Being here today is an unexpected honor, one that I’m pretty certain I don’t deserve. I am not a member of this society. And indeed my only claim to any kind of academic distinction during my undergraduate career elsewhere is that I once earned a grade of F minus—which is a *kind* of distinction. So it is from a distinctly low vantage point that I look up to you all today—and, of course, offer my advice on academic achievement.

I’m not *entirely* unqualified to offer advice. Despite a slow start, I’ve spent my entire life in the academy, either as a student, earning a truly uncalled-for number of advanced degrees, or as a teacher, doing the work that has been for me a labor of love. On any given morning, in almost any line of work, it is possible to entertain doubts whether the task ahead of you that day will make the world a better place. But if that task is teaching, your mornings (at least) should be free of such doubts. Teaching is one of the few jobs in which you have a right to feel that you’re doing God’s work. (We know it’s God’s work because the state pays us so little to do it.)

But I think if I have any business speaking to you today, it’s less because I’ve persisted in the academy for so many years, and more because of the different *ways* I’ve persisted in it. In my time I’ve been an undergraduate majoring in physics, majoring in art, majoring in English. A graduate student studying creative writing, studying English literature. A professor teaching creative writing, teaching English literature. A medical student. A resident physician, a subspecialty resident, an attending physician training residents, and a professor teaching social medicine, teaching creative writing. And now, as the parent of *two* Tarheels, I’m seeing it from still another perspective. I’m not so much a product of the academy as a chronic condition of it.

But whatever the reason, I know what I’m here to do—not simply to admire the rare combination of talent, determination and hard, hard work that has brought you here—although I do. And I’m not here only to praise what you’ve done with those gifts—although I will. I’m also here, of course, to exhort you to do something even harder than what you’ve already done. But praise first.

As I mentioned, both of my children are currently undergraduates at this institution, and it’s this perspective more than anything else that informs what I have to say to you today. Watching them go through the process, from application to orientation to registration and so on, I’ve been impressed by some aspects of the Carolina experience that should have been apparent to me long before. One of these is how very hard we make it for you here. I’m not talking about tests and term papers, labs and recitations—those should be hard, and you’ve demonstrated that they can be done and done brilliantly. I’m talking about getting registered, not to mention getting a roof over your heads and choosing a meal plan. Getting a note from Student Health, straightening out your cashier’s account, navigating multiple Sakai sites, finding the classes you actually want to take at a time you can actually manage, finding roommates, food, and basketball tickets, but never, ever parking. The list is longer than this, I know—these are just the ones I’ve heard about from my kids in the last week. These are not skills I believe anyone has taught you. Yet you’ve managed to master these as well, and without much help from us. That says something about your ingenuity and resourcefulness that’s important.

It’s important also because this very large institution, full of very bright people, all gathered here for the task of making you the best possible version of you, is also for many of you your first sustained, close-up experience working in a large corporation. The difference between this university and most corporations, of course, is that our charter says a great deal about *your* welfare—you, “the rising generation”—whereas most corporations are dedicated not to their employees or customers, but to their stockholders. You can think of us as a corporation with training wheels, but in our size and complexity, and sometimes our impersonality as an organization, we are not entirely different. Your experience learning to work the system here is important because you’re going to be working one kind of system or another for the rest of your lives. I’m glad you’ve made such a good start at it, on such a challenging training course.

The other aspect of the undergraduate experience that is going to matter to you for a long time has also become tangibly real to me recently. I’m thinking, of course, about the cost.

Let’s stop for a moment to acknowledge that here at Carolina we have a historic commitment to making a world-class education available to you at the lowest practical cost, and that no matter how much the larger economic forces in the world have eroded our ability to keep that commitment, it remains one of the core values of this institution. As a doctor, helping to make the resources of UNC available to the poorest and most desperate people of our state, regardless of their ability to pay, has been one of the two greatest honors of my life. And as a teacher, helping to make those resources available to the best and brightest young people of our state, regardless of *their* ability to pay, has been the other.

Even so. Having two children enrolled here has focused my attention on a question I have wondered about for years. Why does it cost so much? Even more, why has the cost gone up so much? When I was an undergraduate, in a span of ten years my parents were able to send four children through private colleges debt-free. They did that on the single income my father earned as a solo practitioner in a relatively low-paying area of medicine. Now, my wife and I are counting pennies to afford what is after all the best bargain in American education—for half the number of children. We’ve all heard the horror stories about the burden of student loan debt your generation will be struggling under for decades to come. Even here at Carolina, for many of you, and for far more of your peers at other institutions, that debt will threaten to make your choice of career a financial decision when it should be something far more personal.

I’ve also been wondering, and more recently worrying, about not only the cost of education, but even more about the cost of medical care, in regard to which everything I’m saying about college costs can be multiplied by several orders of magnitude. More precisely, I’ve been wondering about the *disconnect* between what you pay a university to school you or a doctor to cure you, and the cost of everything else. How is it I can buy an iPhone—a handheld computer that was the stuff of science fiction when I was your age—for only a fraction of what it costs to spend a day in the hospital, or a year in college?

What happened?

Like many of you, I don’t know a thing about economics. Instead, I listen to NPR. Which one morning about a month ago offered an explanation of this very question. What the NPR piece discussed was something called the Baumol effect, and while my reading since suggests that they may have missed some of the nuance of Baumol’s theory (which economists call “Baumol's cost disease,” a term I prefer because it sounds medical), the piece did offer some insights that helped me to understand much of what has puzzled me for so many years. What Baumol and his collaborator William G. Bowen described were some effects of changes in productivity. As a business squeezes all the inefficiencies and costs it can out of its production process, we say that productivity goes up. In classical economic theory, as production costs go down, companies can charge their customers less. But what happens to those businesses that cannot squeeze their productivity in this way? In relation to competitors that are able to turn out more widgets at lower cost, whatever they produce will cost more, and so you’d expect them to go out of business.

But what happens to such a business, one that can’t increase its productivity, if what it produces is something for which there is no equivalent, something people, for one reason or another, *must* have? It may not go out of business, but whatever goods or services it provides become more expensive, not because it’s charging more, or because materials are more expensive or its workers are earning more. They become more expensive *relative to everything else*, because everything else is getting cheaper.

I’m not really interested, of course, in the production of widgets. What I’m talking about is educating young people. And curing the sick. I’m talking about writing novels or composing symphonies, or *performing* symphonies. About the ballet, and baseball. About most of the things that make life matter. In a world where almost everything can be made faster and more cheaply, where the real prices of so many things fall over time, anything that can’t be subjected to the productivity squeeze is going to become, *by* *comparison with everything else*, more and more expensive. And since the cost of living to a great extent determines wages, those things that can’t be put through the productivity squeeze quickly become luxury items, accessible only to the wealthy. Or to the rest of us only through an increasingly irrational system of insurance. Or by taking on a crushing burden of debt.

Or so I understand it. But before I drown in waters clearly out of my depth, I’d like to shift gears and explain why a man with degrees in medicine and literature went swimming there in the first place. I did so because when I heard about Baumol, and in my reading about the problem since, I understood for the first time in my life not only why the economics of education, the arts, and medicine—the areas in which I have made a living my entire life—are so unlike the economics of rest of the world. I also understood something about why I wound up in education, the arts, and medicine. Something you may want to consider in choosing what to do with the talents that have brought *you* here today.

Education, the arts, medicine: these represent areas of activity that until now have been able to resist Baumol’s disease. We *can’t* speed up. You can’t really improve the productivity of a symphony orchestra by speeding up the tempo, or hiring less competent musicians, or having the horn section perform on kazoos, because “productivity” does not map simply onto “value.” Or, more to the point, onto *value****s***. The idea that we can remake a university or a hospital to the business model of a publicly held corporation would be laughable if there weren’t so many people trying to do it. Not surprisingly, the outcome of such initiatives, as network television has demonstrated about the arts for several generations now, tends to be pretty shoddy. And while we can tolerate, or even enjoy, shoddy creations in some areas of our lives—such as network TV—I doubt any of us would want to live in a world where that was the only kind of art available. And none of us would—or could—live in a world where all medical care was tailored to meet productivity goals, or where universities were valued for the number, not the quality, of their graduates. Where an arbitrary set of outcomes measures told you how to do your job.

Part of the problem here is that outcomes measures exhibit a powerful tendency to be arbitrary. There’s an important reason for this. Some years ago I attended a talk by a couple of medical educators who had come to Chapel Hill to explain how they were deploying outcomes measures to improve the medical education they were dispensing up in Cambridge. About halfway through the talk, deep into the weeds of t-tests and Gaussian distributions, somebody in the back of the room had a question. “I might have missed this,” he said. “But do you have a working definition of a ‘good doctor’?”

They hadn’t, of course. And while it’s amusing that they hadn’t considered this question, it’s not surprising. In medicine, we spend so much time parsing the statistical analyses of the latest clinical trials that we continually forget that statistics cannot tell us anything about the individual patient sitting across from us. We measure a great many things, but (as Einstein actually never did say, although he should have) “not everything that counts can be counted.”

This is the fallacy that those who attempt to import models of productivity and efficiency from the world of business to medicine—and even more to the academy—fail to appreciate. We are involved here in work that we do more quickly at *your* peril, do more cheaply at *your* cost, *and do not know how to evaluate*. But that work is nevertheless—it is *consequently*—important. It is precisely the mission of the university to work in fields where we cannot tell you in advance what the results of this experiment might be, what the conclusions of that monograph might be. We do the slow, laborious, *essential* work that *precedes* outcomes measures—the work that, down the road, might allow *some*body *some*day to measure *some*thing, but we must be there in advance, laboring in uncertainty and darkness before anyone can hold up a scale to the light. More than that—and I’m speaking here especially to the humanities—we do the work that tells you *why* something might be worth measuring at all, and what any measurement might *mean*. It is those things we do not know how to measure that are *most* worthy of our work and time, important precisely *because* they cannot be reduced to quanta on a numerical scale. I cannot tell you, standing here today, why *you* are important, or even how. But I have absolute faith in your importance—as a phi bet, as a Tarheel, as a human being. Your importance cannot be measured on any outcomes scale. But I would hesitate on that account to let anyone sell it short.

You’ve had the extraordinary privilege of spending the past several years in a great university, and by your presence here in this room you’ve shown that you know how to take advantage of that privilege. But I’d like you to consider, after you leave this room, that the choices you’ll be facing in the next several years may be understood not only as “How do I pay off this debt?” but also as “Is this life I want to lead?” “Is this the kind of work I want to do?” “Am I going to make the world better today?” And that choice may perhaps be understood most usefully as whether you will live your life in terms of productivity, or of values.

We live in a world where it’s possible to weigh so many things to a nicety in one scale or another. We get so caught up in measuring outcomes—whether its price per unit or GPA—that we sometimes neglect to ask what scale we’re using. We forget to ask if we’re even measuring the right things. Are the outcomes we’re striving to achieve actually the ones we want?

It may be possible to turn out a car or computer or phone at a lower cost, but some things resist that process. Some things—great art, great teaching, great medicine—great people—cannot be done on the cheap. And these, I hope you have learned in your time at Carolina, are the things that really matter.