# *Humanitas*

Nineteenth-Century Physicians and the Classics

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Presented to the Richardson History of Psychiatry Research Seminar

Weill Cornell Medical College

New York-Presbyterian Hospital

October 3, 2007

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"As *for myself, I am grinding up my Latin, and various other subjects . . .*"[1]

-- James Mackenzie, founder of modern cardiology, on the eve of his entrance examinations to Glasgow University in 1874.

"*Among the things to watch may be excessive use of esoteric terms – e.g., Latin phrases. They come naturally to me with my classical-education background but might look 'stuck-up' to some readers."*

--Heinz Kohut, founder of psychoanalytic self psychology, to Paul Stepansky, his editor, 22 May 1981

In the 19th century, the greatest of centuries (!), physicians seeking enlightenment about the nature of suffering and the goals of medicine – to borrow the title of a book by Eric Cassell, one of Cornell's own – did not have to seek out the writings of a gifted medical literati. "Illness narratives" devoted to

[1]Alex Mair, *Sir James Mackenzie, M.D., 1853-1925, General Practitioner* (London: Royal College of General Practitioners, 1986), p. 27.

"suffering, healing, and the human condition" – to borrow the title and subtitle of a book by Arthur Kleinman[2] – were not the province of a tiny cohort of medical authors, the kind of authors who in our own time make their way to the New York Times Bestseller List: an Oliver Sacks, a Richard Selzer, a Sherwin Nuland. Nor did the "human" side of medicine require special curricular adjustments on the part of medical educators. We search in vain for "courses" introducing medical students to the human dimension of illness and the human consequentiality of medical intervention. No one was giving lectures on the role of therapeutic empathy in patient care. No, in the 19th century, in both Europe and America, students were expected to learn these and other existential lessons in the manner they long had: through mastery of Latin and Greek and diligent study of the classics. Just as the notion of *pietas* – that foundational duty to one's gods, one's society, and one's family – weaves its way through Virgil's *Aeneid*, so the study of the classics writ large, especially the study of Latin, weaves its way through the history of modern medicine. The inspiration provided by the ancients was a guiding thread in the lives of those great pioneers who dragged medicine into the realm of scientific "doctoring" in the 19th and early 20th centuries.

On rare occasions, the inspiration was tantamount to instrumental guidance. Dare we forget that Rudolph Matas's deep grasp of ancient medicine led him to the Greek surgeon Antyllus, who devised a surgical approach for treating aneurysms around 300 A.D. while tending to Greek soldiers injured

[2] Eric J. Cassell, *The Nature of Suffering and the Goals of Medicine* (New York: Oxford University Press, 1991); Arthur Kleinman, *The Illness Narratives: Suffering, Healing, and the Human Condition* (New York: Basic Books, 1988).

fighting Visigoths during the reign of Valens. Matas revived and modified Antyllus's method in repairing the traumatic brachial aneurysm of one Manuel Harris, a plantation field hand brought to him in 1888. His development of endoaneurysmorrhaphy technique (aneurysmoplasty), which he credited entirely to Antyllus, rendered him the father of modern vascular surgery. Sir William Osler, no slouch himself when it came to the classics, lauded Matas's achievement amid the wounded British soldiers flowing into Oxford's Radcliffe Infirmary in 1915. His great friend and compatriot, he averred, had brought the possibility of vascular repair to army surgeons; Matas, he proclaimed, was a "modern Antyllus."[3] And to adduce an example closer to home, dare we forget that Freud took as motto of *The Interpretation of Dreams* Juno's angry riposte in the seventh book of Vergil's *Aeneid*, "*Fluctuat si nequeo superos, Acheronta movebo*" (VII, 312)[4] -- and later characterized his science of dream interpretation as a return to the "prejudice of the ancients," a "follow[ing] in the footsteps of the dream-interpreters of antiquity."[5]

But obviously this kind of inspiration is not what I have in mind in a talk bearing the title *Humanitas*. No, I want to look more broadly at the classics as the reservoir of medical humanism from which19th-century physicians drank liberally throughout the century. And while I am especially concerned with the animating role of Latin and the classics in the careers of certain of the most

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[3] Isidore Cohn, *Rudolph Matas: A Biography of One of the Great Pioneers in Surgery* (New York: Doubleday, 1960), pp. 201-215; Steven G. Friedman, *A History of Vascular Surgery* (Mt. Kisco, NY: Futura, 1989), pp. 65-67.

[4] Juno, wife and sister of Jupiter, was incensed over her failure to keep Aeneas and the remnant of his Trojan force from reaching Italian soil, where they would found Rome.

[5] Sigmund Freud, "Introductory Lectures on Psycho-Analysis," in *Standard Edition*, vol. 15. London: Hogarth Press, 1961. Quoted at p. 87.

illustrious of 19th-century physicians, I begin by reminding you that knowledge of classical writings – and the languages in which they were written – was not limited to the great scientists and clinicians who bequeathed us modern medicine. Nor was it associated only with the great European universities, such as Glasgow and Edinburgh, where preliminary examinations in various subjects, including Latin, had to be passed prior to studying for the medical degree. Throughout the European continent, Thomas Bonner has observed, "a diploma from a classical secondary school had long been a sine qua non for admission to medical school."[6]

This fact should not surprise us: Knowledge of Latin was the great 19th-century signpost of general knowledge. It was less an index of education achieved than testimony to educability per se. As such, it was an aspect of cultural endowment essential to anyone aspiring to a learned profession. For this reason, German and French medical faculties fought throughout the 19th century against movements to broaden medical school admission to graduates of more modern, scientifically oriented secondary schools. The graduates of such schools, the German *Realschulen* among them, were devoted "for the most part to the practical life [and] the acquiring of material goods."[7] That is, they lacked the humanistic sensibility, inculcated through study of the classics, which was foundational to the professions.

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[6] Thomas Neville Bonner, *Becoming A Physician: Medical Education in Great Britain, France, Germany, and the United States, 1750-1945* (New York: Oxford University Press, 1995), p. 286.
[7] Draft letter by the Dean of the University of Bonn to the German Ministry of Education, January 4, 1879, cited in Bonner, *Becoming A Physician*, p. 286.

Nor was the dependence of medical literacy on classical training lost on the colonists who imported European models to the New World. The first medical institution in America, the Medical College of Philadelphia, codified the relationship in its founding rules and regulations of 1767. Students wishing to enroll for a medical degree, so held the school's trustees, "were required to demonstrate a knowledge of Latin and of such branches of mathematics and physics as were judged prerequisite for medical study." Students who successfully completed the college curriculum, attended the practice of the Pennsylvania Hospital for one year, and served an adequate apprenticeship with a reputable practitioner – these men became candidates for a medical degree. But they graduated only after submitting to rigorous oral examination by the faculty that typically included Latin and natural philosophy along with the subject matter of their medical education.[8] And even those candidates whose Latin passed muster received only a bachelor's degree in medicine. The august M.D. degree was reserved for graduates who acquired three additional years of professional experience and presented a Latin thesis – a contingency realized in 1771, when four of the 10 members of the first graduating class of 1768 returned to their alma mater to present Latin theses and receive their Doctor of Medicine degrees. Skilled Latinists, one and all.

In 1800, when medical education in America amounted to two four- or five-month terms of lectures supplementing a two- or three-year apprenticeship,

[8] I say "typically" because candidates who already held a degree in the arts were exempt from the requirement; they were examined on medical subjects only. See George W. Corner, *Two Centuries of Medicine: A History of The School of Medicine, University of Pennsylvania* (Philadelphia: Lippincott, 1965), pp. 25, 27, 31.

medical schools required little more than baseline literacy from their applicants. But how was literacy to be gauged? A college education was well beyond the financial means of most applicants and of little relevance to medical training in any event.[9] In fact, the requirements for medical school admissions were but two: a little knowledge of "natural philosophy" and, equally important, a working knowledge of Latin that would enable students to read the classical medical literature. Neither type of knowledge required formal schooling; both could be obtained with the help of a private tutor.

Of course, those few who aspired to leadership roles in medicine knew that a mere "working knowledge" of Latin was not commensurate with their professional aspirations. A thorough grounding in Latin and Greek was a sine qua non of rigorous medical study, and it had to be acquired, however belatedly. In 1822, the 17-year-old Samuel Gross, destined to lead American surgeons for a half century, began his medical apprenticeship with a physician "who gave him no aid and simply turned him lose on a small library of obsolete books." Young Gross thereupon made a great discovery that proved the turning-point of his life. The discovery, as conveyed to John Chalmers DaCosta, "was the knowledge of his own ignorance. He found he did not have enough education in Latin and Greek to understand technicalities and to study medicine as he felt it ought to be studied, and as he intended to study it." Gross remedied his classical deficit by gaining release from his apprenticeship and commencing classical studies at two

[9] Only in the 1880s did American medical schools adopt the formal entrance requirement of a high school diploma, and as late as 1890 less than 8% of 16,000 American medical students had college degrees. See William G. Rothstein, *American Medical Schools and the Practice of Medicine: A History* (New York: Oxford University Press, 1987), p. 93.

academies of note – "the Wilkesbarre Academy, a school in New York City, and the famous school at Lawrenceville, New Jersey." His Latin and Greek duly brought up to speed, he began a second apprenticeship at age 19 and entered Jefferson Medical College two years later.[10]

Gross was clearly an exception, but the relationship of Latin to medicine remained in force in the decades that followed. Mid-century American medical students still needed no prior formal education to gain admission to medical school, but they were expected to know enough Latin to learn the Latin names of drugs and to be able to write prescriptions for them.[11] Of course, many students, especially those whose parents had emigrated form Europe, were subjected to far more rigorous grounding in the classics. Indeed, for European-born middle-class parents, the "classical course" was considered a necessary prelude to any form of professional training for their children.

Here, as in 19th-century scientific training in general, Western Europe provided a plethora of role models for the American rustics. Examples abound, but it suffices to recall the background of three giants of 19th-century medicine, Claude Bernard, Joseph Lister, and Robert Koch. Bernard, the founder of the experimental method in medicine, began his study of Latin in 1821, when he was eight years old. Among the school books preserved at a memorial museum are his French-Latin dictionary and dictionary of classical antiquity, a history of Greece, a volume of Tacitus, and a copy of Cicero's oration *Pro Milone*. The

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[10] John Chalmers DaCosta, "The Samuel D. Gross Address for 1914-15," in *Papers and Speeches* (Philadelphia: Saunders, 1931), pp. 305-307.

[11] Rothstein, *American Medical Schools and the Practice of Medicine*, p. 32; Susan Wells, *Out of the Dead House: Nineteenth-Century Women Physicians and the Writing of Medicine* (Madison: University of Wisconsin Press, 2001), p. 7.

letters of Bernard's adulthood are sprinkled with quotations from the poet Horace, and, throughout his life, he retained his boyhood habit of inscribing his books in Greek script.[12] Lister, before setting out on the path that led to the discovery of germ theory and its application to surgical practice, graduated from University College of London in 1847. He received honors in two fields: botany and the classics.[13] Robert Koch, the German researcher who, building on Lister's work, demonstrated the causal relationship between specific germs and specific infectious illnesses (and thereby founded the science of bacteriology) concluded his Gymnasium training in 1862 with an Abitur thesis on "How Odysseus Conquered Ajax."[14]

When Minna and George Bernays, who emigrated to Lebanon, Illinois from Germany in 1853, enrolled their son August Charles at McKendree College in the fall of 1866, the boy – destined to become one of the greatest surgeons of the American Midwest – was only 12 years old. Why so early a start? It was to provide their son with the equivalent of a German Gymnasium education, which is to say, with six years of Latin and Greek – the "least," his sister Thekla recollected, "that could with equanimity be contemplated by our European-bred progenitors for their gifted first-born." And young August had no choice in the matter. According to his sister, he

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[12] J. M. D. Olmsted & E. Harris Olmsted, *Claude Bernard and the Experimental Method in Medicine* (New York: Schuman, 1952), pp. 10-11.
[13] Rhoda Truax, *Joseph Lister: Father of Modern Surgery* (Indianapolis: Bobbs-Merrill, 1944), p. 24.
[14] Thomas D. Brock, *Robert Koch: A Life in Medicine and Bacteriology* (Washington, DC: ASM Press, 1998[1988]), p. 8.

> Had to be more or less gently urged in his studies of Latin and Greek. Learning declensions and conjugations in languages no longer alive in the mouths of men was to him not an unmixed joy. But my father was inexorable. He held that the strait and narrow door of the classics had to be passed, because, in the first place, this kind of study ranked high in his estimation as a mental discipline, and, further, because it seemed to him to be the key to pleasures of the intellect that a boy's limited vision might fail to foresee, but to which in later life he would turn with the utmost delight.[15]

George Bernays's attitude was of a kind with that of 19th-century medical educators: Latin, they believed was essential to becoming a physician. It was knowledge of Latin that ensured competence in the use of English, without which young physicians could not communicate effectively with patients and would likely prove an embarrassment to their profession. And 19th-century medical students were not insensitive to the importance of Latin in establishing their professional bona fides. When James Simpson, soon to discover the anesthetic properties of chloroform and revolutionize the process of childbirth throughout Europe, read a passage in Latin in one of his lectures at Edinburgh University in the 1840s, a student jotted down the following remark in his notebook: "This passage was read in sound and healthy Latin untainted by Cockney accents." He was alluding to the fact that Scots had become slovenly in their speech, "assailing our ears with the most disgusting and contemptible pronunciation."

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[15] Thekla Bernays, *August Charles Bernays: A Memoir* (St. Louis: Mosby, 1912), p. 52.

"Humbling it truly is," he continued, "that Scots physicians, known in former days for their beautiful reading of Latin, should ape the set of English snob!"[16]

But the physicians' knowledge of Latin, above and beyond its show of erudition, had a practical consequence: It guaranteed the mysterious remoteness of their professional language and, as such, shielded patients from otherwise frightening knowledge of their illnesses. René Laennec, the French physician who invented the stethoscope in 1817 and discovered the meaning of heart and lung sounds, not only gave his bedside prescriptions in Latin, but also wrote his hospital records and occasionally his consultation reports in Latin. (Small wonder that Laennec, a Catholic and a royalist, was a favorite among high-placed catholic clergy, including visiting Cardinals from Rome.) At the patient's bedside, he never used native French terms to describe the different rattling sounds or "rales" he heard in his patients' chests. Expressions such as "crepitant," "sibilant," and "sonorous" rattles, he reasoned, would be frightening to hospitalized patients. So he routinely translated French into Latin in his bedside remarks: "rale" became "*rhonchus*," and the term was modified with similarly Latin qualifiers, such as *crepitans*, *sibilans*, or *sonorous*.[17]

Laennec's Irish follower, William Stokes, may have lacked the master's startling Latin fluency, but he was far from a novice in the classics. Prior to medical training in Edinburgh, he was tutored for many years in Greek, Latin, and mathematics by the well-known scholar John Walker, whose published editions of Livy and Euclid were then current. And Stokes himself could not resist the

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[16] Myrtle Simpson, *Simpson, The Obstetrician: A Biography* (London: Gollancz, 1972), pp. 90-91.
[17] Jacalyn Duffin, *To See with a Better Eye: A Life of R. T. H. Laennec* (Princeton: Princeton University Press, 1998), pp. 84, 132, 141.

occasional nod to his own well-earned Latinity. He began his monumental *Diagnosis and Treatment of Diseases of the Chest* (1837) by noting that he sought to elucidate the type of clinical reasoning through which "the medical mind – the *mens medica* – is seen."[18]

If, for 19th-century physicians, "literacy implied at least a taste of Latinity," then, unsurprisingly, the graduation examinations of 19th-century medical students represented a final test of such literacy. At the University of Edinburgh, one of Europe's oldest and most distinguished medical faculties, these examinations, which consisted of both extensive questioning on medicine and surgery and the writing and verbal defense of a written thesis, were conducted in Latin until 1833. And the theses themselves were likewise written entirely in Latin. In 1832, the young James Simpson publicly defended his graduation thesis on inflammation – "*De Causa Mortis in Quibusdam Inflammationibus Proxima*" – so impressively that his faculty examiner, one Dr. John Thomson, offered him a job on the spot.[19] Simpson's Latin virtuosity was exceptional, but the great Edinburgh physicians who followed in his wake all engaged the classics in one way or another. James Syme, Edinburgh's great surgeon of mid-century and arguably the most skilled of Europe's pre-Listerian operators, came to medicine only after studying Latin, philosophy, and natural science for two years at Edinburgh University.[20]

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[18] William Stokes (*fils*), *William Stokes: His Life and Work* (1804-1878) (London: Fisher Unwin, 1898), pp. 30, 51.
[19] Simpson, *Simpson, The Obstetrician*, p. 48.
[20] Alex Miles, *The Edinburgh School of Surgery Before Lister* (London: Black, 1918), p. 176.

The graduation requirements of American medical colleges were not as taxing as those of their European counterparts, but even in the New World 19th-century medical students had to write graduation theses that demonstrated basic competence in Latin. In fact, students were given the option of writing their theses entirely in Latin, and a small number actually did so. Among them was the distinguished physician and educator Mary Jacobi Putnam, arguably the most eminent woman physician of the 19th century. Her 1864 graduation thesis from Philadelphia's Woman's Medical College, a discussion of the spleen written entirely in Latin, was so erudite that it "seems to have taxed the faculty's classicism." The examiner who agreed to read it, one Professor Coates, struggled through half the manuscript – apparently enough to sustain his evaluation of it as "a fair exposé of what is at present known concerning the spleen and to be of satisfactory Latinity though containing some errors of grammatical construction."[21]

The reference to grammatical lapses in Jacobi's Latin was entirely appropriate to the assessment of medical theses of the mid-19th century. Virtually all 19th-century medical educators saw good English, as evidenced in a grammatically correct and neatly written graduation thesis, as essential to medical competence. Insofar as knowledge of Latin was deemed a prerequisite of good English, medical educators tended to take the next logical step and equate good Latin with good doctoring. Interestingly, this equation entered into controversies surrounding the medical training of women. Beginning in the 1850s, American

[21] Wells, *Out of the Dead House*, pp. 81, 106, 151. Cf. Regina Morantz-Sanchez, *Sympathy and Science: Women Physicians in American Medicine* (Chapel Hill: University of North Carolina Press, 1985), p. 193.

women began to receive medical training at their own female medical colleges and, over the next half century, a debate raged among medical educators, physicians, and laymen over the "natural endowment" of women physicians. Small wonder that knowledge of Latin entered into the debate about the ability of women to learn and practice medicine. In 1870, when the Medical Society of Pennsylvania debated about whether or not officially to recognize women physicians who had graduated from the Woman's Medical College of Pennsylvania, one Dr. Hamilton argued that the faculty members who had trained these women were incompetent doctors because they were poor Latinists:

> . . . notwithstanding the declaration in reference to the high qualification of this female medical college . . . I have not long ago met with two or three prescriptions, written partly in Latin, partly in English, and partly in Latin that I presume she understood, but no Latin scholar could understand. This was written by a female practitioner of great celebrity in this city. Now it is only a very short time since I saw another prescription by one of the female professors; it was in the same condition.[22]

Now, the conventional argument has it that the role of Latin in medicine progressively diminished throughout the second half of the 19th century, as experimental medicine and laboratory science took hold, first in Germany and Austria, then in France, and finally in Britain and the United States, and

[22] Wells, *Out of the Dead House*, p. 82.

transformed the nature of medical training. During this time, physicians who valued classical learning, so the argument goes, were the older men who clung to what Christopher Lawrence terms "an epistemology of individual experience." In Britain, aficionados of the classics were the hospital-based senior people who sought to circumscribe the role of science in clinical practice. Like their younger colleagues, they used the rhetoric of science to bolster their authority but, unlike the younger men, they "resisted the wholesale conversion of bedside practice into a science – any science." According to Lawrence, knowledge of the classics was integral to the status (and stature) of gentlemen physicians who sought to remain gentlemen first and physicians second. For these men, clinical medicine might well be based on science, but its actual practice was "an art which necessitated that its practitioners be the most cultured of men and the most experienced reflectors on the human condition."[23]

For Lawrence, classical learning signifies the gentleman-physician's association of bedside practice with "ineffable wisdom and experience" about man, the natural order, the cosmos – indeed, everything. The London consultants of whom he writes considered themselves wise men whose breadth of vision rendered them generalists, "immune from sins begotten by the narrowness of specialization." In America, I believe, the situation was different. Here, the classics did not (or did not only) sustain an older generation intent on dissociating scientific advance from clinical practice. Rather, the classics sustained the most progressive of our medical educators in their efforts to resist

[23] Christopher Lawrence, "Incommunicable Knowledge: Science, Technology and the Clinical Art in Britain, 1850-1914," *J. Contemp. Hist.*, 20:503-520, 1985. Quoted at pp. 504-505, 507.

the dehumanization of sick people inherent in specialization and procedure. They embraced experimental medicine and laboratory science, and they were specialists, one and all. Yet, as educators, they sought to mold physicians whose sense of professional self transcended the scientific rendering of the clinical art. In the case of America, then, recourse to the classics in the final quarter of the century was more than self-referential. It was object-directed – a humanizing and acculturating strategy for revivifying the Hippocratic Oath in the face of malfunctioning physiological systems and diseased organs.

Consider the case of Johns Hopkins Medical College, which imported the continental, experimental model to the United States and thereby became the country's first modern medical school in 1892. In the medical value assigned to the classics, three of Hopkins' four founding fathers were second to none. William Welch, the pathologist who headed the founding group of professors (subsequently known as "the big four"), only reluctantly began medical training in 1872, since it meant abandoning his first ambition: to become a Greek tutor and ultimately a professor of classics at his alma mater, Yale University. Welch's love of the classics, especially Greek literature and history, spanned his lifetime. "Everything that moves in the modern world has its roots in Greece," he opined in 1907.[24] William Osler, the eminent Professor of Medicine who hailed from the Canadian woodlands north of Toronto, began his education career a rambunctious student at the Barrie Grammar School, where he and two friends earned the appellation "Barrie's Bad Boys." On occasion, the little band would

[24] Simon Flexner & James Thomas Flexner, *William Henry Welch and the Heroic Age of American Medicine* (Baltimore: Johns Hopkins University Press, 1968 [1941]), pp. 63-65, 419-420.

give way to “a zeal for study . . . especially when exams were imminent, and as our study-hours ended at 9:30 at which time all lamps were taken away, we would jump out of our dormitory window some six feet above the ground and study our Zenophon, Virgil or Caesar by the light of the full moon, then we would go down to the Bay distant a little over 100 yards and disport ourselves an hour or two in the cool water.” Osler moved on to the Trinity College School, where, in a curriculum overripe with Latin and the classics, he finished first in his class and received the Chancellor’s Prize of 1866. Two years later, he capped his premedical education at Trinity College with examination papers on inter alia, Euclid, Greek (Medea and Hippolytus), Latin Prose, Roman History, Pass Latin (Terence), and classics (Honours).[25]

When Howard Kelly, the first Hopkins Professor of Gynecology and arguably the foremost abdominal surgeon of his time, began college in 1873, he was awarded the University of Pennsylvania’s matriculate Latin Prize for his thesis, “The Elements of Latin Prose Composition.” Kelly, like Welch and Osler, was a lifetime lover of the classics, and he relished summer vacations, when he could “catch up on his Virgil and other classics.”[26] Osler, ever mindful of his classical training, not only urged his students “to read widely outside of medicine,” but admonished them to “Start at once a bed-side library and spend the last half hour of the day in communion with the saints of humanity.” And among those edifying

[25] Harvey Cushing, *The Life of Sir William Osler* (London: Oxford University Pres, 1940), pp. 25, 39, 52.
[26] Audrey W. Davis, *Dr. Kelly of Hopkins: Surgeon, Scientist, Christian* (Baltimore: Johns Hopkins University Press, 1959), pp. 17, 21.

saints who could be counted on to provide intellectual stimulation and spiritual solace for a lifetime were Plutarch, Marcus Aurelius, Plato, and Epictetus.[27]

Of the fourth Hopkins founding father, the surgeon William Stewart Halsted, there is no evidence of a life-long passion for the ancients, though his grounding in Latin and Greek was typically solid: From 1863 to 1869, he attended Phillips Academy (Andover), where he wrestled with, and completed. a rigorous curriculum that revolved around Latin and Greek. "Perhaps," notes his biographer, "it was this thorough preparation for college which implanted in him that interest in the grammatical structure of language which remained throughout his life." In any event, following graduation from Andover, Halsted was deemed too immature for college and returned to his native New York for a final year of academic grooming that included a Latin and Greek tutor in the months leading up to the entrance examinations.[28] Far more impressive bona fides belonged to one of Halsted's early trainees, Harvey Cushing, who came to Hopkins in 1897 and became the hospital's resident surgeon in 1898. Cushing who, inter alia, is the founder of modern neurosurgery, entered Yale in 1887,[29] where he began his college career "walking familiarly in the classics" with courses that included

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[27] William Osler, *Aequanimitas, with other Addresses to Medical Students, Nurses and Practitioners of Medicine*, 3rd edition (New York: McGraw-Hill, 1906), pp. 367, 463; Lewellys F. Barker, *Time and the Physician* (New York: Putnam, 1942), p. 86.

[28] W. G. MacCallum, *William Stewart Halsted, Surgeon* (Baltimore: Johns Hopkins Press, 1930), p. 10.

[29] David Linn Edsall, who, as Dean of Harvard Medical School and of the Harvard School of Public Health, engineered Harvard's progressive transformation in the 1920s, entered Princeton the same year (1887) Cushing entered Yale. Edsall came to Princeton "a serious-minded young classicist" intent on a career in the classics. See Joseph C. Aub & Ruth K. Hapgood, *Pioneer in Modern Medicine: David Linn Edsall of Harvard* (Cambridge: Harvard Medical Alumni Association, 1970), p. 7.

"geometry, Livy, Homer, Cicero, German, Algebra, and Greek prose."[30] In February, 1888, he wrote his father that Yale was giving him and his friends "our fill of Cicero. We have read the Senectute and Amicitia and are reading his letter to Atticus, which are about the hardest Latin prose, and now we have to start in on the orations." Young Cushing seemed especially oppressed by the study of Latin Composition, a subject he had "to grind over like everything" and found "hard to study on." But if Harvey expected sympathy from his father, he was to be sorely disappointed, since the latter held the classics in the same esteem as the father of August Bernays. "A word about Latin Composition," he admonished his son several days later,

> And all other studies that come hard, either from lack of acquaintance or aptitude for them. The necessity of putting your best capacity into them, of working hard upon them, is what develops brain capacity, just as training is needed for good bone, muscle and pluck in the race or tug of gymnastic or outdoor sports. Every victory gained over Latin Composition is a preparation for success in the hard things of life wh. come to all. So work away at it and feel that after all it is a blessing in disguise. Difficulties squarely met and overcome by faithful work are the tests of character wh. show the reliable man from the fair weather crowd of sailors.[31]

[30] Elizabeth H. Thomson, *Harvey Cushing: Surgeon, Author, Artist* (New York: Schuman, 1950), p. 20.
[31] John F. Fulton, *Harvey Cushing: A Biography* (Springfield, IL: Thomas, 1946), pp. 35, 36.

Now, by the beginning of the 20th century, it is true, Latin and the classics no longer played a significant role in the premedical education of physicians. We have looked at the role of the classics in early- and mid-19th-century medicine and, in the case of America, suggested that the classics retained their value for leading medical educators at century's end. Yet, the luminous Hopkins faculty notwithstanding, how are we to understand the precipitous devaluation of classical learning in the early 20th century? It is a matter, I believe, of the revolution in medical diagnosis and treatment between roughly 1890 and 1920. This critical period witnessed the emergence of new technology which, taken together, transformed medical practice from a patient-centered ministering to sick people to an organ-centered evaluation of diseased body parts or malfunctioning bodily systems. Accurate diagnosis became linked to laboratory studies and technology-driven procedures for discerning and assessing bodily functioning. To be an effective physician no longer meant achieving the status of a local savant, whose knowledge of Latin and Latin-grounded use of English attested to the literacy associated with professional understanding and communication. Rather it meant achieving instrumental skill in employing the diagnostic methods of "modern" medicine. Understanding of people in their homes gave way to interpretation of laboratory findings – urinalysis, blood chemistry, bacterial cultures, and the like – and competence in utilizing new diagnostic instruments – the sphygmomanometer, ophthalmoscope, spirometer, laryngoscope, and into the 20th century, the string galvanometer (the first practical electrocardiograph) and x-ray – all of which yielded "objective" clinical findings ostensibly superior to

mere physical examination. By the end of this period, the cultural literacy that the aspiring physician brought to medical studies came to matter far less than the technical, usually hospital-based, skills acquired during and after medical training.

Hand in hand with the new valuation of procedural technique came the development of medical specialization, which revolved around even more recondite diagnostic procedures and treatment interventions associated with a particular bodily part or bodily system. Surgeons led the way with the founding of the American College of Surgery in 1913. Medical specialty boards, which attested to the competence of "specialists" through verbal and written board certifying examinations, began with the creation of the American Board for Ophthalmic Examinations in 1915; it was followed by the National Board of Examiners of Otolaryngology in 1924 and the American Board of Obstetrics and Gynecology in 1930. The pace quickened with the formation of the Advisory Board for Medical Specialization in 1933, and by 1937 12 medical specialty boards had come into being.

Specialization, a restructuring of medical practice in its economic, political, and cultural aspects, not only freed medical training from its 19th-century humanistic moorings; it dramatically altered the socialization experience of physicians-in-the-making and the emergent sensibility that informed their specialty practices.[32] The impact on medical education was especially salient.

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[32] Rosemary Stevens's *American Medicine and the Public Interest: A History of Specialization* (Berkeley: University of California Press, 1971) is the outstanding account of these developments. On the emergence of medical specialty boards and their implications for the practice of medicine, see especially chapters 9-11.

By the 1920s, medical schools had assumed their modern "corporate" form, providing an education that was standardized and mechanized in the manner of factory production.[33] "The result of specialization," Kenneth Ludmerer has observed, "was a crowded, highly structured curriculum in which subjects were taught as a series of isolated disciplines rather than as integrated branches of medicine."[34] Absent such integration, the very possibility of a holistic grasp of sick people, enriched by study of the classics, was relinquished.

In the early 20th century, Latin, no less than high culture in general, fell by the wayside in the effort to create modern "scientific" doctors. Consistent with the instrumental character of 20th-century medicine, Latin was reduced to mere instrumental helpfulness for those 20th-century physicians fortunate enough to study it. In this limited linguistic sense, it remained useful in the way it had been useful a century earlier. But gone was any appreciation of the broader body of myth, literature, and history to which the language opened up. Typical are the reflections of the surgeon George Crile, Jr., who reminisced about studying Latin at the Hotchkiss School in the early 1920s. "in retrospect," observed Crile,

> I find it astonishing that Latin, for example, was taught as an end in itself instead of as a way of getting to know the derivation of our own language. In the vocabulary, when an English equivalent of a Latin word was used, it was always the Anglo-Saxon translation rather than the Latin equivalent that was given. It is such a boon to memory and to spelling to understand the derivation of words, and later when I studied medicine, it was so

[33] Kenneth M. Ludmerer, *Learning to Heal: The Development of American Medical Education* (New York: Basic Books, 1985), pp. 256-57.
[34] Ludmerer, *Learning to Heal*, p. 262.

> helpful to be able to understand the meaning of the Latin terms that I still don't understand why Latin cannot be taught as a means of understanding English instead of as an explanation of why all Gaul was divided in three parts.[35]

Crile, who published his memoirs in 1992, is every bit a modern doctor, and his astonishment over the traditional overvaluation of Latin borders on indignation. How is it possible, he implies, that Latin was *ever* construed as more than instrumental means to a prosaic linguistic end? Compare his astonishment with the lament of the great British surgeon and pathologist of the mid-19th century, James Paget, who bemoaned that his schooling in the British port town of Great Yarmouth in the late 1820s enabled him *only* "to translate enough for the commonplace understanding of a Latin or a Greek book." What Paget regretted throughout his life was his early failure to acquire "anything fairly to be called classical knowledge," an inability "to acquire any classic taste or enjoy the influence of any ancient writer, or take part in any of the learned table-talk to which in later years I was admitted." "Equal, or perhaps greater," he added, "was the loss in the fitness or the facility for social life."[36]

Paget wrote his memoirs in the early 1880s, a transitional period when "learned table-talk" and "facility for social life" still bore an integral relation to the physician's make-up. Classical knowledge remained a gateway to social skills

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[35] George Crile, Jr., *The Way It Was: Sex, Surgery, Treasure, and Travel, 1907-1987* (Kent, OH: Kent State University Press, 1992), p. 39.

[36] Sir James Paget, *Memoirs and Letters*, edited by Stephen Paget (London: Longmans, Green, 1901), p. 12. Cf. the reminiscence of Lewellys Barker, the anatomist and internist who replaced Osler as chief of medicine at Hopkins in 1905: "I have always been sorry that my study of the classics was so limited, for the classics give a standard of value that is difficult to gain from studies of the sciences alone." Lewellys Barker, *Time and the Physician: The Autobiography of Lewellys F. Barker* (New York: Putnam, 1942), p. 21.

that were ethically salient. As the key to the physician's caring sensibility, the fertile soil in which his Humanitas took root, the classics were essential to the ability to empathize with patients whose experience of illness could not be reduced to measurable indices of anatomical abnormality and cellular pathology. When, in 1890, Welch and Osler founded the Johns Hopkins Hospital Historical Club, it was with the explicit understanding that knowledge of the ancient sources, including the Hippocratic writings on medicine, hygiene, surgery, and gynecology, were essential building blocks in the formation of a medical identity. Welch's own presentations to the Club covered various aspects of Greek medicine, whereas Osler's talks included a perceptive account of "Physic and Physicians as Depicted in Plato." For a volume that collected this and other public addresses, Osler adopted the title of his Valedictory Address to the graduating class of 1889 of the University of Pennsylvania School of Medicine: *Aequanimitas*. We render the Latin "equanimity," a word that denotes the calm acceptance of whatever trials and tribulations life may bring. For Osler, this "watchword of the good old Roman" was equally the physician's principal mental virtue. And what was the young physician's pathway to *Aequanimitas*? Over and over, Osler urged his young colleagues to cope with the onerous burdens of the medical calling – "the bitter tragedies of life, the *lacrymae rerum*, beside the hidden springs of which we sit in sad despair" – by reading the works of Plutarch, Plato, Marcus Aurelius, and other "men of high purpose and character."[37] Among members of the younger generation, no one heeded Osler's advice more than a 33-year-old Viennese neurologist who, in 1889, the year of Osler's address,

[37] William Osler, "The Master-Word in Medicine" (1903) in *Aequanimitas*, p. 367.

traveled to Nancy to perfect his hypnotic technique under the tutelage of Hippolyte Bernheim. Freud was a *Gymnasiaste* of the first order.[38] His store of Latin quotations was vast; his Vergil so close at hand that in 1899 he could resolve a patient's motivated forgetfulness – his "parapraxis" -- by quoting the entire hexameter from the *Aeneid* from which a key word, the pronoun "aliquis," had been forgotten.[39] In 1914, a quarter century after Osler's *Aequanimitas* address, Freud reminisced that his classical education at Vienna's Sperlgymnasium provided him with his "first glimpses of an extinct civilization," a civilization that "in my case was to bring me as much consolation as anything else in the struggles of life."[40]

As a final apercu, I note that Osler's great British counterpart, T. Clifford Allbutt, who played a key role in importing continental science to English medicine, was no less committed to the classics. Allbutt entered Cambridge's Caius College in 1855, where he read classics and was awarded a Caian classics scholarship a year later. Appointed Regius Professor of Physic at Cambridge in 1892, Allbutt endorsed both continental specialism and the use of new diagnostic technology; he himself had long used the ophthalmoscope in assessing nervous disease, and his invention of the "pocket" clinical thermometer

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[38] On Freud's early immersion in the classics and their centrality throughout his life, see R. F. Sterba, "The Psychoanalyst in a World of Change," *Psychoanal. Quart.*, 38:432-454, 1969; R. F. Sterba, "The Humanistic Wellspring of Psychoanalysis," *Psychoanal. Quart*., 43:167-176, 1974; and H. Knoepfmacher, H., "Sigmund Freud in High School, " *Amer. Imago*, 36:287-300, 1979.

[39] Sigmund Freud, "The Psychopathology of Everyday Life," in *Standard Edition of the Complete Psychological Works of Sigmund Freud*, vol. 6. London Hogarth Press, 1960. The "aliquis" parapraxis is the single illustrative example of chapter 2, pp. 8-14. Freud's accurate rendering of the passage in question is "*Exoriar(e) ex nostris ossibus ultor*." It is the angry remonstrance of love-sick Dido as Aeneas and his Trojan legions quit Carthage: "Let someone (*aliquis*) arise from my bones as an avenger!" (Vergil, Aeneid, IV, 625).

[40] Sigmund Freud, "Some Reflections on Schoolboy Psychology," in *Standard Edition*, vol. 13, pp.:239-244. London: Hogarth Press, 1953. Quoted at p. 241.

around 1867 brought thermometry into common usage. Allbutt was a formidable clinician whose original contributions spanned the treatment of tuberculosis, heart disease (he identified what we now term "essential hypertension"), and diseases of the stomach (he introduced gastric lavage by the siphon method). His monumental *System of Medicine*, released in eight volumes between 1896 and 1899, "sets out in graceful prose all that was best in medicine of the early twentieth century."[41] Yet, his devotion to scientific clinical practice did not prevent him from delivering numerous addresses stressing the importance of the classics to the modern physician. Indeed, the title pages of his various books bore the self-description, "sometime classical scholar of Gonville and Caius College." His Fitzpatrick lectures to the Royal College of Physicians in 1909-1910 were on Greek medicine in Rome.

Who among contemporary physicians mimics the regret of Paget at missed opportunities to acquire classical taste and the capacity to appreciate the ancient writers? Who among internists, in the manner of Clifford Allbutt, allows the identity of a "sometime classical scholar" to commingle with the clinical calling? Who among contemporary medical educators embodies the values of Welch and Osler, for whom the classics were not only foundational to medical knowledge but a veritable key to the healing sensibility? Who among contemporary surgeons captures the classical learning of Cushing, who brought a timely Ciceronian maxim – *Salus populi suprema lex esto* – to the attention of a

[41] E. Ashworth Underwood, "Clifford Allbutt, Scholar-Physician and Historian," *Proc. R. Soc. Med.*, 56(suppl): 11-19, 1963. Quoted at p. 16.

President of the United States?[42] We have grown subservient to the technologically fractured agendas of medical subspecialists, who diagnose and repair diseased body parts under the penurious gaze of insurers and managed-care administrators. Doctoring has long since rid itself of the epistemic and moral obligation to understand people who happen to be sick. And so the classical impulse, that 19th-century guarantor of medical Humanitas, has grown dim, like the ebbing heartbeat of a dying patient. Are our doctors better off without the burden and promise of classical learning? Are we, their patients?

**F I N I S**

[42] Thomson, *Harvey Cushing*, p. 302.