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AN

INTRODUCTORY DISCOURSE,

TO A

COURSE OF LECTURES

ON THE

THEORY AND PRACTICE OF PHYSIC:

CONTAINING

OBSERVATIONS ON THE INDUCTIVE SYSTEM OF PROSECUTING

MEDICAL INQUIRIES;

AND

A TRIBUTE TO THE MEMORY OF THE LATE

DR. BENJAMIN RUSH.

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DELIVERED

AT THE COLLEGE OF PHYSICIANS AND SURGEONS,

ON THE THIRD OF NOVEMBER, 1813.

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BY DAVID HOSACK, M. D. F. L. S.

PROFESSOR OF THE THEORY AND PRACTICE OF PHYSIC AND CLINICAL MEDICINE IN THE
UNIVERSITY OF THE STATE OF NEW-YORK.

NEW-YORK:

PRINTED BY C. S. VAN WINKLE,

No. 122 Water-street.

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1813.

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NEW-YORK, DECEMBER 6, 1813.

SIR,

THE great satisfaction which was universally expressed, on the delivery of the Discourse introductory to your course of Lectures on the Theory and Practice of Physic, in the College of Physicians and Surgeons, as well as the excellent eulogy it contained on that ornament of the profession, the illustrious BENJAMIN RUSH, have induced the Medical and Surgical Society of the University of the State of New-York to appoint us a committee to request a copy of the same for publication. Your consent will confer a favour not only on the Society, by whose authority we have the honour to act, but on every cultivator of medicine, and every lover of general science.

With due respect, we are, Sir,

Your obedient servants,

JOHN SCUDDER,

WILLIAM F. QUITMAN.

TO DAVID HOSACK, M. D.



NEW-YORK, DECEMBER 6, 1813.

GENTLEMEN,

I receive with emotions of great sensibility and gratitude, the flattering resolution which you have conveyed from the Medical and Surgical Society of the University of the State of New-York. My respect for that institution induces a compliance on my part with their request. I must be permitted, however, to observe, that the merit which they have assigned to that discourse, is chiefly to be ascribed to the very important subjects to which it relates; especially, the memory of that distinguished physician, the late Dr. BENJAMIN RUSH, whose services to our profession must ever awaken an interest in the bosom of every pupil and practitioner of medicine.

I am, Gentlemen,

With sentiments of esteem and respect,

Yours,

DAVID HOSACK.

TO MR. JOHN SCUDDER, and MR. WM. F. QUITMAN,

Committee, &c.

1875

INTRODUCTORY DISCOURSE, &c.

GENTLEMEN,

AMIDST the numerous improvements which have recently taken place in the literary establishments of the city and state of New-York, the institution of a College of Physicians and Surgeons, exclusively devoted to the great purposes of medical education, is certainly an event deserving the highest commendation. It reflects equal honour upon its founders, the Regents of the University, and upon the Legislature, from whom it has received its first endowment and patronage. This institution was first projected, and a law passed, authorizing the Regents of the University to carry it into effect, as early as 1791; but motives of respect to the Trustees of Columbia College, who had annexed a medical school to that seminary of learning, prevented the Regents from carrying the views of the Legislature into operation until 1807, when a charter was first granted for that purpose.

The exercise of the power delegated to the Regents by the act of the Legislature referred to, has afforded just cause of congratulation to the friends of science, as an event, of all others, calculated to advance the usefulness and respectabi-

lity of the medical profession, the celebrity of the state, and the honour of our country. That the high expectations which were entertained of the benefits that would flow to the community from its establishment were well founded, the history of the College, even during the short period it has been in operation, abundantly testifies : for, during the six sessions that have elapsed, nearly four hundred gentlemen have received the benefits of instruction afforded at this establishment, and of that number about forty have been admitted to the honours of graduation.

But the Regents of the University, as well as the members of the profession in general, have ever been duly sensible of the benefits that would result from an union of the Professors of this College with those constituting the Faculty of Physic of Columbia College. Impressed with the importance of such union, the Regents of the University, in the winter of 1811, respectfully solicited the friendly offices of the Board of Trustees of Columbia College in combining the two medical institutions. This event, so desirable in itself, and which promises to be productive of signal and permanent advantages to the profession and the community, has at length been happily accomplished.

Permit me, gentlemen, students of medicine, to offer you my congratulations upon the favourable auspices under which the present session of this College commences : for to you it must prove peculiarly beneficial ; as in no other part of the United States can you obtain so extensive a system of medical education as that now afforded by this university.

But the establishment of this College, and the ultimate union of the Medical Schools of New-York, constitute an important era in the history of our state ; and may I not add, in the history of medical science ? For what advantages and improvements may we not reasonably anticipate from the united labours of those who now occupy the several professorships of this College, and of the numerous pupils who may be expected hereafter to resort to this city for instruction ?

New-York, in her commercial and agricultural character, has long been distinguished. In these respects, she has justly been considered one of the most important states of the union ; but when we take into view the immense provision she has made for common schools ; the extensive pecuniary contributions made to her numerous academies ; the appropriations granted to her different colleges ; the incorporation of new literary societies in different parts of her extensive territory ; the acts lately passed for the promotion of medical science ; the incorporation of state and county medical societies ; the liberal provision made for that invaluable charity and practical school of medicine, the New-York Hospital ; and the establishment and endowment of the Institution in which we are now convened, it must be admitted that her pre-eminence is not confined to her population, her commerce, or her agriculture, but that she is equally distinguished for her protection and cultivation of the arts and sciences, and shortly must combine every advantage that the most favoured states of the union may have individually enjoyed.

My anticipations lead me still further : When peace may be restored, and the benefits of commercial and literary intercourse with the old world be again experienced by this western hemisphere, but a few years can elapse when the universities of New-York, of Pennsylvania, of Massachusetts, of Connecticut, and of Maryland, will hold an honourable competition with the most distinguished seats of learning that now adorn the European continent.

In the profession of medicine it may already be said, that in the United States we possess all the necessary resources for the most finished system of education that can be obtained in any part of the world, not excepting the justly celebrated medical schools of Edinburgh, London, or Paris.

In anatomy, physiology, the principles and practice of surgery, midwifery, the materia medica, chemistry, botany, mineralogy, and other branches of natural history, we have the most abundant means of instruction both practical and theoretical. And in the study of the theory and practice of physic, in acquiring a knowledge of the diseases of our country, we enjoy advantages, which, to the American pupil, are superior to those of any of the schools of the old world : for such is the influence of soil, climate, vicissitudes of season, and the state of society, upon acute diseases, that in this country they exhibit in many respects a character different from those of Great Britain or of the continent of Europe. Hence it happens, that the American physician, who may have had all the advantages of a foreign course of study, who may have enjoyed all the benefits of instruction which the infirmary of Edinburgh

or the hospitals of London or Paris afford, if he has not previously acquired a knowledge of the febrile and other acute diseases of this climate, upon his return to his native country has still the most important practical lessons to learn, and which experience alone can supply. In this respect, you have advantages at home which you cannot obtain abroad ; nay, more, although we have been indebted to Europe for most of the knowledge we possess in the healing art, the European physician has still much to receive in return : he has yet to learn the history of the febrile and other diseases of this country ; the varieties they exhibit ; the effect of peculiarities of constitution and climate ; the causes which produce them, and the various modes of treatment they severally require, before he can attain to those principles which are necessary to constitute a system of practice. For it is justly remarked by an eminent medical writer,* that “no system of medicine can be perfect, while there exists a single disease which we do not know, or cannot cure.” There cannot, therefore, be a complete system of medicine until our country has furnished the description and the cure for all its peculiar diseases.

American genius has already largely contributed to the improvement of the arts, and has done much in developing the principles of civil government. For you and your successors, probably, is also reserved the discovery of those principles in medicine which are necessary to complete the fabric that has been begun by a Sydenham, a Boerhaave, a Hoff-

* Dr. Rush.

man, a Cullen, and other celebrated physicians of Europe. Cherish, then, the feelings which this prospective view excites, and let your exertions correspond with the obligation it imposes.

THE Practice of Physic, which, in connexion with Clinical Medicine, it is my province to teach in this University, is very properly defined, by a great systematic writer, to be the art of discerning, distinguishing, preventing, and curing diseases. The discernment of a disease, as Dr. Cullen very properly denominates it, is only to be acquired by long and habitual observation at the bedside of the sick, for it frequently happens, that not only the symptoms, but the causes of disease, are so concealed, that they escape the observation both of the patient and the bystander ; and, even by the physician, are only to be discovered by habitual attention to the phenomena of health as well as the symptoms of disease. But this discernment admits of still more extensive application, as it presents to the mind those circumstances attendant upon diseases, which no language can define. For although books of practice, and systems of nosology may furnish the description of the symptoms of disease, and faithfully delineate the more *prominent* features by which they are characterized, there are certain nicer shades of discrimination, which frequent converse with the sick can alone detect : for diseases, like plants and animals,

have their peculiarities of character, which no system of nosology will supply, no description, however voluminous or minute, can impart, which no medical Lavater has yet delineated, and with which practice alone can make us acquainted.

It is only the practical botanist who can distinguish plants which have a close resemblance. The eye of the practical physician, in like manner, when quickened by habit, readily distinguishes one form of fever from another, but which are all confounded in the eyes of the hasty observer, or of him whose preconceived notions have interposed a medium which obscures his vision. But this knowledge of the symptoms of disease is not sufficient to lead us to their prevention and cure. Whatever may be the readiness with which diseases may be perceived, or however minute may be our acquaintance with the varied phenomena they exhibit, it is only the knowledge of the various causes by which they are produced, and of the structure of the system upon which they operate, that can direct us to a safe and judicious practice; for, from these sources alone, the great principles upon which the treatment of disease is to be conducted must be derived.

These causes are of three kinds: such as are generally inherent in our frame, and predispose the system to be acted upon; those which are the most immediate, and for the most part external agents in exciting disease; and lastly, the proximate cause, which denotes the condition of the part affected, or of the whole system, and upon the change or removal of which the corresponding changes or removal of the disease depends. To use the elegant language of Dr. Gregory, that

ornament of our profession and of classical literature, “*causa proxima est, quæ presens, morbum facit, sublata tollit, mutata mutat.*”*

The theory of physic, therefore, may be defined to be, that system of principles which is deduced from a knowledge of the human structure, and of the predisposing, exciting, and proximate causes of disease, and by which the practice of medicine is to be directed. By many, however, the term theory has been abused, by considering it as synonymous with every hypothesis that has been promulgated for the purpose of explaining the phenomena of diseases, and with which medicine, like every other branch of philosophy, has in all ages been corrupted. The question then presents itself, by what process are we to attain to those principles so necessary as subservient to practice? I answer, by *accurate observation, judicious experiment, and cautious induction from the facts which they present.* These are the sources whence was deduced that luminous system of philosophical investigation introduced into physics by Lord Bacon, Robert Boyle, and Sir Isaac Newton. They are the same sources whence those celebrated metaphysicians, Reid, Gerard, Campbell, and Stewart, have drawn those principles which have recently been applied, with so much success, in explaining the phenomena of mind. And from the same sources, as exemplified in the pages of Hippocrates, Sydenham, and Boerhaave, are to be derived those principles in medicine which

* *Conspectus medicinæ.*

can alone conduct us to a judicious and successful practice. Suffer me to arrest your attention in the contemplation of those distinguished benefactors to medical science.

Anterior to the days of Hippocrates, we have no traces of any thing like theory or principles in medicine, much less a regular system of practice. On the contrary, before his time, the only medical knowledge which existed, was the result of random experience, or accidental observation, of the effects of remedies in particular diseases ; totally uninfluenced by principles derived from the structure of the human frame, the symptoms of disease, or the causes which produced them. The practice of that day was consequently purely empirical, in the strict etymological sense of the term ; but it is to be observed, that at that early period of society, the diseases of mankind were few in number when compared with those which intemperance, luxury, and what are called the refinements of civilized life, have since introduced.

Hippocrates was the first physician, of whom we have any record, who attempted to deduce from the facts which were presented to him, certain principles upon which to conduct the cure of diseases. He, therefore, first united the theory with the practice of physic ; but it was not that speculative theory which proceeds from hypothesis to facts, but from facts to principles. Hippocrates was in medicine what Lord Bacon was in philosophy : he first pointed out the true road to correct knowledge in our art. Permit me to devote a few moments to this grateful theme, while I endeavour to rescue his venerable name from the imputations which have

been cast upon it, even by Lord Verulam himself, and who, it is more than to be suspected, drew from the works of Hippocrates, with which he was intimately acquainted,* that very system of investigation which characterizes the *Novum Organum*, but which no less distinguishes the writings of our great progenitor

Hippocrates was born in the island of Cos, about four hundred years before Christ. At that memorable period of Grecian splendour, in which Apelles, Praxiteles, and Demosthenes, adorned the several arts of painting, sculpture and eloquence, Hippocrates was not less distinguished for his improvement in the healing art, and for which he received not only a crown of gold, but the highest honours Athens could bestow. Having applied himself with indefatigable industry to the various branches of human learning, then most generally taught; having become a proficient in the philosophy of the schools of Cnidus and of Cos, and afterwards added to his stock of knowledge by travel; with a mind thus enriched, and a bodily frame no less vigorous than his mind, (for it sustained him upwards of an hundred years) he entered upon the practice of physic.

Here his talents appear eminently great. The same system of inductive reasoning, which was afterwards adopted by Lord Bacon, was no less the guide of Hippocrates. For it was the maxim of the latter, as of the former, that every principle should be founded upon the

* Bacon on the Advancement of Learning, book II. See his works, vol. 1. p. 122, &c. Lond. Ed. 1803.

firm basis of observation and experience, and that the only correct mode of reasoning is that which proceeds from the effects to the causes which produce them. With this view he not only availed himself of that mass of facts which the temples of Greece supplied,* but he patiently sat down at the bedside of the sick, recorded every successive symptom of disease, the changes it underwent, as well as the manner of its termination, whether in the dissolution or the recovery of his patient. Although he was unacquainted with the circulation of the blood, or the value of the pulse as the index of disease, he carefully attended to every change in the *respiration* of his patient, which led him to conclusions equally correct; nor was he less attentive to the various secretions of the system, both in the healthy and in the morbid state. Indeed, so minute is the description which he gives of the various appearances the secretion from the lungs undergoes in the different stages of pneumonic inflammation, that to him alone are we yet, at this very day, indebted, not only for the best, but I do not hesitate to say, the only correct and satisfactory description that has been given of that disease. Although totally unacquainted with the nature of the materials constantly emanating from the surface of the body in perspiration, and which is but of recent discovery, he well knew the importance of that function, both in health and disease. But the observations of Hippocrates were not confined to the human body, and to the phenomena it presents in the morbid

* Vide Coacæ prænotio. Lib. Prænotion. I. Prædict. 11.

state: the action of every external agent no less attracted his observant eye. The air he breathed, the water he drank, the earth he trod upon, alike became the subjects of his attention, as far as they were supposed to exert an influence upon our system.* Nor were these the limits of his observation: The movements of the heavenly bodies; their influence upon our planet and upon our frame, were also embraced in his extended view.† From data such as these, and from a long and extensive experience, he founded and built up a system of pure and rational philosophy. As the great object of all his labours was to arrive at truth, and as Bacon discarded the logical definitions and distinctions of Aristotle, so did Hippocrates reject the principal hypothesis of Pythagoras and the other mysterious dogmata of the sophists of his age. Governed by the true spirit of what has lately received the appellation of Newtonian philosophy, he admitted so much only as enabled him to reason more justly in investigating the causes, and in discovering the method of cure in diseases. As the philosophy of Bacon differed from the fashionable logic, or syllogistic form of demonstration, which, until his time, was almost universally received; equally great was the difference between the method of Hippocrates and that of his predecessors.

But while we offer the tribute due to this great philosopher and physician, it is not to be denied that his knowledge of the internal structure of the human frame was necessarily limited,

* Hippoc. de Morb. Epidem. Lib. 1, 2, 3, &c. et de Aere, Aquis, et Locis.

† Vide Lib. citat. et in aphorism. Sect. 3, 4.

and, in many respects, erroneous. But although, as has already been intimated, he was ignorant of the circulation of the blood; although he confounded an artery with a vein, and a nerve with a tendon, he effected, even in his own time, more real improvements in the healing art than all his predecessors had done in the space of two thousand years before him; and, we may add, more than all his successors did in two thousand years after him. But although he lived in the infancy of medicine, his works, like those standards of perfection, the columns of Grecian architecture, will ever remain the admiration of the world, and the best models for our imitation. "His fame," to employ the language of an able and eloquent writer,* "like a stupendous and solitary mountain, seems to have acquired new height by the wasting effects of time upon the adjacent country."

After the death of Hippocrates, little was done to complete the building of that fabric of which he had laid the foundation. But while the example which he set was imitated, and the road he pointed out was followed, though with unequal steps, there was still a gradual but a sensible augmentation to the stock of medical knowledge. Hippocrates was succeeded by Plato and Aristotle, who concurred, though in different ways, to check the progress of medicine for many centuries. They corrupted almost every branch of human learning. In the room of the Hippocratic method of induction, were now substituted captious disputations and syllogistic quibbles.—The mode of reasoning which they adopted, though it afford-

* Dr. Rush.

ed some aid in the detection of sophistry, gave little assistance in the investigation and discovery of truth. In short, instead of having recourse to observation and experiments, they multiplied hypothetical propositions, confounded realities with fictions, preferred words to things : in the language of Lord Bolingbroke, " they invented systems more baneful to truth and real learning, than the ravages of the Goths and Vandals."

But the circumstance, which of all others, gave currency to the Aristotelian doctrines in medicine, was their adoption by Galen, a man of great learning, little inferior to Aristotle himself in genius, and an ardent admirer of his peculiar talents. He laboured with great zeal to complete and offer to the world a new theory in medical science. His fertile imagination supplied the place of facts, and as he infused into all his writings the subtle distinctions and metaphysical notions of Aristotle, he so far corrupted, more than any other writer in medicine, the true spirit of philosophical investigation. Yet it deserves to be remembered, and to the immortal honour of Hippocrates, that Galen himself was aware, that the *practice* of Hippocrates was the most just and rational, and that he himself pursued it in the treatment of diseases. What progress the doctrines of Galen made, and how long they were implicitly adopted, are facts too familiarly known to require further mention on this occasion. But happily for mankind, and the interests of science, towards the conclusion of the sixteenth, and beginning of the seventeenth century, another galaxy of talents appeared that dissipated those clouds

with which the Aristotelian philosophy had enveloped the world, and which both philosophers and physicians, Ixion-like, had embraced for nearly fourteen hundred years : You will anticipate me in the names of Bacon, Boyle, Galileo, Locke, and Newton. It was not until this period that philosophers and physicians “emancipated themselves from their vassalage to Aristotle and Galen.” It was not until this period that the human mind again recovered its freedom and dignity, and genuine science began to develope what had remained involved in the deepest obscurity. To commence this illustrious work was reserved for Lord Bacon, a man in every respect qualified for so great an undertaking. By the publication of his *Instauration of the Sciences*, he *rescued reason and truth* from the slavery in which they so long had been held ; he effected a total revolution in the empire of science, and laid the foundation of the inductive system of philosophizing, or rather, as we have already attempted to show, he revived the Hippocratic mode of acquiring knowledge.

Nearly cotemporary with those distinguished characters was Thomas Sydenham. As he possessed a strength of understanding, an accuracy of discernment, and an ardour of curiosity no less rare than desirable, he soon perceived the absurdity and pernicious effects of the visionary theories which had preceded. He accordingly devoted the most indefatigable attention to the study of nature, and what he considered of nearly the same importance, the aphorisms and other writings of Hippocrates. He caught the true spirit of phi-

osophy which they inculcate, and was the first in medicine, after the revival of learning, who adopted the inductive method of Bacon, and enforced the plan of study first pursued by the father of medicine. In his preface to his works he states, that we are to arrive at perfection in our science by two means; a faithful relation of the causes and symptoms of diseases, and from thence deducing and establishing their method of cure. Like his great prototype, he accurately noticed the phenomena and progress of diseases, and the manner of their termination, as well as the effects of medicine and diet, in their prevention and cure. He also, more minutely than any other writer, recorded the prevailing epidemics of each year; the influence of seasons, climate, and the sensible qualities of the atmosphere. Want of time, however, forbids that I should here enlarge upon his merits. But while I recommend to you a close and repeated examination of his writings, in order to enable you the better to appreciate them, I shall conclude this imperfect sketch of his character in the words of his celebrated successor: "He was the ornament of England, the Apollo of the art, whom I never consider but my mind presents me with the true picture of an Hippocratic physician, and to whom physic is so much indebted, that all I can say will fall far short of his merit."*

Let us now take a brief notice of another individual, to whom, next to Hippocrates and Sydenham, our profession is most indebted—the illustrious Boerhaave, who was no less

* Boerhaave.

eminent in medicine than Sir Isaac Newton in philosophy. Boerhaave flourished about forty years after Sydenham. I shall content myself with giving you some idea of the extent of the knowledge which he possessed, rather than of the manner in which he acquired it. He was well versed in the Latin, Greek, Hebrew, and other of the oriental languages, and also in those of modern Europe. He was a profound mathematician, and algebraist, and a remarkable proficient in the philosophy both of mind and matter. He studied the works of Hippocrates, and all the Greek, Roman, and Arabian physicians, as well as those of the most eminent among the moderns. He was the advocate of experimental science, and was himself a distinguished practical anatomist and chemist. In botanical knowledge he was among the first of his age, and in his acquaintance with the various departments of the materia medica, exceeded by none. He thus furnishes the most striking example to show, that it is practicable for a single individual to excel in almost every branch of human learning. Of the numerous writers on medical science whom he studied, he particularly admired Hippocrates among the ancients, and Sydenham among the moderns. Upon his election to the professorship of medicine, in 1701, he pronounced an oration "*de commendando studio Hippocratico*," in which he not only recommended the writings of the Coan sage as among the most valuable sources of practical information, but particularly enforced the *Hippocratic mode* of conducting medical inquiries.

He delivered lectures on the theory and practice of medicine, botany and chemistry, with the greatest clearness, precision and eloquence ; and had such a conflux of students, from all parts of the world for his hearers, as never, probably, had been presented before any professor. Upon the death of Le Mort, he was placed at the head of every branch of medicine, when the number of his students became so great, that, according to his biographer, Dr. Matty, Leyden itself was scarcely sufficient to accommodate them. In his Institutions of Medicine and his Aphorisms, which have been pronounced two of the most concise, yet comprehensive works which have ever been presented to the medical world, and which have been the text books of the universities of Europe for nearly a century, you will find the result of all that learning, experience and talents, for which he was so eminently distinguished. But the great talents, the indefatigable application, and the extensive knowledge of Boerhaave held but a second place in his character : In the language of Dr. Johnson, "he was an admirable example of temperance, fortitude, humility, and devotion ;" and we may add, christianity enrols his name among her firmest and steadiest supporters.

But, gentlemen, while we thus revere the great and good of the old world, let us do homage to merit in the new. While we acknowledge the benefits which the science of medicine has received from the physicians of Europe, let us not be unmindful of the debt of gratitude we owe to a native of our own soil, who was no less an ornament to human nature,

than his various exertions have been precious to his profession, to science, and his country.

Your feelings, I trust, will be in unison with mine, while, in addition to the numerous offerings of public and private respect, which have been paid to the memory of Doctor Benjamin Rush, we devote a few moments to the contemplation of the professional attainments, the public services, the moral and religious character, which make up the portrait of that distinguished philosopher and physician.

Doctor Rush was born on the 24th of December, 1745, on his father's estate, about twelve miles from the city of Philadelphia. His ancestors followed William Penn from England to Pennsylvania, in the year 1683. They chiefly belonged to the society of Quakers, and were all, as well as his parents, distinguished for the industry, the virtue, and the piety, characteristic of their sect. His grandfather, James Rush, whose occupation was that of a gunsmith, resided on his estate near Philadelphia, and died in the year 1727. His son John, the father of Dr. Rush, inherited both his trade and his farm, and was equally distinguished for his industry and ingenuity. He died while his son Benjamin was yet young, but left him to the care of an excellent and pious mother, who took an active interest in his education and welfare. In a letter which I had the pleasure to receive from Dr. Rush, a short time before his death, and which was written upon his return from a visit to the tomb of his ancestors, he thus expresses the obligation he felt for the early impressions of piety he had received from his parents :

“ I have acquired and received nothing from the world which I prize so highly as the religious principles I inherited from them ; and I possess nothing that I value so much as the innocence and purity of their characters.”*

But this was not the only source of that virtue and religion for which he was so eminently distinguished. His mother, as if influenced with a presentiment of the future destinies of her son, resolved to give him the advantages of the best education which our country then afforded:—For this purpose he was sent, at the early age of eight or nine years, to the West Nottingham Grammar School, and placed under the care of his maternal uncle, the Rev. Doctor Samuel Finley, an excellent scholar and an eminent teacher, and whose talents and learning afterwards elevated him to the Presidency of the College of Princeton. At this school young Rush remained five years, for the purpose of acquiring a knowledge of the Greek and Latin languages, and other branches necessary to qualify him, as preparatory for a collegiate course of study. But under the tuition and guidance of Dr. Finley, he was not only instructed in classical literature;—he also acquired what was of no less importance, and which characterized him through life—a habit of study and observation, a reverence for the christian religion, and the habitual performance of the duties it incul-

* The letter here referred to was originally addressed, by Dr. Rush, to the Hon. John Adams, Esq. late President of the United States: from a copy of the same, sent to the author by Dr. Rush, several of the preceding interesting particulars have been taken.

cates. For his accomplished and pious instructor not only regarded the temporal, but the spiritual welfare of those committed to his care.

At the age of fourteen, after completing his course of classical studies, he was removed to the College of Princeton, then under the superintendence of President Davies, one of the most eloquent preachers and learned divines our country has produced.

At college, our pupil not only performed his duties with his usual attention and success, but he became distinguished for his talents, his uncommon progress in his studies, and especially for his eloquence in public speaking. For this latter acquirement, he was doubtless indebted to the example set before him by President Davies, whose talents as a pulpit orator were universally acknowledged, and were frequently the theme of his pupil's admiration.

Dr. Rush received the degree of bachelor of arts in the autumn of 1760, at the early age of fifteen. The next succeeding six years of his life were devoted to the study of medicine, under the direction of Dr. John Redman, at that time an eminent practitioner in the city of Philadelphia. Upon commencing the study of medicine, the writings of Hippocrates were among the very first works which attracted his attention; and, as an evidence of the early impression they made upon his mind, and of the attachment he had formed to them, let it be remembered, that Dr. Rush, when a student of medicine, translated the aphorisms of Hippocrates from the Greek into his vernacular tongue, in the

seventeenth year of his age. From this early exercise he probably derived that talent of investigation, that spirit of inquiry, and those extensive views of the nature and causes of disease, which give value to his writings, and have added important benefits to the science of medicine. The same mode of acquiring knowledge which was recommended by Mr. Locke, and the very manner of his commonplace book was also early adopted by Dr. Rush, and was daily continued to the last of his life. To his records, made in 1762, we are at this day indebted for many important facts illustrative of the yellow fever, which prevailed in, and desolated the city of Philadelphia, in that memorable year. Even in reading, it was the practice of Dr. Rush, and for which he was first indebted to his friend Dr. Franklin, to mark with a pen or pencil, any important fact, or any peculiar expression, remarkable either for its strength or its elegance. Like Gibbon, "he investigated with his pen always in his hand;"—believing with an ancient classic, that to study without a pen is to dream—"Studium sine calamo somnium."

Having with great fidelity completed his course of medical studies under Dr. Redman, he embarked for Europe, and passed two years at the University of Edinburgh, attending the lectures of those celebrated professors, Dr. Monro, Dr. Gregory, Dr. Cullen, and Dr. Black.

In the spring of 1768, after defending an inaugural dissertation "*de coctione ciborum in ventriculo*," he received the degree of doctor of medicine. In that exercise which was written with classical purity and elegance, it was the object

of Dr. Rush to illustrate, by experiment, an opinion that had been expressed by Dr. Cullen, that the aliment, in a few hours after being received into the stomach, undergoes the acetous fermentation. This fact he established by three different experiments, made upon himself; experiments, which a mind less ardent in the pursuit of truth, would readily have declined.

From Edinburgh Dr. Rush proceeded to London, where, in attendance upon the hospitals of that city, the lectures of its celebrated teachers, and the society of the learned, he made many accessions to the stock of knowledge he had already acquired.

In the spring of 1769, after visiting Paris, he returned to his native country, and immediately commenced the practice of physic in the city of Philadelphia, in which he soon became eminently distinguished.

Few men have entered the profession in any age or country with more numerous qualifications as a physician, than those possessed by Dr. Rush. His gentleness of manner, his sympathy with the distressed, his kindness to the poor, his varied and extensive erudition, his professional acquirements, and his faithful attention to the sick, all united in procuring for him the esteem, the respect, and the confidence of his fellow citizens, and thereby introducing him to an extensive and lucrative practice.

It is observed, as an evidence of the diligence and fidelity with which Dr. Rush devoted himself to his medical studies, during the six years he had been the pupil of Dr. Redman,

that he absented himself from his business but two days in the whole of that period of time. I believe it may also be said, that from the time he commenced the practice of medicine to the termination of his long and valuable life, except when confined by sickness, or occupied by business of a public nature, he never absented himself from the city of Philadelphia, nor omitted the performance of his professional duties a single day. It is also stated, that during the thirty years of his attendance as a physician to the Pennsylvania hospital, such was his punctuality, his love of order, and his sense of duty, that he not only made his daily visit to that institution, but was never absent ten minutes after the appointed hour of prescribing.

In a few months after his establishment in Philadelphia, Dr. Rush was elected a professor in the medical school which had then been recently established by the laudable exertions of Dr. Shippen, Dr. Kuhn, Dr. Morgan, and Dr. Bond. For this station his talents and education peculiarly qualified him. As in the case of Boerhaave, such too had been the attention bestowed by Doctor Rush upon every branch of medicine, that he was equally prepared to fill any department in which his services might be required.

The professorships of anatomy, the theory and practice of physic, clinical medicine, and the materia medica, being already occupied, he was placed in the chair of chemistry, which he filled in such manner as immediately to attract the attention of all who heard him, not only to the branch he taught, but to the learning, the abilities, and eloquence, of the teacher.

In the year 1789 Dr. Rush was elected the successor of Dr. Morgan to the chair of the theory and practice of physic. In 1791, upon an union being effected between the college of Philadelphia and the university of Pennsylvania, he was appointed to the professorship of the institutes of medicine and clinical practice ; and in 1805, upon the resignation of the learned and venerable Dr. Kuhn, he was chosen to the united professorships of the theory and practice of physic and of clinical medicine, which he held the remainder of his life. To the success with which these several branches of medicine were taught by Dr. Rush, the popularity of his lectures, the yearly increase of the number of his pupils, the unexampled growth of the medical school of Philadelphia, and the consequent diffusion of medical learning, bear ample testimony ; for, with all due respect to the distinguished talents with which the other professorships of that university have hitherto been, and still continue to be filled, it will be admitted, that to the learning, the abilities, and the eloquence of Dr. Rush, it owes much of that celebrity and elevation to which it has attained. What Boerhaave was to the medical school of Leyden, or Dr. Cullen to that of Edinburgh, Dr. Rush was to the university of Pennsylvania.

But Dr. Rush did not confine his attention and pursuits either to the practice of medicine or to the duties of his professorship : his ardent mind did not permit him to be an inactive spectator of those important public events which occurred in the early period of his life.

The American revolution ; the independence of his coun-

try ; the establishment of a new constitution of government for the United States, and the amelioration of the constitution of his own particular state, all successively interested his feelings, and induced him to take an active concern in the scenes that were passing. He held a seat in the celebrated congress of 1776 as a representative of the state of Pennsylvania, and subscribed the ever memorable instrument of American independence. In 1777, he was appointed physician general of the military hospital for the middle department ; and in the year 1787 he received the additional gratification and evidence of his country's confidence in his talents, his integrity, and his patriotism, by being chosen a member of the state convention for the adoption of the federal constitution.

These great events being accomplished, Dr. Rush gradually retired from political life, resolved to dedicate the remainder of his days to the practice of his profession, the performance of his collegiate duties, and the publication of those doctrines and principles in medicine which he considered calculated to advance the interests of his favourite science, or to diminish the evils of human life. In a letter which I received from him as early as the year 1794, he expresses this determination, adding, " I have lately become a mere spectator of all public events." And in a conversation on this subject, during the two last years of his life, he expressed to me the high gratification which he enjoyed in his medical studies and pursuits, and his regret that he had not at a much earlier

period withdrawn his attention from all other subjects and bestowed it enclusively upon his profession.

Young gentlemen, let this declaration of that venerable character, who, like Hippocrates of old, well knew the extent of his art and the comparative shortness of human life, impress your minds with the duties before you; let it teach you, too, the value of time, that it may not be occupied in those pursuits which are unconnected with science or your profession; and, especially, that it be not wasted in idle and unprofitable amusements; for, of the physician it is not enough to say,

“That here he liv'd, or here expired.”

POPE.

Such was the attachment of Dr. Rush to his profession, that speaking of his approaching dissolution, he remarks, “when that time shall come, I shall relinquish many attractions to life, and among them a pleasure which to me has no equal in human pursuits; I mean that which I derive from studying, teaching, and practising medicine.” But he loved it as a science; principles in medicine were the great objects of all his inquiries. He has well observed, that medicine without principles, is an humble art, and a degrading occupation; but directed by principles, the only sure guide to a safe and successful practice—it imparts the highest elevation to the intellectual and moral character of man.

But the high professional character and attainments of Doctor Rush, did not alone display themselves in his skill as

a physician, or his abilities as a teacher; he was equally distinguished as a writer and an author.

The present occasion does not allow me to recite to you even the numerous subjects of his medical publications; much less does it afford an opportunity to review the opinions they contain. In the ensuing course of lectures these will severally fall under our attention, as the various subjects to which they relate may present themselves. Permit me, however, generally to observe, that the numerous facts and principles which the writings of Dr. Rush contain, the doctrines they inculcate relative to the nature and causes of disease, and the improvements they have introduced into the practice of medicine, recommend them to your attentive perusal and study, while the perspicuity and elegance of the style in which they are written, give them an additional claim to your attention as among the finest models of composition. The same remarks are equally applicable to the epistolary stile of Dr. Rush and that of his conversation; in both of which he eminently excelled.

Mr. Fox declared in the British House of Commons, that he had learned more from Mr. Burke's conversation than from all the books he had ever read. It may also be observed of the conversation of Dr. Rush, that such were the riches of his mind; such was the active employment of all its faculties; so constant was his habit of giving ex-

* For an ample and minute account of the writings of Dr. Rush the reader is particularly referred to the excellent and instructive discourse delivered before the Medical Society of Charleston, by the Hon. David Ramsay, M. D.

pression to his thoughts in an extensive correspondence, in the preparation of his public discourses, and in his daily intercourse with the world, that few persons ever left his society without receiving instruction, and expressing their astonishment at the perpetual stream of eloquence in which his thoughts were communicated.

It has frequently been the subject of surprise, that amidst the numerous avocations of Dr. Rush, as a practitioner and a teacher of medicine, that he found leisure for the composition and the publication of the numerous medical and literary works which have been the production of his pen.

Although Dr. Rush possessed by nature an active and discriminating mind, in which were blended great quickness of perception, and a retentive memory ; although he enjoyed the benefits of an excellent preliminary and professional education, it was only by habits of uncommon industry, punctuality in the performance of all his engagements, the strictest temperance and regularity in his mode of life, that enabled him to accomplish so much in his profession and to contribute so largely to the medical literature of his country. Dr. Rush, like most men who have extended the boundaries of any department of human knowledge ; who have contributed to the improvement of any art or science, was in habits of early rising, by which he always secured what Gibbon has well denominated "*the sacred portion of the day.*"

The great moralist* justly observes, that "to temperance

every day is bright, and every hour is propitious to diligence." The extreme temperance of Dr. Rush in like manner enabled him to keep his mind in continual employment, thereby "setting at defiance the morning mist and the evening damp—the blasts of the east, and the clouds of the south."* He knew not that "lethargy of indolence" that follows the inordinate gratifications of the table. His ciesto did not consist in indulgence upon the bed or in the armed chair, to recover those powers which had been paralysed or suspended by an excessive meal, or the intemperate use of vinous or spirituous drinks.

Dr. Johnson, during his tour to the Hebrides, when fatigued by his journey, retired to his chamber and wrote his celebrated Latin ode addressed to Mrs. Thrale.† Dr. Rush, in like manner, after the fatigues of professional duty, refreshed his mind by the perusal of some favourite poet, some work of taste, some volume of travels, biography, or history. These were the pillows on which he sought repose.

But the virtues of the heart, like the faculties of his mind, were also in continued exercise for the benefit of his fellow men; while the numerous humane, charitable, and religious associations, which do honour to the city of Philadelphia, bear testimony to the philanthropy and piety which animated the bosom of their departed benefactor, let it also be remembered, that, as with the good Samaritan, the poor were the objects of his peculiar care; and that in the latter,

and more prosperous years of his life, one seventh of his income was expended upon the children of affliction and want. Dr. Boerhaave said of the poor, that they were his best patients, because God was their paymaster.

Let it also be recorded, that the last act of Dr. Rush was an act of charity, and that the last expression which fell from his lips was an injunction to his son, ‘Be indulgent to the poor.’

“Vale egregium academix decus ! tuum nomen mecum semper durabit ; et laudes et honores tui in æternum manebunt.” *

* These words were addressed by Dr. Rush, upon his taking leave of the University of Edinburgh, to his particular friend and preceptor, Dr. Cullen. See Haug. Diss. De Coctione Ciborum. Edin. 1769.

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