Abraham Flexner and the Development of the Yale School of Medicine

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Abraham Flexner first toured the Yale University School of Medicine in preparation for his report of 1910, but it was just the beginning of his relationship with the school. While his review of Yale in his report was generally favorable, he mentioned several shortfalls that needed to be improved to make the school acceptable. Throughout the next twenty-five years, Flexner worked with Deans George Blumer and Milton C. Winternitz to improve the school’s finances, infrastructure, and quality of education through his work with the Carnegie Foundation and General Education Board. Flexner has been given great accolades for his work on medical education for the country, but little mention is made of him at Yale, even though he was one of the most influential figures in the development of Yale in the last century.

INTRODUCTION

In 1908, Abraham Flexner was searching for work that would allow him to cover his debts. After receiving his bachelor’s degree from Johns Hopkins in 1886, he taught high school in his home city of Louisville. He started tutoring several students outside of his primary job, and from this he founded his own private high school, which drew the attention of Charles Eliot, President of Harvard University. Flexner’s students were entering younger and graduating earlier from Harvard than those men of the elite New England preparatory schools [1]. Eliot suggested that he write an article about his teaching methods, which was published in The Educational Review in November 1899. A few years later, he decided to close his school and travel to Europe to study its education system. Before going, he felt he needed to educate himself more, so he decided to enroll at Harvard to receive a graduate degree. His experiences at Harvard and travels in Europe led him to write a book on the American College system. It contained several innovative ideas, but the university establishment did not act on any of them at the time. Fortunately, Dr. Henry Pritchett of the newly founded Carnegie Foundation for the Advancement of Teaching had read it. The American Medical Association’s Council on Education had approached Pritchett about completing a study of medical schools in the United States and Canada. Pritchett decided that Flexner was the proper person to undertake this report. Flexner thought Pritchett had confused him with his brother Simon, a well-known physician at the Rockefeller Institute, but Pritchett explained, “This is a layman’s job,
not a job for a medical man” [1]. Pritchett wanted the focus of the report to be on education, not medicine.

Abraham Flexner, working for the Carnegie Foundation, visited every medical school in the United States and Canada in 1909 and 1910. As a result of this, he published Bulletin Number Four, a vicious critique of medical education in North America. His report swept across the nation like a tornado. Private ventures with profits divided among professors were demonstrated a less than desirable method of medical education. In its place, Flexner argued that quality facilities and clinical teaching were necessary for the proper education of the medical student and for the future of medicine in North America.

**FLEXNER’S ASSESSMENT OF YALE**

In January of 1910, Flexner visited Yale University to assess the school’s situation. The Yale Medical School was located advantageously at this time because of its place within New England. While New York and Massachusetts were crowded with schools, Yale was the only school in Connecticut. New Haven was a small city, but large enough to support three hospitals. Instruction in medicine had started in 1813, when Yale College and the Connecticut Medical Society jointly petitioned for a charter to establish a medical seminary called the Medical Institution of Yale College [2]. In 1884, Yale took full responsibility of the school, and in 1887, it became the Medical School of Yale University.

Compared to most other institutions he visited, Yale received a favorable report. Flexner said that by requiring at least two years of college, the school had “unusual conscientiousness” in its admission requirements and that even though the professors were overworked, they performed well under the circumstances [3]. The laboratories of organic chemistry, physiology, and pharmacology were all deemed satisfactory, and the New Haven Hospital, in which the school controlled a few beds, was “very intelligently employed.”

However, the school did have several problems that Flexner thought needed to be fixed. He noted that the departments of bacteriology, pathology, and anatomy were not performing well. There were not enough assistants in the laboratory departments, and this meant professors were forced to perform routine work instead of teaching and research. The hospital also needed improvements such as a contagious diseases pavilion and more postmortems. Obstetrics and gynecology were not taught in the hospital but rather in the dispensary, an outpatient clinic, located across the street, where, because the staff worked gratis, care was not diligent and quality varied greatly. Flexner felt that Yale needed more money for facilities, professors, and staff if it were to serve the needs of New England.

There were other problems that Flexner did not note in his report. At the time of its publication, the Yale Medical School was in poor financial conditions. The school had been relying on the University to cover its debts for years [4]. Many professors within the University saw it as an extra appendage that was draining away resources that could pay their salaries. The endowment of the medical school in 1910 stood at $225,000, not including the money it received from the University endowment [5].

Furthermore, unlike its early days on Grove Street or later on York Street, there was no central location where all the classes were taught. It was housed in four buildings located throughout downtown New Haven. Medical Hall, on York Street, had two lecture rooms, two large working labs, and two smaller labs, where the department of anatomy was located. The Laboratory Building contained the department of pathology and bacteriology and the department of physiology and pharmacology. The University Clinic and Clinical Laboratory Buildings were located about five blocks away from these other structures. The Clinic was built in 1901 and housed the New Haven Dispensary and an amphitheater for lectures. The Clinical Laboratory adjacent to it was the research space for the departments of medicine, surgery, and obstetrics and gynecology.
Over the next twenty-five years, the school would see an enormous transformation under the guidance of its two deans, George Blumer and Milton Winternitz. The major impetus behind these changes was the belief that a strong hospital would create a strong medical school. Better faculty could be attracted to the school, thus providing better instruction to better students. While there were large changes within the school itself during this period, these followed the improvements made in the hospital. The man who has received the least credit for this transformation, yet who sparked these changes, was a man with no formal affiliation to Yale: Abraham Flexner.

THE GEORGE BLUMLER YEARS

Flexner was not the first to realize that medical schools needed more money. George Blumer was the John Slade Ely Professor of the Theory and Practice of Medicine from 1907 to 1920 and Dean of the Medical School from 1910 to 1920. In 1907, he said, “If medical teaching is to be put on a proper basis it will become more, rather than less expensive. How to meet the demands of this increased expense is the question which the American medical college must answer” [6].

Blumer specifically wanted money to integrate the hospital and medical school, something Flexner thought was an absolute requirement for a medical school. While the dispensary was useful for showing a wide variety of cases, the students did not see the progression of a disease as could be seen in the hospital. The school could control the hospital, where its students would learn from its physician-professors.

Adjacent to the University Clinic and the Clinical Laboratories, the New Haven Hospital was nicely located to be the main clinical teaching location for the students. In 1911, Blumer had explicitly stated his desire to make the New Haven Hospital the primary teaching hospital of the Yale Medical School [7]. To accomplish this, he wanted an additional building added to the hospital for pathological and clinical laboratory work and new professors, clerical staff, and custodial staff for the facility. He thought the university and medical school should raise the projected costs of $640,000 for endowment and $80,000 for the building.

In 1913, Blumer’s requests were realized by a $500,000 donation from the Anthony M. Brady Foundation, with an annual income of $25,000 provided towards an agreement between the hospital and the medical school. This agreement stipulated that the medical school construct and control the Brady Memorial Laboratory but that its use was for the hospital. Furthermore, the Yale Corporation, under direction of the medical school, was responsible for appointing physicians to the hospital. The proposal for the agreement was prepared with the help of Flexner, who declared it as “an admirable one — one of the very best that has yet been made in this country . . .” [8].

On May 19, 1913, the Yale Corporation accepted the agreement, later amended in 1918. The Brady Laboratory housed the departments of pathology and bacteriology, pathological chemistry, obstetrics and gynecology, and medicine. The most important utilization of space in this new building was for the routine laboratory work of the hospital. The notion of a closer interconnection between the medical school and hospital, epitomized in this agreement, represented all that Flexner wanted. In a letter to the Secretary of Yale University, Anson Phelps Stokes, Flexner wrote that this new agreement was exactly what the medical school needed as long as there were further improvements in the hospital. Flexner saw the raising of a larger endowment as the next step, and he hoped that Yale graduates would provide these funds.

Fortuitously, alumni were giving more generously at this time than ever before. The endowment had risen ten-fold since the publication of Flexner’s report ten years earlier, but it was still not enough to correct all of Flexner’s complaints [9]. Blumer was very hopeful for the future of the school and petitioned the Carnegie Corporation for funds. He asked for $250,000 towards one million raised by the University during 1914, and
another $250,000 towards another million dollars the next year. The money would be used to set up the full-time system at Yale for the departments of medicine, pediatrics, and obstetrics and gynecology. Blumer was rewarded by a gift of $250,000 by the Carnegie Corporation and $582,900 from the General Education Board. The Board was a philanthropy started by John Rockefeller that gave gifts to educational institutions in the hopes that it would stimulate neighboring institutions to improve. Such was the logic when it gave $1,500,000 to the Johns Hopkins University to improve the medical school, with the intent it would become an “ideal” institution all others would strive towards. Later, in 1918, Flexner accepted a position on the General Education Board.

Blumer’s last creation for the hospital was the Isolation Pavilion for contagious diseases, a completely separate building southwest of the main ward built in 1919. The William Wirt Winchester Hospital in West Haven also came under the control of the New Haven Hospital at this time. It was used by the United States Public Health Service and Army for tuberculosis patients and later became the VA hospital.

MILTON WINTERNITZ BECOMES DEAN

In 1917, Flexner was instrumental in the appointment of the new Professor of Pathology at the Yale School of Medicine. Flexner had mentioned the weakness of pathology at Yale in his report, so Blumer consulted him for this position. Flexner suggested Milton C. Winternitz, who had previously worked at Johns Hopkins under the famed William Welch. Winternitz accepted the position, and within three years he was chosen as Dean of the Yale School of Medicine. Winternitz brought with him the energy and desire to build the school into a top institution. Knowing he needed help, he asked Flexner to visit the school and make suggestions on what needed to be changed. Flexner asked Winternitz for a detailed list of what he saw as the needs of the school.
oratory School but was then housing the department of surgery. Its condition was decrepit, described as “crowded and noisy, hot in summer and cold in winter, and not fireproof” [11]. There were only seven faculty members at the school, two of whom were primarily affiliated with other schools in the university [10]. Two professors had recently resigned and one had announced his intention to do so. It is obvious that Flexner’s remarks were true.

The Yale Corporation passed a resolution that year making the medical school a priority. It stated:

That the Corporation accept as a policy the development of a medical school of the highest type to include the pre-clinical and clinical years of instruction upon such principles of medical education as may be approved by the Corporation, after conference with the Medical Faculty.

That every effort be made to obtain at the earliest possible date the necessary funds with which to expand and develop the buildings, the equipment, the instruction, and the research, and the service, in accordance with the best ideals of modern medical education — as an essential unit of our University Plan of Development [11].

Yale’s President, Arthur Hadley, was skeptical that Yale could raise the funds or make the suggested changes without angering too many people. Local physicians and surgeons were worried that a better medical school and hospital would drain away their patients. Also, Hadley had organized a committee comprised primarily of Yale College graduates who had become prominent physicians and surgeons. They recommended that Yale not try to become a first-tier school because of the lack of sufficient clinical facilities in the small city of New Haven [4]. A dinner was arranged with Colonel Isaac Ullman, the Chairman of the Board of the New Haven Hospital, where Flexner, Winternitz, and Ullman would discuss the prospects of the hospital. Flexner explained to Ullman that the whole hospital needed to be reorganized, an effort that would have to be financed by the people of New Haven. Ullman wanted the General Education Board to contribute generously to the project, but Flexner explained the structure would belong to the University and people of New Haven, so the Board would only help in part.

Meetings like this between Flexner and Winternitz were important in that they solidified Flexner’s interest in Yale. While Blumer and Flexner had a very professional relationship, Winternitz and Flexner became great admirers of one another and, over the next 35 years, close friends. It was this relationship that kept Yale a priority for Flexner and, therefore, the General Education Board, and helped the Yale School of Medicine to raise the money it needed to rebuild its physical plant and faculty.

NEW AND DESIRED BUILDINGS FOR YALE

The 1920s saw a massive rebuilding of the hospital and medical school. The endowment soared as money was used to construct new buildings, provide for new professors, and give scholarships and loans to students. The first new building was funded by the Trustees of the Estate of John W. Sterling, an 1864 graduate of Yale College. This structure, called the Sterling Hall of Medicine, was to house the departments of anatomy, physiology, pharmacology, and toxicology and a medical library, which was previously housed in the Brady Building. In 1921, a temporary Laboratory of Medicine and Pediatrics Building was built for $85,000 [12]. It was attached to the Gifford Ward of the hospital and contained both offices and laboratories. A donation of $175,000 in 1922 created the Boardman Administration Building, which served the clerical functions of the hospital. The Private Pavilion of the hospital was built in 1923 for $400,000. The chair of surgery was endowed by the William Henry Carmalt Fund, and the Sterling Trustees endowed the Chair of Pediatrics. The two buildings located on York Street were closed in 1923 to consolidate the location of the school to the Cedar
Street area. As Winternitz wrote to the Provost in 1921, “It has long been recognized by medical education that the fundamental premedical sciences would be located in geographic proximity to the clinical sections of the School of Medicine” [13].

Winternitz’s plan was outlined in the document The Past, Present, and Future of the Yale University School of Medicine and Affiliated Institutions [14]. He saw twelve needs for the medical school and hospital. The medical school needed to complete an endowment campaign of $2,000,000, an educational endowment for psychiatry and tuberculosis, and classrooms and laboratories for pathology and bacteriology. The hospital needed a laboratory for surgery, a service building, a central dispensary, an extension of the woman’s clinic for obstetrics and gynecology, a new pediatrics pavilion, rehabilitation of the Gifford Wards, and an increased endowment. Lastly, a school of nursing was needed for the University. It was the hospital facilities that needed the greatest improvements, and Winternitz believed that these changes in the hospital would contribute greatly to the quality of the adjoining medical school.

**FLEXNER AND WINTERNITZ BUILD**

Throughout the next decade, Flexner and Winternitz maintained both a personal and professional correspondence. Many letters by Winternitz open by stating the progress at the medical school and end with stories of his children. Their letters show the admiration and respect each had for the other and kept Flexner interested in the development of the Yale School of Medicine into a first-class institution. In 1924, Winternitz wrote Flexner asking the General Education Board for $11,000 towards two assistant professors and three clerical positions [15]. On the next day, he received an affirmative response from Flexner. While Flexner was only one member of the Board, his voice held great sway in matters of medicine. He could never guarantee the Board would vote according to his desires, but rarely did it disagree with his recommendations. Therefore, having Flexner’s approval was effectively the equivalent of having the Board’s.

Winternitz understood that he was asking much of his friend. A letter dated the following year shows both the professionalism of the positions they held, but also a humor that marked their friendship. “All I have to say is that if you are not bothered any more by the deans of the other medical schools than you are by me, your life must be one of blissful tranquility” [16]. Flexner responded that he was not bothered by Winternitz in the slightest. In a later letter, Winternitz asked for the “privilege of a formal interview” with Flexner to discuss a building at Yale. Flexner wrote back, “Don’t ever write me asking for ‘the privilege of a formal interview’: ‘Privilege’ and ‘formal’ be d—!” [17]

The purpose of that interview was to discuss the building program. The Board had donated $1,250,000 to build Farnam Hall, Lauder Hall, and an extension of the Brady Lab, but Winternitz wanted one more building. A Western Union telegram from Flexner shows the response of the Board to his request: “Go ahead and put up your durn building” [18]. The Board donated $500,000 for a building and an additional $850,000 towards $2,000,000 the University would raise. From this gift, a permanent Laboratory for Medicine and Pediatrics was created. The Board would also give the money for the Clinic and Service Building, completed in 1931.

**THE INSTITUTE OF HUMAN RELATIONS**

In 1928, Flexner retired from the General Education Board, but this did not stop his interest in the affairs of the Yale School of Medicine.

The next year, Winternitz created the Institute of Human Relations, which combined faculty from the Medical School, Law School, and Social Science Departments. He wanted a place for the study of the human in society, a discipline whose perspective con-
trasted with the biochemical reductionist view of humans that pervaded the sciences at the time. He saw this as “an atmosphere inhibiting the production of doctor-technicians, but favoring the development of physicians and humanitarians.” The Rockefeller Foundation and General Education Board helped fund the $7,500,000 startup costs. The combined institutions of the Yale School of Medicine, New Haven Hospital, Yale Nursing School, and the Institute of Human Relations became known as the Human Welfare Group.

The Institute represented the first major disagreement between Flexner and Winternitz over the future of the medical school. Flexner thought that the school was expanding too fast and not enough energy was going into production [19]. In 1926, the school switched to what is now known as the Yale System of Instruction, allowing more time for electives and revising the examination system, but that wasn’t enough for Flexner. Winternitz disagreed saying:

I do not believe that the expansion has been too rapid. Indeed, I am inclined to take the opposite viewpoint, and I think what you have done for education is so outstanding and as time goes on it will become even more so that the point of view your letter suggests must come from irritation that should have no part or place in your thoughts [20].

Flexner’s main fear was that Winternitz had become overly single-minded in his purpose of raising funds and planning buildings, but felt that eventually the two would see the positive results of their transformation [21].

The Institute, although the brainchild of Winternitz, seemed a terrible waste of money to Flexner. He tried to be congenial in his evaluation of the school, but soon expressed his extreme dissatisfaction with the dean’s plans: “I confess that it worries me as one more of very many instances of vast undertakings commenced without penetrative or sufficient thought and without regard to the other obligations of American Universities” [22]. After he looked at the actual plans for the building, Flexner thought the Institute was just a cover for the departments of psychology and psychiatry, providing little space for the supposedly integral sections of anthropology and social sciences. However, he did not stop its construction.

**WINTERNITZ RETIRES**

When Winternitz left the Deanship in 1935, he had dramatically transformed the school. The endowment stood over eight million dollars with an annual budget approaching one million dollars [23]. What is amazing is that tuition was only raised once from 1922-1935. In 1927, the student’s burden rose from $300 to $500, but the matriculation fee of five dollars and the graduation fee of twenty dollars remained constant [24]. The combined Human Welfare Group had a total floor space of 423,000 square feet in 1935, over five times the amount of fifteen years earlier [11]. All the buildings were located along Cedar Street as opposed to the buildings on Park Street and York Street that had existed earlier. In these buildings taught 27 professors and sixteen clinical professors of the highest scholarship and training [25].

Upon the announcement of Winternitz’s retirement, Flexner sent a note expressing his amazement at the work of the dean:

Your name will be forever remembered as one of the architects of modern medical education in the United States. When I think of Yale Medical School as it was when you went there from Baltimore and as it is now that you are retiring from the Deanship to devote your thought and time to your chosen subject, I cannot but feel that the progress made in New Haven is well nigh miraculous, and it is all due to your unflagging energy and ability, despite the pressure of care during so many of those fateful years [27].

Winternitz was honored by Flexner’s remarks, considering that Flexner had been involved throughout the whole process. Winternitz, like others, considered Flexner the authority on medical education and ap-
preciated his approval of what he had created on Cedar Street.

President Angell said upon the retirement of Dean Winternitz, “The University is under deep and lasting obligation to Dr. Winternitz, and the School of Medicine will always stand as a monument to the wise and devoted service which he rendered at a critical period” [26].

After Flexner retired from the Board, he became intimately involved in the creation of the Institute for Advanced Study in Princeton, New Jersey. He died in 1959 at the age of 93, but his legacy at Yale is obvious in the structures on Cedar Street.

Abraham Flexner never received any official gratitude from Yale University. Even though he never attended Yale, he showed more of a “devoted service” to the university than most alumni. Flexner will not be forgotten, though. No person is as intimately tied to medical education as he, and no outsider directed more money or effort to the Yale School of Medicine during this critical period.

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