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ADDRESS ON THE PROGRESS OF MEDICAL EDUCATION IN THE UNITED STATES OF AMERICA,

DURING THE CENTURY COMMENCING IN 1776.

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FROM the date of the first English settlement in America, which was in 1607, to the Declaration of Independence in 1776, thirteen separate colonies had been established, embracing the Atlantic Coast from Massachusetts to Georgia inclusive, and all acknowledging allegiance to the government of Great Britain. Distributed over this wide extent of territory, there had accumulated about three millions of people, among whom there were between three and four thousand engaged in the practice of medicine. Of these, it has been estimated that not more than four hundred had received the degree of Doctor in Medicine from any medical college; and these, with but few exceptions, had received their collegiate education and honors in the medical schools of Europe. Only two medical schools had been organized in the colonies, namely, the Medical Department of the College of Philadelphia (now the Medical Department of the University of Pennsylvania), in 1765, and the Medical Department of King's (now Columbia) College, in New York, in 1768. Only fifty-one medical degrees had been conferred by both of these institutions prior to 1776, when active operations in them were suspended by the progress of war. In all the colonies there were not more than twelve or fifteen cities and towns having over five thousand inhabitants, and these were so widely separated from each other, and possessed of such limited means of communication, that attendance on a medical college, or on the meetings of medical societies, was hindered by delays and difficulties but little thought of at the present day.

The same condition of the country compelled many of those practising in the smaller and more remote settlements to unite other occupations with their practice. In the New England Colonies, the offices of physician and clergyman were often united in the same person, and in all the colonies it was common for the physician to occupy a part of his time and increase his income by agricultural labor.

Notwithstanding all the obstacles presented by the sparseness of the population, and the want of roads and means of communication, a large proportion of those engaged in practice had attended one course of medical college instruction, and had served a regular apprenticeship with some practitioner of note, before entering upon the active duties of the profession. Only three medical societies are known to have been organized during the colonial period of our history. The most important of these was the Medical Society of the State of New Jersey, which was organized in July, 1766. It appears that a few months previous to this, a society called the Philadelphia Medical Society was formed in that

city, chiefly through the influence of Dr. John Morgan, who had returned from Europe the year previous. It did not probably survive the war for Independence, and is not known to have left any permanent record of its doings. The Delaware State Medical Society was organized in 1776, and hence has a history parallel with that of the independence of the States.

In nearly all of the colonies, laws had been enacted concerning some topics of interest to the profession. Most of these laws were designed either to protect the people of the colonies from the introduction and spread of contagious diseases, from injury by ignorant and reckless midwives, or from exorbitant charges by physicians; or for the establishment of hospitals for the sick and insane. In only two of the colonies had laws been enacted to define the qualifications of physicians and surgeons, with provisions for enforcing an observance of the same. The General Assembly of New York, in 1760, ordained that "no person whatsoever shall practise as Physician or Surgeon in the City of New York before he shall have been examined in Physic and Surgery, and approved of and admitted by one of His Majesty's Council, the Judges of the Superior Court, the King's Attorney-General, and the Mayor of the City of New York for the time being, or by any three or more of them, taking to their assistance for such examination such proper person or persons as they in their discretion shall see fit." Such candidates as were approved received certificates conferring the right to practise physic or surgery, or both, throughout the whole province; and a penalty of five pounds was prescribed for all violations of this law.¹ A similar act was passed by the General Assembly of New Jersey in 1772.

Although most of the colonies had provided temporary hospitals for seamen, emigrants, and the victims of smallpox and other epidemic diseases, the only permanent general hospital for the sick was established in Philadelphia, in 1752, and was aided by a grant of two thousand pounds from the Colonial Assembly. Dr. Thomas Bond was appointed superintendent, with Drs. Lloyd Zachary, Thomas Cadwalader, Samuel P. Moore, John Redman and Phineas Bond, as associates.

Dr. Thomas Bond, from the opening of the institution, introduced his class of students for bedside instruction, and thereby became the first regular clinical lecturer in America. In 1767, the colonial government of New York was induced to grant a charter for a general hospital, and an organization was effected, and the work commenced. But the building when nearly completed was destroyed by fire, in 1772, and owing to the supervention of the Revolutionary war was not rebuilt until 1791. From this very brief glance at the condition of medical matters in the colonies, more especially in relation to educational facilities, it will be seen that at the commencement of our history as an independent nation, in 1776, there were between three and four thousand practitioners of medicine, supplying about three millions of people, their field of duty occupying thirteen States, embracing the whole Atlantic coast from Maine to Florida, and containing two medical colleges, two organized medical societies, and one permanent general hospital. Small as were these beginnings, they nevertheless constituted the germs from which have since developed all the educational institutions belonging to the profession in our country.

¹ See *History of Medical Education and Institutions in the United States*, by N. S. Davis, M.D., p. 22.

The Medical Department of the College of Philadelphia, which had been organized in 1765, with Dr. William Shippen, Jr., as Professor of Anatomy and Surgery, and Dr. John Morgan, as Professor of Medicine, had continued regular annual courses of medical instruction until 1776, when the session was broken up by the vicissitudes of war, and the most valuable movable materials of the college were privately removed to places of safety by the provost and members of the faculty. Previous to this time, Drs. Adam Kuhn and Benjamin Rush had been added to the medical faculty of the college—the first, as Professor of *Materia Medica* and Botany, and the second, as Professor of Chemistry. During the same time, Dr. Thomas Bond had been lecturing on clinical medicine in the Pennsylvania Hospital. On an attempt being made to resume the courses of medical instruction in the College, in 1779, political differences and suspicions caused the State Legislature to pass an act abrogating the charter of the college, removing its officers, and transferring its property to a new institution, called the "University of the State of Pennsylvania."

The new University was granted a very liberal charter and considerable endowments. The Rev. John Ewing, D.D., was appointed Provost, and an effort immediately made to organize a medical department, by offering those who had held professorships in the College, the same positions in connection with the University. Regarding the act of the Legislature abrogating the charter of the College and confiscating its property as unjust, all but Dr. William Shippen, Jr., refused the offer and continued their annual courses of instruction independently, but without legal authority to confer degrees. The Trustees of the University, finding themselves unable to fill the several medical chairs satisfactorily, agreed to confer degrees on such students as should be examined and recommended by the several professors of the College whose charter had been abrogated. By this arrangement, at the first public commencement of the University, held in Philadelphia, June 27, 1780, the degree of Bachelor of Medicine was conferred on William W. Smith and Ebenezer Crossly, and that of Doctor of Medicine on David Ramsey, who was in the service of the American Army, and at the time a prisoner in the hands of the British. These were the first medical degrees conferred by any institution created under the auspices of one of the independent States of America. This state of antagonism between the professors in the College of Philadelphia and the trustees of the University, continued until 1789, when, aided by the influence of Benjamin Franklin, after his return from Europe as foreign minister, the former succeeded in inducing the State Legislature to repeal the act of abrogation, and to restore to the College all its rights and privileges. This was done in March, 1789, but it left the University in existence, with its endowments from confiscated estates the same as before. The officers and faculty of the College of Philadelphia were immediately reinstated, with Dr. Benjamin Franklin himself as president of the Board of Trustees.

In October of the same year, Dr. John Morgan died, and Dr. Adam Kuhn resigned, leaving the chairs of Practice of Medicine, and *Materia Medica* and Botany, vacant. The vacancies were immediately filled, and the Medical faculty of the College as reorganized for the session of 1789-90, was composed of William Shippen, Jr., M.D., Professor of Anatomy, Surgery, and Midwifery; Benjamin Rush, M.D., Professor of the Theory and Practice of Physic; Caspar Wistar, M.D., Professor of Chemistry and of Institutes of Medicine; Samuel P. Griffiths, M.D., Pro-

fessor of *Materia Medica* and Pharmacy; Benjamin Smith Barton, M.D., Professor of Natural History and Botany. At the same time Dr. Shippen continued to occupy the same chair in the University of the State of Pennsylvania, and was joined in that faculty by Dr. Adam Kuhn, in the Chair of Theory and Practice of Medicine, and by Dr. James Hutchinson, in that of Chemistry.

The trustees of the College of Philadelphia not only reinstated a full corps of medical professors, but they revised their former rules in regard to medical requirements for graduation. These rules, as adopted in 1767, provided for the conferring of the degrees of Bachelor of Medicine and Doctor of Medicine. The student was permitted to apply for the first after "a sufficient apprenticeship to some reputable practitioner in Physic," attendance on "at least one course of Lectures on Anatomy, *Materia Medica*, Chemistry, the Theory and Practice of Physic, one course of Clinical Lectures, and attendance on the practice of the Pennsylvania Hospital one year." It was expected by the founders of the College, that those who took the Bachelor's degree would return after three years of study and practice, and take the higher degree of Doctor. Experience, however, had proved this expectation fallacious, as very few of those who entered into practice after receiving the first degree, ever returned for the second. For this reason the Bachelor's Degree was abolished, and the revised regulations adopted for the College by the trustees, November 17, 1789, and published in the Pennsylvania Gazette were as follows:—

I. No person shall be received as a candidate for the degree of Doctor of Medicine until he has arrived at the age of twenty-one years, and has applied himself to the study of medicine in the College for at least two years. Those students, candidates, who may reside in the city of Philadelphia or within five miles thereof, must have been the pupils of some respectable practitioner for the space of three years, and those who may come from the country, and from any greater distance than five miles, must have studied with some respectable physician there, for at least two years.

II. Every candidate shall have regularly attended the Lectures of the following professors, viz.: of Anatomy and Surgery; of Chemistry and the Institutes of Medicine; of *Materia Medica* and Pharmacy; of the Theory and Practice of Medicine; the Botanical Lectures of the Professor of Natural History and Botany; and a course of Lectures on Natural and Experimental Philosophy.

III. Each candidate shall signify his intention of graduating to the Dean of the Medical Faculty, at least two months before the time of graduation, after which he shall be examined privately by the professors of the different branches of medicine.

If remitted to his studies, the professors shall hold themselves bound not to divulge the same; but if he is judged to be properly qualified, a medical question and a case shall be proposed to him, the answer and treatment of which he shall submit to the medical professors. If these performances are approved, the candidate shall then be admitted to a public examination before the Trustees, the Provost, Vice Provost, Professors and Students of the College; after which he shall offer to the inspection of each of the Medical Professors a Thesis, written in the Latin or English Language (at his own option) on a medical subject. This Thesis, if approved of, is to be printed at the expense of the candidate, and defended from such objections as may be made to it by the Medical Professors at a commencement to be held for the purpose of conferring degrees, on the first Wednesday in June every year.

Bachelors in Medicine who wish to be admitted to the degree of Doctor in Medicine, shall publish and defend a Thesis agreeably to the rules above mentioned.

The different Medical Lectures shall commence annually on the first Monday in November, the lectures in Natural and Experimental Philosophy about the same time, and the lectures on Botany on the first Monday in April.

BENJAMIN FRANKLIN, President of the Board of Trustees.

WILLIAM SMITH, Provost of the College and Secretary of the Board of Trustees.¹

The Trustees of the University of the State of Pennsylvania adopted very similar regulations regarding courses of lectures and time of study for the degree of Doctor in Medicine, but they continued also to confer the degree of Bachelor, as before. One hundred and four medical students attended the Lectures in Philadelphia during the College term of 1790-1, and appear to have been nearly equally divided between the two schools. The disadvantages arising from this division of patronage were too apparent to be overlooked, and the friends of both schools soon instituted measures for an amicable union. These measures resulted in the passage of an Act of the Legislature of the State, September 30, 1791, uniting the College and the University on the terms which had been mutually agreed to by both the parties in interest. The name adopted for the united institution was the "University of Pennsylvania." Dr. John Ewing was elected Provost and Professor of Natural and Experimental Philosophy, and all the professors in the medical department of the two previous institutions were elected professors in the new one. The full medical faculty of the University, as thus constituted, was arranged as follows: William Shippen, M.D., Professor of Anatomy, Surgery, and Midwifery; Caspar Wistar, M.D., Adjunct; Adam Kuhn, M.D., Professor of Theory and Practice of Medicine; Benjamin Rush, M.D., Professor of Institutes of Medicine and of Clinical Medicine; James Hutchinson, M.D., Professor of Chemistry; Samuel P. Griffiths, M.D., Professor of Materia Medica and Pharmacy; Benjamin Smith Barton, M.D., Professor of Botany and Natural History.

The University, as thus reorganized, ceased to confer the degree of Bachelor of Medicine, and left it optional with the medical students whether they should attend the lectures on Natural History and Botany, but in all other respects adopted the "Rules respecting a medical education and the conferring of Degrees in Medicine," which have been already given as having been adopted by the Trustees of the College of Philadelphia in 1789.

We have thus sketched briefly the progress of medical instruction from its incipient beginnings in Philadelphia, to the complete establishment of the University of Pennsylvania by the formal election of the faculty above named, in January, 1792, not merely because it was the pioneer school, and one which still continues to exercise an important influence over the educational interests of our profession, but because it has served as the type or pattern for nearly all the medical schools subsequently organized in this country. While the cause of medical education was progressing, as we have detailed, in Philadelphia, the profession in New York was not idle. We have stated that, as early as 1767, a charter was granted by the Colonial government of New York for the establishment of a General Hospital in that city; that, chiefly through the efforts of Drs. Samuel Bard and Peter Middleton, a society was organized, and a hospital building nearly completed, which was destroyed by fire in 1772; and that the enterprise received liberal pecuniary aid from Sir Henry

¹ See *History of the University of Pennsylvania*, by Joseph Carson, M.D., pp. 95-6.

Moore, the provincial Governor, from the Legislature, from the City Corporation of New York, and from many private individuals. The loss of the building by fire, and the speedy supervention of the war for Independence, prevented all further efforts in that direction until after the close of that war. Soon after this latter event, the corporation known as the Society of the New York Hospital was revived, its work resumed, and adequate hospital buildings completed ready for occupation in 1791. The same persons who had been influential in the primary effort to establish the New York Hospital, also induced the trustees or governors of King's College, located in New York City, to establish a Medical Department of that institution, and to appoint a full medical faculty in 1768. This faculty was composed of Samuel Clossy, M.D., Professor of Anatomy; John Jones, M.D., Professor of Surgery; Peter Middleton, M.D., Professor of Physiology and Pathology; James Smith, M.D., Professor of Chemistry and Materia Medica; John V. B. Tennent, M.D., Professor of Midwifery; and Samuel Bard, M.D., Professor of Theory and Practice of Physic.

Some important differences will be noticed in comparing this faculty organization with that of the faculty just previously organized in Philadelphia. First, it makes a more complete division of labor, and at once gives a full recognition to the departments of Surgery and Midwifery, assigning to each a separate professorship on an equality with all other departments, instead of making them appendages to the more prominent departments of Anatomy and Theory and Practice of Medicine. In this respect the New York faculty was in advance, not only of that of the Philadelphia College, but also of that of the University of Edinburgh. Second, it makes no mention of the departments of Botany and of Natural and Experimental Philosophy. Third, as the number of chairs and the consequent division of labor was greater, the annual college term was made shorter by one month; the term closing in May instead of June in each year. In all other respects the regulations were very similar to those adopted by the school in Philadelphia. The first courses of lectures were given in the autumn and winter of 1768-9, at the close of which, in May, 1769, the degree of Bachelor in Medicine was conferred by the Trustees of the College on Samuel Kissam and Robert Tucker. And at the close of the succeeding college term, in May, 1770, the degree of Doctor in Medicine was conferred on one or both of the same persons. These are stated by Dr. J. B. Beck, and several other writers, to have been the first medical degrees conferred by any college in America. This is true, however, only as it relates to the degree of Doctor in Medicine. For, as a matter of fact, the College of Philadelphia conferred the degree of Bachelor in Medicine on ten students in June, 1768, but did not confer the degree of Doctor in Medicine until June, 1771.

The regular annual courses of medical instruction were continued, and attended by small classes of students, until they were interrupted by the war. During the war, the name of King's College was changed to that of Columbia College, which it still retains. Soon after the close of the war an effort was made to re-establish the medical department connected therewith. By some misfortune connected with the procuring of subjects for dissection, a violent popular outbreak, called the "Doctors' Mob," was induced, during which the dissecting-room of the college was broken up, and for three days law and order were trampled under foot. To counteract, as far as possible, the evil influences thus brought to bear upon the profession, and to improve medical science, several of the more

enterprising and younger members of the profession formed a private society, and in 1787 succeeded in inducing the magistrates of the city to establish a public free dispensary for the sick poor. Among the more prominent of those engaged in this enterprise were Drs. William Moore, Nicholas Romaine, Benjamin Kissam, Wright Post, and Valentine Seaman. They not only gave gratuitous attendance on the poor in the dispensary, but in connection therewith gave lectures on most of the branches of medicine; thereby making it the first institution connected with *practical* instruction in medicine under the corporation of the City of New York.

So great was their success that, in 1790, more than fifty students attended their instruction, and an unsuccessful attempt was made to organize an independent school under the name of the College of Physicians and Surgeons. In the autumn of 1791, the private association introduced not less than sixty students into Columbia College, and thereby induced the Legislature of the State to make a grant of \$30,000 to the trustees, for the purpose of enabling them to enlarge their buildings, etc. In the following year the medical faculty was reorganized by the appointment of Drs. Bailey, Post, Rogers, Hammersly, Nicol, and Kissam, as professors, and of Dr. Samuel Bard, as Dean of the Faculty. Some of these appointments were very unsatisfactory to the students, and were followed by such a degree of opposition as to greatly interfere with the prosperity of the College, and to lead many members of the profession in the city to use their influence in favor of the establishment of another and independent medical school.

In accordance with their wishes, the regents of the University of the State of New York granted a charter for a new college in 1807, to be located in the city, and called the College of Physicians and Surgeons of New York. It was placed under the control of a board of trustees, consisting of the whole Medical Society of the city and county of New York, and the degree of Doctor of Medicine was to be conferred by the regents of the University of the State, on the recommendation of the trustees and faculty of the College. The first course of lectures was given in the winter of 1807-8, to a class of fifty-three students. In 1810 the medical department of Columbia College was finally discontinued, leaving the College of Physicians and Surgeons the only one in the State, with a class of students numbering eighty-two, and the following very able faculty, viz.: Samuel Bard, M.D., President; David Hosack, M.D., Vice President and Professor of the Theory and Practice of Medicine and of Clinical Medicine; William James Macnevin, M.D., Professor of Chemistry; Samuel L. Mitchill, M.D., Professor of *Materia Medica* and Botany; Valentine Mott, M.D., Professor of Surgery; John W. Francis, M.D., Professor of Obstetrics and Diseases of Women and Children; Wright Post, M.D., Professor of Anatomy.

But instead of that rapid prosperity which the friends of the institution and the regents of the University now anticipated, the very numerous board of trustees, being mostly medical practitioners in the immediate vicinity of the College, soon became distracted by opposing councils, and jealousies arose between them and the members of the faculty, which caused much difficulty and greatly retarded the prosperity of the college. These defects were corrected in subsequent years, and the institution has maintained a good reputation and leading influence down to the present time.

In 1783, the medical department of Harvard College, in Cambridge

near Boston, was organized by the appointment of John Warren, M.D., Professor of Anatomy and Surgery; Aaron Dexter, M.D., Professor of Chemistry and Materia Medica; and Benjamin Waterhouse, M.D., Professor of the Theory and Practice of Medicine. The medical department of Dartmouth College, at Hanover, New Hampshire, was organized in 1797, chiefly through the influence of Dr. Nathan Smith, who was appointed Professor of Medicine, and for ten or twelve years taught all the branches of medicine with signal ability. The medical department of the University of Maryland, at Baltimore, was incorporated in 1807, and was supplied with an able faculty, consisting of John B. Davidge, M.D., Professor of the Principles and Practice of Surgery, and Nathaniel Potter, M.D., Professor of the Theory and Practice of Medicine, assisted by Drs. Shaw, of Maryland, and Cooke, of Virginia.

By the foregoing brief historical statements it will be seen that during the first thirty years after the close of the war for Independence, which included the first decade of the present century, seven medical schools had been organized, namely, two in Philadelphia, two in New York City, one in Boston, one in Hanover, and one in Baltimore. The two in Philadelphia had been speedily united into one, and one of those in New York had been discontinued. We find, therefore, only five medical schools in existence in the United States in 1810, with an aggregate number of medical students in attendance of about 650, of whom about 100 received in that year the degree of either Bachelor or Doctor of Medicine. Two-thirds of this whole number were in the University of Pennsylvania. Only two public general hospitals had been established, namely, the Pennsylvania Hospital in Philadelphia, and the New York Hospital in New York City.¹ The former was a very important aid to the University in attracting students to Philadelphia, by the clinical instruction which it afforded, as inaugurated by Dr. Thomas Bond soon after it was opened for the reception of patients.

All but one of these medical schools were organized as departments of colleges or universities of literature and science, already established, and all but the one began with a small number of professors, making it necessary that one man should teach two, and sometimes three, branches of medicine during each annual college term. For this reason more than any other, the medical college terms were made to commence generally on the first of October, and to continue until the following May or June. All these schools adopted, at first, the policy of conferring the degree of Bachelor of Medicine on students who had studied medicine with some reputable practitioner not less than two years, and had attended the medical instruction in the college one year, or rather one college term; and the degree of Doctor of Medicine after three years of study and two annual college terms. It must be remembered that, during the colonial period of our history, and for thirty or forty years subsequent to the achievement of our National Independence, it was the universal custom for young men who entered upon the study of medicine to become regularly apprenticed to some practitioner for a term of three or four years, during which time the preceptor was entitled to the student's ser-

¹ Since the above was written, we have learned that, in 1784, Don Andras Almonaster commenced the erection of a public or general hospital in the city of New Orleans, on the site of the one blown down in the great storm of 1779. It was called the New Charity Hospital, and cost \$114,000. As Louisiana became one of the States of our Union, by purchase, in 1803, this Charity Hospital should have been included with those of Philadelphia and New York mentioned above.

vices in preparing and dispensing medicines, extracting teeth, bleeding, and other minor surgical operations, and, when more advanced in studies, in attending on the sick; and, in return, the preceptor became obligated to give the student detailed and thorough instruction in all the branches of medicine. Many of the more eminent practitioners often had several students in their offices at one time, constituting a small class who were drilled almost as regularly in their studies as they would be in a college. In some instances the term of apprenticeship was extended to six and even seven years, and was made to commence at the early age of fifteen or sixteen years. All these customs were brought by the emigrants from the parent country, and their perpetuation here was rendered more necessary by the sparseness of the population and the difficulty of access to medical schools.¹

In the midst of such customs, and at a period in the world's history when railroads, steamboats, and other means of speedy transit were unknown, and even post-coaches were rare, it was entirely reasonable that the first idea of a medical college should be to furnish the means for a rapid review of the several branches of medical science, aided by such experiments and appliances for illustration as could be commanded, and the whole concentrated into as small a part of the year as possible. The idea of the founders of medical schools, both in Great Britain and in this country, was to make them *supplement* but *not supersede* the work of the preceptor and the medical apprentice. The study of anatomy by dissections, the illustration of chemistry by experiments, the clinical observation of disease at the bedside, were capable of being carried on in the offices of preceptors, only to a very limited extent. But by combining several preceptors, each eminently qualified in some one department, in a college faculty, with access to anatomical rooms, chemical laboratory, and hospitals for the sick, all the branches of medicine then recognized could be very well reviewed in the form of didactic instruction, in five or six months of the year. It was expressly to supply the wants here indicated, with the greatest economy of time and labor, that the medical department of the University of Edinburgh was founded in the beginning of the eighteenth century, and conferred its first degree of Doctor of Medicine in 1705. It rose rapidly to distinction among the schools of Europe, and furnished the model after which the first medical schools in this country were organized; as it was the *Alma Mater* of nearly all their first professors.

Assuming that the student would serve from two to four years of his apprenticeship to his preceptor, before resorting to a medical school, the several professors very naturally arranged their courses of instruction to begin nearly at the same time, generally in September or October, and to be completed in time for the public commencement and conferring of degrees in the following May or June. And as the Bachelor's degree was generally conferred after attendance on one full course of college instruction in the several branches taught, no gradation or consecutive order of studies could be incorporated into the college course. The addition of one or two years more of study, including a second course of college instruction, entitled the applicant to an examination for the degree of Doctor of Medicine. At the first organization of all the medical schools to which we have thus far alluded, provision was made for conferring the degrees of both Bachelor and Doctor of Medicine. But, as already men-

¹ See Contributions to the Annals of Medical Progress, etc., by J. M. Toner, M.D.

tioned, the degree of Bachelor was abandoned by the College of Philadelphia in 1789, and by the University of Pennsylvania in 1791, and by all the medical colleges in the country after 1813. The whole number of medical degrees conferred by the seven medical schools whose origin we have traced, prior to 1810, did not exceed six hundred. Very many, however, served their regular apprenticeship with the preceptor, attended one course of college instruction, and entered upon practice without a college degree; and there were not a few who entered upon the responsible duties of practice with simple certificates from their preceptors, without ever having seen the inside of a college building.

We shall not fully appreciate the relations of the medical schools to the needs of the profession at that time, unless we consider also the coincident condition of the different branches of medical science. To the active workers of the present generation, a medical college with only three or four professors, or one professor attempting to teach anatomy, surgery, and midwifery, all in one college term of five or six months, would appear hardly less than absurd. If we remember, however, that down to the commencement of the present century, the principal medical works in use were the writings of Sydenham, Boerhaave, and Cullen, the Physiology of Haller, the Anatomy of Cheselden or Monro, the Surgery of Sharp, Pott, or Jones, the Midwifery of Smellie or Hunter, and the *Materia Medica* of Lewis, we shall readily see that the field of medical study was limited in comparison to that which now opens before the student.

At that time, surgery had only begun to be recognized as a distinct branch from anatomy. We learn from an introductory lecture by James Spence, F.R.C.S.E., Professor in the University of Edinburgh, that "so late as 1777, when the College of Surgeons petitioned the patrons to institute a separate professorship of surgery in the University, they were opposed by Monro, then Professor of Anatomy, as interfering with his branch; and he succeeded in getting his commission altered so as to include surgery, which was thus made a mere adjunct of the anatomical course, and continued to be so taught (if it could be said to be taught) until the institution of the chair of Surgery in 1831." It was not until June 4, 1805, that Surgery was separated from the chair of Anatomy by the appointment of Dr. Philip Syng Physick as Professor of Surgery, on an equality with the other professors in the University of Pennsylvania. The department of Midwifery was still later in gaining recognition as a distinct branch of medicine. At the request of Dr. Caspar Wistar, who had succeeded to the professorship of Anatomy and Midwifery in the University on the death of Dr. Shippen, in 1808, the trustees separated the chairs, and in 1810 appointed Dr. Thomas Chalkly James the first Professor of Midwifery in that College. And yet it was not until three years later, October 11, 1813, that he was formally recognized as a member of the faculty, and attendance on his lectures rendered obligatory upon the students who applied for graduation. In New York, however, midwifery was recognized as a distinct branch at a much earlier period than in any of the other cities in which medical schools had been organized; for in the first medical faculty appointed in connection with King's College, in 1768, Dr. John V. B. Tennent was made Professor of Midwifery, apparently on an equal footing with all the other professors.

The foregoing facts are sufficient to show the limited field of medical science at the beginning of the present century, compared with the same field at the present time. If this is borne in mind, it will be seen that

the five medical schools, embracing the medical departments of the University of Pennsylvania, Harvard College, near Boston, Dartmouth College, at Hanover, the University of Maryland, at Baltimore, and the College of Physicians and Surgeons, at New York, which were either re-organized or founded *de novo* during the first thirty years of our history as an independent nation, were established on as liberal a basis, and were as well adapted to the then existing wants of the profession and the people, as any that have been organized since. As a general rule, they commenced with a small number of professors, but as the different departments of professional knowledge became better developed, and the work of instruction better systematized, there was manifested that tendency to make divisions of labor by the creation of new chairs, which has continued to the present time. In this respect the University of Pennsylvania, as the leading school, may be taken as a representative of all the rest. Commencing with only two professors, Drs. Morgan and Shippen, aided by the clinical instruction of Dr. Bond in the Hospital, in 1765, the number was increased by the addition of the chairs of Chemistry and *Materia Medica*, in 1768-9; and on the merging of the College of Philadelphia with the University of the State of Pennsylvania, in 1791-2, the number of chairs was increased to six, by the addition of professorships of Institutes of Medicine, and of Botany and Natural History. A further addition took place by the creation of a separate chair of Surgery, in 1805, and one of Midwifery, in 1810. From the year just named the number of medical schools began to increase with great rapidity.

A medical department was established in connection with Yale College, in New Haven, in 1810, but the first course of instruction was not commenced until 1813. In 1812, the Regents of the University of the State of New York incorporated the College of Physicians and Surgeons of the Western District, located in Fairfield, Herkimer County. The Vermont Academy of Medicine, located at Castleton, Vermont, received a charter from the Legislature of that State in 1818. The same year, a medical school was organized as a department of Transylvania University, at Lexington, Kentucky, chiefly through the influence of Drs. Dudley, Richardson, and Blythe. In January, 1819, the Legislature of Ohio passed an act incorporating the Medical College of Ohio, in Cincinnati. In 1820, the Medical School of Maine was organized as a department of Bowdoin College, at Brunswick, Maine, with a faculty consisting of Drs. Nathan Smith, John D. Wells, and Parker Cleaveland. In 1821, a medical school was organized in connection with Brown University, at Providence, Rhode Island, but was soon after discontinued. The medical school of the University of Vermont was established in Burlington, in 1822. A school called the Berkshire Medical Institute, was organized in Pittsfield, Massachusetts, under the charter of Williams College, in 1823. The Medical College of South Carolina was established in Charleston, in 1824, and supplied with a full corps of professors, including the well-known names of Drs. Ramsey, Holbrook, Dickson, Prioleau, Frost, Ravenal, and Elliot. The Medical Department of Columbian College, in the District of Columbia, was organized in 1825, chiefly through the influence of Drs. Thomas Sewall and Frederick May, of Washington.

In the winter of 1825, the Legislature of the State of Pennsylvania passed an act under which a new medical school was organized in Philadelphia, in connection with a literary institution called Jefferson College, at Canonsburg; and hence the new medical school took the name of Jefferson Medical College, and, in its progress since, has attained

ity and influence equal to that of the best medical colleges in this country. The Medical Department of the University of Virginia, located at Charlottesville, in that State, was organized in 1825, and has continued to the present time, teaching the different branches of medicine in the same manner as the various branches of science are taught in other departments of the institution. The medical school of the Valley of Virginia was established at Winchester, Virginia, in 1826, on nearly the same plan as the Medical Department of the University, at Charlottesville. It attracted but a small number of students, and appears to have been discontinued several years since. In 1827, the Washington Medical College was organized in Baltimore, on the same plan as the majority of American medical colleges. The Medical College of Georgia, located at Augusta, was incorporated by an act of the Legislature of that State in 1830, and the first course of instruction was given in 1832-3. The Willoughby University, in Ohio, was chartered in 1834, and its first course of instruction commenced in the autumn of 1835. The Medical Department of the University of Louisiana, at New Orleans; the Medical Institution of Geneva College, at Geneva, New York; the Medical Department of Cincinnati College, Cincinnati, Ohio; and the Vermont Medical School, at Woodstock, Vermont, were chartered by the Legislatures of the respective States in which they were located in the year 1835.

The Medical Department of the University of Louisville, Kentucky, was organized in 1837, and the Medical Department of the University of the City of New York, the same year. The Medical Department of Hampden Sidney College, at Richmond, Virginia, was organized in 1838. The Albany Medical College, at Albany, New York, and the Medical Department of Pennsylvania College, at Philadelphia, in 1839. The Missouri Medical College, at St. Louis, Missouri, was organized in 1840, and the St. Louis Medical College, in the same city, in 1841. The Legislature of Illinois granted a charter for the Rush Medical College, in Chicago, in 1837, but a faculty was not organized for instruction until 1843. The Cleveland Medical College was organized at Cleveland, Ohio, in 1843. The Medical Department of the University of Buffalo was organized in Buffalo, New York, in 1846. The Starling Medical College and Hospital was organized at Columbus, Ohio, in 1847. The Medical Department of the University of Michigan, at Ann Arbor, was instituted in 1849. The Medical Department of the University of Nashville, at Nashville, Tennessee; the College of Physicians and Surgeons, at Keokuk, Iowa; and the Woman's Medical College of Pennsylvania, at Philadelphia, were organized in 1850.

The Medical College of Virginia, at Richmond; the Medical Department of Georgetown University, at Washington; and the Cincinnati College of Medicine and Surgery, at Cincinnati, were created in 1851. The Savannah Medical College, at Savannah, Georgia, and the Miami Medical College, at Cincinnati, were established in 1852. The Atlanta Medical College was commenced at Atlanta, Georgia, in 1855. The Medical College of the Pacific, at San Francisco, was organized in 1858. The Chicago Medical College, Medical Department of the Northwestern University, was organized in 1859. The Medical College of Mobile, Alabama, and the Long Island College Hospital, in Brooklyn, New York, were organized in 1860. The Bellevue Hospital Medical College was established in the city of New York in 1861. The Woman's Medical College of the New York Infirmary, located in the city of New York, was created in 1864. The Medical Department of Willamette University,

located at Salem, Oregon, was commenced in 1866. The Medical Department of Howard University was organized in 1867. The Medical Department of the University of South Carolina, at Columbia, and the Detroit Medical College, at Detroit, Michigan, were commenced in 1868. The Medical Department of the University of Wooster, at Cleveland, Ohio; the Kansas City College of Physicians and Surgeons, at Kansas City, Missouri; the Louisville Medical College, at Louisville, Kentucky; the Medical Department of the Iowa State University, at Iowa City; and the Medical Department of the Indiana University, at Indianapolis, all had their beginning in 1869.

The Woman's Hospital Medical College, at Chicago, and the Medical Department of Lincoln University, at Oxford, Pennsylvania, were organized in 1870. The Free Medical College for Women was organized in the city of New York in 1871. The Medical College of Evansville, Indiana, was chartered in 1846, and reorganized in 1872. The College of Physicians and Surgeons of Syracuse University, at Syracuse, New York, and the College of Physicians and Surgeons at Wilmington, North Carolina, were incorporated in 1872. The Medical Department of the University of California, at San Francisco, was first organized under the name of the Toland Medical College in 1864, and became a department of the University in 1873. The Medical College of the University of the State of Missouri, at Columbia, Missouri, and the Texas Medical College and Hospital, at Galveston, Texas, were organized in 1873. Medical schools have recently been established in Portland, Maine, and in Baltimore, Maryland, the exact dates of the formations of which are not at hand.

From the foregoing statistics we learn that, during the thirty years intervening between the close of the war for Independence and 1810, seven medical schools were organized; in the thirty years intervening between 1810 and 1840, twenty-six new medical colleges were added to the list; in the thirty-five years since 1840, the number of new medical schools created is forty-seven; making the whole number of medical educational institutions established in the United States, during the first century of our history as a nation, eighty. We have not included in these numbers five or six mere abortive attempts to form medical schools in different localities, but which were so transient as to leave a record difficult to trace. Of the eighty which have been established, seventeen have been discontinued or suspended, leaving, at this date, sixty-three medical colleges now in active operation in this country. Of these, Maine has two, New Hampshire one, Vermont three, Massachusetts one, Connecticut one, New York nine, Pennsylvania three, Maryland three, Virginia two, South Carolina one, Georgia three, Alabama one, Louisiana two, Texas one, Tennessee one, Kentucky three, Missouri three, California two, Oregon one, Iowa two, Illinois three, Indiana three, Ohio seven, Michigan two, and the District of Columbia three, leaving thirteen States without any medical college now in operation. Four of the schools included in the foregoing list, namely, two in New York City, one in Philadelphia, and one in Chicago, are established for the exclusive education of women in medicine. The whole number of students attending the medical colleges in 1810 was about 650, of whom about 100 graduated at the close of the college terms for that year. The population of the United States at that time was 7,239,881. In 1840, the whole number of students in the colleges was about 2500, of whom about 800 received the degree of Doctor of Medicine. The population of the United States

in that year was 17,069,453. During the college terms for 1875-6, the whole number of medical students in attendance on the colleges was 6650, of whom 2200 received the degree of Doctor of Medicine. The population of the States at this time is over 40,000,000. Without claiming absolute accuracy for the foregoing figures, they are sufficiently close for all the purposes of comparison. And they show clearly, notwithstanding all that has been said about the rapid multiplication of medical schools, and the increased numbers of students and graduates, that the colleges and the students, during the last thirty-five years, have increased in a ratio only about equal to the increase of the population of the country. The whole number of those engaged in teaching as professors in the several medical colleges, at this time, is about five hundred.¹

As has been already stated, the origin of medical schools in this country was solely from individual efforts, put forth from time to time, as the ambition of the individuals or the supposed wants of the country demanded, and not from any well-digested scheme or official plan of professional education adopted either by the States or by the General Government. The same remark is true, not only of their origin, but also of their continuance and multiplication to the present time. Whenever and wherever the Legislature of any one of our States has been asked to grant a charter for a medical college, as a rule the request has been complied with. And in the few instances in which such requests have been denied, the parties interested have seldom found difficulty in forming a connection with some literary college or university, already having authority to grant degrees in medicine, as well as in general science. Some of the State Legislatures, in addition to liberally granting charters for medical colleges, have also occasionally appropriated a few thousand dollars to aid in the erection of suitable buildings, but rarely, if ever, to endow professorships, or to defray any of the current expenses of such institutions. In the State University of Michigan, and possibly in one or two other State Universities, the medical professorships, like those of the other departments, are sustained by the income from the general endowment, independent of the fees derived from the medical students. We may say, in general terms, therefore, that the whole system of medical education in this country, represented to-day by sixty-three medical colleges distributed among twenty-four different States, sustained by the active work of over five hundred professors, and annually aiding in the education of nearly seven thousand students, is the spontaneous outgrowth of the profession itself, self-reliant, and almost wholly self-sustained. Originating among a free people, under the *ægis* of various educationally independent States, apparently striving to keep pace in the increase of their number and efficiency with a population which, in one short century, has increased from three millions to forty millions, and extended over a territory from the Atlantic to the Pacific, and from the great interior Lakes to the Gulf, under circumstances of the freest competition, these schools constitute a subject worthy of the most careful study.

To what extent have these schools been adapted to the real wants of the profession and people of these States? Wherein have they failed to keep themselves adjusted to these needs or wants, as the country has

¹ In the above statistics we have not included colleges or schools for teaching exclusively dentistry or pharmacy, or exclusive dogmas in medicine. Of the first there are eleven; of the second, thirteen; of the third there are three, called Eclectic, and eight or nine, Homœopathic.

advanced to the present time? If failures in adjustment have taken place, in what do they consist, and how can they be remedied? Let me ask a continuance of your patient attention, while I answer as briefly and directly as possible these most important questions, and my task will be done.

We have already seen that our medical colleges had their origin at a time when medical science and art occupied a far narrower field than at present. A time when obstetrics was yet mostly in the hands of unlettered midwives; surgery an appendage to anatomy; organic chemistry, histology, and even physiology, as now recognized, hardly known. A time, too, when it was the universal practice for regular students of medicine to apprentice themselves to private preceptors of reputation, from whom they expected to receive the greater part of their professional education. The great and pressing need, at that time, was for schools in which, after gaining a knowledge of the text-books, the rude pharmacy of his preceptor's office, and the individual experience of the preceptor himself, during two or three of the first years of his study, the student could review the whole in connection with such experimental demonstrations as could be given only in the laboratory, the dissecting room, and the clinical wards of the public hospital. It was to supplement, not supersede, the work of the private preceptor.

Precisely this was what the medical schools were adjusted to do, and they fulfilled the object well. Hence, although originating in different States, wholly independent of each other, and in direct rivalry for patronage on which they depended for support, they were remarkably similar in their organization and requirements. At first, the number of professors was small, and the college term eight or nine months, offering the Bachelor's Degree after three years' study, and one college term, and the Doctor's Degree after one or two more years, and a second course of college attendance. But as most of the students lived in small towns and country districts remote from the colleges, making attendance on the lectures both tedious and expensive, only a part of those engaging in the study of medicine ever reached a medical college, and most of these, after taking the Bachelor's Degree, never returned to take a second course and the higher degree of Doctor. These circumstances constituted a strong inducement for the colleges to concentrate the annual period of instruction into as short a time as possible, both for the purpose of increasing the number of students who could afford the means of attending, and the number who would take the second degree. Under these influences, the first thirty years sufficed to cause the Bachelor's Degree to be abandoned by all the schools, the number of professors in each to be doubled, and the length of the annual college term to be shortened one-third. And in twenty-five years more, from the same causes, aided efficiently by the fact that the degree conferred by the colleges became practically recognized everywhere as a sufficient *license* to practise medicine in all its departments, the colleges, with but one exception worth noting, had each from five to seven professorships occupied by as many different professors, and an annual college term of only from twelve to sixteen weeks, during which the students, in one class, listened to from five to six lectures daily, on as many different topics, besides attending to dissections and clinical instruction when such were accessible.

The requirements for the Doctor's Degree were, three years study with some regular practitioner of medicine, including attendance upon two such courses of college instruction, the one being chiefly a repetition of

the other; the writing of a thesis on some medical subject; the possession of a good moral character; the attainment of twenty-one years of age; and the sustaining of a creditable examination in the several branches of medicine at the close of the second course of lectures. It will be seen that, in these requirements, there was no reference to any standard of preliminary education to be attained by the student before entering upon his professional studies, except the ability to write a thesis. The requirement of a knowledge of the ancient languages, and the writing of a thesis in the Latin language, were abandoned on the full reorganization of the University of Pennsylvania, in 1792. The relinquishment of natural philosophy, natural history, and botany, as requirements, soon followed, leaving only the single indirect trace of any non-professional education, to which we have alluded. Under these conditions and tendencies, by the end of the second thirty years of our history, the number of medical colleges had increased from five to forty-one; the number of students attending them from six hundred and fifty to twenty-five hundred, and the ratio of those graduating, each year, from less than one in six, to one in three.

Here we see a system of medical colleges originating spontaneously to supply the wants of a free and rapidly increasing people, and open to the most free and unrestrained rivalry, actively developing two apparently opposite results. In one direction, the schools justly vie with each other in increasing the number of their professors in full consonance with the rapid advancement of medical sciences; they sagaciously seek out and enlist the services, as teachers, of the most learned, eloquent, and industrious men to be found in the profession; they spend time and money freely in filling laboratories, anatomical rooms, and museums with all the means for efficient teaching and illustration. So far their free rivalry has reference only to their office as teaching bodies—institutions for imparting instruction—and is productive only of the highest good to the profession and the people. But the anomaly consists in the fact that, at the same time, the same institutions have been rapidly shortening their annual courses; cutting off all collateral requirements; failing to grade the branches of medical study, as they have increased in number and extent, so as to adapt them to the several years of pupilage; and even reducing the final examinations to the simple process of asking a few oral questions in the mysterious "green room." This most unfortunate tendency of our experiment in permitting the freest rivalry in the establishment of medical schools, results directly and necessarily from the fact that the degrees they confer, and the diplomas they give, have been permitted throughout the whole country, with only a few temporary exceptions, to have all the force and effect of a license to practise medicine. It requires but a moderate familiarity with the motives that govern human actions, to see clearly that in a country where there are no entailments of estates, and where the great body of young men who seek the profession are without pecuniary fortune, and largely dependent on their own industry for the means of education, as well as reputation and fortune in after life, the question "where can I get the degree of doctor, which is equivalent to a license to practice, and a full admission into the ranks of the medical profession in the shortest time, and consequently with the least expenditure of time and money?" exerts a very great, if not controlling influence, in determining where the student shall attend his college instruction.

Not that medical students are a whit less conscientious, in their desire

to fully qualify themselves for the responsible duties of our profession, than those who seek any other calling in life. But present necessity, or even convenience, easily controls when there comes with it the flattering thought that, at another time, after having earned a little money by practice, all deficiencies can be supplied by a season of reviewing in a school of the largest facilities. Just on this half-unconscious delusion, hundreds are induced to go where the requirements in time and money are least, regardless of all other advantages. The medical college in a country village, remote from all facilities for clinical instruction in hospital or dispensary, and but scantily supplied with subjects for dissection, can issue to its graduates just as large a diploma, couched in just as unintelligible Latin, and having much the same influence with the people, as the school in a metropolitan city, where its students can have the largest facilities for clinical and practical study. Hence it is not strange that, before the end of the seventh decade of the past century of our existence as a nation, about forty medical colleges had been organized, only sixteen of which were so located as to afford their students any proper facilities for clinical instruction; and that these sixteen were attended by little more than one-third of the whole number of those who attended medical colleges.

The general acceptance of the college diploma as full admission into the profession, thereby uniting in the hands of the same men the business of teaching and the power of licensing, has continued to the present day; and is wholly responsible for the fact that, while we have sixty-three medical colleges to-day, one third of them are so located that they can afford their students no advantages for clinical instruction worthy of mention; and all, except three or four, still attempt to crowd instruction in all the departments of medicine upon the attention of mixed or ungraded classes, in annual college terms of from sixteen to twenty weeks, and exact only two such strictly repetitional courses for graduation. This state of things, in regard to our medical schools, is made still worse by the fact that, during the century under consideration, the system of private medical pupilage has undergone a complete change. At the beginning of that period, as we have already seen, the private study, under a master, was a protracted and serious work, and the resort to the college was simply to review and more fully illustrate that work. But steadily, as medical colleges increased in number, as populations became more dense, and as steamboats and railroads increased a thousand fold the facilities for travel, the work of private pupilage relaxed. Indentures of medical students, as pupils to the more noted practitioners, long since ceased, and the relations of student and preceptor have become merely nominal in practice, in nine cases out of ten consisting in little more than the registry of the student's name in the doctor's office, permission to read the books of his library or not as he chooses, and the giving of a certificate of time of study for the student to take to the medical college where he expects to graduate.

The relative position of the private pupilage and the collegiate studies has undergone a complete reversal. The latter, instead of reviewing and supplementing the former, has become the student's chief reliance for the acquisition of medical knowledge; and hence, to have maintained its adaptation or adjustment to the needs of the profession, should have not only increased the number of its professors and its means for communicating knowledge, but also the length of its annual courses, and the division or gradation of its classes in accordance with their period of study, and in proportion to the greatly enlarged field of medical know-

ledge to be acquired. And such would have been, to-day, the grand result worked out by our experiment of self-originating, self-sustaining, and unrestricted competition in the establishment and maintenance of medical schools, had they been restricted to their only appropriate function as institutions for imparting medical instruction and advancing medical science, instead of being hampered and perverted from their natural course by assuming the office of licensing institutions. And could this incubus be removed to-day, another quarter of a century would not pass before every medical college in our country would have its annual course of instruction extended to six months; its curriculum and classes so graded that the attention of each student should be restricted to such branches as are adapted to his period of advancement in study; and nine-tenths of all our medical students would be in attendance on those colleges only that could afford proper facilities for full clinical and demonstrative instruction.

Let the only question presented to the mind of the student, when choosing the college he shall attend, be where can he most certainly obtain that amount and variety of medical knowledge which will enable him successfully to pass the examination of an independent board of examiners, acting under liberal and enlightened rules and modes of testing the student's knowledge, and we shall have nothing to fear either from the number, or the rivalry, of our medical schools. The injurious tendencies of our system of uniting the work of teaching and that of licensing to practise, in an unlimited number of independent medical colleges, was seen at an early period, and clearly pointed out; and by none more clearly and forcibly than by some of those engaged in the colleges themselves.

So true is this that the Legislatures of some of the States, in organizing and regulating their respective State Medical Societies, made some ineffectual attempts to lessen the evil by legislation. This was particularly true in South Carolina, Maryland, Delaware, Massachusetts, and New York. As early as 1839, at an annual meeting of the Medical Society of the State of New York, the following resolution was reported by a committee, and, after free discussion in the Society, was adopted by a vote of fourteen to four: "Resolved, That the right of teaching ought to be separated as much as possible from the power of conferring degrees or licenses." The following year a committee, consisting of Drs. James R. Manly, of New York City, T. Romeyn Beck, of Albany, and John McCall, of Utica, submitted to the same Society an able and interesting report on the whole subject of medical education, in which occurs the following cautious but significant language: "But in view of the diploma becoming depreciated by the rapid establishment of new schools, it may well become a question deserving serious consideration, whether at no distant period the rights of teaching and licensing should not be *disjoined*. An incidental difficulty to the adoption of this suggestion, is the fact that we are surrounded by institutions in other States, which might or might not follow it, and thus our students be induced to desert our own colleges."¹

In 1837, the same view was advocated by some of the ablest members of the profession in Philadelphia, and they proceeded so far as to organize an institution for the purpose of examining candidates and of conferring degrees, wholly independent of the business of teaching. A petition

¹ See Transactions of the New York State Medical Society for 1840.

signed by one hundred and twenty-six physicians, residents of that city, was presented to the Legislature of the State, asking for a charter giving legal effect to their organization, but the charter was not granted and the project failed.

In 1844, the subject was again brought prominently under discussion in the meeting of the New York State Medical Society, by him who now addresses you. The discussion of the same subject was continued in the annual meeting of 1845, and resulted in the call issued by that society for a convention of delegates from all the medical colleges and societies in the United States, which was held in New York, in May, 1846, and from which originated the American Medical Association. I make these historical allusions to show that neither those engaged in medical teaching nor the profession at large have been unmindful of the evil to which I have attached so much importance. Yet it still exists in all its force. That the colleges have failed to keep themselves adjusted to the needs of the profession in regard to the length of their annual courses of instruction, the systematic classification of the branches included in their curriculums, the corresponding grading or division of their classes, and the exacting of a reasonable standard of preliminary education, has been still more fully appreciated and acknowledged.

Not only is this appreciation indicated by the criticisms in our medical periodicals and the discussions in our medical societies, and by the more general efforts of the colleges, since 1850, to increase the number of their professors, and the fulness of their curriculums, by piecing out their annual courses of instruction with two or three weeks of preliminary lectures at the beginning, and short spring courses at the end of the regular terms—all of which the student might attend or not as he chose—but in a still more formal manner by the proceedings of two or three conventions of delegates from the various schools, in which all the defects here stated relating to preliminary education, inadequate length of the annual courses of instruction, and the urgent need of a systematic division of the branches taught into groups appropriate for each year of study, and the consequent grading of the classes, with annual examinations of each class, have been fully stated, and a thorough plan of remedying them devised and urgently recommended to the schools for their adoption.

The first of the conventions to which I allude was held in Cincinnati, in May, 1867, and was presided over by the learned Prof. Stillé, of the medical faculty of the University in whose buildings we are assembled to-day. The second was held in the city of Washington, in May, 1870, and was presided over by the justly distinguished head of the faculty of the Jefferson Medical College of this city. A third convention of less formal character was held in this city, in June of the present year. If you ask me why these reasonable and highly important recommendations have not been adopted by the greater part of the schools, I can only point you for answer to the paragraph already quoted from the report on medical education made to the New York State Medical Society, in 1840, by that learned trio composed of Beck, Manly, and McCall. Or, more directly, to the fact that while the faculty of each school frankly acknowledges the defects in adaptation to the present enlarged field of medical science and art, and the urgent needs of the profession, each waits for the other to move first, lest, by placing higher requirements upon the time and resources of the student, it should cause its own halls to be deserted for those of its less exacting neighbor.

The efforts in this direction, however, have not been entirely fruitless

of practical results. In 1859, the Chicago Medical College, now the Medical Department of the Northwestern University, was organized for the express purpose of testing the practicability of establishing a school with a thoroughly graded and consecutive system of instruction. Its curriculum was made to embrace thirteen professorships, arranged in three groups, one appropriate for each of the three years of study required. The students attending were correspondingly divided into three classes, junior, middle, and senior. Each class was required to devote its time thoroughly to the group of branches and lectures belonging to its year of advancement in study, and to be examined fully in those branches at the end of the college term. Each of the three courses was continued six months of the year, and actual attendance on hospital clinical instruction, and practical work in the chemical, anatomical, and microscopic, or histological laboratories, was added to the requisites for eligibility to graduation. The very satisfactory success of this institution during the past fifteen years, and its present prosperity, certainly demonstrate the practicability of the scheme.

In 1871, the medical school of Harvard University, one of the oldest and most influential medical institutions in our country, also adopted a fully graded system of instruction, dividing her classes, and extending her courses of instruction throughout the collegiate year, and has continued this plan to the present time, adding annually to the perfection of its details, and adding also to her own prosperity and influence. The new medical school of Syracuse University, New York, has practically adopted the same scheme; and the annual announcements of several other medical schools, for the present year, including some of the most influential and important institutions in the country, give unmistakable evidence of their having taken initial steps in the direction of this most desirable change.

But our medical schools, aided by the work of the private preceptor, do not constitute the whole educational force or influence operating upon the profession in this country. Our social or society organizations, City, County, District, State, and National, have exerted, throughout the whole period of our history, a most potent influence over the educational interests of the profession. We had intended to sketch briefly the history of the more important of these organizations, but must not trespass further upon your time and patience on this occasion. It is sufficient to say that these society organizations, by their annual reunions of the profession in almost every State and important city in our wide domain; by the opportunities they afford for the presentation of papers, and comparison of views in free discussion, not only in relation to scientific and clinical matters, but in relation to every interest whether of medical science or medical polity, have exerted indirectly an influence over the progress, the education, and the general character of the profession, hardly second to that of the organized schools. And if the profession, as represented in these social organizations, would boldly move on in the exercise of its own most important right and duty—by fixing for itself both the standard of preliminary and professional education necessary for young men to attain before admittance into its ranks, and by appointing the necessary tribunals for enforcing that standard, thereby leaving the colleges to their only legitimate work, that of imparting instruction—the latter would speedily adjust themselves perfectly to the actual educational needs of the profession.

Because we have endeavored, in reviewing the progress of our educa-

tional institutions during the past century, to indicate what we regard as their most important defects, let no one infer that we belong to that class, who, in any degree, undervalue the past work or present influence of our medical schools. We do not agree with those who would compel every young man who desires to spend his life in alleviating the sufferings of the sparse populations of our mountains and prairies, to spend the best part of his youth in the vain endeavor to become an adept in the native languages of Cicero and Hippocrates; nor would we discourage the laudable ambition of that large and most valuable class of our young men, who are largely dependent on the proceeds of their own labor for their education, as well as for their advancement in after life, nor foster the indolence of the more wealthy by copying the five, six, or seven years of professional collegiate study from the institutions of Europe. Neither do we agree with those who regard the establishment of a National professional school by our general government, or the endowment of State colleges, with professors salaried out of public funds, as the panacea for our ills. To invoke the patronage of either National or State Governments, in this country, in the regulation and support of medical schools, is simply equivalent to asking that the lobbies of every legislative body in the country shall be annually filled with the log-rolling satellites of every "pathy" and "ism" of the day, that the professorships of our colleges shall be transformed into political sinecures, and that the colleges themselves shall become the foot-balls of partisan politicians.

On the contrary, we believe that our system of medical college instruction, with all its defects, has developed in strict consonance with the spirit of a free and enlightened people, in the comparatively short period of one hundred years, a body of medical men as enlightened, enterprising, industrious, and self-sacrificing, as faithful to the interests of the people, and animated by as noble an *esprit de corps*, as is to be found in any country on the globe. And not only so, but that these same schools have done their full share in creating and sustaining that progress in medical science and literature, which has been demonstrated to this Congress so fully in the most interesting Addresses to which we have listened, on the various departments of medical science and art.

Let us, then, in the same self-reliant, independent spirit, which actuated those who founded, and with the same untiring zeal and generous emulation which characterized the host of others who have sustained and developed, the medical institutions of our country thus far, endeavor to manage wisely the high trust they have left us. Let us neither be blinded by reverence for the past, nor be fretful with impatience because clearly perceived evils will not flee at our bidding, nor yet, with childish weakness, call on the Hercules of government to do our work for us; but let us with boldness yet persevering steadiness of purpose, carry forward our educational organizations, both collegiate and social, enlarging their foundations, improving their adjustments, and adding to their superstructure; and we shall thereby most certainly enable those who come after us in celebrating the next centennial anniversary of our national progress, to review our work with the same pleasure and profit that we derive to-day, in contemplating the works and characters of those whose names are an honor to the century which has just passed.