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**SOCIAL STRUCTURE AND MEDICINE,
MEDICAL EDUCATION AND MEDICAL STUDENTS
IN FRANCE AND THE UNITED STATES (1820-1861)**

In this period, from 1820 to 1861, France attained superiority in medicine and medical education. The immediate cause was the French Revolution in 1789. It liberated the minds of men from a feudal society, and its intimidating, paralyzing, religious institutions. Poverty no longer stood in the path of careers in medicine and science. The door of medical schools were open to all who qualified ; and many penniless youths were able to achieve their cherished goals. Medical schools were now freed from the fetters of theology, scholasticism, and sacrosanct authority ; and hospital medicine was cultivated in place of endless philosophic discourse.

Parallel to this trend was devotion to morbid anatomy to uncover the seat of disease and its relation to symptoms. « De sedibus » was avidly studied ; and the strangling theory of humors in the pathology of disease was discarded. Pinel and Bichat were among the first to express opposition to humoral imbalance as explanation for disease origin. Clinicians and surgeons, whose accomplishments place them among the best in the history of medicine, were the products of this new teaching, and became the distinguished professors of the medical schools and the great Paris Hospitals. Their roster reads like a page from Garrison's History of Medecine where they are inscribed : Andral, Chomel, Trousseau, Orfila, Magendie, Louis, Laënnec, and a host of remarkable surgeons : Lisfranc, Velpeau, Roux, Larrey, and Dupuytren who inspired profound respect and awesome fear, and whose students pulled his casket in reverence and grief to Père La Chaise cemetery.

Medical students from almost every country converged on the Paris hospitals, which were free, and of many types : medical, surgical, venereal ; for the old, the blind, the insane ; the incurable and for children, the first of its kind in the world. There were thirteen general and eleven specialty hospitals, and twelve hospices that made available over 20,000 patients, and a myriad of diseases to investigate. A plentiful supply of cadavers, obtainable for a few sous, gave access to normal and abnormal anatomy.

Students had the stethoscope to explore the chest ; were taught diagnosis by use of eye, ear, and hand, saw mental patients liberated by Pinel from the cruelty of chains ; and acquired experience in obstetrics, dermatology, ophthalmology, neurology, venereology, and chronic ailments. Perhaps, their most exciting experience was to observe mastersurgeons, noted for familiarity with normal and pathologic anatomy, perform intricate surgery with uncommon speed, dexterity, and skill, and without antisepsis and anaesthesia, yet undiscovered.

American students, who numbered about 700, came from Philadelphia, Baltimore, New York, Virginia, Boston, and Charleston ; and returned to contribute to

a new era in medicine and surgery in America. They came poorly equipped for the practice of scientific medicine ; possessed scant knowledge of anatomy, chemistry, pathology, and physiology, and many were lacking in practical clinical experience.

Let us now look over the shoulders of some Americans in their lodgings, seated at a table illuminated by candle light, writing home about their experiences. James Jackson boasts : « I examine about 100 cases of living disease daily : and the interesting cases are without end. »

Oliver Wendell Holmes writes : « In less than two months I acquired a knowledge of diseases of the skin that astonished myself. I have seen in a morning 80 cases under the eyes of the first authority in the world. »

Jonathan Mason Warren exalts : « I watched Dupuytren amputate an arm, one of the most beautiful operations I had seen : Roux remove cancer from the face, cut out a cancerous elbow joint, remove cataracts, amputate the neck of the uterus, perform lithotrity, and operate on fistula-in-ano and hernia ; Larrey cauterize an ulcer ; Civale perform rhinoplasty ; Ricord castrate a patient for tuberculous testicles ; and Lisfranc remove the neck of the uterus. »

Ashbel Smith is in a quandry : « There is so much offered, and the greatest difficulty is the selection of courses. In America, I sighed after opportunities for improvement. » Holmes advises : « Because of the availability of subjects, one who knows how to use his hands may become an expert operator in a few weeks » ; and adds : « Follow me to the Hotel Dieu where rules and reigns the master surgeon of the day, the illustrious Baron Dupuytren. » W. W. Gerhardt lauds Louis : « A remarkable man, very different from physicians from England and America. »

René La Roche concludes : « The French plan of instruction is superior to that found in our schools ; and French anatomy, surgery, pathology, and physiology are the best in the world. »

Elisha Bartlett compares : « The familiarity of distinguished physicians and surgeons with their students contrasted with the proud and haughty carriage of some of our New England professors. » He advises : « By using such rigorous empirical methods, Americans can become fact-finders instead of pompous phraseologists. »

Holmes contributes a glowing tribute : « The standard of medical teaching is such that the student may return a more rounded physician at 25 than many who slumbered till 60 in our languid, scientific atmosphere. » Peter Porcher condemns : « Teaching medicine in the United States is so much of quacks, so little of science, it is quite trash. »

Holmes summarizes what he will bring home from Paris :

« Not to guess when I can know.

« Not to take authority when I can have facts.

« Not to think a man must take physic because he is sick. »

Paris was not only the apogee of world medicine to American students, but an exciting city of Gallic refinement, politness, and culture, of theatre, art, music, literature, drama, opera and museums. Charles Thomas Jackson notes, « The French are polite and urbane. »

James Young Bassett, Osler's Alabama Student, accepts an extership under Velpeau, and assures Mrs. Bassett that although this good fortune will prolong his stay in Paris, it will, also, « keep him out of bad company ».

Holmes reviewing Parisian enticements pledges : « To take his work with

all his might, and his pleasures very moderately.» This, apparently, was the fine balance adopted by all his compatriots. There were no scandals.

It is important to understand why American medical students left their country and undertook a difficult, hazardous sea voyage at that time to study in France.

For many it was costly, involved sacrifices, and a long period of separation from family.

The American medical scene in the 19th century was, in large part, barren and depressing. Profitable proprietary schools multiplied and operated without restraint nor barriers to admission ; and the curriculum provided, at the highest fee obtainable, a series of short lecture courses over a two year period. Practical instruction was usually lacking, and limited hospital facilities precluded observation of sick patients. Few schools provided normal or pathological anatomy, since the availability of cadavers was severely limited due to widespread opposition to dissection. A graduate who sought practical clinical experience, became an apprentice for two years, and accompanied a preceptor on daily sick calls.

To the sincere physician entering the practice of medicine, discovery of widespread quackery and incompetence was distressing ; and equally painful was the public distrust and contempt for physic and physicians.

As early as 1818, John Sterns, president of the New York Medical Society, asserted, « with few exceptions practitioners were ignorant, degraded, and contemptible ».

Samuel D. Gross, a distinguished surgeon and pathologist, called it, « a hopeless situation ».

Nathaniel Chapman, first president of the American Medical Association, proclaimed : « The profession has become corrupt and degenerate arising from the ready admission of individuals by whom it is debased.» William H. Welch thought, « there was no prospect for improvement ».

This barren period in medical education and science was, in great part, the result of unchecked, limitless free enterprise. It began in 1800 when machines replaced man power in manufacturing. The Industrial Revolution, in time, transformed the United States from a handicraft, agricultural economy into the leading industrial nation in the world. Its growth and expansion in the 19th century was possible with doctrines of laissez-faire that reached only for ruthless power, money, and unchecked individualism regardless of its moral, physical, environmental, or health consequences.

Among its casualties were education, medicine and medical education, science, and the essential regulations in the practice of medicine for public protection. Shattuck in 1845, decried the affect « on the health of the population of this reckless speculation and thirst for wealth in America ».

Sigerist believed, « proprietary medical schools were an expression of a society that worshipped principles of unchecked free enterprise and unlimited laissez-faire, and not so much the result of emergency and need of doctors ». He also thought that in this period « whoever gave up money-making to live for science was considered a crank ». Welch was regarded as too incompetent to practice medicine and, hence, his choice of laboratory medicine as a career.

Fortunately, towards the end of the 19th century, a more efficient government abandoned laissez-faire ; and funds established by more realistic financiers made possible Abraham Flexner's dramatic Bulletin number 4 in 1910, which gradually liquidated and elevated medical schools and medical education.

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