Imagine if a modern physician, armed only with ancient instruments, could somehow be transported to the Trojan battlefield on the day Hector killed Patroclus. Leaving aside practical concerns such as being brained by Hector, how would the modern doctor measure up? Could a physician without tools still practice medicine? Surely, Achilles would find no comfort in hearing that in a few millennia Patroclus would not necessarily die from his injuries. And in the face of Hector’s triumph, Achilles’ rage, and Patroclus’ deadly wounds, technique alone seems inadequate, even if it were available and effective. The physician would still need deeper sources of human wisdom than bodily mastery alone could ever provide. But would our modern doctor’s medical education prepare him for this encounter with passionate souls and dying bodies?

Medicine is an ancient profession. It pre-dates modern science, just as suffering pre-dates the modern arts that aim to ameliorate it. But what, if anything, still abides in the medical vocation from previous eras? And granted the marvelous advances afforded to medicine through modern science, are the goals of modern medicine the same as modern science? Are physicians the same as scientists?

The obvious answer to this last question is no: physicians treat patients. They aim to heal the afflicted, not simply to discover the truths of nature. But the close relationship between modern medicine and modern science has made many doctors think and act like scientists. Perhaps this is necessary, if they are to wield the technical tools that only empirical science makes possible. But the transformation of doctoring in the image of science may also obscure, in important ways, the real character of the medical vocation. If we educate doctors solely or largely as mechanics of the body, we may leave them unprepared for the human encounter with the sick and desperate, the brave and dying, the healed and grateful. And even if we equip them with the best medical tools of the age, we may leave the physician partially naked on the wards.

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Newborn Doctors

Of course, the education of modern doctors still reflects some genuine understanding of the vocational differences between physicians and scientists. One clear difference is that the physician is defined by action from the beginning. Upon graduating from medical school, the final act before receiving one’s diploma is taking an oath. The oath is usually some form of the Hippocratic Oath, despite some post-Hippocratic innovations. And the most well known admonition—“first, do no harm”—identifies the profession as concerned with action that potentially puts both the physician and the patient in jeopardy. Practicing medicine involves high stakes—the life and well-being of another—and thus requires an oath to act well. Scientists are not asked to take an oath before beginning their work.

There is a second, related feature of medical training that distinguishes it from a scientific education. In order to be licensed, the M.D. must complete an internship. One year of practical work is required for the degree to be enacted. Of course, most people pursue far more training if they intend to practice, but the point is that action and experience are essential to the very definition of a doctor as a credentialed professional.

The substance of the internship is also instructive. Being a new intern is similar to being a new parent. What began as a project of self gives way to service to another. For the new identity of mother or physician to be formed, the old identity must be broken. In the first days after giving birth, mothers find themselves in pain, deprived of sleep, perhaps unable to find the time to brush their teeth, and in a role that only they can fulfill for their child. Perhaps it is not an accident that the child insists on being fed every two or three hours. With each passing night of inadequate sleep, the mother and father give up their lives, their vanity, and their grip on the way things were in favor of life with their new child—acting on the vulnerable baby’s behalf, putting the child’s needs before their own.

Similarly, the intern learns quickly that life as he knew it is over. He spends long days and nights in the hospital, struggles to find time to eat and sleep, and responds to the incessant pages notifying him of the latest problem to be addressed. Running from patient to patient, his initial uncertainty gives way to a growing confidence. Like the new mother, despite the physical challenges, the doctor’s new life offers novel rewards, especially as his devotion to his patients grows. Indeed, at some point in the year, if things go as planned, the patients truly become his. He watches over them carefully, struggles to leave them at the end of the day, and thinks about them at night. In this way, the ideals that brought the eager
medical student to the profession are inculcated as moral virtues. The intern is broken down, and day after day his responsibilities are internalized until it becomes second nature to place his patients’ needs above his own. The intern is placed in the often charged, always difficult, impossibly sad center of his patients’ lives, teaching him a thing or two about human nature and human frailty.

But what happens to the idealism that brings most young men and women to medicine? What new ideas become operative? Somewhere after the internship and before the end of residency, a new sense of honor and direction necessarily takes hold. The original desire to help people takes shape amid pragmatic concerns about fellowships and jobs, and within the shared system of praise and blame from one’s colleagues and superiors.

Doctors rely on one another, and most are well equipped morally to do so. Generally speaking, physicians are bright, diligent, and compassionate people. And with few exceptions, we turn to one another not simply for clinical expertise but for camaraderie and understanding in the face of demanding work. Medicine is also remarkable for its self-governance. Individually, each doctor is expected to bring self-control and sound judgment to each case, always informed by the most current medical knowledge. Collectively, each hospital or clinic has well defined norms and expectations that allow physicians to bring particular expertise to bear, with varying opinions aired in what is (when done right) a remarkably well-run enterprise. The atmosphere is organized yet dynamic, routinized yet open to novelty, intellectual yet tempered by practical realities, confrontational yet civil. Add to this the nurses, technicians, and of course the patients themselves and one has a broad, lively field for both intellectual and moral action. It is here that many of us exercise our abilities as doctors in search of excellence. And like any activity seeking excellence, there is the expectation of reward.

Honor and Glory

In various ways and with varying consequences, the doctor is motivated not only by devotion to his patients, but also and sometimes especially by the quest for honor and glory. Honor is typically bestowed by and within a given community, and honor is surely a powerful force in medicine. Most physicians are accustomed to outward recognition for academic excellence, and as the training continues, the thirst for acclaim from one’s fellows persists. This is largely a good thing. To be honored by one’s peers, who know better than anyone else what outstanding achieve-
ment in the field requires, is a great reward. Yet to be so honored is also something of a paradox. The fact that the honoring must come from “within the ranks” necessarily limits the scope of the honor. The American College of Cardiology is uniquely suited to honor the best cardiologists, giving such an award unique stature. But the recipient can only find true honor from those similarly excellent in cardiology, those who really know and understand his achievements. As one advances in excellence, there is greater honor from fewer and fewer people. To demonstrate the point, imagine a cardiologist being honored by a national vote. Even if such a spectacle brought fame and fortune, the cardiologist would know it was not a true reflection of excellence as a cardiologist. Yet precisely because it comes from others, honor is limited to what the community of specialists values.

Glory, on the other hand, travels beyond borders. It finds recognition not only in the eyes of fellow experts but in the hearts of fellow human beings. Glorious deeds are worth talking about; they are the basis of our best human stories; they strike a broader human chord. And unlike honor, which is time-bound and limited to a few, glory is shared and elevates collectively. This elevation can be transient or permanent. The hunger for glory can lead the doctor beyond the technical confines of his field, or it can pervert his practice by causing him to forget what he learned as a resident: patient first, self second.

Increasingly, honor within medicine comes in the form of scientific achievement. Although it is an ancient profession, medicine is not immune to the spirit of the age. Academic hospitals are increasingly dependent for resources on research dollars, which are largely provided by the National Institutes of Health. An academic physician spends a lot of time writing grants in search of funding. These grants sustain the research lab and pay the academician’s salary. The academic hospital provides the space and the intellectual environment, but the investigator is otherwise largely on his own, a research entrepreneur with patients on the side. Academic physicians are like small business owners within the academic health center, able to remain only as long as the grant support continues. Since medical students are taught mostly by academic physicians (as opposed to community physicians), it makes sense that scientific achievement would be emphasized. In this pedagogical environment, physicians and scientists are slowly becoming less distinguishable, as both are shaped primarily by the “research imperative.” This convergence is an apparently voluntary process, fueled by a natural search for honor, and by the contemporary realities of modern, technological, institutional medicine.
Virtue at the Bedside

Yet the moral virtue of the physician really takes shape and becomes manifest at the bedside, not in the research laboratory. Patient by patient, if he is able to bring his Shakespearean capacities to bear, the physician engages particular human stories. This is not the stuff of science, but poetry. It revels in particularity, paradox, and the passions. The drama of individual lives is disclosed to us, which is one of the privileges of practicing medicine. We see people at their best and worst, stoic and vulnerable, devastated and elated. And if we pay attention, we learn something in the process about being human. We recognize the brutality of disease, the blessings of health, and the courage required to endure pain and face death. We also gain the opportunity for glory, to reach beyond our own sources of honor, to participate in the drama of mortal man seeking meaning. In this way, the physician can transcend the medical profession, even as he participates in its more ancient traditions.

But even glory sometimes falls short of the ethic of the physician, dependent as glory is on outward recognition. Virtue need not be visible to others to be present. Indeed, Aristotle's definition of happiness as a lifetime of activity in accordance with virtue (here applied to medicine) likely comes closest to the truly happy physician qua physician. The day-to-day dealings with patients provide us with the real occasions for acting well. And while glory might motivate us toward virtue, it is not essential to being or becoming a truly good physician.

Yet this raises a profound question: What is essential to practicing medicine virtuously? At a recent meeting of the President's Council on Bioethics, Dr. Daniel Foster offered a tacit answer: competence and compassion, but competence first of all. In our world, competence means skill in diagnosis and treatment, using the best techniques that modern medical technology has to offer. The virtuous doctor must be a master scientist. He must understand the materiality of the person.

Yet while medicine is functionally dependent on science for its tools, the ends of medicine involve more than the triumph over disease; good doctoring also encompasses the spiritual and moral struggles of patients living with uncertainty and distress. When faced with relatively simple ailments such as pneumonia, these broader humanistic considerations might remain out of view. Scientific competence is enough. But when we face a disease we cannot cure or even hold at bay, the physician's job does not end. Virtue is still possible for the doctor, so long as we understand what distinguishes medicine from science. This raises an even deeper
question: Does the scientific education of doctors strengthen or under-
mine their capacity for non-scientific virtue, for the work of diagnosing
and healing souls, for the burdens of the “physician as priest”?

Obviously, it is the material response that patients first seek from us,
hoping a pill or procedure can restore them to good health. But it is also
clear that natural science cannot be the only form of help we bring the
sick—even when our interventions cure them, and especially when the
body’s incurable ailments afflict the soul. It would be the very opposite of
wisdom to believe that doctors alone can heal the souls of their patients.
Yet to conceive of the patient as materiality alone is a kind of degradation,
even if that is what the patient wants.

Since human beings will always be mortal and suffering, medicine will
often be inadequate and always incomplete. The truly wise response to
suffering may not be the righteous, indignant call for more science but an
acknowledgement that no matter the disease, the physician pledges to see
the patient through to the end—come what may, cure or no cure, albeit
with the best available resources at the present time. And our own limi-
tations as doctors, instead of being simply occasions for disappointment,
might also be occasions for reflection on man’s fate. To this end, we need
to bring into view the necessary limitations of natural science with regard
to larger human questions. We need to recall, if briefly, the origins of the
modern scientific project, so we can better understand its insufficiency
when it comes to preparing doctors for their work.

Power and Impotence

The original defense of natural science, by men like Descartes and
Spinoza, was not so much a refutation as a quiet beheading of preceding
philosophies. That is, modern science refutes metaphysical questions not
by addressing them but by ignoring them. Its view of nature is purely
material, devoid of purpose or meaning. Natural science tells us how
things work, but not what they are or why they do what they do. It is
fair to say that modern science does not even have a definition of nature,
including human nature. The project of the modern natural scientist is the
material inquiry into objects that are subject to inquiry through material
manipulation.

The tool for mechanical manipulation is technology. The original
technology of modern science was geometry, because geometry is the
science of space. That is, it provides an account of nature as extension
in space. The difference between the ancient and modern view of geom-
etery is instructive, since it reveals a great deal about the modern use of technology. For ancients, like Euclid, geometric truths were investigated and demonstrated in "theorems," or human efforts to give an account of reality. In contrast, modern geometry is concerned with "problems," or difficulties to be solved. Problems are technical issues, not theoretical ones. Indeed, one can solve problems without any knowledge of the theory that underlies a question. Nature can be mathematized, and technologies can be developed to manipulate nature, unencumbered by theoretical questions. And most problems have a material component that is potentially (if only partially) amenable to a material solution.

A related distinction is the difference between wonder and curiosity. For Aristotle, wisdom begins in wonder. For modern man, knowledge begins with curiosity. Wonder is an activity of beholding an object, allowing it to disclose itself. Its fruits might be described as the respectful disclosure of the beheld to the beholder. The implication is that the beheld has something to teach us. We must select our subjects carefully and as things worthy of wonder they must be treated with humility and gratitude. Curiosity describes a very different disposition. Curiosity is indiscriminate. Any object is a potential object for curiosity. Moreover, curiosity is famously not an exclusively human act. It knows no limits, and enforces no limits on the curious. One can be curious about the moon or about pornography. The same cannot be said for wonder. Souls can wonder. Cats are curious.

Interestingly, as scientific methods of investigation become increasingly sophisticated and our perspective on nature increasingly minute, it is not only metaphysical understanding that is set aside. Everyday experience itself becomes less and less a part of the scientific account of things. Descartes introduced radical skepticism, the idea that the senses can be deceived and therefore cannot be relied upon. Today, the plane of experience of the scientist is the molecular plane for biology, the atomic and even subatomic for physics. Common experience itself is regarded skeptically, and we instead look to the molecular realm to provide an account. The chain of causality continues to be pushed backward in search of more fundamental, more common mechanisms. The current bedrock in biology seems to be DNA, through which modern science hopes to provide an account of the downstream events that begin with genetically initiated events. There we hope to find what is really going on. As a consequence, the natural scientist spends the working day away from human action. He is in no better a position to be a citizen—or to diagnose and heal souls—than when he woke up.
The proof of the claim that nature is best known through its material manipulation lies in the success of modern technology: By simply attempting to understand and manipulate the world as material, and by ignoring questions of purpose and meaning, the application of modern science has transformed the world. Indeed, the success of the scientific project in terms of change is its very justification, and this was always intended to be the case. Things are getting better all the time. The proper response to our condition is thus a material response, one which eases the burden of man’s estate. Instead of providing an account of the whole, philosophy was beheaded in favor of more practical purposes. Rather than argue about the nature of the good life, man put nature to work in service of our human, all too human, ends.

This scientific outlook requires a certain type of scientific education—one that carves up nature into a series of empirical inquiries (“research projects”) aimed at producing new types of beneficial manipulations (“technological progress”). And this type of education—hyper-specialized, forward-looking, focused on parts more than wholes—shapes souls of a certain sort, including the souls of doctors whose educations focus largely on the mechanical workings of the body.

In this scientific milieu, the sorts of questions that avail themselves of empirical inquiry become the only questions worth asking—or at least the kinds of questions that dominate the attention of aspiring doctors. Previous questions such as the nature of the good or the meaning of suffering are not so much refuted as set aside in favor of studying the body as a matter of engineering. In subtle or not so subtle ways, the young doctor-as-scientist learns that his more natural questions are at worst foolish, or at best a quagmire of subjectivity to be avoided. In the end, the scientific enterprise pares down the scope of inquiry so radically that it is hard to imagine a worse education for a young soul: material, devoid of spirit, and instrumental; yet also powerful, sophisticated, and unabashed in its absence of self-understanding.

The Moral Education of Physicians

Obviously, no one is just a scientist—certainly not the doctor, which is precisely the point. Scientists are also citizens, parents, children, and spouses. But the scientist’s beliefs about the meaning of science often go unexamined; such reflection is surely not part of advanced scientific training in biology, physics, or medicine. As a result, scientists undergo a truncated moral education, one that significantly limits their ability to
evaluate their own enterprise critically and honestly. And as physicians adopt an increasingly scientific worldview, the medical profession risks becoming inarticulate and enfeebled in the face of sickness and suffering and the whole human drama that no doctor can avoid.

No curriculum can easily address this problem, and no regimen of reading can supply doctors with wisdom. But the humanities deserve a more central place than they now have in the education of physicians. To this end, I propose a simple, if radical, addition to the medical school education—one that might help future doctors acquire or recapture a shared human voice. In addition to the standard medical prerequisites, students would study four books. Which books these are could be debated, but after being agreed upon they would not change. My own list would be the following: Plato’s *Republic* for an introduction to questions of justice; Aristotle’s *Physics* for an account of nature that is not vacuous; Dostoevsky’s *The Brothers Karamazov* for a poetic portrait of man; and Shakespeare’s *King Lear* for all of the above. The students would be tested for mastery of these works just as they are tested for mastery of the sciences. This would ensure that everyone had at least a minimum grasp of the larger tradition that gave rise to natural science and a context for understanding its existence and meaning.

Think how our understanding of the aging patient would be enlarged with the image of Lear made part of our psyches, or how our approach to the dilemmas of allocating medical resources would be enriched by wrestling with the political questions raised in the *Republic*. And while it may seem odd to believe that our scientific education is disserved by ignoring Aristotle’s *Physics*, the limitations of modern science’s purposeless and partial account of nature would become more clear by reacquainting ourselves with his purposeful account of the whole. At its best, this humanistic education would help doctors at the bedside, by forcing them to grapple with the kinds of existential questions that their patients cannot avoid.

The early physicians could only respond to the cries of their patients as fellow human beings, sharing their previous experiences of the suffering of others, helping to usher the newly afflicted through their own struggle. In the process, if they listened and observed carefully, physicians gained access to the glories and failures of their patients’ lives. This profession brought forth stories rich as any literature, perhaps at times even reminiscent of a Trojan battlefield, at least insofar as it stirs the opportunity for excellence with the call to human action. Today, doctors are both more powerful and more deaf. They are far less helpless in the face of suffering, yet they often cannot hear the cries that evoke no possibility of
remedy. A more humanistic education might heal the physician’s deafness. It will not make treating the untreatable any easier, but it may at least leave the doctor less naked on the wards.