

Town Forum Address to Faculty & Staff

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I'd like to begin with a story about the virtuoso violinist Yitzhak Perlman whose performance I was privileged to hear at Symphony Hall this past Sunday. When Mr. Perlman emerged for a curtain call and encores, it was apparent that a broom had been placed next to his chair and the piano. When he sat down and took his violin, he motioned to his accompanist, who proceeded to stand up and use the broom to clean the floor around his seat.

The audience was confused, and started to twitter a bit, at which time Mr. Perlman looked quizzically at the audience and said –“I thought you of all people would appreciate a sweep tonight.” He thereby endeared himself to the Boston audience, received another rousing ovation, at which point he said –“I don't really care, I'm a Mets fan.”

Well, I can tell you – I'm a Sox fan who used to be a Yankee and Mets fan – and thank you all for foregoing the Red Sox Parade going on right now to attend this town meeting. Fortunately for this meeting, I was not invited to join the players on the Duck Boats today.

It's been my incredible honor to serve as the Dean of this great school since September 1, and my goal today is to provide a quick statement of my view of the school and my embryonic thoughts about moving forward at this early moment in my tenure.

The road taken

First, since I still have not met many of you personally, a brief word about me and the road that I took in getting here.

- I spent 29 years on the Harvard Faculty at Beth Israel Hospital, then Beth Israel Deaconess Medical Center (BIDMC).

- I'm a physician scientist trained in internal medicine and endocrinology. I used to see patients, though not recently, and I've been engaged in teaching residents, fellows, post doc scientists and medical students.
- My research has focused on diabetes and obesity – and my greatest interest has been insulin and leptin action and signal transduction, both at the molecular and systems levels, and on elucidating the neural circuitry that underlies appetite and metabolism. In doing this work, I have built and have had the pleasure of working with a wonderful interdisciplinary group.
- I have a track record of productive collaboration with industry in the conduct of metabolic research, and I'm very much interested in maximizing the translation of basic discoveries into clinical impact.
- I've pursued academic administration at BIDMC during difficult financial times (that have now passed), and I led the development and then implementation of strategic plans for both research and education.
- I've participated in Harvard-wide science planning, through membership on the University Planning Committee on Science and Engineering (UPCSE) and Harvard University Science and Engineering Committee (HUSEC).

The state of Harvard Medical School today

So now that I am safely moved across the street to HMS, what do I see as the state of HMS today?

HMS is the greatest Medical School in the world by all objective criteria:

- The competitiveness for our medical and graduate programs – and the outcomes for our graduates of these programs as they assume leadership positions around the globe;

- The size and accomplishments of our faculty – both quad-based and HMS faculty in affiliated hospitals and institutes;
- The accomplishments, reputation, and diversity of our Harvard-affiliated hospitals and institutes.

Upon becoming Dean of HMS, an obvious question confronting me was: Should my focus be to maintain the course, in order to maintain the excellence of this amazing institution, or should I consider a less defensive and conservative pose, one that would seek to identify some major new opportunities, even if these might engender some level of institutional change?

The real question is: Are we as good as we can be? And if not, should we be satisfied to simply remain the best?

Well, why are we here in the first place? Our official mission statement has been: *To create and nurture a diverse community of the best people committed to ending human suffering caused by disease.*

Well, this is a pretty compelling mission! Although we are delighted that HMS is deservedly held in high regard around the globe, we must remember that the goal of Harvard Medical School is not to win a tournament of rankings. Rather, our enemy is disease, and suffering caused by disease, and there is no shortage of work to be done against this implacable enemy. Against this enemy, staying the course is not an option. In addition, the world around us is changing dramatically in many dimensions, and any organization as complex as HMS must, even to remain where it is, continuously assess its goals and its strategies, based upon the world today and the world as we see it developing over the next several years.

Self assessment

We cannot avoid the need to perform an honest self assessment, and to compare our present state against our highest aspirations. And we must be prepared to embrace the potential changes that might be suggested. So, how do we assess what changes might be needed in response to the current challenges?

First of all, we have to continuously remind ourselves that at its core Harvard Medical

School is a **medical school**. It is an institution whose core identity relates to the training of physicians, training the greatest physicians that we can possibly train for leadership positions here and around the world. That core fact may sometimes be hard to remember because as a total organizational entity our research budget and operations vastly exceed that related to medical education.

Rest assured that I will see that medical education receives the attention and resources that it must receive. This includes attention being paid to the physical infrastructure of our educational space. I would like to call attention to the Medical Education Day going on right now and all afternoon in the Tosteson Medical Education Center.

We are also one of the greatest sites for graduate and postgraduate scientific training in the biomedical sciences. This kind of training and education is also a part of our core identity, and must be kept vibrant and well funded. This is a major challenge in the current environment.

HMS recently completed a comprehensive medical curriculum reform process that took place over the past several years. This plan is now being implemented. As Dean, I will work with educational leadership to see that the implementation goes smoothly, and if changes are needed, as they often are, I will do what is necessary to accomplish these. The structure of the clinical years is being reorganized, with the principal clinical year now taking place around an experience in one or another of the major hospitals, creating a greater coherence and continuity of the experience.

I would like to try to find a way to implement one of the recommendations of education reform that has not yet been implemented. That specifically was a requirement that HMS students engage in a scholarly activity. This is something that I think is exceptionally important for a school with the aspirations of Harvard. Of course, many of our students already do engage in scholarly activities, with remarkable success, often launching amazing careers in the process. But many more can be helped to engage in an in-depth scholarly experience, which could represent wet lab research, clinical research, or any number of other scholarly endeavors. If so, we would be better positioning our graduates for leadership roles, in whatever career path they choose.

I am very concerned about the state of indebtedness that many of our students are

facing, and I am dedicated to finding ways to increase the financial aid available to our students, to mitigate the effect that major debt has on choices of professional goals. Addressing this will leverage the ability of our students to become the leaders that they can be and should be.

In addition to being a Medical School, Harvard Medical School is also a research institute of rather amazing size and breadth. The preclinical departments of HMS are a group of basic science departments and a smaller number of social science departments. Biochemistry and Molecular Pharmacology, Genetics, Cell Biology, Microbiology and Molecular Genetics, Pathology, Neurobiology, Systems Biology, Health Care Policy, Social Medicine, Ambulatory Care. To these we have recently added the Department of Stem Cell and Regenerative Biology that reports to both the HMS Dean and the Dean of the Faculty of Arts and Sciences. These are outstanding departments by any criteria and our faculty is of the highest quality. Keeping our quad departments at the leading edge, and seeing to it that they are well positioned to respond to scientific opportunities, is a wonderful responsibility of the Dean.

Although our affiliated hospitals and institutes are independent organizational entities, the Harvard faculty based in the clinical departments are extraordinary in their size, diversity, and quality. And although HMS does not directly employ them, provide them with research infrastructure, or pay their salaries, they are very much the faculty of Harvard Medical School, as seen by me, and by the outside community of science. That is the world in which my career developed.

These Harvard-affiliated hospitals are extraordinary institutions; the five top hospital-based research programs in the United States are all Harvard affiliates. While our hospital-based faculty could, quite effectively, live their professional lives largely within their hospitals, there is a tremendous desire among these faculty to reach out across the University, across the hospitals, and to reach out to the quad-based faculty of the Medical School as well. While this certainly does occur now, the extent to which it occurs is suboptimal for many reasons. I am dedicated to facilitating these interactions between hospital and quad faculty, as they can only enhance our scientific impact.

So when considering our overall status as a Medical School faculty, both on the quad and off, we can now ask a number of questions.

Despite our excellence, are we optimally organized in the current environment to:

- take full and maximal advantage of the most exciting aspects of modern science?
- interact most effectively between the quad and our faculty based in the affiliated hospitals and research institutes?
- interact robustly with the other schools of Harvard University?
- take full advantage of physical and financial resources of the Medical School?
- effectively mentor and develop our faculty?

I believe the answer to these questions is “No,” we are not yet where we need to be.

We need to be able to seize more opportunities in the current whirlwind advance of basic science, collaborate more consistently across departments and institutions, and more optimally utilize our substantial available resources. We need to aggressively augment the mentoring we provide our faculty and the leadership opportunities we afford them.

These are my general thoughts.

Areas of opportunity

What are some immediate and particular issues that I face and that the school faces, that give some indication of where I'd like us to go over the next decade?

The first thing I'd like to mention is the Clinical Translational Science Award, a mandate from the National Institutes of Health to consolidate much of the clinical and translational research across our community.

Each of the Harvard major teaching hospitals has a General Clinical Research Center (GCRC), and each of them has had these through competitive funding for the last thirty to forty years. This is a National Institutes of Health (NIH) program that funds the infrastructure for certain kinds of hospital-based clinical research. Massachusetts General, Brigham and Women's, Children's, Beth Israel Deaconess have had these. NIH pays millions of dollars a year to offset the costs of beds, nursing, nutritional support, administrative support, and physical structures in which certain kinds of studies can be

done which otherwise would be impossible to do.

During my early career at Harvard I virtually lived out of the General Clinical Research Center at BI. I was interested in understanding why some people were extremely insulin-resistant. I would have these patients referred to me because I became known as an expert in the area. I would admit the patients to our General Clinical Research Center. I would be able to study them, and have nurses take frequent blood specimens, assess the response to insulin infusions, remove blood cells for studies in the lab, precisely control their nutritional intake, etc. I wouldn't have been able to do these studies without the GCRC and there are hundreds of other investigators like me.

The problem is that the centers became a bit administratively ossified, in part because of the structure the NIH put in place. It became difficult to innovate in these kinds of centers. In addition, there was very limited ability to collaborate between the distinct Harvard-affiliated GCRCs.

NIH hinted at the need for change for many years, but nothing happened. And then NIH Director Elias Zerhouni, a couple of years ago through his roadmap initiative, announced that all of these Centers would be ended by 2010 and you would either lose them or you would roll them into a new kind of grant. This is the Clinical Translational Science Award (CTSA) which would incorporate previous General Clinical Research Centers but would also add many other required elements related to education and career development for clinical/translational researchers, outreach to the community, and regulatory support. The idea was to transform clinical and translational research both as a practice, and as a career path.

The catch was that Harvard could only have one Clinical Translational Science Center (CTSC). This is the first time that there is a cooperative, broad-ranging clinical research initiative across Harvard, with the exception of the Dana-Farber/Harvard Cancer Center. But this is on a much broader scale, and is unique in that the Medical School itself is the recipient of the grant.

The CTSC will unify aspects of these clinical research centers in all the hospitals so that if you are at the Massachusetts General and you're an investigator, but the equipment and capability of studying a patient with a particular problem only resides at Beth Israel Deaconess, you will now be able to do that without too much difficulty, we hope. And

there will be a reduction in redundancy across the centers, and the saved resources, and massive new resources, will be put into more infrastructure, new technology development, support for career development, and many pilot grant programs.

The Medical School will receive all of the funds, and will oversee the distribution of funds to all of the hospitals and other schools associated with the grant. There will be 16 million dollars of additional new funds committed by each of the hospitals, the Med School and from the University's new HUSEC. The changes to be engendered by this grant, which is being submitted by an amazing team of scientists and administrators next week, will be transformative. And the impact on HMS, which will now serve as a coordinating center and academic leader for clinical and translational research at Harvard, will be profound.

Another area where I see tremendous opportunity and need at Harvard is in the broad and exciting field of bioengineering. The new wave of bioengineering – including cellular, molecular, and tissue engineering, nanotechnology, as well as more traditional devices and implants – is something that Harvard Medical School cannot avoid being involved with in a big way. The Medical School Quad and the University do not now have major identified efforts in this area. There are many important centers of bioengineering research in the hospitals, but they are not coordinated intellectually. In this sense, it is a very propitious time for a new level of commitment and coordination in the field.

We are in the early phases now of having discussions between the new School of Engineering and Applied Sciences (SEAS), HMS, and the Faculty of Arts and Sciences to put together a plan for a very major investment in bioengineering, and I hope that one significant plan for the new Allston campus could be in this area. I am personally committed to this being the case.

One other area of opportunity relates to the importance of Human Genetics today. The field of Human Genetics has been transformed such that the human organism is now a subject for study in ways that were unimaginable a few short years ago. Many of the important breakthroughs that will lead to understanding, treatment, and prevention of disease will come from applications of this new Human Genetics.

Although there are strong pockets of excellence, this aspect of Human Genetics is

insufficiently represented in the quad departments of HMS. We have an extraordinary Department of Genetics, but its predominant focus is on other, though equally important, fundamental questions. The Harvard Medical School faculty located in our affiliated hospitals, however, includes many of the world's greatest human geneticists, and some of these are members of our Genetics Department. But most agree that Human Genetics at Harvard is in some sense less than the sum of its parts.

I am now working very closely with an executive committee and Cliff Tabin, our Chair of Genetics, regarding the future of Human Genetics across the broad Harvard community. We are in the early stages of developing plans for how we can launch a more coordinated and robust effort in Human Genetics, perhaps involving all of Harvard University.

Whatever form this planning finally takes, I believe that with a significant intellectual effort on our part, and with some major investment, we can create a program for Human Genetics across the institution broadly, that would be unequalled anywhere on earth.

Another area that I'm very dedicated to exploring is what I'll refer to as pharmacology, therapeutics, toxicology, and chemical biology. Of course, all medical schools used to have pharmacology departments, and many still do. Then came the revolution in cellular and molecular biology, and many such departments left behind their prior, quite limited capacity in "pre-molecular" therapeutics and took up molecular approaches to signal transduction, cell biology, etc. The results were often, and continue to be, spectacular science. But there was an unintended consequence. Just as we are positioned to take greatest advantage of modern scientific breakthroughs to accelerate the process for discovery and optimization of new therapeutics, we find ourselves lacking an identified major program where people focus on these goals.

I think there is an intellectual discipline here that is exceptionally important, and we can seize the high ground with a few additions to our spectacular faculty, and such changes, perhaps once again involving the hospitals and other schools of Harvard, can make this an area where we can lead the world, and more importantly, have a huge impact on human health.

What are our approaches to these challenges in the short run?

Strategic planning

We have decided that it is necessary to have a strategic planning process to engage the HMS community. In doing this, we will consult broadly across the hospitals, the university, the departments, and the faculty.

My sense, and the reason I'm so optimistic about this, is that I do believe, based on my own experience, when you talk about these issues straightforwardly, openly and honestly, it's very hard to disagree with many of the issues I have been speaking about. But we will seek feedback broadly on all of these issues.

I'm quite excited and energized about the possibilities and believe that it won't take a decade to begin to bring about these potential changes. I think these efforts will accelerate our capacity to fulfill our core mission, as stated before:

To create and nurture a diverse community of the best people committed to ending human suffering caused by disease.

I look forward to working with all of you on behalf of this goal.