

Bryan (2)

PROGRESS OF MEDICINE

DURING THE FIRST HALF OF THE

NINETEENTH CENTURY.

BEING

AN INTRODUCTORY LECTURE

TO THE

SPRING SESSION

IN THE

PHILADELPHIA COLLEGE OF MEDICINE.

DELIVERED MARCH 17, 1851.

BY

JAMES BRYAN, M.D.

PROFESSOR OF INSTITUTES AND MEDICAL JURISPRUDENCE.

"Homo autem, quoniam rationis est particeps, per quam consequentia cernit, causas rerum vidit, earumque prægressus et quasi antecessiones non ignorat, similitudines comparat, et rebus præsentibus adjungit atque annectat futuras, facile totius vitæ cursum vidit, ad eamque degendam præparat res necessarias."

Cicero de Off: lib. I.

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PUBLISHED BY THE CLASS.  
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PHILADELPHIA :

GRATTAN & M'LEAN, STATIONERS, THIRD AND WALNUT STREETS.

1851.

Box

PROGRESS OF MEDICINE

AND THE ARTS

IN THE YEAR 1791

BY

JOHN AINSLIE, M.D.

PHYSICIAN

TO

THE UNIVERSITY OF EDINBURGH

AND

THE ROYAL SOCIETY OF EDINBURGH

IN TWO VOLUMES

THE FIRST VOLUME CONTAINS
A HISTORY OF THE PROGRESS OF
THE ARTS AND MANUFACTURES
IN GREAT BRITAIN

AND

OF THE

PROGRESS OF

THE ARTS AND MANUFACTURES

IN

1791

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1851.

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CORRESPONDENCE.

PHILADELPHIA COLLEGE OF MEDICINE, APRIL 25, 1851.

PROF. JAMES BRYAN, M. D.

Dear Sir,

At a meeting held by the class, Joseph A. Leonard of Philadelphia, was unanimously called to the chair, and Theodore Le Blanc of Louisiana acted as secretary. The undersigned were appointed a committee to request of you your truly eloquent and excellent Introductory Lecture for publication. Hoping you will comply with our request, we remain yours truly.

A. A. Ziegenfuss, Phila. Chairman.

George Emery, Maine.

Rufus Sargent, Mass.

Nathaniel Smith, N. Y.

Albert L. Gihon, Phila.

W. J. Byerle, Penna.

A. J. Hay, N. J.

James Haman, Del.

Saurin T. Daily, Md.

Thomas U. Hix, Va.

William L. Love, N. C.

William Gary, S. C.

Joseph F. Wright, Geo.

T. B. Waters, Louisa.

D. J. Gibson, Tenn.

Thomas M. Jacks, Ark.

Geo. W. Rogers, Mexico.

Philadelphia, April 27, 1851.

TO MESSRS. ZIEGENFUSS, HIX, HAMAN, SARGENT, et aliis.

Gentlemen,

Your note of the 25th inst. is before me. My imperfect sketch of the Progress of Medicine during the first half of the Nineteenth Century is heartily at your disposal.

Very truly and respectfully

Your obedient Servant,

JAMES BRYAN.

A. A. Ziegenfuss, Phila. College of Medicine.

De Hix

INTRODUCTORY LECTURE.

I propose in the following pages to present a brief sketch of the progress of the science and practice of Medicine, Surgery and Obstetricy, during the first half of the present century.

The whole period will be divided into four epochs, the first of which will embrace the beginning of this century up to 1820: the second will include the ten years following: the third and fourth will extend from 1830 to 1840, and from 1840 to 1850, respectively.

There is a common impression very prevalent, that not only our science, but the sciences in general, are progressive; that each century, or half century, marks a period of progress which is distinct and easily appreciated by the student who attends to the history of his science. In medicine, a knowledge of this progress, be it for the better or worse, is absolutely essential to the successful practitioner.

The very names of diseases and medicines, as well as the general terminology of medical terms and phrases are changed by the varied theories and doctrines which prevail from time to time. It has been well and truly said, that a physician educated twenty-five years ago, who has not by diligence and study kept up with the advance of science, could not now treat disease; or at least he would be so lost in the wilderness of our altered pharmacopœia, that he would be obliged to study some of the elementary parts of his profession anew, ere he would be able to prescribe some of the most commonly used remedies.

If this may be said of the last quarter of a century, it may with equal or greater propriety be averred of the twenty-five years preceding that.

Ere beginning with the nineteenth century, however, it will be necessary to present a very cursory survey of the state of medicine at the end of the eighteenth century.

By some of my hearers it will be recollected, doubtless, that the text books of this period were Thomas's Practice, Cullen's First Lines, Cullen's Materia Medica, Lavoisier's Chemistry, Cheseldon's and Albinus's Anatomy, Sharp's, Potts', and Hunter's Surgery, Haller's Physiology, with Epitomes of Sydenham, Boerhaave, Brown, Hoffman, and others.

Dr. Rush had taught his profession to hundreds of young men for more than thirty years; and had inculcated and excited a love of original observation and deep respect for such authors as had practised it. He also taught the institutes of medicine; but it was reserved for a very recent period to establish a distinct chair for this branch: this has been the result of the advancement of science, and new modes of instruction, chiefly of the present century.

In Chemistry, it is true, oxygen had been discovered, but the metals of the alkalis had not; the composition of a few of the acids was known, but the hydracids had not been analyzed. The history of the great drug used in intermittents had not been carefully examined, and its active principle was undiscovered. Organic chemistry did not exist, either animal or vegetable. Surgery was rapidly reaping the benefits of the labors of John Hunter, but it was not until the first epoch of this century that it enjoyed the full fruition of his matchless investigations. Obstetrics came to us from the hands of Dionis, William Hunter, Smellie, Chamberlin, and a few other of the older authors. It brought with it the forceps, the lever; and the Cephalotinic Embryology was literally in its infancy.

The Solidism of Haller, the stimulating and depressing system of Brown, with the fanciful theories of Darwin, occupied many of the chairs of the practice of medicine, to the exclusion of more important matters.

The great legacies which this century inherited at its birth, in medical science, were perhaps the doctrines of John Hunter and Zavier Bichat, in Anatomy and Physiology, which are the bases of all true medical reasoning; second, that spirit of individualism

or independence which developed itself in the French and American revolutions, and which operated with equal effect in medical and general science. We must conceive of a general state of independent thought and energetic action—with an almost total disregard of all authority as such—in order properly to appreciate the condition of the public mind at this time. A general disposition to question the established habits and principles of antiquity, with a strong determination to overthrow all pre-existing forms and set up those which were new. Such a condition, in fact, as was seen in 1848, when all Europe rose almost *en masse*, and asserted and partly established principles of individualism, which resulted in dethroning kings and causing hierarchies to flee from their high places.

The life of the immortal Benjamin Rush is one continuous commentary, as well as an illustrious example of this principle, in action, in its most exalted form, operating in science, politics and morals.

The spirit of Bacon seems to have brought forth a manly progeny, which at that time peopled all Christendom.

The Nosology of Cullen, with the theories of the Solidists, Humoralists and Chemists, were cast off like old and worn out garments, never to be resumed by philosophers who pretended to any degree of independence and force of character. The results of such a spirit, on the French nation, in religion, literature and government, are well known. In medicine, it brought forth a Bichat, a Larrey, and Desault: names, which if there were no others, would stamp the age and people of their birth as those of no common order. Among these the name of Bichat stands pre-eminent; and wherever the votaries of medicine shall follow the rugged paths of fame or philanthropy; in whatever land or in whatever clime they may worship at the altars of Esculapius, they will ever look back to the great mind of the author of the "Anatomie Generale," as the fountain from which mighty streams of scientific knowledge have flown over the whole land, "for the healing of the nations."

This great work broke at once the boundaries of anatomical and physiological science, and laid broad and deep the foundations of rational medicine. The present century, at least in the first half, may perhaps be represented as a young and ardent disciple of truth, who was welcomed to the New World and to its wonders by the friendly hand of the venerable Rush: taught its Surgery by

Physic, Mott, Warren, Mussey, Dudley, and others; and in France learned the same branch under the instructions of Velpeau, Civiale, Malgaigne, Ricord, Blandin, Brechet and Dupuytren; in England, under Sir Astley Cooper, Sir Benjamin Brodie, Sir Charles Bell, Ferguson, Liston, Guthrie, John Bell, and Lyme, in Scotland. Acquired his Obstetrics under James Dewees, Ramsbotham, Channing, Collins, Churchill, Kennedy, Moreau, Velpeau, Colombat d'Isere, Meigs, &c. His Chemistry, under Sir Humphrey Davy, Hare, Farraday, Turner, Black, Fownes and Mitchell. His Anatomy, from Shippen, Monro, Cruveiheur, Magendie, Todd, Bowman, Horner, Pattison, Post, Pancoast, McClintock, and others. Schwan, Schleiden, Kiernan, Vogel, Valentine, Bischoff and Goadby, taught him Microscopical Anatomy. Rush, Elliotson, McIntosh, Wood, Watson and Dunglison, instructed him in the practice of medicine, and lastly his great lesson in alleviating the pains of human suffering was taught him by Dr. Jackson of Boston, in the use of those great anesthetic agents whose discovery is destined to mark an important epoch in the nineteenth century. During the *first twenty years* of the present century, the medical mind, in action, was occupied in elaborating and perfecting the ideas of Hunter and Bichat, and applying them to the solution of questions in Anatomy, Physiology, Pathology, and Surgery. In Chemistry, the great Swedish philosopher Berzelius accomplished much by analyzing the fluids and solids of the body, and in improving the nomenclature of chemical science, while Rees, Golding, Bird, and others in England, extended their researches into the composition of the blood, urine, and other fluids.

In Surgery, Physic introduced a more perfect gorget for Lithotomy—the stomach pump for toxicological and other purposes—a more philosophical plan of treating chronic ulcers, viz., rest and bandages—improved various surgical instruments—excised the tonsils instead of using the ligature and wire—extracted the hardened lens—discovered the pouches at the verge of the anus and successfully divided them, to cure a painful disease. Mott took up the innominata as well as the carotids and iliacs, and extirpated portions of the lower jaw.

In Anatomy, Dr. Wistar had discovered the ossa pyramidalia, and by means of large models, carved from wood, very much improved the means of teaching a knowledge of the more minute parts of special or individual structures. His classically written work on this subject, was, and is, a text book in this country.

Post, in New York, introduced a neat mode of dissecting, and a clear and lucid manner of demonstrating human special Anatomy. In Botany, and the indigenous materia medica, the Bartons, particularly Benjamin and William P. C., were active, and aided much in exciting a general interest in these subjects.

Prof. Benjamin was perhaps one of the most eloquent and accomplished Botanists and Naturalists of this period, either in this country or in Europe. John Bartram was a quaker, and by dint of great industry, established a magnificent botanic garden on the west side of the Schuylkill river, a little south of our city. In this garden, he collected, after traveling over the greater part of the United States, British America and Mexico, an immense number of the native plants, and cultivated large numbers of exotics. This beautiful garden I learn, I had almost said with regret, has lately been purchased by an enterprising Philadelphian, who having made a large fortune by making steam engines for the Emperor of "all the Russias," now designs to build a splendid mansion in which to enjoy that *otium cum dignitate* so generally desired, and I may add, so generally felt to be unsatisfactory when once obtained.

Eton and Darlington are other successful cultivators of botany, as well as Torrey, Lee and many more that might be enumerated.

In Chemistry, Waterhouse and Hare improved the mode of teaching, and made many important discoveries and inventions. The latter perfected the Hydro-oxygen blow-pipe, constructed some very fine Eudiometers, by which the elementary proportions of the gases were more accurately measured and determined: produced an immense electric machine, which he denominated his Calorimeter, besides many other important pieces of apparatus well calculated to analyse inorganic substances, and demonstrate the principles of chemical science to a large class. This immense collection of apparatus is now in the Smithsonian Institute in Washington, where it was conveyed in a vessel chartered for the purpose.

Davy, in England, discovered the metallic bases of many of the Alkalies and Earths, particularly Potassa and Soda.

In practice, the doctrines of Rush and Brown culminated; the lancet was almost a universal remedy. Not only all the simple phlegmasiæ, whether internal or external, were treated by it, but Rheumatism, Gout, Insanity, Consumption, Scrofula, and Typhoid fever, were subjected in one stage or other, to the ordeal of Venesection. Calomel to full salivation, was continually resorted

to, and was daily used as a common cathartic, especially in combination with jalop or rhubarb or both. So general was the resort to phlebotomy, that the people were in the habit of being bled whenever a slight inflammatory affection attacked them, and the result was that a class of practitioners came into existence denominated bleeders, of which a comparatively small number still remain. We well remember one, who may with some propriety be denominated the king of these old bleeders, who was employed by most of the distinguished practitioners of our city. His prognosis of the case drawn from the appearances of the blood, was not unfrequently the theme of admiration or fear, both to patient and physician. He is said to have predicted the death of Dr. Wistar in his last illness, from the character of the blood drawn from the doctor's arm. Mr. Ripperger has shed as much blood, I suppose, as either Taylor or Scott, and perhaps more than both. Let his name then be embalmed in that immortality which is the fruit of such, or of all bloody deeds.

Blisters were extensively used, but generally under the proviso so well laid down by Dr. Rush, viz. when the system was at the blistering point. They were also used to prevent the extension of mortification in surgical and medical diseases. The general tone of the human system seems to have been vigorous, bearing large doses of medicine, extensive depletion and generous diet.

In obstetrics, James and Dewees, particularly the latter, obtained a great reputation for the judicious use of the forceps and ergot, together with a more rational and systematic arrangement of the fetal presentations and positions. Female diseases or those of the parturient woman, and those of children, were well attended to, so that instead of there being no chair of obstetrics in our medical schools, we have now one that embraces not only obstetrics proper, but also the diseases of women and children. The writings of Dewees and Eberle have contributed much to this result.

What Mott, Sir Astley Cooper, and Physic did for surgery, James, Dewees, and Eberle have done for obstetricy.

During this period flourished also the renowned Laennec, who commenced and successfully prosecuted a new course of investigation and observations. True it is, that Hippocrates percussed the chest to detect the presence of water or other fluids there, and obscure hints of like character, are given by many of the old authors. The poet Juvenal has even referred to this mode of examination when satyrising one of his co-temporaries; but it must be recollected

that nothing is found in the writings of the standard authors of antiquity, sufficiently definite to establish the existence of these modes of investigation to any very great extent. Percussion and auscultation have opened to us a new field, and many distinguished men have entered it, and reaped fruitful harvests, in pathology, diagnosis, prognosis, and our knowledge of the progress and cure of thoracic, cardiac, and other affections.

The works of Laennec have all been translated into our language, and are now very well understood by the American medical man. Among the earliest of those who have distinguished themselves in this line of study and observation is my learned friend Dr. Samuel George Morton, who was a pupil of Laennec himself. Dr. Morton's illustrations of pulmonary consumption, may be ranked among the first, and perhaps the best fruits of stethoscopical and pathological investigations this side of the Atlantic.

Hope, Williams, Watson, and others in England: Gerhard, Jackson, and many others in this country, have successfully followed in this path. Indeed, the young physician, who should now begin the practice of his art without being able to detect the normal and abnormal sounds, produced by the respiratory and circulatory organs in health and disease, by means of auscultation and percussion, would be considered as at least thirty years behind the science of his day.

It is true, that a witty and distinguished professor of our city has defined the stethoscope in use as a piece of wood, with a fool at one end and a knave at the other, but we all know that wit is not argument, if "Cervantes" did "smile his country's chivalry away." This same distinguished professor has said that one might as well examine the wounded, mutilated and dying on the field of battle, for the cause of the war, as to expect to find the cause of disease in the pathological conditions of the organs: yet who would give the invaluable knowledge we now have of the morbid alterations which the several tissues undergo, for a witty saying or a bon-mot? No, all this knowledge is valuable, and is chiefly the result of the labors of this century.

We thus arrive at the end of the first period or second decade of the present century, 1820. The impetus communicated to medical inquiries was directed into several paths during this period. First, in Surgery, Mussy of Cincinnati, had conceived and performed several novel and important operations; Warren, of Boston, and Mott, of New York, had extended the

number into other regions of surgical science, but it was reserved for Dr. George McClellan to carry the war into Africa. "Mussy had excised the whole arm and clavicle, in a secondary operation, and at least two accidents had occurred previous to 1820, (one in the French army,) in which the whole of the upper extremity, with the clavicle, was lost without destroying life, but it was reserved for McClellan to amputate the whole limb, including the collar bone."

He also extirpated repeatedly, (it is said eleven times,) the parotid gland, a fact which has been denied, as stoutly perhaps, as any other in Surgery. This was done also, without taking up the carotid artery.

Lithotomy, by the high and lateral operations—the extirpation of the inferior maxillary bone—the resection of the superior maxillary, with the operations of couching and extraction for cataract, (strabismus had not then been treated by the section of one or more of the muscles of the eye,) for hernia, aneurism, the latter always by the Hunterian method, extirpation of cancerous mammary glands, with all the minor surgical operations now performed, were the Surgery of that day. Venesection, diet, rest, and a judicious medical treatment, calculated to relieve many surgical diseases, without resorting to an operation, were practised.

In Practice, the principles or theories of Broussais began to affect the medical mind. All general febrile action began to be referred to some local cause, particularly to inflammation of the mucous membrane of the digestive canal.

The treatment corresponded with this theory. Entire starvation, or barley water, gum water, or other mucilaginous drinks, to protect the inflamed membranes—with ice and cold water applied both externally and internally. Leeches were generally applied over the abdomen or to the anus; cups, scarifications, and other means of abstracting blood locally, were resorted to; together with the use of emollient poultices, blisters, and every form of counter irritation. The use of large doses of medicine was almost entirely abandoned, while the smallest quantities were given at short intervals, in order to avoid irritating the inflamed mucous membranes. General venesection was by no means neglected, but was in very general use.

It will be recollected that Broussais was a French surgeon, who practised in early life in the armies of the Republic, and that being accustomed to treat the soldiers, after their repeated excesses in

these triumphant wars, his attention was very naturally drawn to gastric irritations, so frequent among these generally young men. His bold and sanguine temperament, and active imagination, with fine elocutionary powers, and good personal address, drew many of the American youth to his lectures. These came home full of the new views, translated his books, wrote others themselves, and thus stimulated the American medical public to investigate what was then considered as new. It is to the influence of these views, mainly, that the present disposition by the members of our profession to use comparatively small doses of drugs, is due. Gentlemen educated anterior to this period, still adhere, many of them, to the use of large doses of medicinal articles.*

The enthusiasm connected with what was denominated Broussaisism, continued into the next ten years, and indeed some little remains of it may still be found in certain portions of the medical mind. During this period also, the microscope came again into use, after a long season of disuse. The fluids and solids of the body began to be subjected to a closer scrutiny. The individual tissues, whose physical and vital properties had been so thoroughly examined by Bichat, were again analysed by the chemist and examined by the microscopist.

The *Materia Medica* was daily enriched by contributions from the Flora of this continent, the result of that spirit of inquiry which had been started in the early part of this century; and many indigenous plants before unknown or unnoticed, assumed their position in our pharmacopœiæ. That peculiar innovation denominated Thomsonianism, started into existence about this time, and spread over the country in every direction. Its tendency was to draw attention more particularly to the properties and uses of the vegetable articles of the *materia medica*; and to oppose those of the mineral kingdom, especially the mercurial preparations, which

* A zealous friend of the Broussaisian *system*, thus writes in this period:—"Broussais has been more fortunate in his time. Every department of medical science has been pressed forward with a zeal, industry and talent, never before equalled, and in methods of superior order. The improvement has been corresponding. Analytical Anatomy is established, and advances rapidly to perfection. Pathological Anatomy, to which he gave so powerful an impulse, in his *Chronic Phlegmasiæ*, assumes daily a higher influence, while physiological investigations, prosecuted in the spirit of a strict philosophy, are unravelling the mysteries of vital and functional phenomena. The doctrine of Broussais, evolved by his extensive pathological researches and clinical observations, combined with a method often of rigid induction, allies the principles of Brown with the general Anatomy of Bichat."—*Jackson's Principles of Medicine*, p. xix.—1832.

had been much abused. This sect, if sect it may be called, attained its highest point of popularity during the ten years between 1830 and 1840: since which time it has rapidly declined, not, however, without leaving very evident traces of its existence. These are to be seen in the several Botanic, and the so called eclectic schools, and many vegetable or herb doctors scattered over the country, especially in the Western and Northern States. Its treatment was peculiarly Herculean, and while anathematising the vigorous practice of the chemists, it steamed, stimulated, and strengthened, in a manner that sent thousands

“ to join

The innumerable caravan that moves
To the pale realms of shade.

The frequent and continued use of hot water and vapor baths, with strong alcoholic tinctures of capsicum, lobelia, myrrh, and other stimulating vegetable articles, was resorted to in order to throw out the heat or fire, which according to its founder, had concentrated on the internal organs, producing functional and organic disease. The whole theory indeed, appears to have been founded on the idea that all diseased action was due to the irregular distribution, and the diminution of the heat of the body: and that, consequently, the equalization and increase of the animal temperature, were the chief ends of medical practice.

The author, it will be remembered, was a rude unlettered farmer of New Hampshire, where the rigor of the climate is doubtless the acting cause of many of the diseases of the country. Frequent deaths having occurred, in persons suffering under catarrhs and other slight affections, who were subjected to the treatment, several prosecutions for mala praxis followed, with some incarcerations of the enthusiastic, but deluded practitioners; this resulted in cooling the faith of that many-headed and changeable monster, the public, which, with its usual consistency and regard to common sense and the juste melieu, jumped incontinently into the opposite extreme, and embraced with equal fervour and faith, that intangible phantom of infinitesimal doses, Homœopathy.

The practice, however, led many enthusiastic herb gatherers into the wilds of our country to collect and experiment upon the indigenous plants, which has resulted in a knowledge of the properties of many new plants, and a better acquaintance with the virtues of those previously known. The fact is that the experiments of these gentlemen on the human constitution have taught us many things

which the risk in the case, would never have permitted the regular faculty to attempt.

Anatomical and Physiological Science was also materially forwarded, especially in reference to the nervous system, by the new modes of dissection and observation adopted and promulgated by Gall, Spurzheim, and their followers. The old method of dissecting and demonstrating the brain and medulla oblongata downwards by transverse sections, had accomplished its purpose; and a long list of names had been given to different portions of this complex organ which had no possible relation to the functions of the parts named, and served chiefly to confuse the mind of the student without furnishing him any available data, by which he might even infer the functions of this most important portion of the nervous system.

Lobsteen had given a very good account of ganglionic nerves or those of organic life, and had exhibited some of their connexions with the cerebro-spinal axis. Sir Charles Bell had classified and arranged the nerves of the latter, and by a series of beautiful experiments thrown much light upon their functions and anatomical connections; but it was reserved for Gall and Spurzheim to demonstrate a more rational mode of separating and dissecting the nervous fibres from below upwards; in the order of their development in the animal creation. They followed the nervous fibres, to the very periphery of the brain and showed conclusively that the medullary portion of the latter was tubular or fibrous. By a long series of physico-physiological observations they have been enabled to establish many facts in connection with the functions of the several portions of the brain. The microscope has demonstrated that the cortical portion of this organ is vesicular, and analogous in structure to the general glandular system. Gall and Spurzheim have shown that the production of the nerve power resides in the cortical or vesicular portion, and other observers have demonstrated this structure to exist in the optic and other nerves of special sense, as well as in the numerous ganglia connected with cerebro-spinal nerves and those of organic life. These discoveries verify in a remarkable manner the suggestion of the distinguished Dr. Rush, viz. that thought is a secretion of the brain; a plethora of which demands mental or physical activity for its expenditure. They also throw light upon the dark subject of the functions of those knots on the two nervous systems termed Ganglia, as well as many phenomena connected with vision and the other senses.

The consequence of the above discoveries, especially those of

Gall and Spurzheim, have been ; a much more rational classification of the mental, moral, and nervous diseases of man : as well as a far better system of Therapeutics. The asylum for the insane mind, has become an asylum indeed—the lash and the dungeon have given way to kind words and a cheerful occupation—Chains and torture have been supplanted by exercise in the open air, the practice and cultivation of music and science, and indeed all the gentler arts, calculated to lead the unhappy lunatic back into the sweet paths of reason and happiness. All Europe has been roused to the importance of the subject, and great hospitals have been erected and endowed for the cure of this class of diseases : which though formerly considered as well nigh incurable, are now placed upon the same footing as ordinary diseases of the general system, and cured as readily as they. America has not been behind Europe in this matter, but has perhaps rather taken the lead in it. Her institutions for the relief and cure of insanity, will compare favourably with any of those in the old world,—and her physicians who superintend these hospitals are distinguished for their science and humanity, and for the success with which they treat this unfortunate class of patients. Pennsylvania at the suggestion of a woman has endowed and erected one, which will be an ornament and honor to her in all future time. Even the poor cretin or idiot is now cared for and educated. The doctrine of the plurality of the organs of the brain has taught us that even he has some faculties which may be successfully cultivated ; and that many others may be strengthened and made to bear a part in the drama of his simple life.* Gugenbuhl, in Switzerland, has been and is successfully imitated in our own country, and we will, doubtless, ere long, learn to improve the moral and intellectual condition of a class of our fellow creatures hitherto placed beyond the pale of all social, political or religious privileges.†

It must not be forgotten, that although Sir Charles Bell ever remained a disbeliever in the doctrines and discoveries of the great Physiologists of Vienna, yet his own investigations in another part of the nervous system, will ever stamp his name with an immortality little less than that of Gall and Spurzheim. The demonstration of the diverse functions of the several tracts and cords in the

* Rapport sur le Traitement du Cretinisme, 1848.

† An institution for the education of idiots, imbeciles, and children of retarded development of mind, has been established in Barre, Mass. by Dr. H. B. Wilbur. It has been in operation three or four years with good success.

spinal marrow, particularly those of the respiratory tract in the medulla oblongata, with those of the anterior and posterior cords, together with many new views on the individual and associated functions of these nerves in their peripheral distribution, have greatly advanced our knowledge of the structure and functions of the nervous system. His mantle has been taken up most worthily by Marshall Hall, to whose untiring genius in experimenting and acute logical reasoning, we are indebted for a knowledge of reflex and other associated actions of the cerebro-spinal nerves, as well as those of organic life. All departments of Therapeutics, not omitting Obstetrics, are being benefitted by the happy results of Dr. Halls' experiments and reasoning. The diseases of the nervous system are being elucidated in a mode and to an extent altogether unknown to our forefathers. The human body becomes under his hand a mere machine, with diastaltic, catastaltic, peristaltic, and other forces, capable of being charged like a Leyden jar, and charged or discharged through its conductors much in the same way, or perhaps like a machine whose springs touched by the master's hand, or acted upon by disease, produce a multitude of phenomena understood only by the mover himself.

Tetanus, Paralysis, Convulsions, Spasms, and other muscular contractions of every kind, are as the movements of a musical instrument under the fingers of the master musician. Although Dr. Hall's experiments were some of them made during the period under consideration, they extend to the present, and I have been informed by a learned medical friend, who visited him a few months ago, in London, that he is as active and enthusiastic as ever. He exhibited to my friend a frog, which was quite stationary and quiet, but which, in his own words, was *full of tetanus*, and which on being suddenly struck by the doctor, was immediately convulsed, very violently. This was the result of small and repeated doses of strychnia, which appeared to have charged the nervous system. Dr. H. suggested that in *Hydrophobia* the system may be in the same condition, and that the disease might remain dormant and wear itself out, if no stimulus were applied to produce the convulsions.

We now come to another and peculiar mode of treating disease, which came into vogue about this time—*The Water Cure*—technically denominated *Hydropathy*.

Originating with an uneducated peasant of Silesia, by the name of Prestneitz, it gradually spread during the third, fourth and fifth

decades of this century, into France, England, and other portions of Europe, arriving finally on this side of the Atlantic. Establishments have been gradually founded for the practice of hydro-pathy in the chief cities and many of the inland towns and villages of the United States. This sect appears to be a revival in another form of the humoralists of olden times, and their chief idea appears to be, that all diseases may be remedied and cured by the internal and external use of water, free exercise in the open air, together with a rigid course of mild vegeto-animal diet. The latter is much modified by different practitioners. The patient is wrapped up in wet sheets and covered with blankets, where he is allowed to remain until the heat of his body warms these coverings, and he is brought to a state of profuse perspiration. This process is termed "*packing*." He is then uncovered and subjected to a cold douche or bath, followed by a general shampooing, and then made to take exercise on foot, with rather scanty clothing. During the course of his peregrinations he is to drink freely of pure water, and afterwards to dine, or sup, or breakfast on unbolted bread with milk, or bread and water, some simple raw or cooked fruits, boiled rice, plain boiled meats, and similar articles of diet.

The most delicate are urged to take long and fatiguing walks, drinking water at different stopping places on the way. Cold baths, foot baths, semicupia or sitzbads, douches, &c., of every description, are resorted to daily and almost hourly by the patient, as well in cold as in warm weather. The distinguished founder of this system, is however, we are told, very careful to observe the eye, the skin, and the general expression under the influence of this treatment, watching carefully the reacting power of the system, and adapting the force of the therapeutic agents to this power. Reaction is in fact carefully secured in all cases, so that the shock, which is at first very considerable, is soon followed by a pleasant glow of warmth, moisture, and general reaction. These exercises, without any drugs, are the daily routine of the patient until relieved, well, or dead. A small number of our native physicians have adopted the practice; the greater number, however, who advocate it, are from Germany, and not unfrequently very illiterate men.

The treatment, as above detailed, results, in a few days or weeks, in a general or partial eruption on the skin, or in phlegmonous inflammations. These "*biles*" are thought to mark the crisis of the disease, and are anxiously looked for both by the physician and the patient. The theory here is evidently that the blood by this

means relieves itself of its impurities. Thousands of the sedentary, city fed, and debauched of Europe and America, have in this way stimulated their exhausted and worn down constitutions into something like life and health, while many others, afflicted already with incurable chronic diseases, have hastened very rapidly their descent to the tomb : and still others have hastened or established pre-existing predisposition or disease for all future life. A more general attention to the value of baths and to the conditions of the skin, and other excreting surfaces, has been the good which has resulted from this fancy. My learned friend Prof. Jno. Bell, now of Cincinnati, has discussed the whole subject of hydrology, in his admirable work on baths, to which work I refer the audience.

With the single remark that quinia, morphia, strychnia, and other important vegetable alkalies, had been discovered previous to 1830, together with iodine, and were rapidly becoming popular in the treatment of many important diseases, we pass on to the third decade, or that between 1830 and 1840.

This decade was signalized by the prevalence of one of the most destructive, extensive, and erratic epidemics recorded in the annals of medicine. The epidemics of the middle ages were fatal and wide-spread, but the *Cholera* extended over a larger surface, including not only portions of Europe and Asia, but a great part of the American continent. The known laws observed by other epidemics are not applicable, or have not been followed by this. Its cause is altogether unknown. Its origin, or the agents which control or influence its course, in its peculiarly vagarious progress, are all entirely unknown. All seasons of the year were alike to it—Winter, Spring, Summer and Autumn. It appeared suddenly in a hamlet, village or town, in a single night, and in a few days cut off, as with an electric shock, hundreds and thousands, of all ages, both sexes, and all conditions in life. It would disappear as suddenly, and anon would be heard of hundreds of miles off, carried by no winds, tides, or the course of commerce, where the heart-stricken inhabitants would be cut down, as if by myriads of unseen and malignant spirits, whose delight was to gloat over the groans of the dying and the ghastly forms of the dead. Now it would appear to follow some large or small water course, or some highway of travel ; again it would disappear from the more thickly populated districts, and pick out its unsuspecting victims on the lonely mountain top, in the unentangled wilds of the forest, or in the lone farm-house in the quiet and retired valley.

It appeared in Philadelphia in 1832, having previously travelled through Canada and the intervening States of our Union, on its way South. In 1848 it again appeared in our city, but travelled this time in the very opposite direction; having raged in New Orleans, passed up the Mississippi river, devastated many of the Western cities and towns, and finally crossed the mountains, to gorge its rapacious maw on the descendants of Penn on the banks of the noble Delaware.

Its symptoms were, a rapid prostration, accompanied with excessive watery discharges from the bowels, similar to water in which rice had been boiled, hence denominated "rice water discharges." Quarts, and sometimes gallons of these discharges would be thrown off in a few minutes or a few hours.

A general collapse of the system would follow, with blue nails—cold tongue, cold—clammy and inelastic skin—continued and even agonizing thirst—weak pulse, or no pulse at the wrist—insensibility—death. The cases of recovery were those in which early reaction took place, otherwise death occurred in a few hours—sometimes in a few minutes, especially in 1832–3. In addition to the above symptoms, spasms, both of the bowels and general muscular system, took place; the intellect remaining, in recent cases, unclouded to the last moment; in some cases, in a quite hopeful condition. Where reaction was partial, a tedious convalescence, accompanied with a typhoid condition, followed; or even in many cases delirium and death, at the end of ten or more days. No age, sex or condition of life was exempt from the disease, though the very poor, the debauched, and broken down constitutions, were the first victims. Where the depressing passions, as fear or great anxiety prevailed, the individuals frequently became easy victims to the disease. The negro population, it is said, suffered less in proportion to its numbers than the white.

The *treatment*, in 1832, was as various as the varied theories of the disease, held by medical men. One expected to cure the disease by the use of chicken water, ice water, ice in the mouth, irritating frictions, sinapisms, hot baths, and cordial drinks, (Parrish.) Another boldly announced his intention to cure the disease by the use of nitric acid, morphia, and camphor water, together with external stimulants, (Meigs.) Another tried salt water and tepid water injections into the veins, with the view of supplying the immense loss of the watery portions of the blood, (Jackson.) Others tried calomel in small, and still others calomel in large doses. Some would be eclectic and prescribe for the symptoms, (Chap-

man.) All were doomed to disappointment during the onset of the disease, and the statistics, after the epidemic had passed away, showed that no one could boast a success over his neighbor in the treatment.

Homœopathy was fairly tried in Europe, and afterwards in America. Hydropathy, Thompsonianism, and every other ism, had full opportunities to experiment on the disease. All of course claimed superior success, and were lauded to the skies by the deluded advocates of each particular heresy.

Speaking of heresies, it will be proper that we now say a few words about one of the most popular and extensive of the present day—we mean *Hahnemanism* or *Homœopathy*.

Dr. Constantine Herring, who has been styled the Hahneman of America, arrived in Philadelphia from Surinam, in March 1833, and delivered an address before the Hahneman Society, on the Anniversary of the birth-day of the Master, April 10th, of the same year.

Dr. Gram, who appears to have been an American by birth, but had resided abroad the greater part of his life, came to the city of New York in the year 1825, and there commenced the practice of Homœopathy.

The success of the new system appears to have been but small until the arrival of Dr. Herring, since which period it is said more than a hundred homœopathic publications have issued from the press in this country. It is said that there are fifteen hundred physicians who practice homœopathy, and at least a million and a half of patients who employ these practitioners.

This speculation has for its foundation the postulate, that *similia similibus curantur*; in other words, all diseases are to be cured by inducing similar ones in the system. That the milder this second disease, or set of symptoms is, compatible with the removal of the previous morbid condition, the better will be the cure, and the fewer evils will the patient suffer from the use of drugs, or the disease necessarily induced by their use. It is also maintained, that a diseased or deranged condition of the system, increases its susceptibilities to the impressions of remedial agents; and that very small, indeed infinitesimal doses of medicine produce marked effects upon the economy, especially when in a diseased condition.

That all medicines cure disease in this way, and that an excessive use of medicinal agents produces other diseases: or the system may throw all over the amount necessary to produce a beneficial

effect off with the fæces or excretions. That the potency also, or power of medicines, even those usually considered inert, is increased by trituration, and other means of division of the substance. The majority of the symptoms of the disease is taken as the type, and that medicinal article which produces these symptoms in the healthy body, or the greater number of them, is the one indicated for the case.

No regard is had to the pathological condition of the organs, as such, by the pure Hahnemanist—he is merely a symptomatologist. The culminating point of this doctrine was probably reached about the middle of the fifth decade, though it may continue to exist much longer as one of the theories of medical speculators.

It has perhaps led to a more accurate observance of symptoms and shades of symptoms—though if one examines the voluminous writings of Dr. Good and other symptomatologists, he can scarcely think this possible.

As usual with all these innovations, homœopathy is rapidly undergoing the process of amalgamation with the prevalent medical doctrines of its day. Many of its practitioners discard entirely and openly the idea of the potency of those minute doses—especially the higher dilutions, which have been carried as high and higher than the thirtieth degree. Others use external applications, as blisters, sinapisms, poultices, &c., resort to venesection, leeching, and other recognized modes of diminishing the amount of blood in the blood vessels, retaining, in fact, only the shadow of the original founder's theory. *Similia similibus*, indeed, is a principle, if principle it may be called, applicable to the cure of many diseases. The great difficulty, as in most other discussions, being the definition of the terms employed. In reference to this matter, as all other questions of science, whether physical or intellectual, the following lines of Bryant may be safely relied upon :

“ Truth crushed to earth shall rise again—
The eternal years of God are hers ;
But Error, wounded, writhes with pain,
And dies among her worshippers.”

During the period under consideration, Surgery was improved in several of its subdivisions by a number of distinguished men, both in Europe and in this country.

Velpeau wrote upon and taught extensively what has been termed minor and practical Surgery. Operative Surgery was carried to a much higher degree of perfection than formerly. The plastic

operations of Taliacotius were revived and extensively practised all over both Continents, and in Great Britain.

Mütter, Pancoast, Warren, Eves, and many others among us, practised largely these operations. The process of curing deformities by subcutaneous section of tendons, muscles and ligaments, came also into very general use. Among the diseases thus treated successfully, were club-foot, torticollis, strabismus, false ankylosis, and many other deformities resulting from the contractions of the muscles, ligaments or tendons. Guerin, of France, carried subcutaneous myotomy so far as to cut no less than forty muscles at a single sitting, of a patient suffering with spinal distortion. The mechanical means of relieving these distortions were also much improved. Under this head should be mentioned the celebrated operations of my distinguished friend Dr. Rhea Barton for deformities at the hip and knee joints—in these cases the bones themselves were either divided or resected. Lisfrance, in Paris, excised the cervix uteri, and the whole organ is said to have been extirpated. Very few American Surgeons have imitated this practice. Great attention was paid by Sir B. Brodie to diseases of the joints; and a rational clasification of these diseases, on anatomical principles, was founded by this distinguished surgeon and physiologist. Kramer of Berlin, during this and the following decade, made important improvements in *Aural Surgery*. He has been followed by Toynbee, Pilcher, Williams and others in England. Indeed, almost all we know of the pathology of the Ear has been taught us by Dr. Toynbee. Hitherto the pathology of the middle and internal Ear had been entirely unknown, so that Kramer divided all the diseases of the latter into two forms, erethetic and torpid nervous deafness. The use of ether in the latter affections is strongly advocated by Kramer. A more philosophical mode of investigating these affections, by means of the catheter, air press, air douche, &c., has been established by the German physician, leading to results in diagnosis much more satisfactory than formerly.

Ophthalmic Surgery received important additions and improvements from Laurence, Jones, Wallace, Velpeau, Sichel and others. Dr. Frick, of Baltimore, has the honor of having written the first American work on this subject.

A new class of diseases have also been subjected to the Surgeon's knife; we mean *ovarian* and *uterine tumors*, extirpated by extensive incisions in the abdominal parietes. These operations

have found able advocates in our own State in the Doctors Atlee. They have also been practised by my friend Prof. Webster, of Geneva College, and other of our native surgeons. As yet these operations are sub judice, many expert surgeons having ceased to consider them justifiable, while others still perform them as often as opportunities present themselves.

The statistics as yet are not very favorable. The great difficulty in forming a just diagnosis—the great extent of the incisions into the abdominal parietes, and particularly through the peritoneum—the danger of the operation from hæmorrhage or from exhaustion; especially when we take into account that the peritoneum is opened before we can examine the tumor or tumors, and decide as to their character. In addition to all this, the great tolerance of the female system under these diseases: many will live to a good old age, and carry them for many years without much inconvenience. But we are not disposed to undervalue these operations, and freely accord to the operators the right hand of fellowship—hoping that they will ere long be enabled to establish definite rules for their performance.

Another great improvement or innovation in Surgical practice was introduced by Civiale, who still lives to teach and practise his method of breaking up the stone in the bladder, denominated *Lithontripsy*. The only Surgeon who has taken pains to perfect himself in this practice among us, was the late lamented Dr. Randolph, who was the son-in-law and favorite pupil of Dr. Physic. At least forty successful cases have been reported by this eminent Surgeon, many of which were operated upon in the Pennsylvania Hospital.

Among the matters worthy of note in the progress of Chemistry, as applied to our science, are the investigations and new views of Justus Liebig, Professor of Chemistry at Geissen. His works, though abounding in fanciful hypothesis, and even unfounded assumption, were received with acclamation by the profession generally. Taking up the scattered fragments of organic and inorganic Chemistry, as yet unappropriated, and adding numerous experiments and observations of his own, he has woven a beautiful network of theory and fact, which if it does not do all that it pretends to do, in the explication of vital phenomena, yet launches so far into hitherto unknown and unattempted regions, that both the imagination and the judgment are carried away by his writings. His process of ratiocination is, however, new in the science of medi-

cine, and great care is necessary in reading his works not to confound his *conjectures* with his *facts*. That because two or more bodies contain certain inorganic elements in certain proportions, therefore certain compounds do result and must result, even contrary, perhaps, to the known affinities of some of these atoms, may be characterized, perhaps, as plausible conjectures, but not positive facts, although these chemical actions may be subject to vital forces, and consequently partly out of the control of the known laws of inorganic matter.

A more accurate knowledge was certainly obtained of the composition of all aliments, whether animal or vegetable. Much more rational views were obtained of the relation which exists between the composition of different foods, and that of the various fluids and solids of the body, as well as that of the several excretions and secretions.

The experiments of Sanctorius were entirely eclipsed, and it was evident that a master mind, capable of grappling as well with generalities as with individual facts—with practical, as well as with theoretical chemistry, had taken hold of the matter. New and untrodden lines of thought were struck out, which have since been successfully followed by many other acute minds. A more accurate analysis of the urine, by Bird, as well as of several of the other secretions and fluids, followed.

Therapeutics, Hygiene, and the general treatment of disease, were made to assume more of a chemical character. Even the operations of the mind, it is asserted, are accompanied with chemical changes in the material organism.

It required all of the period under consideration, and more, for men to grapple with the ideas of the great vital Chemist, and apply his views to the practical portions of our profession. The impression still remains, and will doubtless work out much good in throwing light upon the intricate phenomena of life.

It remains to say a very few words on the progress of medicine during the fifth decade, or that which terminates in 1850. The difficulty which we experience in reviewing this period, is like that which one feels in examining an object that is placed too near the organ of vision, we cannot examine it in its several relations, but must be content with very partial views. Of this period, we are, however small, a part; and there are those around me, of whom it would be, under other circumstances, very proper to speak. It is a common proverb, that a man's life or actions should not be published

until after his death. The heat and dust of the battle-field are unfavourable to an impartial examination of the relative bravery of the troops in action. Spectators placed at a distance, both of time and space, are better judges of the drama of war; so those who are occupied with the battle of life, have little time and less opportunity to sheathe the sword, and measure the ground, gained or lost. To them is committed the labour of the hour, and they must be faithful.

Nevertheless by ascending some elevated and neutral point, out of the reach of both friend and foe, I may, perhaps, cast a hasty glance over the field of action.

No ten years in the history of this country have been more prolific in the production of books in all the various branches of our profession.

The indigenous medical botany has received a noble contribution in a work on the medical plants of New York, by my friend and colleague Prof. Charles A. Lee. *Materia Medica and Therapeutics* have been advanced by the admirable volume on the subject by our colleague, Prof. Thomas D. Mitchell. This work was much wanted by the profession; few books of the kind having been written since those of Chapman and Eberle. I may add that it brings our therapeutics up to the present advanced stage of medicine, and is written in an open and manly style, which commends it to every candid inquirer. Griffiths, Pereira, Carson, and many others, have published valuable works on these subjects.

Prof. Dunglison has literally inundated our shelves with excellent works on *Materia Medica*, *Practice*, *Physiology*, *Hygiene*, *New Remedies*, &c.,

In Surgery we have many small *Epitomes* besides the large work of Chelius, translated by Dr. South from the German, Velpeau's large work with the great and important additions of Dr. Mott. The works of Druitt, Liston, and Ferguson, of England, have been edited by our surgeons, and published in this country. M'Clise's splendid work on surgical anatomy, is now in process of publication. Stricture, cancer, ulcerations of the larynx and trachea have received attention in monographs of larger or smaller dimensions. In reference to the latter diseases, I cannot permit the present opportunity to pass without drawing your attention to the immense improvement made during the last ten years in their treatment. To my distinguished friend Prof. Green, of New York, is due the merit of breaking ground in this direction: and

like other pioneers in science he has had to bear the sneers, and the open as well as secret opposition of envious mediocrity, from the beginning to the present time. Like other promulgators of new truths, however, he looks forward "to a good time coming," when the new truths announced will have become old truths, and history shall do justice to the fearless pioneer.

Anatomy has been enriched by the contributions of Todd, Bowman, Kiernan, Goadby, Morton, Horner, Pancoast, and others.

Medical Jurisprudence which may, with great propriety be said to have sprung from the head of Beck, like Minerva from the head of Jove, "armed at all points," has been advanced greatly by himself, his brother, and other American authorities. Ryall, Guy, Lee, as well as many of the French physicians, have enriched this very important branch of medical and legal science.

Works on obstetrics have been published by Moreau, Ramsbotham, Churchill, Smith, Kennedy, Collins, and Meigs.

Last, but not least, the great anæsthetic agents, Ether and Chloroform, have been discovered, and have already gone through the fiery ordeal of experiment in many branches of practical medicine. They are the almost inseparable handmaids of the judicious surgeon; and are often resorted to by the humane obstetrician. If nothing else had been done during the period of fifty years, which we have thus cursorily run over, than to discover and apply these great pain alleviators, the epoch would for ever be marked as one in which one of the greatest discoveries the medical world ever made, had occurred. What are all our prayers and wishes in this life for, but that we may be freed from its pains and its sorrows. If Sydenham named his tincture of opium, from its great power to alleviate pain, *Laudandum*, then should chloroform and ether be denominated articles above all praise.

But we must close: the short space allotted to this address will not permit a more extended notice of the progress of our noble art during the first half of the nineteenth century. Sufficient, however, I trust, gentlemen, has been said, to show you that your predecessors and teachers, have not been idle, nor are now idle. They have toiled in the great cause of humanity, and not without good success. We stand in the midst of two great epochs of time, the past half and the last half, of this eventful century. You enter your profession at a period of intense interest, a period in which great and powerful minds are carving out their names upon the imperishable scroll of fame—a period when freedom of thought and action produces that collision of mind, which permits none but na-

ture's noblemen to rise successfully above the dark waves of oblivion. Its motto is *Excelsior*. Higher and higher up the steep of science is heard the voice of the aspiring and ambitious enthusiast, until the very vault of heaven itself, echoes and re-echoes the small but never ceasing voices, *Excelsior—Excelsior!*

One word and we close. In the name of the Faculty of the Philadelphia College of Medicine, I extend to you this day the right hand and sign of brotherhood, and cordially invite you to join with us in the pursuit of your profession. We offer you all the facilities which our renowned city affords, for its successful prosecution, and promise to labour with you, in season and out of season—through good report and through evil report—to be ever by your sides as elder brothers in mastering the multiform elements of your studies.

In the bright Lexicon which youth paints out for future guidance there is no such word as *fail*; and although the race is not always to the swift, nor the battle to the strong, yet, we are assured by the same authority, that the diligent man "shall stand before kings, he shall not stand before mean men." "For in all labour there is profit."

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Hend. & Ge Witt

Harrisburg Pa