

## **Closing Session: The Future—Through the Looking Glass**

### **Medicine, Liberal Learning, and the Pursuit of Wisdom**

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I am pleased to welcome you to the final session of this symposium, “The Future: Through the Looking Glass.” In 1960, a symposium was held at Dartmouth Medical School entitled “Great Issues of Conscience in Modern Medicine.” This symposium, titled “Great Issues for Medicine in the 21st Century,” has included all of the topics that were on the agenda 37 years ago, plus one additional topic—that of health-care systems and finances. Let us hope that the next symposium is not titled “Still Greater Issues in Medicine.”

I addressed the opening ceremony of the 1960 symposium, and I am honored that the program committee for this symposium has asked me to make a few introductory remarks for this final session.<sup>1</sup>

The profession of medicine occupies a special place in society, and its practitioners play a unique role in our lives. A physician is likely to be our first and our last human contact in life. In life’s passing, decisions and actions with consequences that may determine survival or death will often depend on a doctor’s competence. Small wonder that society has great expectations of the profession. The physician must be kind and caring, knowledgeable and skillful. But above all else, there should be manifest that attribute of character called wisdom. It is a pity that it cannot be taught.

The theme of this session focuses on the future, but I am going to look back. In fact, it will be a parochial view. In the next few minutes, I will examine an aspect of a few prominent early persons in the history of Dartmouth Medical School and of the Medical School as a part of Dartmouth College. The aspect I have in mind, one more apparent in the past than in the present, is a more undifferentiated manner of thinking—one that led to greater cohesion in institutional function and a wider scope of individual practice. It influenced the outlook of both lay and medical populations in a way that was at once reciprocal and connective. My purpose is not to remind ourselves that there are lessons to be learned from history, but to reflect on those attributes of some persons and places worthy of emulation.

First, there was a man and his idea. The story of Nathan Smith and the founding of Dartmouth Medical School has been retold many times,<sup>a</sup> but few have commented on the character of this revered physician and teacher, especially upon the principles that guided him in his professional work. First, it is clear that Smith, early on, sensed the inadequacy of the apprentice system of training that he had learned by, but it was all that was available in northern New England at the time. As a practitioner with ap-

prentices under his own supervision, he became increasingly concerned about their limited exposure to emerging medical science. This was a strong motive for his petition to the president and trustees of Dartmouth College to establish a medical school. It would make accessible a formal medical education in a region devoid of any such opportunity. The only three possibilities in this country at the time were at the University of Pennsylvania in Philadelphia, at King's College (later Columbia University) in New York, and at Harvard University in Cambridge, all impossibly far removed for northwoods New England boys.

The College's acceptance of Smith's request, one year after his first course of lectures, included the awesome academic title "Professor of Anatomy and Surgery, of the Theory and Practice of Physic, of Materia Medica and Botany, and of Chemistry." The story goes that this title caused Oliver Wendell Holmes, who joined the Dartmouth medical faculty some years later, to deliver a much-quoted quip that Smith didn't occupy a chair at Dartmouth, but a whole settee. It was not unusual in the early medical schools of this country for a professor to teach many subjects, but Smith's case was unique, and he carried this load for several years without help except from his former student Lyman Spalding, who assisted in anatomy.

On top of his classroom obligations, Smith maintained an active practice, and his clinical skills were widely sought as his reputation continued to grow. Furthermore, in carrying out his clinical duties, Smith was forced to travel long distances on horseback. Medical students routinely accompanied him to learn at the bedside. There is ample evidence that Nathan Smith was conscientious in everything he undertook, and especially in the care of patients; he was thoughtful of their personal as well as their medical problems.

The stature of Smith's character is clarified by examining the development of his personal philosophy of medicine, especially therapeutics. The theories of William Cullen and Benjamin Rush dominated medical thinking at the time. Their views were set forth with uncompromising dogmatism, and they advocated vigorous therapies, especially praising the value of repeated purging and blood-letting. Smith was inclined to be conservative, but, more important, he relied on his own experience to assess what was good and what was bad. He presented the teachings of Cullen and Rush in his lectures but then refuted them by citing case histories from his own extensive practice. In short, he was following that old maxim: sound judgment comes from experience, although experience often comes from bad judgment. Simply put, Nathan Smith was a practitioner of common sense, or, in more exalted terms, a man who had acquired the capacity to judge rightly in matters of life and conduct, which is the definition of wisdom.

Smith did not have much formal education and he made no pretense of being a learned man, but he always introduced his lectures with a historical review of the subject at hand. He frequently referred to Hippocrates, whose views he found generally acceptable—especially his counsel that treatments should aim to assist nature in the healing process and his caution that the physician should take no action that

<sup>a</sup>The first truly full-scale biography of Nathan Smith was published shortly after the Bicentennial Symposium, as another of the School's anniversary observances. Titled *Improve, Perfect, & Perpetuate: Dr. Nathan Smith and Early American Medical Education*, it was written by Oliver S. Hayward, M.D., and Constance E. Putnam and published by University Press of New England (Hanover, N.H., 1998).

might harm the patient. Ancient learning and a critical attitude of mind, ever on the alert for sources of error, led Smith to sound conclusions.

Medical knowledge is deeply rooted in science, but good medical practice still requires much that lies outside the domain of science. There are those who feel that the growth of one has been at the expense of the other—that science and technology have left no room for the human factor in medicine. That simple explanation seems unlikely; I suspect there are a great many widespread social factors at work, and everyone can construct a growing list of everyday transactions with no human involvement at all. The movement toward depersonalization is facilitated by technology, but there has also occurred a subtle change in attitude, an aspect of mind that accepts a categorical separation in the branches of learning, encouraging an intellectual split where once a natural fusion was taken for granted.

Let us look at the first aphorism of Hippocrates (and let us also note in passing that the first edition in modern times of the *Aphorisms of Hippocrates* was published by François Rabelais, a physician at Montpellier who was, of course, better known for his literary masterpiece *Gargantua et Pantagruel*):

Life is short, the art long, opportunity fleeting, experience treacherous, judgment difficult.

It is on the first phrase—“Life is short, the *art* long”—that I want to focus, and, within it, on the word “art,” which is the word the translator has chosen to convey the meaning of the original Greek, *techne*. “Techne” is the root of many words in today’s vocabulary, like technology and technique, but in ancient Greece its meaning was much more inclusive and was by no means restricted to the category of matters we call technical. It could mean either art or science, but any distinction between the two was blurred. Skill, as a result of knowledge, was implied, but the clear separation of meaning that we now understand was not apparent in the classical mind. A derivative, possibly, is found in the long tradition of the medical profession to roam freely in the arts and sciences.

In fact, when I consulted my copy of Pickering’s Greek lexicon regarding the word *techne*, I found in the preface an acknowledgment of the contribution of sections B to O by Professor Daniel Oliver of Dartmouth Medical School. Oliver was appointed here in 1822, the first full-time member of the faculty—that is, the first to have no medical practice on the side; he held titles in Physiology, Physic, Materia Medica, and Botany, and he was also Professor of Moral and Intellectual Philosophy in the College. Like Oliver Wendell Holmes, who was appointed Professor of Anatomy and Physiology here in 1838, Daniel Oliver could claim professional legitimacy as a humanist as well as a scientist. One can be sure that the teachings of both men, in whatever department, prepared their students for the work of life, which is a goal of the liberal arts. And as was the case with Smith, the personal example these men provided was at least as important as what they taught.

In the contemporary university structure, a Faculty of Arts and Sciences is routine, but it is unusual to find individuals qualified in both divisions. Also, today’s medical faculties sometimes teach on the undergraduate level, and medical students are encouraged to take courses on the college level, but the general phenomenon of college students attending medical school courses has become relatively rare. By contrast, records from the early history of Dartmouth Medical School reveal that almost half of the students enrolled in medical courses were from the College, and it

is clear that their ambitions were not to train for a career in medicine. They apparently saw medicine as one of the "liberating arts." And during the revitalization of Dartmouth Medical School (DMS) in the late 1950s, a strong scientific base was introduced on the premise that science need not be illiberal. One finds that Daniel Webster was just such a student at DMS. Based on his experience with medical subject matter, he was moved to deliver a commencement discourse on the chemical theories of Lavoisier. President Freedman has already told you of the remarkable prayer offered by President Wheelock after he had attended a lecture by Nathan Smith. This singular example of a college president, so inspired as to thank the Almighty for a lesson in anatomy and chemistry, would have achieved immortality in the annals of medical history if Wheelock had concluded the prayer: "... and we thank Thee for this medical school."

The interesting fact is that medicine, viewed as a systematic body of knowledge, was once considered a worthy subject for some study by any well-educated person. Thomas Jefferson, for example, listed medicine along with philosophy, music, and architecture as fields in which he read widely. And at his newly created university in Charlottesville, he recruited the famous London physician Robley Dunglison to join the faculty long before he contemplated founding a medical school.

This symposium has been devoted to a forward look into the 21st century, but in these past few minutes I have cast a backward look at this place and some of its people with the purpose of identifying a few features that were once more apparent than they are now. The public today is critical of the medical profession for being uncaring, cold, technique-oriented, and indifferent to human beings. All science and no humanity, in other words. The growing popularity of "alternative medicine" and the alarming tendency to reject science are no solution to the problem. Medical progress will depend on more, not less, science, and medical students must understand the principles on which the profession rests. Possibly the compartmentalization of a once more homogeneous body of knowledge has led to compartmentalized thinking. "Either/or" has become the didactic rule, instead of "and."

The proper conjunction of art *and* science is the reliable road to wisdom. There may be some merit in the stratagem introduced by many medical educators of including courses in literature in the medical curriculum, apparently to titrate the impersonal logic of science. But what would have a far greater impact is contact with teachers and physicians whose character exemplified both scientific and humanistic virtues. Of course, reading great literature enriches our lives; educated individuals read for pleasure. And it cannot be denied that both medical students and doctors enrich their lives by this means. But it should be acknowledged that the coin has another face. Everyone, not just doctors, should have some knowledge of how the human body works and of those principles that govern healthy life, and some insight into its dislocations and perturbations that we call disease.

It is ironic that not so long ago it was commonplace for students in the liberal arts to attend medical lectures, but that now, when television presents a disease-of-the-day and a health-conscious public is confused by a blizzard of recommendations and warnings based on uninformed opinions, a valuable custom once prevalent has nearly vanished. We urge that there be a responsible citizenry, one informed about the laws of our country, but there is no such sentiment for being informed about the workings of the body we inhabit. A once more open academic society, one that fos-

tered a community of ideas, has given way to a separation and sacrifice of intellectual scope.

In as many ways as possible, I hope that the academic component of medicine will be brought back into a more integral relationship with the university. The Faculty of Medicine is the historic base for studies of human biology. Medicine, which strives to improve the health and welfare of mankind, resonates sympathetically with the humanities' goal of fostering human interests and ideals. Physicians and humanists share a common faith in man and a devotion to human well-being. There still exists a synergistic bond, but it needs to return to its former strength.

Finally, we return to Nathan Smith, a physician and teacher who combined art and science in his practice, a man whose knowledge was shaped by experience, a man of character justly known as wise. It has been said that an institution is the lengthened shadow of one man. For Dartmouth Medical School, Nathan Smith stands tallest.

#### NOTE

1. I would like to make a point here of recognizing Heinz Valtin, a professor emeritus of physiology at Dartmouth Medical School, an internationally known authority on renal physiology, and the chair of the Bicentennial Symposium Planning Committee. And personally, I would like to note my nearly 40 years of collegiality and close friendship with him at Dartmouth, and, in fact, even further back at the University of Rochester, where we were also colleagues. I treasure our friendship and admire his professionalism. The ability that he displayed in leading the Symposium Planning Committee, an effort to which he devoted his full energy for three years, is evident in these proceedings. I would like to convey to him the gratitude of the faculty and of the audience on behalf of President Freedman and Dean Wallace.