the most appropriate of these, and to modify it for the particular case under consideration. This will open to him a new duty, the selection, preparation and administration of medicines: the able performance of which requires a knowledge of the effects of the various remedies on the body, both in health and disease; in other words, an acquaintance with the *Materia Medica*, and certain parts, at least, of its subordinate and contributing sciences—Pharmacy, Botany, Mineralogy, and Zoölogy.

Again: Suppose he is consulted for a chronic malady of some internal organ, on which the powers of

medicine have been exhausted ineffectually, and the important question of a change of climate and country is proposed. How can he determine in what region his patient may find a condition of soil, water and climate favorable to recovery, without a knowledge of Geology, Geography, and Meteorology?

Finally, he may be called to a maniac, and in the sad combination of mental and bodily disease, be presented with a case that requires him to possess a knowledge of the laws which regulate the mysterious influences of the mind and body upon each other. He will then perceive the necessity of an acquaintance with Metaphysics; for without it he must be utterly incapable of "administering to a mind diseased."

It would be easy to extend this exposition of the duties of a physician; but enough has been said, I trust, to prove, that no other profession requires in its practitioners so profound a knowledge of very different sciences,—such a versatility of mental effort,—such an association of ideas apparently the most distant from each other,—such a power of calling up dormant facts,—such nice discrimination in the selection of precedents,—so collected a mind in moments of unexpected difficulty,—and so ready a resort to expedients, when established means are unattainable, or not adapted to the end in view.

I have now completed a catalogue of the principal branches of science and art which should engage the attention of the student of medicine. To facilitate the acquisition of these, Medical Schools were originally designed, and continue to be encouraged in every civilized country. In the classical ages of

Greece, under the guidance of particular masters, they shone forth with the lustre peculiar to that wonderful people; but lost their brilliancy as the flames of patriotism and public virtue declined, and were either extinguished, or carried away, by the copious torrent of barbarism that swept down from the north and east. In modern Europe, these institutions were among the first to emerge from the inundation; and for several centuries have been ranked with the most powerful means which have been invented for advancing the interests of science and humanity. Their establishment in this nation is of recent date; and, till lately, like the other fruits of advanced civilization, they have been cultivated exclusively in the parent states. Whether they can be made to flourish in the new states of the west, can only be determined by trial. The MEDICAL COLLEGE OF OHIO, which we are now assembled to institute, is an experiment of this kind. At the opening of its first session, the question whether it will ultimately succeed, forms a problem of many conditions. I shall briefly state the principal *data* from which a favorable prediction has been drawn.

The mountains that separate the western from the eastern states, and the declivity which extends from their base to the Mississippi, present an obstacle to free communication from the former to the latter, which requires from us an unceasing effort at self-dependence, in whatever relates to the support, the comfort and the preservation of life. On this broad and permanent foundation, we may confidently proceed to erect many important establishments, which, without it, like the rolling stone of Sisyphus, would fall whenever

the immediate support of those who might sustain them, should be withdrawn.

More than half the states of the Union lie west of the great rampart, and are thus coerced into a union of interests, by an impediment to the east, while they are powerfully attracted into communion, by a common channel of foreign intercourse in the south. The population of these states, already one fourth of the national aggregate, is increasing at a ratio which must make it equal, within the present age, to such portions of the original states, as lie beyond the eastern sources of the Mississippi. In the United States, every ten thousand inhabitants, on an average, supply one medical student to our universities; and we may hence conclude, that the period is not remote, when one or more respectable schools of medicine may be supported in the west.

Of the numerous towns which have been built in this region, not one seems to me so proper for such a school, as Cincinnati. Its better geographical position, and more intimate relations with the western country generally; its more numerous population, and, above all, its greater necessities and facilities for the establishment of a permanent Hospital, designate it as a spot peculiarly fitted for the erection of a medical institution. On the last of these local advantages, I feel it my duty to expatiate for a moment. Without the aid of an Infirmary, no school for the cultivation of practical medicine can possibly be made to flourish. The citizens of Cincinnati are, therefore, urged to the erection of a hospital by all the prospective advantages which a successful College of Medicine

could bestow upon them. To enumerate these at large would be a work of supererogation. I shall state that only, which has an immediate connexion with the pauperism and sickness which prevail among the lower orders of our emigrants. *It is an unquestionable fact, that these wretched people, who at present subject us to the heaviest contributions, would, if an infirmary were provided, become a source of profit and prosperity to the city.* I make this declaration advisedly, and hope it will be remembered by all who participate in the weighty imposition of taxes which annually falls upon us, even if it should be thought doubtful or unworthy of notice by those who direct our municipal concerns.

It is in hospitals, that the lectures on practical or clinical medicine must be delivered. To hear these and witness the cases to which they relate, would be an object with every student who might attend the Medical College. The fees of admission for these purposes would go into the treasury of the hospital; and, as the professional attendance on the sick would, under this regulation, cost but little, the revenues thus accruing would, after a few years, become adequate to all the expenses of disease among this unfortunate and degraded class of our population. We should then make them do in sickness, what they did not perform in health—support themselves. The price of their exhibition, moreover, would be paid by persons from a distance, whose other disbursements during a residence here, would become a source of positive benefit to the city.

The Legislature of Louisiana, in the true spirit of benevolence, has proposed to the different Mississippi states the erection of hospitals for the sick boatmen on the various waters of that great river. On this subject the Governor of Ohio has received a communication from the Governor of Louisiana, which will be transmitted to the next legislature. I cannot for a moment doubt, that this honorable body will make an appropriation for an object involving so deeply the prosperity and reputation of our state; and Cincinnati, as its commercial metropolis, would, of course, be the spot where the establishment would be erected. It will not be necessary, however, that the State should maintain a distinct and independent hospital for this object. Their efforts might, with great propriety and advantage, be united with those of the guardians of our poor and the Faculty of our College—the State supplying the means of erecting a common edifice, the City maintaining its police and expenses, and the College supplying it gratuitously with medical assistance.

A Poor-house with shops and gardens might be made a part of the same establishment, and the whole confided to the care of a single board of managers. It is sufficiently apparent, however, that such a work cannot be accomplished without a general union of means; a hearty coöperation of efforts; a liberal and considerate course of legislative policy; and, above all, a deep and general conviction of its necessity and benefits. If this happy communion of feeling and design could be effected, our city would soon be graced with a house of charity, in which the unfortunate, when

discased, would find refuge and relief; and the people of the whole state an asylum for the insane, that would wipe away the disgrace of confining them in the cells of our common jails;—while our students of medicine, enjoying more ample opportunities of improvement, would become the benefactors, instead of the scourges of society.

Conceding to Cincinnati all the advantages which have been enumerated, it may however be urged, that the establishment of a Medical College is premature; and that without endowment, the patronage which it can create will not be sufficient to sustain it. It cannot be supposed that the legislature of Ohio will long suffer an institution so beneficial to the people of the state, to struggle unsupported, with the difficulties that must beset its infancy. But should a different policy prevail, it will not therefore be abandoned. Its growth may be retarded, but like the pine on the stormy and barren summits of the Allegheny, what it loses in luxuriance, it will gain in vigor and hardiness. Its professors are determined on success, and hope to deserve it. To show more fully on what foundation their expectations rest, will occupy us but a few moments. The College to which they belong offers one advantage over all that have been hitherto established in the United States. Not one has a session exceeding four months—a period confessedly too short for the course of instruction which they are designed to impart. The lectures in this institution will continue five months, and there will be fewer of them daily. Thus the pupils will not be perplexed and op-

pressed by exuberance, nor hurried so rapidly on, as to be precluded from the necessary reading and reflection. To this single regulation, there is much reason to believe, our College will ultimately be indebted for no inconsiderable part of the support which is anticipated. The advantages of a protracted session may not however be perceived, until sufficient time has elapsed for the graduates of this school to be compared, in the extent, variety and perfection of their attainments, with those in which the pupil is revolved through the great circle of medical science in the short period of three or four months.

It is an axiom of the medical profession, that the same diseases in different ages and countries have many peculiarities. I shall not on this occasion attempt to assign the causes which operate to produce those modifications which are exhibited in this region. It is sufficient to know that they exist, and that they can be studied most successfully in a university established within the limits where they prevail, and supplied with professors whose daily occupation it is to investigate and cure them. A consideration so powerful will operate with the students of the west to counterbalance many of the advantages which the more ample collections of books, of anatomical preparations, and of philosophical apparatus, in the older schools of Europe, and the Atlantic states, may enable them to afford. To extend the comparison between old and young medical institutions, may appear preposterous to such as think they should be contrasted, and not compared. I shall not, however, be induced to desist from the task, by any apprehension of being charged with temerity or invi-

diousness. I venerate the founders of the medical institutions of the eastern states; I honor the liberality which has endowed them, and respect the eminent professors with which they are filled; but they have not reached an elevation to which *our* College may not ultimately attain, nor can I consent to regard those who conduct them as objects of imitation, rather than competition.

Every scientific institution is composed of teachers, and the machinery with which they operate; and the superiority of old over young ones, obviously consists in the latter, more than the former. Since the invention of printing, the discoveries and improvements of genius are no longer hoarded in the archives of the schools, but spread abroad and made the property of all. When a new professor, therefore, is inducted into the chair of an old institution, he does not acquire a heritage of useful knowledge, as none has been accumulated and transmitted with the office to which he has succeeded. With the single exception of being supplied with better instruments, he stands on a level with the professor of a new institution, and is superior or inferior according to the energy of his genius and application. Institutions, then, as it relates to those who conduct them, cannot be said to increase in knowledge as they increase in age. The professorships are perpetual, but their incumbents are successive. Hence we can understand how the professors of a new institution *may* equal, and even surpass those of an old; and how the former, with the greatest destitution of artificial aids, might sometimes possess an assemblage

of talents, that would do more than the latter with all their accumulated machinery.

I hope not to be understood as arguing against the importance of books and philosophical apparatus to a scientific institution. On the contrary, I think they should be collected with the greatest diligence; but the possession of them should not be considered a positive evidence of superior excellence; nor a deficiency of them, a certain proof that it cannot afford many important advantages. One of the characteristics of genius is the capacity of attaining its ends, independently of the means by which, only, inferior intellect can accomplish its objects. This quality of the mind might, indeed, be defined the power of *substitution*. It enables those who possess it, to contemplate abstractly the variety of agents by which an effect may be produced; and thus gives them the choice of a great number. The philosopher whose views of a subject are vivid and comprehensive, can render it obvious to ordinary apprehension, by means of the simplest apparatus:—with this he can instruct; with the multiplied instruments of an old university he can both instruct and delight.

In thus standing forth as the advocate of a young institution, it is not my design to draw a comparison between its teachers and those of the established and operative schools of the Atlantic cities. I may however be indulged in the hope, that they will be found to approach somewhat nearer to those eminent men, than our sparing collections and simple apparatus, approximate to their magnificent libraries, cabinets

and laboratories. And, as more depends on the artist than the instruments which he employs, I shall flatter myself with the further expectation, that from its commencement, the Ohio school will be able to confer important benefits on those who visit it; and thus be found to have a self-dependent principle of growth. It is to this principle that the stimulus of public sentiment and patronage should be applied; and for the purpose of securing its influence, I shall proceed to display more fully the interest which the community has in the prosperity of medical institutions.

To enumerate the various advantages conferred upon society by well regulated medical schools, may be considered superfluous; as they fall upon us unceasingly, from the moment of our birth to that of our dissolution. Like the genial effects of heat and light, we cease, however, to observe them, because they are uninterrupted. Having become imperceptibly blended with the other elements of our happiness, we are unconscious of their influence, and without the aid of analysis, they continue through our whole lives, like secret benefactors, to administer to our comfort unobserved and unappreciated. There are occasions on which this analysis should be made; and in pleading the cause of an infant seminary, I should be recreant to its interests, did I not call upon the enlightened community, on whom it must rely for the aliment of its growth, to inquire how far their happiness is connected with the medical profession.

Most of the occupations in society reflect upon it merely the limited advantages of their immediate application to its necessities. The profession for which

I have the honor to plead, is capable of dispensing a wider range of benefits and blessings. Its proper object is the cure of diseases, but in becoming qualified for this, its members are prepared to render many other important services. Imbibing in the course of their collegiate studies, a taste for the cultivation of letters and science, and being afterwards received into the bosom of every society, they contribute powerfully to infuse the same taste, where it might otherwise be wanting. Impelled by necessity, as well as inclination, to continue the prosecution of sciences which benefit mankind through other channels than the profession of medicine, they not unfrequently become the authors of discoveries and inventions which in their application to the common purposes of life, materially augment the sum of its enjoyments;—or, devoting themselves to the cultivation of *one* of the auxiliary sciences, increase the number of its facts; enlarge its boundaries; and elucidate its principles, or apply them with new success to useful and ornamental purposes. This is especially the case in a new country, where literature and philosophy are not yet self-existent; but must rely for protection and cultivation upon an alliance with the learned professions. It is in such a country, that the usefulness of a scientific physician spreads widest through society, and his character displays, comparatively, its broadest and brightest disk.

But the chief purpose of the life and labors of the physician, as already intimated, is the prevention and cure of disease; and this object is of the greatest magnitude, whether we consider it in reference to the

preparation which it imposes on him; or to the countless multitude of blessings which it confers on society. In proposing to advert to these, I find them so intimately combined with all the scenes and situations of life, as to render selection difficult, and classification almost impossible.

Health, for the present purpose, may be defined that state of our sensibility, which enables the external agents that ordinarily act upon us, to produce effects of an agreeable kind. Disease is a condition, in which our sensibility is so changed, that those agents either produce no effects, or such as are painful. Now, if happiness do not *consist* in the former, that state is essential to its production; while the latter, of necessity, is attended with misery. And hence, either to be free from distress, or to be positively happy, it is equally indispensable to enjoy sound health.

I shall not dwell exclusively on the pains and sufferings of the sick; but call your attention, likewise, to the various distresses of which disease is the fruitful parent.

To estimate these, we must have approached its unfortunate subjects, and mingled with those who hung in anxiety and anguish over the sick bed. The united agonies of mind and body experienced even by a disgusting victim of prodigality and vice, affect us so sensibly that we cannot but desire his recovery, and feel inclined to unite with him in sentiments of gratitude to the physician who restores him to health, and perhaps to reformation and happiness. But what is there in the maladies of an insulated wretch to excite our pity, in comparison with the sufferings of the unfortunate, the useful and the good.

When a serious disease attacks an only son, on the threshold of manhood, and threatens the sudden extinction of genius and enterprise ; or, when it fixes on a favorite daughter, in the midst of bloom and beauty, while every virtue is germinating in her youthful bosom, and the first fruits of taste and intelligence afford full sustenance to future hope—to what can we compare the agony and consternation of the afflicted parents ? or what language could express their gratitude to him who should preserve such beloved objects from a premature grave ?

To accomplish this deliverance would be an enviable achievement ; but a nobler triumph attends the conquest of the Tyrant, when his vengeful arrows are fixed on manhood in the zenith of its splendor.

Men of genius and beneficence are the brightest luminaries of the moral firmament : the choicest gifts of bounteous Heaven to our benighted race. They were the authors and architects of society ; they decoyed the hunter out of the wilderness and weaned him from the chase ; encircled him with the arts and sciences ; inspired him with new and nobler propensities, and continue to furnish him with the means of gratification and happiness. In their preservation and prosperity then we should feel a deep and living interest. When they are assailed by disease, the very pillars of society are menaced with destruction ; and their expiring struggles spread convulsion and disorder throughout whole communities. When a catastrophe of this kind impends ; when our divines, philosophers and statesmen ; our artisans, physicians, advocates, professors and philanthropists, are selected as the

victims of disease; when the fountains of benefaction begin to pour forth troubled waters, and we are even threatened with a diminished supply of these, where do we then look for relief, or on what can we rely but the medical profession?

But the apprehensions of society for the fate of a great and good man in disease, sink into insignificance, when compared with the forebodings and anguish of his friends and family. Who has ever cast his eyes upon the death-bed of such a man, without the conviction that it is a scene of the deepest anguish? Who has, at any time, gazed on the sad spectacle of weeping relatives, supplicating friends, and distracted children, and not been suddenly pervaded with horror? Who has ever contemplated the affectionate wife, immovably fixed at the head of her expiring husband, absorbed in unutterable grief, and silently rent with pangs of sorrow; and not turned in sympathetic dismay towards that profession, upon which, in these hours of emergency and distraction, the good as well as the bad, the wise as well as the foolish, are compelled to rely for hope and relief? When such a man is the prize, to rescue him from the grasp of death, and dissipate the portentous gloom that hangs over his family and friends, by the light of his renovated eye, is one of the happiest efforts of the medical profession. But although among the happiest, it is not the noblest triumph of medicine. There are periods of epidemic disease, in which the King of Terrors envelopes society in a pestilential cloud; when the salutation of the morning is not, who has expired, but

who has survived through the night; when the stillness of our highways is interrupted only by the solemn rumblings of the hearse, and the silence of our apartments unbroken, except by the groans of the dying, and the more melancholy wailings of those who watch around; when Despair spreads her lurid mantle over the portals of every habitation; and Horror infuses his chilling influence into every vein, till the stoutest hearts are appalled; when Calamity sways his iron sceptre, and Terror, like a whirlwind, breaks asunder the bonds of society, and involves its members in anarchy and desolation:—then it is, when the ties of consanguinity and love have been dissolved, till the mother abandons her infected son, and the husband deserts his dying wife,—at this awful crisis, the good physician arises in a panoply of knowledge, as the champion of humanity. Deeply impressed with the sacred duties of his office, and nobly animated to their faithful performance, he sustains an aspect of serenity and confidence, and sublimely goes forth, like a ministering angel, to dispense health and hope and happiness.

With these dreadful visitations *we*, providentially, have no acquaintance but by report. Let us turn from the hideous picture, and resume the history of individual suffering.

The distresses of the sick consist, partly in the pains inseparable from disease, and partly in the seclusion which it imposes from all external sources of enjoyment. The efficacy of medicine in destroying the former is great; for, when the malady cannot be terminated until it has run a destined

course, it may frequently be deprived of its virulence. The poison may be neutralized when it cannot be extracted; and wounds, which time only can cicatrize, may have their anguish assuaged, and be rendered supportable. The powers of the healing art in shortening the stages of a disease, are equally obvious; and, next to the mitigation of pain, nothing is more grateful to an invalid, than his early release from the chamber of sickness. Every convalescent has an exquisite relish for the objects and aspects of nature; and even in their coarsest and simplest dress they never fail to delight him. But there are moments when the great Artist arrays her in charms uncommonly fascinating. In every country the elements of this enchantment are in some degree peculiar. In this, we are presented with the most striking exhibitions of beauty and grandeur in an April morning, when the heavens have distilled their first and purest dews upon the tenderest flowers of the year; when the buds of our forest expand to the enlivening influence of the vernal sun, while the same influence has restored our migratory birds, and "made vocal every tree" with their songs of love; when the Ohio, swollen by the last snows of its parent mountains, wheels rapidly along its weight of waters, and reflects the brightened disk of that luminary, whose return has dissolved the spells of winter, and diffused new energy and action through every animate and inanimate form: or, on an evening of August, after the oppressive heats of the great fountain of light and life have been tempered by a thunder gust, and the freshened atmosphere wafts the

sweet exhalations of our blossomed cornfields; when the green mantle of our hills assumes a livelier hue, and the rays of the setting sun illumine the departing clouds with the softest tints of red and yellow light. To languish in captivity till these evanescent glories have passed away, is the agony of privation: to be emancipated by medical skill, and set at large with renewed capacities for enjoyment, infuses gladness of heart, and inspires gratitude to the Great Physician above, as well as to the humble instrument by which his beneficence is administered.

But confinement in a sick room is rendered irksome by other causes, than a seclusion from the beauties of external nature. Occurring without our anticipation or consent, it produces an unexpected suspension of all the pursuits of business; exhausts the proceeds of those which had been made efficient; precludes the consummation of others; and restrains us from engaging in new ones, till the "golden moments of opportunity" have perhaps fled away for ever.

On our social plans and pleasures it exerts an influence equally unpropitious. A sick man is no longer a sociable, but a selfish being. He sinks to the state of a dependent on the community, and asks nothing from it, but sympathy and assistance;—and these afford him no other enjoyment than what arises from the removal of pain, or the dissipation of irksomeness. Their effects are negative, rather than positive. He wants the power to be an actor in the busy and bustling operations of society; and cannot even be a spectator of scenes in which he once performed a conspi-

eous part, and from which, in health, he unceasingly derived entertainment and happiness.

Finally, disease is a foe which invades us in as many forms as Proteus could assume. It is the great enemy of all enterprise and improvement: the sedative which paralyzes every faculty and passion: the poison which deranges every mental operation: the opposing power of patriotism, philanthropy and ambition—relaxing the arm of industry, subverting the schemes of benevolence, and extinguishing the lights of genius, to lead him captive through the mazes of error and dullness. It may be likened to the dark cloud which intercepts the sun beams till the germinating corn perishes in the earth; or the baleful mist that spreads mildew over the ripening harvest;—nay, its ravages are terrible as the volcano which breaks up the foundations of a country; prostrating as the tempest that lays waste its cultivated surface; overwhelming as the inundation which buries up its monuments, and “completes the work of devastation and ruin.”

The struggle of the medical profession with this fell power, can only be compared to the holy but interminable contest of truth with error and falsehood; or the glorious warfare that liberty maintains against the black empire of despotism:—the magazines of science supply the shield and armour, philanthropy inspires the heroism, and the life of man is the prize of victory.

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