

**ARTS, SCIENCES & ENGINEERING
FACULTY MEETING
COOLIDGE ROOM, BALLOU HALL
WEDNESDAY, NOVEMBER 4, 2009**

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ANNOUNCEMENTS

PROVOST BHARUCHA: Any announcements?

DEAN PEPALL: I would like to announce that the Graduate School of Arts and Sciences will be holding a faculty meeting on December 9th to continue our discussion about proposed bylaw changes. Hopefully, we'll be able to have that discussion and vote on them at the meeting on December 9th. It's possible that we will use from 12:00 to 12:30, or maybe even less time for it. We'll have a Liberal Arts and Jackson curriculum meeting, and then we'll open the Graduate School of Arts and Sciences meeting for the bylaw changes. I just wanted to give you a heads up. We will probably have lunch as well, so come early. That's my announcement.

PROVOST BHARUCHA: Any other announcements? Yes? For the record, please identify who you are.

PROF. RIDGE: My name is Jack Ridge. I'm in the Geology Department, and I'm the chair of the EPC, and I'd like to make an announcement on behalf of the EPC. This semester, we're taking on the challenge of revising the course evaluation system at Tufts that's used here on the Medford campus. Today, you should have received an email already, requesting your input. I just want to make you aware that we would greatly appreciate your input on this. I think faculty input is critical to revising the course evaluation system.

PROVOST BHARUCHA: Okay. Any other announcements? Yes, Rich?

PROF. VOGEL: Richard Vogel. I'm one of the four faculty directors for the Tufts Institute for the Environment. There's a request for proposals that was just sent out via email for the Tufts Environmental Literacy Institute for 2010. This is a multi-day workshop for Tufts faculty. You can denote your interest, your expression of intent, by November 20th. It's just simply your name and contact information and the name of the proposed Institute. The Institute is basically to enhance environmental literacy among our faculty and students. The final proposal is due January 8th. The workshop will take place in the spring, on May 24th, for a five-day period. It's up to you what that workshop will look like. To define it, the previous one, last year, was on climate change and climate adjustments. Other topics could range from health economics, to water, to energy conflict and negotiation, to international relations. Particularly, we're interested in topics that breach many disciplines. The Institute will provide \$20,000 towards the institute expenditure. We're just looking for a leader to come up with an idea. There are a lot of resources to help you organize that idea into an Institute. We hope to receive applications from a number of people.

PROVOST BHARUCHA: Any other announcements? I have a couple of short ones. One is that I'm delighted to report the extraordinary success of our faculty in getting resources from the stimulus package. I think I gave you an update at an earlier meeting. Faculty have brought in more than \$30 million from more than 75 different awards from the stimulus package in research. This, I think, represents our fair share, or more than our fair share, and I want to applaud those of you in this room who might have been involved in moving very quickly. As you know, we were very aggressive about it. We sent notices regularly to faculty if particular programs or grant awards were pertinent to them. I think we've done well. We should be seeing even more.

We have actually had a significant up-tick in our sponsored research since the previous year, even putting aside the stimulus package. Our research volume has increased higher than the amount of money available from the federal agencies. That reflects our continuing strengthening of the faculty, and hopefully, our continuing strengthening of the research administration process that enables you all to write these grants.

I want to say, in that context, that Vice Provost Peggy Newell and I remain committed to providing the research administration staff and service that enables you to focus on your work and get your grants out. I know that there are sometimes frustrations because the staffing levels are not as high as they might be, particularly in this economic environment, but please don't hesitate to continue to give us feedback about what we can do to leverage your own work optimally so that if you are able to get grants, you can do so without the institution being a problem.

The veterinary school, the Cummings School of Veterinary Medicine, secured a phenomenal grant. It was a \$46 million grant, a Respond Grant. That has been cut. Most of these grants, they come in very large, and then they're cut very quickly. That's already been cut. Nevertheless, it's an extremely successful grant, and it comes at a very opportune time for the veterinary school, which, as you know, has been under extreme pressure from the state government. So, this is a tremendous success and a tremendous relief.

RECOMMENDATIONS FOR AS&E DEGREES

PROVOST BHARUCHA: Okay. Why don't we go to the first new business? Recommendation for AS&E degrees for November. Jim Glaser.

DEAN GLASER: Members of the faculty, I have the honor to present these candidates from Liberal Arts and Jackson, the School of Engineering, and the Graduate School of Arts and Sciences. It is the function of this faculty to recommend to the Board of Trustees all candidates for degrees in Liberal Arts and Jackson, Engineering, and the Graduate School of Arts and Sciences, as authorized by the Trustees for the award of the degree in November, 2009, subject to the usual conditions.

I am happy to certify that these candidates have met or will meet the degree requirements, as set forth by this faculty, for the programs in which they have been enrolled.

The total number of degrees to be recommended is 49. Of those, 18 are Bachelor degrees, 22 are Masters degrees and Certificates of Advanced Study, and nine are Ph.D. degrees. The numbers of undergraduate degrees are as follows: Eight in the College of Liberal Arts, eight in Jackson College for Women, and two in the School of Engineering. The numbers of graduate degrees are as follows: Eleven Masters of Arts, two Masters of Science in Teaching, one Master of Engineering, one Master of Fine arts, four Masters of Science, and two Masters of Science in Engineering Management, one Master of Public Policy, and nine Doctors of Philosophy.

Is there a motion to recommend?

DEAN GLASER: Okay, the motion carries. Thank you. Jillian has said to me that there are no honors here, and I'm not quite sure why, but I am going to take leave and go over to Dowling and see if we're missing something, in which case we may need to extend our ten-minute meeting a little bit if there are some honors cases that failed to get on the agenda. Thank you.

PROVOST BHARUCHA: Thank you, Jim.

ALL DEGREES APPROVED

LIST OF LIBERAL ARTS & JACKSON DEGREE CANDIDATES APPENDED (APPENDIX A)

LIST OF SCHOOL OF ENGINEERING CANDIDATES APPENDED (APPENDIX B)

LIST OF GRADUATE SCHOOL OF ARTS & SCIENCES DEGREE CANDIDATES APPENDED (APPENDIX C)

ELECTRONIC VOTING

PROVOST BHARUCHA: We now have an open discussion on electronic voting. Rich?

PROF. VOGEL: Thank you. I'm Rich Vogel, and I am on the Committee on Committees. The rest of the committee couldn't be here; a number of our committee members are actually elsewhere. I think we have one or two others here, but I'm going to speak on their behalf.

I'd first like to thank the Executive Committee for providing some of the leadership behind the idea of electronic voting, along with us, and Jillian and her staff; that has been really, really important. They have provided an awful lot of input on the process.

First of all, several years ago, the Committee on Committees implemented an electronic process for the committee preference survey. Now, this isn't what I'm talking about today, but you all know about the committee preference survey, which takes place each spring. It used to be done by hand. What we did is we created a website where you could go and state your preferences, and this helped a great deal, particularly because then all the information can be put into a database which is managed by Jillian's office. It really helps a great deal in trying to figure out which people are not only qualified to be on a particular committee, but for us to select people on committees and so forth. The process is just really important.

Now we're talking about another introduction of an electronic media. In this case, we're trying to change the ballot from paper ballots. We consider electronic ballots to be a viable option. We're talking about just the six elected committees. We have an election each spring where we elect the faculty for these six committees, and we're talking about changing that from a paper ballot into an electronic process.

The goal of this would be to ensure wide faculty participation. That's the primary goal. We have not had wide participation by faculty, either in committees or in the vote, and that's been a problem ever since I've been here. At least, more recently, perhaps even worse.

It also enables us to provide hyperlinks on the website to give faculty bios, information about their qualifications and potentially other assorted information, and also importantly, to ensure an objective and confidential process. We do that by having an outside vendor. The outside vendor is Campus-Vote. They allow us fifteen ballot questions, ballots or questions per vote, so we can add to the six committees. We can add some other ballots, as we did in our recent test, which we just did. We had a test of the system. We had a test because it was necessary before the test to locate and rectify any kind of errors or issues prior to the actual use of this electronic system. Hopefully, most of you participated in the test. Is there anyone here that did not participate?

There are 426 faculty who were deemed potential candidates for this election. Of those 426, 188 of you voted, 44 percent. Now, that's a good deal greater -- usually we only get 70 to 80 people here at the spring meeting, which is between 16 and 23 percent. So, we already doubled the participation.

Mind you, that ballot was not a real ballot, and the questions were not thought out as carefully as they could be. But the idea of that ballot was to test the system to make sure that the emails could be sent to the right address. In other words, test the Campus-Vote system. We give them your email addresses, and we tell them which of you are qualified to vote on each committee and which ones are qualified to be on each committee as well. We provide a list of eligible voters for each committee, basically.

There were some concerns raised, but, by and large, it was really remarkably positively evaluated. So, I guess we could spend the rest of the time talking about this. It's a very short

meeting. I'm going to take this opportunity to just put in one short thought about this whole process. I've been attending these meetings for 25 years. I know that the point of all these meetings is to make a decision. I'm a decision scientist. In fact, I'm an environmental engineer whose specialty is decision sciences, and we are about to make a decision. So, the Type I error -- all decisions have Type I and Type II errors, and I've noticed that we tend to spend all our time on Type II errors.

First of all, let me explain. In this case, the Type I error is if we didn't have the ballot system, then we wouldn't ensure wide faculty participation. This is a big, big error. This is a big deal. If we don't have this system, we're not going to ensure wide participation. And so, what is that? A Type I error. If I'm an engineer and I'm designing an elevator, that's making the elevator cable not strong enough. That's a pretty serious problem, right? A Type I error would be designing that cable and I didn't make it strong enough, so we had a fatal problem. That's the Type I error.

The Type II errors are going to be the rest of this discussion. The rest of this discussion, in the case of an elevator or cable problem, it's making the cable too strong. It's not a big error. It's an error, but it's not as big an error. In our case, there are many, an infinite number, of Type II errors. I just want to preface this discussion to make sure you're aware -- I've noticed in many of our conversations, we've talked an awful lot about problems. We do because we're faculty, and we think about all the different intricacies of the problem.

If there are any questions, I'd like to open up to questions and discussion. Hopefully, these Type II errors or concerns won't bog us down too much, but let's open up to questions. I hope if I can't answer them, Jillian will, because she's an expert on this. Yes, Howard?

PROF. MALCHOW: The obvious drawback is there will be even less reason to come to faculty meetings. Now I come for food and for discussion, but these faculty meetings have been drawing, over the last few years, ever fewer percentages. This will be one more reason why they won't come.

PROF. VOGEL: They won't come to one faculty meeting on the one hand. On the other hand, they may actually come to find out who won, and that will be announced. That said, if we're talking about faculty participation in a broader sense, we're talking about faculty governance, which is much more than participation in a single faculty meeting. But that said, I agree, one meeting.

Other questions? Okay, Boris?

PROF. HASSELBLATT: Boris Hasselblatt, Mathematics. I just want to ask, did the test show up anything that wound up requiring any changes?

PROF. VOGEL: There were a few corrections which would be required. It was noted that a few of the email addresses -- a number of you, I don't know if any of you here did not receive the ballot at first, and that was because our list of email addresses was incorrect. There were a few that had to be corrected in the process.

There was also some concern about the definition of the ballot and what the intent of the particular questions was on this ballot, and that was clarified by Jillian. She sent out an email subsequent to the ballot. Hopefully, things like that won't happen next time, because there will be a ballot, and it will be more obvious. The actual voting will make the objectives of the ballot more obvious. In this case, some people mistook the intent of the ballot. They thought perhaps we were actually assessing their willingness to serve on committees. It's not a bad idea to think that, but the fact is that we were really just trying to test the ballot system, the electronic ballot system. Am I correct? Were there other corrections? There may have been one or two other thoughts we had about how to improve the process.

SECRETARY OF THE FACULTY DUBMAN: The one you have raised.

PROF. VOGEL: Any others?

SECRETARY OF THE FACULTY DUBMAN: No.

PROF. VOGEL: I can't think of any others now. Roger?

PROF. TOBIN: Roger Tobin, in Physics, and I'm on the Executive Committee. I just wanted to let you know that there will have to be a bylaw change to make this possible, and the Executive Committee is working now on wording for that. There will be a whole process of bringing forward a bylaw change, and then probably a subsequent policy change to actually implement it. There will be a series of things coming before this faculty over the next several meetings in order to make this happen. It can't just be done with the flip of a switch. Technologically, it can, but not legally, as it so often goes.

DEAN SULLIVAN: More reason to come to meetings.

PROF. ORIAN: Colin Orians, Biology. The Type II error is spending too much money to make that really strong cable. So, what's the cost to Arts, Sciences and Engineering of doing this?

SECRETARY OF THE FACULTY DUBMAN: I can answer that.

RICHARD VOGEL: Jillian knows the answer to that.

SECRETARY OF THE FACULTY DUBMAN: I did some research last summer that the Executive Committee had asked me to do about implementing some sort of electronic system. I had gone to a couple of students, Tufts students, to put this together, and it was an exorbitant amount of money. But in my research, I also have this company called Campus-Vote.com, and they base their pricing on the number of voters we have. So, I think we're like 300 to 1,000 voters, which is the category we fall into. It's somewhere around \$900 for a one-time vote. I don't think it's a lot of money to facilitate more faculty participation in voting, because you do open it to several hundred more people than normally come to a faculty meeting. That's my opinion.

PROF. VOGEL: Thank you. Any other questions, comments? Oh, Howard?

PROF. MALCHOW: I'm sorry, I mean I really don't oppose this. It seems innocuous, but I think if there's a future where electronic voting instead of coming to faculty meetings might be extended to other issues where we would expect discussion on the floor of the faculty, I would be very concerned. I hope there isn't. That hasn't been part of the discussion, not extending it beyond committee assignments. I mean, the elections.

PROF. VOGEL: That's a very good point. To my knowledge, there's been no discussion of anything outside of literally electing the six elected committees, other than the potential it offers for asking for responses to valid questions, but we haven't actually come up with any good ideas on that. But I completely echo your idea. There's no way to replace intelligent discussion amongst the faculty.

PROVOST BHARUCHA: Okay, thank you, Richard.

OPEN DISCUSSION

PROVOST BHARUCHA: Before we adjourn, since we have time, I want to see if anybody wanted to raise any questions or make any comments about anything, questions that we might, as the administration, answer, or anything that's on your mind that you'd like to see discussed in this body. There's a lot going on at the university and we try to communicate, but not always everything gets communicated both ways. We also want to listen. So, if there's anything on your mind, raise your hand. Yes, Barbara?

PROF. GROSSMAN: Thank you. Barbara Grossman, Drama and Dance. Kind of a minor point, but it was all over the newspapers yesterday that Tufts is number one in terms of tuition costs, \$50,000. And so, what would you suggest as an appropriate response to people who say that's exorbitant? Why is Tufts charging students so much? Particularly people who come into some of the less attractive buildings on campus and see chips in tiles and -- you know, just a building that doesn't look one hundred percent, and say, "Where is our tuition money going?"

PROVOST BHARUCHA: Great question. Yeah, good question.

Actually, the first response is based on the comparison group. What is our student/faculty ratio in comparison to those institutions? Because that's what the students who come to a school like Tufts are buying. They're buying access to an outstanding faculty where they have a small number of students per faculty and a small number of students in most of the classes. Even though we do have some large classes; some departments have their large introductory classes. That's sometimes appropriate. Two of the dimensions in *US News* in which we really excel are the number of classes with enrollments of less than twenty and the number of classes with enrollments less than fifty. We are in the top five of national universities on those dimensions. So, you're buying a positive student-faculty ratio, and you're buying small classes.

Having said that, there are other factors as well. One could spend a lot of time answering this question. The Higher Education Price Index, HEPI, has always been higher than the Consumer

Price Index, and there's a very simple reason for that. The Consumer Price Index is based on a basket of goods and services, many of which can be made cheaper by converting labor into technology. For service professionals, service industries like higher education, health services, legal services, where you're buying the services of highly trained professionals, in this case faculty, the price index has always been higher. When we adopt technology, we don't do it at the expense of our labor costs. We don't lay people off. We have to adopt technology, just as anybody else does.

Another reason is that it's part of our core mission to provide the very latest knowledge, opportunities, and facilities to our students, and therefore, to recruit faculty who are at the cutting edges of their fields and to equip them appropriately so they can carry on their work, and that's expensive. A couple of meetings ago I gave a presentation, and one of the statistics I mentioned was that the startup costs of a recruiting package for faculty in the last 25 years has risen roughly 18 percent per year. 18 percent per year. So, these are just some of the issues.

The public has successfully framed a number of these issues in ways that put us on the defensive. I think that's a failing of universities and colleges in getting our message out to the public. So, this particular question has been framed with reference to the CPI. Why the nominal rate of inflation? Why should our inflation be higher than the nominal rate of inflation that's typically used? The answer is approximately what I gave you.

Now, once the public gets angry at us, which they have been already for several years -- all colleges and universities, even before this financial crisis -- there's been an increase in anger by the public about the rising costs of tuition at private colleges and universities. Once they get angry, it's very difficult to provide your justification, because you're arguing in the face of emotion, and this is certainly what's been happening at many of the national organizations trying to respond to concerns in Congress.

Having said that, we are sensitive. We are proposing a tuition increase in the range of three and a half percent. We could certainly use more than that revenue, because our costs tend to go up higher than that. Libraries, application costs tend to be in the double digits. Technology cost increases tend to be much, much higher than the increase in the nominal rates of inflation. And so, we are going to have to find ways to better justify to the general public why it is that we increase tuition the way we do. I think all of you should see yourselves as ambassadors in that respect, because I'm sure you have friends and relatives who ask you this question at the dinner table. You know, "Why do you keep increasing tuition? What are we getting for that?"

As you know, the Department of Education in the previous administration in Washington really fired a shot across the bow in the report, the so-called Spellings Report, which challenges colleges and universities to justify their tuition rates in terms of learning outcomes. Once again, the issue has been framed for us. Now we are put in a very difficult position of trying to justify these increases in terms of outcomes of learning. You know, are our students learning three point five percent more this year than the year before, either in quantity or quality? And that, the accrediting agencies -- the one that we're responsible to is the New England Association of Schools and Colleges -- the accrediting agencies have taken this on as part of their task now, to force us to justify and demonstrate our learning outcomes. So, we have a process going on. As

you know, we have a committee that's been charged, working with Dawn Terkla and others, to try to do some of this assessment and try to frame the issues ourselves. All the leaders of colleges and universities in the United States agree, I think, that if we don't now respond to this challenge by framing the issues ourselves, we're going to be in deep trouble. Anyway, this is a long answer, but it's a good question. Anything else, about anything? Yes, Boris?

PROF. HASSELBLATT: Once again, Boris Hasselblatt from Mathematics. I was wondering whether the issue of costs of books to students has loomed larger now that parents' and students' funds are strained more financially overall, and our financial budget as well. I don't know what we have in place to help students who have to choose courses based on the costs of books.

PROVOST BHARUCHA: Jim, do you know anything about what's been going on? Because I haven't seen any sort of grassroots rebellion.

DEAN GLASER: I know of two things that are on the horizon. One is that very soon we will be asked to identify the books and the price of the books in the course descriptions. That's not something that's being initiated from our office or the Financial Aid Office, but imposed upon us.

ASSOC. PROVOST TERKLA: There has been legislation that requires institutions to do it, along with another 299 other disclosure requirements.

DEAN GLASER: So, we're preparing for that. Thank you, Dawn, I didn't know the exact legislation there. I should, because I'm a political scientist. You just showed me up pretty good. That's good.

The other thing is that universities are trying different ways of helping students through financial aid. In the financial aid award, as I understand it, students are given a certain amount for books, but if their books cost more than that amount, they'll just have to figure that out themselves.

I know that one of our peers is now asking financial aid students to purchase their books, and they will be reimbursed for the cost of the entirety of their books. That sounds attractive when you first hear about it, but it's not. It's not possible to make any differentiation between high-need students and low-need students. Anybody who is on financial aid will be able to do this at our peer institution. It's Williams. So, if you have a very modest financial aid award, you'll be getting this huge benefit. We're kind of wondering how Williams is going to be able to handle that in their budget, because it's a very, very big benefit for many people who may not require it.

So, there is some experimentation that's going on with our peers with regards to this issue. We're certainly aware of that going on. We'll be looking to see what's helping and what's working. The most important thing that we can do as faculty is to identify the books that we're going to be using early and publicize to our students what those books are so that they can make purchases ahead of time if they wish. There's the convenience of the book store, which is great, but competition is a good thing for prices. If students know about the books that are being assigned early enough, they can purchase them in a different way.

PROVOST BHARUCHA: Any other questions, comments? Okay.

DEAN GLASER: I just want to say there are no *summa* candidates for November. There's no problem with our communication. It's just that there weren't any.

PROVOST BHARUCHA: Jim just said there are no *summa* candidates. Okay. Do I have a motion to adjourn?

PROVOST BHARUCHA: Okay. The meeting is adjourned.

MEETING ADJOURNED

Respectfully Submitted,

Catherine Doheney for Jillian Dubman
Secretary of the Faculty for Arts, Sciences & Engineering