PEPPER (W.)

BENJAMIN RUSH.

BY
WILLIAM PEPPER, M.D., LL.D.,
PROVOST AND PROFESSOR OF THEORY AND PRACTICE OF MEDICINE
IN THE UNIVERSITY OF PENNSYLVANIA.

An Address delivered before the American Medical Association at its Annual Meeting in Newport, R. I., June, 1889.

Reprinted from "The Journal of the American Medical Association," April 26, 1890.

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Time, which destroys so much, has dealt kindly with the fame of Benjamin Rush. Like his great master Sydenham he was distinguished during life, and distinguished not through the absence of able rivals, but owing to surpassing power. But as with all true renown his fame has endured and grown, and it seems not unlikely that he will remain forever with us, not, it may be, as the greatest of our physicians, but as the first of our great physicians.

His life of ceaseless, restless activity demands and will repay full description when all interdiction is removed from his private papers. I hazard the prediction that the largest publicity will but show more clearly the purity and intensity of his patriotism, the vivid and unselfish interest shown by him in every question which affected the happiness, the honor, or the prosperity of his country; and the undaunted courage which made it impossible for him to be away from the front in every struggle. But it seems to me that the political services[1] and influence of Rush—import-

NOTE.—I am indebted to the family of Dr. Rush for the opportunity of consulting and making extracts from some of his correspondence.

A careful examination has also been made of the large collection of letters (for the most part letters written to Dr. Rush) deposited in the Ridgway branch of the Philadelphia Library; with the exception of a single volume presumably containing matter, personal and political, of interest to the historian and biographer which is there held in reserve.

I may add that in order to place myself in a fair position to judge of his work and influence, his entire published writings have been read twice—once rapidly, once critically; and all accessible publications concerning him have been, in very large number, consulted.

[1] The importance and extent of these services may be gathered from this brief statement:

In 1776 (æt, 31) he was a member of the Provincial Conference of Philadelphia, and of the committee to which was referred the great question, whether it had become expedient for Congress to declare Independence. He was chairman of the committee; the report they submitted was adopted and sent to Congress. This report includes near y all that has been so much praised in the Declaration of Independence, of which it might appear to be the protocol. He was appointed by the State Convention a member of Congress, in order that he might sign that Declaration.

He was appointed Surgeon-General of the Army of the Middle

ant as they were—have comparatively little to do with the position he holds with us to-day. He never was a politician, though often engaged in public affairs. His high spirit, his impetuosity, his transparent character kept him for the most part aloof from political intrigues and dealings in which they would have prevented his success. He never sought political office or preferment. The appointments he held were alike honorable, laborious and unprofitable. He signed the Declaration of Independence, not merely because he was a member of Congress, but because he had been appointed for that specific purpose by the State Convention of Pennsylvania. The appointment followed the presentation of his report, as chairman of the committee to consider the question whether it had become expedient for Congress to declare Independence. This report is a vigorous and animating production; and so closely does it foreshadow the leading features of the Declaration of Independence, that it might appear to be a protocol or rough draft of that immortal document. He discharged with great energy and efficiency the laborious duties of his positions as Surgeon General, and later as Physician-General of the Army of the Middle Department; and like Washington and Franklin, and others in those primitive days, he refused pay for his public services. During those memorable years he wrote vigorous and influential papers and letters on the organization of the General and State Govern-

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Department in 1776; in 1777 he exchanged this position for that of Physician-General.

He published important papers on public events; especially four powerful letters on the Pennsylvania Constitution of 1776; a remarkable address in 1785 entitled "Considerations on the Test Laws of Pennsylvania;" and many able though shorter articles in 1786-1787 in favor of the adoption of the Federal Constitution. He was a member of the Convention of Pennsylvania for the adoption of that instrument which he thus describes: "It is a master-piece of human wisdom, and happily accommodated to the present state of society. I now look forward to a golden age. The new Constitution realizes every hope of the patriot and rewards every toil of the hero. I love my country ardently, and have not been idle in promoting her interests during the session of the Convention. Everything published in all our papers, except the *Foreign Spectator*, was the effusion of my Federal principles." Allusion has been made elsewhere to his successful labors for amelioration of the penal code; it was apparently in large part to accomplish this and the establishment of public schools that he accepted membership in the State Convention in 1787 for the formation of a State Constitution. He was then 42 years of age, and from that time onwards, although he always took a lively interest in every important public question, he devoted his whole energies to the cause of medical science and medical education.

ments; but even then he was diligent in medical observation and writing.

He shared the doubts of Samuel Adams and Richard Henry Lee as to the military genius of Washington; and his unshrinking courage and vehement spirit led him into positions and expressions which he doubtless regretted later when time and events had demonstrated the rare qualities of the great leader. But at the same time (1785), he projected the Philadelphia Dispensary, following the example of Franklin in regard to the Pennsylvania Hospital, and devoting himself with equal vigor and success to the collection of funds. He carefully prepared the public mind by describing the advantage of such an institution, for it was the first of its kind in the United States. Public interest being aroused, combined efforts secured such liberal contributions that the Dispensary was placed upon a permanent basis, and for more than a century has continued its unostentatious but precious work. It is needless to remark that its example has been followed in hundreds of places. He had already attained such prominence in medical circles that in 1789, when the College of Physicians was established, he was called upon to prepare an address on the objects of the institution, which is published in the Transactions for 1793. It is a very able paper, altogether worthy of the occasion, and with far-sighted sagacity it indicates the lines of development along which that venerable institution has grown into such gratifying prosperity.

He was profoundly interested in moral philosophy, and in 1787 read to the Philosophical Society, of which he was one of the most active members, an essay on the "Influence of Physical Causes on the Moral Faculty," which was of such remarkable originality as to attract the widest attention here and abroad. It deservedly occupies the position of a classic. In the same year he became a member of the Convention of Pennsylvania for the adoption of the Federal Constitution and of that for the forming of a State Constitution. He labored, spoke and wrote incessantly, enthusiastically and forcibly,—not for partisan or personal ends, but in obedience

to the dictates of a lofty sense of patriotic duty, and to have the chance to press the reform of the penal code, and to promote public education.[2]

He was among the first to oppose capital punishment. Little can be added to the indictment he brings against it as ineffectual and injurious in its influence. Nor did he limit himself to denouncing evils; his mind was essentially practical and his lively imagination was chiefly occupied with suggestions of solid utility. His "Inquiry into the Effects of Public Punishment upon

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[2] The important services rendered to education by Rush merit a separate memoir. He advocated consistently the highest practicable standard of medical education. In 1792 he urged the importance of thorough preliminary study, embracing the modern as well as the dead languages. He insisted upon the study of botany, zoology, and comparative anatomy. With equal force he urged the study of medical jurisprudence, and he was a pioneer in the study and teaching and practice of psychiatry. The admirable address of Dr. C. K. Mills on Rush in American Psychiatry, read before the Medico-Legal Society of New York, Dec. 8, 1886; and the opening chapter in Hack Tuke's recent work (The Insane in the United States and Canada), which is an extended and judicious eulogium upon Rush, render it unnecessary to allude further to this, which must have consumed an immense amount of his time and energy, and which would of itself constitute a just claim to lasting fame.

Veterinary science found in him its earliest champion in America. Throughout his life he pleaded eloquently for the protection of animals from cruelty. In his inquiry into the influence of physical causes on the moral faculty in 1786 he exclaims, "I am so perfectly satisfied of the truth of a connection between morals and humanity to brutes, that I shall find it difficult to restrain my idolatry for the legislature that shall first establish a system of laws to defend them from outrage and oppression." In 1807, he delivered the lecture introductory to his course "Upon the Duties and Advantages of Studying the Diseases of Domestic Animals and the Remedies Proper to Remove them;" and after an eloquent statement of the importance of the subject, and an allusion to the fact that up to that time no veterinary school had yet been established in the United States, he concluded with the following words: "I have lived to see the Medical School of Philadelphia emerge from small beginnings and gradually advance to its present flourishing condition, but I am not yet satisfied with its prosperity and fame, nor shall I be so, until I see the Veterinary Science taught in our University." This wish was not realized during his lifetime—nor until 1884, when the Veterinary Department of that Institution was established.

But it was not only in the promotion of medical education that Rush was strenuous. He published important and influential papers on the establishment of public schools; upon the mode of education proper in a republic; upon the study of the Latin and Greek languages, with hints of a plan of liberal instruction without them; and upon allied subjects. He advocated the establishment of a National or Federal University of which all office holders should be graduates (Mss. letter); and he urged and labored for the establishment and prosperity of several colleges in Pennsylvania, in addition to the long and valuable services he rendered to the University of Pennsylvania. He served on the committee to raise funds for the establishment of Franklin College at Lancaster (now the justly prosperous and celebrated Franklin and Marshall College); he was one of the first Trustees of Dickinson College at Carlisle, a liberal benefactor, and a constant and earnest friend to it throughout his life. I have been amazed at the evidence furnished by his correspondence (Philadelphia Library collection) as to the extent of his labors for this institution—of which indeed it is clear that he was then regarded as the principal founder. Surely this is a noble record of wise and public-spirited activity.

Criminals and upon Society" closes with a powerful plea for a truly reformatory system of punishments. He exclaims, "I have no more doubt of every crime having its cure in moral and physical influence than I have of the efficacy of the Peruvian bark in curing intermittent fever. The only difficulty is to find out the remedy or remedies for particular vices." It is one of Rush's highest distinctions to have contributed powerfully, and probably more than all others, to the amelioration of the penal code subsequently effected.

These were years of activity which we find it hard to parallel, for the range of subjects covered, the vigor of grasp with which each is handled, and the far sighted sagacity and practical wisdom shown in the reforms urged or the original measures suggested. If he had no other claim to fame, Rush would stand high as a philanthropist and social reformer. He was inspired by no love of notoriety, not deterred by any dread of unpopularity. He denounced the evils of slavery as early as 1771 and was, with Franklin, one of the founders of the Society for the Protection of Free Negroes; of this he was annually elected president after Franklin's death. He espoused the cause of non-jurors, and under the title of "An Inquiry into the Consistency of Oaths with Reason and Christianity," he presented a masterly and convincing argument against such tests. He was a discriminating but decided opponent of the use of ardent spirits. He did not aim at the total prohibition of stimulants, as he held that the weaker alcoholic beverages were comparatively harmless. He did not deny that the use of spirits may be indicated in the low states of certain acute diseases, but he pleaded eloquently for legislation against the abuse of ardent spirits, and he used his immense influence as a teacher and practitioner to discountenance their employment in disease save when absolutely necessary and then only with every precaution to guard against the formation of the alcohol habit.

Rush was evidently a perfectionist. His enthusiasm over the possibilities of human nature continually breaks out into expressions of sincere

exuberance. I fear he drew his inspirations more from the experience of his own nature, refined and elevated, which required no excitement but the claims of duty, and no pleasure but the pursuit of knowledge and truth, than from the observation and study of men as they actually exist. Very naturally and properly he opposed the use of tobacco as a habit attended with many injurious results. "Were it possible," he begins his observations upon the influence of the habitual use of tobacco upon health, morals and prosperity, "for a being who had resided upon this globe to visit the inhabitants of a planet, where reason governed, and to tell them that a vile weed was in general use among the inhabitants of the one it had left, which afforded no nourishment; that this weed was cultivated with immense care; that it was an important article of commerce; that the want of it produced real misery; that its taste was extremely nauseous; that it was unfriendly to health and morals, and that its use was attended with considerable loss of time and property, the account would be thought incredible, and the author of it would probably be excluded from society for relating a story of so improbable a nature. In no one view is it possible to contemplate the creature man in a more absurd and ridiculous light than in his attachment to tobacco." And so he concludes the same observations by reference to one from whom frequent evidences show that he drew much of his inspiration of humanity. He tells us that Dr. Franklin, a few months before his death, declared to one of his friends that he had never used tobacco in any way in the course of his long life, and that he was disposed to believe there was not much advantage to be derived from it, as he had never met with a man who used it who advised him to follow his example.

I do not touch upon these various points merely as proof of versatility and activity. It is a common thing to see men who acquire a certain conspicuous but temporary fame, owing to the bustling energy with which they assume many positions and mix in many affairs; but it is found that they have won no lasting credit from any of

their varied work. But for Rush it is fair to claim that in all the large affairs and questions with which he dealt he showed himself a pioneer and a leader, and that he did work of capital and enduring value. Very much of this depended upon his great gifts as a speaker and as a writer. He was in truth a man of letters of very high rank. Abundant testimony shows that his medical lectures were consummately excellent—clear, impressive, eloquent, and at times instinct with dramatic power. I shall allude again to the immense effect they produced in aiding the diffusion of his medical views. His more elaborate addresses and orations are admirable, and some of them, as those on Cullen and on Rittenhouse, and his address on "The Influence of Physical Causes on the Moral Faculties," are splendid performances. Richardson[3], to whom we owe the most appreciative of recent sketches of Rush, quotes from the eulogy on Cullen what he fitly calls a golden utterance; justly applicable to Cullen, it is a true expression of the spirit which moved Rush. "That physician has lived to little purpose who does not leave his profession in a more improved state than that in which he found it. Let us remember that our obligations to add something to the capital of medical knowledge are equally binding with our obligations to practice the virtues of integrity and humanity in our intercourse with our patients. Let no useful fact, therefore, however inconsiderable it may appear, be kept back from the public eye; for there are mites in science as well as in charity, and the remote consequences of both are often alike important and beneficial. Facts are the morality of medicine; they are the same in all countries and throughout all times."

However he may have acquired it, he was master of a style in writing, of rare clearness, force and flexibility. It lends a charm to every production of his pen. His letters to his family and intimates, the discussions of important public questions, his dissertations upon medical topics, are alike composed in this attractive style. Compact and well thought out arguments; vivid bursts of

3 The Asclepiad, 1885. B. W. Richardson, M.D.

imagination and passages of glowing eloquence; bits of description of microscopic accuracy; apt illustrations, drawn from nature, history, literature, art, most of all from Holy Writ; sententious phrases; these are separate merits of the style, through all of which there breathes such candor and earnestness and humanity that the reader finds himself delighted with the man, as well as with the author.

If time permitted, it would be easy to show that in the vital matter of education he was as active, as progressive, and as far ahead of his contemporaries, as he was in social science. I dare not even allude to his advanced views on the education of women, or I should be drawn into an extended eulogy of his position upon this question, which now, more than a century later, is but beginning to receive the attention its immense practical importance demands. His labors for the establishment of the public school system; his suggestions of "A Mode of Education Proper in a Republic;" his "Observations Upon the Study of the Latin and Greek Languages as a Branch of Liberal Education, With Hints of a Plan of Liberal Instruction Without Them," and his "Defense of the Bible as a School Book," may be pointed out as evidences of what I have claimed for him.

What deep gratitude must we ever owe, for our national stability and prosperity, to the illustrious men, among whom Rush was notable, who recognized instinctively that universal education, thorough, sound and broad, was the only safety of the new Republic, and who continued the devoted efforts which had won from foreign oppression our liberties, in order to ensure us the means of maintaining them against no less deadly dangers at home.

In every portion of Rush's writings we find constant evidence of his genuine, unaffected piety. There is a vein of truth and sincerity in it which cannot be mistaken. Unquestionably he had his hard struggles with himself, with a nature excitable, sensitive and self-asserting. He stood in the slippery places of rapid success and early popularity. It was a time when men's blood was up.

Opinions were held tenaciously and fought for willingly; but throughout his writings, public and private, the subject of religion is continually referred to, and invariably in the most reverential tone, without a tinge of polemics or of sectarianism. Indeed, he urged, in a remarkable "Address to the Ministers of the Gospel of Every Denomination," published as early as 1788, that each sect should appoint a representative in a general convention of Christians, whose business shall be to unite in promoting the general objects of Christianity. He concludes: "America has taught the nations of Europe, by her example, to be free, and it is to be hoped she will soon teach them to govern themselves. Let her advance one step further and teach mankind that it is possible for Christians of different denominations to love each other and to unite in the advancement of their common interests. By the gradual operation of such natural means the kingdoms of this world are probably to become the kingdoms of the prince of righteousness and peace." It is true that to the end of his life Rush continued to be active in the cause of philanthropy, of education, and of religion; but we shall see that after the year 1789 his great work was purely medical. The almost incredible fact appears, then, that in twenty years up to that date, when he was but 46 years of age, he had already accomplished so much in public life, both political and medical; in professional work, as a teacher, as a writer and as a practitioner; in statesmanship, in philanthropy, in education and in social science, as to secure lasting fame as a thinker of power and originality, and as a writer and orator of high rank. But a no less remarkable, and probably to us the most interesting, period of his life was to follow. Sydenham died in 1689, and just 100 years later, in 1789, Rush was elected to the chair of the Theory and Practice of Medicine in the College of Philadelphia, to fill the vacancy caused by the death of Dr. John Morgan.[4]

[4] In 1791, when the charter and estates were restored to the college, a reorganization was effected and the institution assumed the title of the University of Pennsylvania. Dr. Rush became the Professor of Institutes and of Clinical Medicine in the University. In 1797 he filled also the chair of Practice resigned by Dr. Kuhn in that year, though he appears not to have been formally elected to the latter position by the Trustees until 1805.

When we consider how important he rendered that position, and what lustre his subsequent work reflected upon the medical profession and upon medical science, it is not unreasonable that we should take note of this Centennial Anniversary of an event of the greatest significance in the history of American medicine.

The air still vibrates with the national outburst of homage to the memory of the greatest of our heroes. The Centennial Anniversary of the Inauguration of Washington was fittingly made the occasion not only to illustrate our marvellous growth in power and prosperity, but to commemorate the character and services of that incomparable man. It may be that it was a thrill of sympathy with that fine retrospect, which made me feel that, in the discharge of the most difficult duty assigned to me to-day—of addressing this great audience representative of all branches of our profession in all sections of our land, it might not be amiss to select a topic which would remind us that for us members of the American medical profession this is an Anniversary year in an added sense.

The truth is that Rush was at all times and in all places and before all else a great physician. He had entered public life from a sense of patriotic duty; he had labored for the improvement of society because he was irresistibly impelled by his large humanity; but he threw himself into the service of medicine with passionate intensity. Ramsay, a favorite pupil and intimate friend, tells us that Rush wrote to him: "Medicine is my wife, science is my mistress, books are my companions, my study is my grave." As a matter of fact he married at the age of 32 years, and was so fortunate as to secure the hand of a woman whose character, charms and ability made their union a singularly happy one. At the close of his life, writing of the causes of insanity, he uses the following orthodox language: "Celibacy is a pleasant breakfast, a tolerable dinner, but a very bad supper. The supper is not only of a bad quality but, eaten alone, no wonder it sometimes becomes a predisposing cause of madness." Still we find him saying in 1808, in allusion to his

death: "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 derived from studying, teaching and practicing medicine."[5]

Through the courtesy of Mr. Ferdinand J. Dreer I am enabled to reproduce here a facsimile of the certificate, given by Dr. Dorsey, as to the cause of Dr. Rush's death:

Dr. Benjn. Rush aged about ~~Seventy~~ 68 eight years, died on the 19th April of Pneumonia typhoides. J. Dorsey. —
(1813.)

5 The following account of Dr. Rush's death, in 1813, is copied from the original letter of his widow to Dr. Mease:

Dear Sir:—Agreeably to your request I have committed to paper all that I think important in the progress of the disease of our dear and ever to be lamented friend. You can make any alteration in the order or words you think proper, and make such use of it as will answer the object you have in view. Yours with great regard,

JULIA RUSH.

Friday, December 8, 1815.

"At 9 o'clock on the evening of Wednesday, the 14th of April Dr. Rush (after having been as well as usual through the day) complained of chilliness and general indisposition, and said he would go to bed. While his room was preparing and a fire making he became so cold that he called for some brandy, which he immediately swallowed, then went to his room, soaked his feet and got into a warm bed and took some hot drink. A fever soon came on, attended with great pains in his limbs and in his side. He passed a restless night, but after daylight a perspiration came on, and all the pains were relieved except that in his side, which became more acute. He sent for a bleeder, who took 10 ozs. of blood from his arm; this gave him great relief. At 10 o'clock Dr. Dorsey saw him, heard what had been done and approved of it, observed that his pulse was calm but rather weak, and advised him to drink plentifully of wine whey, which was immediately given to him. He remained the rest of the day and on Friday with but little apparent disease, though never quite free from fever, and always complaining of the pain in his side when he tried to take a long breath. On the morning of Saturday he awoke with an acute pain in his side, and desired that the bleeder might be sent for. To this I objected, on account of the weak state of his pulse. I purposed to send for Dr. Dorsey, but Dr. Rush would not consent to the doctor's being disturbed, but was anxious to lose blood. He reminded me that he had a cough all winter and said, 'This disease is taking hold of my lungs, and I shall go off in a consumption.' I thought less risk would be run in waiting a few hours than in suffering him to be

From 1789 to 1813 the history of Rush's work is largely the history of American medicine. We speak of the age of Sydenham, and date the origin of modern English medicine from it. So, if we limit ourselves to American medicine, may we speak of the age of Rush, and date from it our modern system of exact observation of symptoms, and strict attention to details of treatment both hygienic and medical. It is obvious that Rush was profoundly influenced by the genius of Sydenham in science, as he was by that of Franklin in philanthrophy. Sydenham was born in 1624; published his first important treatise in 1666, and died in 1689; and although Rush, when a student at Edinburgh under Cullen, was charmed with the teachings of that brilliant man, so soon as he began his independent observation he felt the trammels of artificial and cumbrous nosologies, and was attracted to the natural and scientific method of Sydenham, himself a true Baconian. Rush calls Sydenham his master in medicine, and loses no opportunity of proving by his writings his veneration for his genius and his example. When he came to choose a name for the country-seat which he so dearly loved as the only place where he found rest and tranquility, he called it Sydenham. Posterity, which Rush truly said is to the physician what the final judgment is to the Christian, has judged the pupil a worthy associate of the master, and has given Rush the title, which he would have regarded as the highest earth could bestow, of the American Sydenham. It is a sure sign of his essential greatness that the

bled without the advice of his physician. At 8 o'clock Dr. Dorsey saw him, but upon feeling his pulse objected to his losing blood, and called in Dr. Physick, who agreed in the opinion that bleeding was improper, and it was not done. The pain in the side continuing and his breathing becoming more difficult, Dr. Physick consented to his losing 3 ozs. of blood from his side by cups. This operation relieved him so that he fell into a refreshing sleep, and towards the evening of Saturday his fever went off and he passed a comfortable night, and on Sunday morning seemed free from disease. When Dr. Physick saw him he told me he was doing well, that nothing appeared now necessary but to give him as much nourishment as he could take. He drank porter and water, and conversed with strength and sprightliness, believing that he was getting well, till about 4 in the afternoon, when his fever came on again, but in a moderate degree. At 5 his physicians saw him and found him not so well as in the morning, but not appearing to apprehend what so soon followed, for at that time nothing was ordered different from the morning. At 9 o'clock they saw him again, when they found him so low as to threaten the most fatal termination to his disease. Stimulants of the strongest kind were then administered; you, my friend, know with how little effect."

names chosen for comparison have been so illustrious. He was a Fothergill in the range of his scientific and human interests; he showed in his best work much of Sydenham's incomparable power of observation of the symptoms of disease and of appreciation of the indications for treatment. Rush enjoyed the immense advantage of living after Sydenham; but the latter had Hippocrates as master and exemplar. The special conditions under which great men do their work will always influence much its direction and its range. But the essential qualities of greatness; the rare note of genius; the power of infinite labor; the close touch with nature and with truth—such marks distinguish the work of men like these in whatever field and to whatever extent they have worked. Close comparison is impossible; it is enough to recognize that they belong to the small group of Nature's most gifted children.

We may judge of Rush's excellence as a teacher, and of the influence which he exerted on his age, by the testimony of his pupils. From all parts of America, students resorted to Philadelphia to profit by his instructions. In the mass of letters I have examined there are hundreds bearing testimony to this. Competent critics declare that for clearness and impressiveness his lectures were unrivaled. He so simplified the subject, presented such broad and clear generalizations, that Ramsay asserts a student could be better prepared for entering on his profession in three years, than he could on the former system in five. This was not because he taught on the famous plan of Sangrado, who said to Gil Blas: "I will immediately disclose to thee the whole extent of that salutary art which I have professed so many years. Other physicians make this consist in the knowledge of a thousand difficult sciences; but I intend to go a shorter way to work, and spare thee the trouble of studying pharmacy, anatomy, botany and physics; know, my friend, all that is required is to bleed the patients and to make them drink warm water." Far from it. He was, indeed, the earliest and strongest advocate for a high standard of medical education, as has been forcibly shown by one of our ablest scholars, himself

a successor of Rush and a former President of this Association.[6] I know that malignant envy started and apathetic credulity has perpetuated the false opinion that Rush's method of cure was equally sanguinary. I know that, as will always happen to impressive teachers, there were students of Rush who carried away recollections of his vigorous treatment in certain cases, without an appreciation of the special indications present, nor of the reasoning which forbade similar measures in other cases apparently analogous, but to the trained judgment widely distinct. Of one of his students I was told by an old friend that she remembered vividly how on every visit of the doctor some blood was shed; and that, on one occasion, as he entered, her mother remarked that one of the children had a bad cold and added, "Of course I shall send for the bowl." Upon which the physician rejoined, justly incensed at this suggestion of mere routine on his part: "Not *of course*—you shall not send for the bowl *of course;* but you may fetch the bowl;" and bled the child was with unusual freedom.

I hold it to be absolutely impossible for us of to-day to pronounce adversely upon the merits of the treatment of Sydenham or even of the more modern Rush. In the first place, the entire subject is dominated by our more exact methods of diagnosis,[7] and by our larger knowledge of the natural history of diseases. It is evident that even those skilful observers were often misled, and treated local diseases as continued or malarial fevers, and attributed to their treatment changes which were essential to the course of the disease. But again, granting the largest share to this source of fallacy, it is to us impossible to doubt that they were right in regarding different epidemics as requiring different treatment. Sydenham[8] says: "This at least, on the strength of a multiplicity of accurate observations, I am convinced of, viz., that diseases of the character alluded to, and more especially continued fevers,

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[6] Alfred Stillé, M.D. Medical Education in the United States, 1846. Dr. Stillé held from 1864 to 1884 the chair formerly filled by Rush.

[7] See works of Sydenham, Sydenham Soc. Ed., i, p. 163, for an example of this.

[8] Medical Observation, Sydenham Soc. Ed., Vol. 1, chap. 9, p. 33.

differ from one another like north and south, and that the remedy which would cure a patient at the beginning of a year, will kill him perhaps at the close. Again; that when by good fortune, I have hit upon the true and proper line of practice that this or that fever require, I can (with the assistance of the Almighty), by taking my aim in the same direction, generally succeed in my results, respect being always had to the age and temperament of the patient, and to the other matters of the same sort. This lasts until the first form of epidemic becomes extinct, and until a fresh one sets in. Then I am again in a quandary, and am puzzled to think how I can give relief. And now, unless I use exceeding caution, and unless I exert the full energies of my mind, it is as much as (nay, it is more than) I can do to avoid risking the lives of one or two of the first who apply to me as patients; at length, however, I steadily investigate the disease, I comprehend its character, and I proceed straight ahead, and in full confidence towards its annihilation." Thus when he writes of the continued fever of 1661 to 1664, he says: "Whenever the state of the blood is of such description as I find it amongst youths of an athletic habit and a sanguine temperament, venesection is my leading remedy. Except in certain cases, it can not with safety be admitted. Neglect it, and you run the risk of frenzies, pleurisies and such like inflammations, which originate in the preternatural ebullition of the blood. More than this, —from the excess of the blood the circulation is impeded. You smother it. As to the quantity, it is my practice to take away just so much blood as I consider will relieve the patient of the distress, to which the violent commotion makes him liable." Yet in these same epidemics he states that when he has to do with a patient whose blood is in itself of a weak character, he keeps his fingers off the lancet. And when he discusses the pestilential fever of 1665 66 he asserts that he found an adequate substitute for venesection in profuse diaphoresis.

It appears that Rush actually bled more systematically than Sydenham. Ramsay says: "In a

review of the improvements made by Dr. Rush, it appears that a free use of the lancet, in almost every case, and particularly in some in which it had rarely or never before been used, was one of his first and most common prescriptions." A careful study of Sydenham, to omit entirely such famous bleeders as Botallus, scarcely supports the former part of this statement, where frequent venesection is spoken of as an improvement introduced by Rush. Certain it is that in the later epidemics which Rush records he thought bleeding was less urgently indicated. Equally certain it is that in treating fevers he conjoins with venesection, the scientific external use of cold water, and a rigidly careful prescription of the diet. Finally, let it be remembered that the fame of Rush and of his methods of treatment in fevers, must, whether for good or for bad, be based chiefly upon his course in the great epidemic of 1793. Let any one who desires to fully appreciate this great man: nay—I would even say let any who desires to appreciate the highest elevation of emotion, of thought, and of action which can be maintained continuously throughout weeks and months—read and re-read Rush's account of this epidemic. It was published in 1796 when the events were fresh in the minds of all. It at once took the place which it has maintained as the best—or if not the very best, as one of the half-dozen best histories ever published of epidemic diseases. There is scarcely needed the extraordinary "narrative of his state of body and mind during the prevalence of the fever"—a narrative which Richardson describes as a ghostly whispering, through a veil of nine-tenths of a century—to reveal the man's inmost nature and thoughts during this terrible ordeal. He may have erred in his conclusions as to the effects of the evacuant treatment. The evidence in its favor is not his alone; some of the ablest of his colleagues endorsed his statements; his pupils, who were his assistants, said, "we cure all we are called to on the first day." Of course the exalted and exhausted state of mind shared by all the physicians who remained at their post, or whose lives were spared, was not favorable to the exercise of cool

judgment; yet the record which Rush has given us is so replete with minute and accurate observations evidently made at the moment and at the bedside, that one finds it difficult to distrust his opinion as to the effect of bleeding and purging when used at the very earliest hour of the attack.

It is impossible to avoid a certain enthusiastic sympathy with Rush as we read his account of his labors and sufferings. For upwards of six weeks he did not taste animal food or fermented liquor; he abandoned all precautions, and rested himself on the bedside of his patient, and drank milk and ate fruit in their sick rooms; he visited over a hundred fever patients daily, and his house was filled with the poor whose blood, from want of a sufficient number of bowls, was often allowed to flow upon the ground; he lost his sister who had refused to leave him, and within an hour of her death he was in his chaise driving to visit his patients; he was ill himself, but recovered after repeated bleeding and purging; he was villified and slandered, but he fought his professional rivals with his pen as he did the fever with his lancet; and it was not until the epidemic was on the wane that he finally yielded to the disease and had a dangerous attack from which he recovered slowly, after plentiful bleedings.

In the plague of 1665, Sydenham acknowledges that he was persuaded by his friends to leave London, for, as he says, "*Tua res agitur paries quum proximus ardet.*" He returned earlier than his neighbor, however, and finding the disease still raging, he preferred experience to theory and bled freely and as he thought successfully. But Rush quaintly records: "It pleased God to enable me to reply to one of the letters that urged my retreat from the city," that "I had resolved to stick to my principles, my practice and my patients, to the last extremity."

Other physicians showed the same heroism, but he was the acknowledged leader, and it was their sincere conviction that a battle was being waged for a principle of vastly more importance than the fate of any one community. Rush began to treat the fever upon a stimulating plan; his failure led him to try diaphoretics, and later to

use the cold bath as a febrifuge. Finding that no good followed, he was led to believe that the debility was apparent, and resulted from an oppression of the system, and he consequently began an evacuant plan of treatment, which he rapidly developed into a method for abstracting excess of stimulus from the system by means of *purges*, *blood-letting*, *cool air*, *cold drinks*, *low diet*, and *application of cold water to the body*. He asserts that the change of result was immediate; so that within a short time and during the height of the epidemic he could record in his note book: "Thank God! out of one hundred patients, whom I have visited or prescribed for this day, I have lost none." Well might he add: "Never before did I experience such sublime joy as I now felt in contemplating the success of my remedies. It repaid me for all the toils and studies of my life. The conquest of this formidable disease was not the effect of accident, nor of the application of a single remedy; it was the triumph of a principle in medicine."

No conqueror could feel greater triumph when the crown of a vanquished empire was placed on his head; no explorer more delight at the sight of a new and long sought continent.

> "Then felt he like some watcher of the skies
> When a new planet swims into his ken;
> Or, like stout Cortez, when with eagle eyes
> He stared at the Pacific, and all his men,
> Gazed at each other with a wild surmise
> Silent, upon a peak in Darien."

It is well for us who toil in paths which lead to little of worldly renown or glory to be reminded that to the faithful students of Nature and of Science there may come such moments of fruition and of sublime joy.

I repeat, then, that it seems to me difficult to believe that in certain fever epidemics, and when used with strict regard to the constitution of the patient, and when used in the forming stage of the disease, bleeding, as used by Sydenham and Rush, may not be at times beneficial. Occasion stays for no man. I am afraid that in our day of refined diagnosis it not rarely happens that the chance of effective interference in acute disease is

lost while we examine the secretions and the record of temperature and search the blood. Sydenham wisely said: "I well know that the chance of a patient's death or recovery depends chiefly, if not wholly, upon the treatment of the first few days."

Once more, the statistical method, which has done such good service in checking perturbative treatment and in determining the natural history of diseases, was unknown in the days of Rush. It would have been impossible, with the faulty diagnosis of that time. For indeed we are learning, that many of the conclusions based upon it during the past fifty years are inconclusive in the light of the more exact differential diagnosis of to day. We shall never again bleed for the name of a disease. Neither Sydenham nor Rush did that, though their less wise imitators did. But we shall learn to appreciate the dynamics of the system so accurately that, even when the disease is due to specific microbes or to poisonous ptomaines, we may possibly be able to relieve urgent symptoms and avert serious complications by timely moderate venesection. In all infectious disease, from scarlatina to tuberculosis, it is a question both of the soil and of the specific poison, and the symptoms and course of the disease are not simply the life-history of the microbe, but they are also the expression of the reaction of the system and of the secondary disturbances of function.

And lastly, let us remember the marvellous wealth of our resources as contrasted with theirs. We can produce startling therapeutic effects with precision and ease. Organic chemistry is daily giving us new agents of tremendous power. We are surely able to produce some of the results formerly attained by bleeding and by purging, by means less inconvenient and possibly less hazardous; but we may be assured that in this abundant wealth of remedies and in this facility of administration lie grave dangers. Let any one who would learn how a master of our art gained his skill in using his tools note carefully the utterances of Sydenham on the indications for opium in different diseases: "To know it only as a

means of procuring sleep, or of allaying pain, or of checking diarrhœa, is to know it only by halves. Like a Delphic sword, it can be used for many purposes besides. Of cordials it is the best that has hitherto been discovered in nature. I had nearly said it was the only one." Sydenham and Rush had a few remedies which their long experience and minute observation taught them to use skilfully for the relief of many symptoms. We have many remedies for every symptom, and I fear that few of us devote enough scrupulous care and patient study to learn thoroughly the varied powers and applications of any of them. So this seems not only a good apology for the former use of bleeding, but a needed warning to us as to the careful and skilful use of our new weapons against disease, and a forcible suggestion that we may have erred in so completely abandoning remedies which had been so long and carefully tested, and so highly approved.

We have seen that Rush believed in principles in medicine. He did more—he gloried in these principles, and he wished his only epitaph to be that he had taught them. And in no way are the independent character and the intellectual vigor and originality of the man more strikingly shown than in his attempts to reduce the infinitely complex phenomena of disease within the compass of a simple but comprehensive system. "Rush," says the distinguished English physician, Lettsom, with whom originated the title of the American Sydenham, "approached, if not exceeded, Sydenham in grandeur and compass of thought, though less discriminating in that felicitous arrangement of medical phenomena which distinguished Sydenham, whilst his theories were less consonant with nature. To Sydenham the motto *Conamen naturæ* is most applicable; to Rush, *Nullius in verba*." I make this quotation with no notion of attempting the difficult and unwise task of a judicial comparison of these two great physicians, but because such expressions may help us to form a clearer estimate of the special merits of each. Full of interest also, from this point of view, is the appreciative and critical summary of Sydenham's great life work by his most

distinguished editor and biographer, Latham; "for he had recognized, what is now an old truth, what was then a new one, and what is always a great one, the entire supremacy of direct observation. He was one of the earliest to see and apply the true induction of medicine, while in the powers of observation, of analysis and of comparison he was subtle among the subtle, and accurate among the accurate. For practice these were all that Sydenham required; for the development of a system he wanted also the reduction of his observations, both on disease and treatment, to laws more or less general. The intellectual powers here requisite were less, undoubtedly, the peculiar powers of Sydenham's mind, than the powers of observation, analysis and comparison."

It goes without saying that any theories constructed in those days, or in the time of Rush, could have been provisional only, owing to the want of instruments of precision to register exact observations, and the want of accurate differential diagnosis. It will suffice, however, that we read carefully the volume of Rush's medical inquiries to be convinced that we are in the presence of a scientific spirit of rare scope and power. It is easy to pick out instances of theorizing pushed beyond legitimate bounds, and of practice based on such theories carried beyond the limits of safety, as we now can define them. All are familiar with the oft-quoted advocacy of bleeding in pulmonary consumption; but all have not taken pains to study the original, where they would see that Rush's views on the treatment of this disease were far in advance of those of his contemporaries, and, indeed, were in harmony with much of the best thought of the present day. So far from advocating depletion and confinement to stove-heated rooms, he says himself:[9] "Bloodletting has often relieved consumption, but it has been only by removing the troublesome symptoms of inflammatory diathesis, and thereby enabling the patient to use exercise or labor with advantage." Again (id. loc.): "We shall not be surprised to hear of physicians, instead of prescribing any one or all of the medicines formerly enu-

[9] Medical Inquiries and Observations, 2d ed., 1796, Vol. i, p. 199.

merated for consumption, ordering their patients to exchange the amusements or indolence of a city for the toils of a country life; or of their recommending not so much the exercise of a passive sea voyage, as the active labors and dangers of a common sailor. . . . . I shall only add that if there does exist in nature such a medicine (as to supply in any degree the place of the labors or exercises), I am disposed to believe it will be found in the class of tonics."

More than enough has been said, I am confident, to vindicate the lofty claims made for Rush as the high-spirited patriot, the wise and far-seeing reformer and philanthropist, the eloquent teacher and writer, and, above all, as the founder of scientific medicine in America, keen and indefatigable in investigation, brilliant and vigorous in generalization, faithful and sagacious in the application of his principles in practice. This imperishable fame is fairly his; his splendid example he has bequeathed to us. Is it not our duty, shall it not be our pride, to rear in enduring form a fitting memorial of our gratitude?