

MIT Faculty Newsletter

<http://web.mit.edu/fnl>

in this issue we offer commentary on the faculty governance structure at MIT (Editorial and From The Faculty Chair, below); a piece on the new Schwarzman College of Computing (page 4); two articles on the recent CUP first-year experiments (pages 12 and 14); and continued discussion of Jeffrey Epstein and MIT (pages 18-23).



The MIT Coop

From The Faculty Chair “A Peculiar MIT Concoction”: Our System of Faculty Governance – Part I

Rick L. Danheiser

HOW TO IMPROVE OUR SYSTEM of faculty governance has been a topic of discussion at MIT for many years, and nearly every one of my predecessors as Faculty Chair has devoted at least one of their columns in the *Faculty Newsletter* to the subject. The description of our system as “a peculiar MIT concoction” comes from the column “On Our Faculty Governance” by Jake Jacoby in the May/June 1991 issue of the FNL, one of several articles that I reference here and which I recommend for further reading.

What currently is the role of faculty governance vis-à-vis that of the Administration and the MIT Corporation? What *should* be the role of faculty governance? How can our current system of governance be improved? Are there alternative systems of governance that would better serve the Institute? This

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A Bookstore Without Books

Ruth Perry

YOU CANNOT TEACH ARTS and humanities subjects without books, and so we always order our books for class at least two months before the start of the new semester. Which is why it was such a shock to discover that there were no books in the bookstore at the beginning of the term. No books at the Coop. Plenty of shirts and ties and hats with the MIT insignia, but no books. We stood appalled. Apparently, the Office of the Vice Chancellor was notified in May, along with the Libraries and the Faculty Officers (with email notices to department administrators in June), that the Coop was getting out of stocking real books. It was going virtual. Students could no longer just walk in and buy their books. Faculty could no longer browse the shelves to see what marvelous new books their colleagues were teaching this semester.

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Editorial The Right to Vote; Prof. Woodie Flowers; Undermining the Institute Professorships

The Right to Vote

THE GOOD NEWS FROM the October Faculty Meeting was: a) the high attendance of faculty; and b) the announcement of the formation of the Senior Women’s Council independent of the Administration. The bad news was: a) once again the establishment by the Administration of two committees on Guidelines for Outside Engagements to tackle critical and contentious issues, unelected, and therefore not accountable to the faculty; and b) the voting down of the motion for a truly independent committee of the faculty elected by the entire faculty.

We interpret the latter vote as perhaps reflecting concerns of many members of the faculty that additional oversight of gifts, grants, or donations might somehow affect the flow of possible

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The Right to Vote
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funding and impair their ability to solicit or accept anonymous gifts. This is a legitimate concern, but should be addressed by improving faculty-directed oversight, to work out actual guiding principles and procedures. Unfortunately, in part due to the hurried manner in which discussion and voting proceeded, this opportunity to expand the Faculty's role in MIT governance has for the moment run aground.

As pointed out at the meeting, none of the 73 faculty who had signed the earlier letter of concern from Senior Women Faculty were included on the newly appointed Committee. None of the nine senior faculty who proposed the motion for an independent committee were appointed or approached.

The subsequent letter from President Reif on MIT culture hostile to women on our faculty and staff is a step forward in accurately describing existing problems. It was deeply disturbing, however, that the letter did not explicitly call for more fundamental reforms, such as correcting the omissions above, direct failures of representative governance, in a key process.

All over the country citizens are battling to ensure the right to vote, eroded by a multitude of pseudo-legal actions by state legislatures. Among current best-selling non-fiction is Eric Foner's description of the struggles after the Civil War to enact the 13th, 14th, and 15th Amendments, which would guarantee voting rights for all. Yet at MIT in 2019, the committees of the Institute are still elected by the 4%-5% of the faculty who attend the meeting in which the committees are voted. All nominations come from the Nominations Committee, which is appointed by the President, and the number of nominees for each committee always equals the number of open membership spaces, so no choices are offered to voters. Critical committees like the Ad Hoc Committee to review MIT's external engagements, as well as the committee announced in October on guidelines for gifts and donations, are not elected either.

There are much better ways to proceed. The Editorial Board of this *Newsletter* is elected by electronic vote of all members of the faculty. Participation is far higher than for election of any of the standing committees. Since President Reif has called for suggestions on how to improve the culture at MIT, we propose six straightforward steps:

1. Election of faculty to all committees should be electronic, allowing all members of the faculty to vote by closed ballot.

2. Particularly important is that members of the Nominations Committee be nominated and elected directly by the faculty. Many organizations do this, such as the American Association for the Advancement of Science.

3. The Institute Faculty Meetings should be chaired by the Chair of the Faculty, who should be elected.

4. Some form of Faculty Senate needs to be established, so that faculty concerns can be voiced clearly and independently of the Administration's interests.

5. A Staff Council also needs to be established to give an independent voice to these stakeholders who also work here, making them a part of the governance process.

6. The role and representation of MIT students in MIT governance needs to be strengthened, including through the currently elected undergraduate and graduate student councils.

Professor Woodie Flowers

Professor Woodie Flowers was a visionary, an agent of change at MIT, and a deeply valued member of the FNL Editorial Board.

In the 1970s, as the movement from empirical to theoretical studies in our undergraduate engineering classrooms was its peak, Woodie advocated strongly for a symbiotic balance, and then showed

the way by developing the sophomore design class, 2.70, that became and remains a national model. Realizing the impact that designing can have on self-efficacy, Woodie scaled up the 2.70 design experience into the national FIRST program, the robotics competition for high school teams, which has touched millions of students. This continues to bring cadres of them to our front steps, positively affecting the diversity of our undergraduate population.

We went to Woodie for advice and input on every issue that touched on education and student development. His breadth of understanding of how young scientists and engineers develop and blossom was unparalleled among our colleagues. We will miss him greatly. (Please see "In Memoriam," page 10.)

Undermining the Institute Professorships

Appointment as Institute Professors has long been a major means of honoring members of the faculty who have made particularly valuable contributions to MIT, to their disciplines, and to society. Recently two named Institute Professorships were announced, decided without broad faculty consultation: the John Deutch Institute Professor and the David Koch Institute Professor. We find it difficult to believe that there would be widespread faculty support for attaching the names of these individuals to the Institute Professorships.

Professor Deutch was responsible, as the Provost at the time, for the arbitrary termination of the former Department of Applied Biological Sciences, ignoring the *Rules and Regulations of the Faculty*. The immediate faculty outcry reversed the termination of the ABS Faculty, graduate students, and postdoctoral fellows. Provost Deutch was almost formally censured by the Faculty. The effort to protect our ABS colleagues was the origin of this *Faculty Newsletter* (see: "20th Anniversary of FNL: A Brief History of its Founding," *MIT Faculty Newsletter*, Vol. XX No. 1).

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Undermining the Institute Professorships
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Responding to Deutch's support for biological and chemical weapons, Physics Professor Vera Kistiakowsky, an FNL founder, noted that "he has no business being in the education business." (*The Tech*, 27 May 1988, Vol. 108 Issue 26.) His problematic engagement at the CIA exemplified behavior that could hardly be held up as a model for the behavior of academics who move to the halls of government.

David Koch certainly did good things for MIT. But across the nation he used his wealth in efforts to undermine electoral democracy, to suppress regulation of environmental carcinogens, to subvert scientific evidence of climate change, and even the teaching of evolution. When journalist Jane Mayer published her carefully documented accounts (*Dark Money*) of the campaigns and influence of the Koch brothers, they tried hard to discredit her and limit her publication.

These are not the kinds of people that MIT Institute Professorships should be named after. Given that Institute Professorships are the highest honor we bestow on our colleagues, any sense of impropriety undermines the very integrity of the honor itself. These two named chairs are further examples of decisions that, although affecting the entire Institute, turn a deaf ear to the sensibilities and values of a great many members of the faculty. ■

Editorial Subcommittee

The Schwarzman College of Computing: Giving Back

Haynes Miller

THIS HAS BEEN AN exciting time at MIT, to some degree paralleling the exciting time in Washington. There are so many challenges that it's very hard to keep up with all of them.

I want to spend this column focusing on the newly established Schwarzman College of Computing (SCoC). First of all, some words about its benefactor, Stephen A. Schwarzman.

Mr. Schwarzman founded the Blackstone Group in 1985 with fellow Lehman Brothers executive and Nixon Secretary of Commerce Peter Peterson.

This hedge fund specializes in real estate investment. Beginning in fall 2012, the Blackstone Group began buying up single family homes, usually through auction or foreclosure proceedings. (Recall that during the 2000s, some nine million American families lost their homes due to foreclosures.) By early 2015, it had spent some \$10B acquiring 48,000 private homes, mainly in depressed housing markets such as Southern California, Florida, Las Vegas, Phoenix, and Atlanta.

Not content with waiting for the market to rise to realize profits on this

investment, Blackstone did two things. By December 2016 it had sold at least \$5.4B in rent-backed securities. This was a courageous move, since in 2012 Fannie Mae had declined to guarantee such arrangements. But now, in January 2017, under the current Administration, it agreed to back securitized rents – but for the Blackstone Group only.

This was excellent timing for them, since it immediately preceded Blackstone's second action, the launch of a publicly traded corporation, Invitation Homes, to manage this investment prop-

erty. This IPO raised \$1.54B in late January 2017. Fueled by this infusion of cash, Invitation Homes had extended their portfolio to 82,000 single family homes by August 2018.

Stephen Schwarzman profited greatly from these investments. *Forbes* quotes his wealth as \$18.4B as of 31 October 2019, up from \$12.4B in August 2018, and a mere \$9.5B in March 2016.

In October 2018, President Reif announced the formation of the Stephen A. Schwarzman College of Computing. Schwarzman's founding gift totaled \$350M. It is best regarded as a transfer of wealth to MIT from disproportionately Black and Hispanic foreclosed-upon homeowners in the southern tier of the United States.

Schwarzman has used his free time in a variety of ways. In December 2016, he was named Chair of the President's Strategic and Policy Forum, a panel made up of business executives and abandoned after many of them resigned following the U.S. withdrawal from the Paris Climate Accord and the President's support of the Unite the Right rally in Charlottesville (which caused Schwarzman to resign).

Schwarzman counts among his friends Saudi Arabia's Mohammed bin Salman. In March 2018, shortly before the Saudi visit to President Reif, Schwarzman arranged a roundtable in New York to introduce 40 American businessmen to Mr. bin Salman. This was not unconnected with Blackstone's development of a new fund, Blackstone Infrastructure Partners – of which the Saudi Public Investment Fund is a prime affiliate – designed to further privatize infrastructure development in the U.S.

This relationship continues: During the last week of October 2019, for example, Schwarzman joined Steven Mnuchin, Rick Perry, Jared Kushner, and a few others at the “Future of Investment Initiative” in the Ritz-Carlton hotel in Riyadh. He is also deeply involved in the Kushner “Prosperity to Peace” plan in the Middle East, as well as in the presidential re-election campaign.

In October 2018, President Reif announced the formation of the Stephen A. Schwarzman College of Computing. Schwarzman's founding gift totaled \$350M. It is best regarded as a transfer of wealth to MIT from disproportionately Black and Hispanic foreclosed-upon homeowners in the southern tier of the United States.

Back at home, the total projected cost of the SCoC was set at \$1.1B. Where will the rest of the funds come from? It's possible that other donors will wish to contribute \$750M – more than double Schwarzman's donation – directly to the College, but it may be a hard sell since naming rights have already been sold. So most likely much of that shortfall will be met using funds from the Campaign and general funds raising, redirecting resources that would otherwise go to other pressing needs across the Institute.

I would like to make two proposals.

(1) MIT should offer a scholarship, to be called the Stephen A. Schwarzman Scholarship, to any MIT student whose home was subject to foreclosure since 2005.

(2) The 25 so-called shared appointments described in Dean Huttenlocher's “Strawman” document should simply be released to the Provost, to be allocated by him in the usual way to non-College entities. This would let the rest of the Institute grow somewhat – though still proportionately much less than the computer science sector. The originally announced intent of these appointments was to ease

the transition to more computationally based faculty across the Institute, in response to the observation that computational methods were increasingly important across the whole MIT spectrum. But these appointments should be made by host departments, as part of their natural evolution. I made this proposal in “MIC,” (*MIT Faculty Newsletter*, November/December 2018), and was pleased to see that something like it was mentioned as an option in the Preliminary Report of the Working Group on Faculty Appointments as a type of “conventional hiring process.” We can still hope that it gets taken up, as it is by far the most “collegial” option. ■

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“A Peculiar MIT Concoction”

Danheiser, from page 1

year the Faculty Officers and the Faculty Policy Committee (FPC) have undertaken a discussion of these and related questions. Our overarching goal is to make our system of faculty governance more democratic, ensuring that a full range and diversity of views are represented in the discussion of issues and in decision-making. Our discussions thus far have benefited from input from faculty colleagues received via email and also from several frank and very useful conversations at Random Faculty Dinners and our first Random Faculty Lunch. We encourage colleagues to continue to provide us with suggestions on all of the issues discussed here and we anticipate that one or more faculty meetings during the coming year will include consideration of aspects of faculty governance.

MIT operates with a system of “shared governance” involving the Corporation, the Administration, and the Faculty. Eleven “Standing Committees of the Faculty” serve as the core of faculty governance, with the Faculty Policy Committee functioning as an executive committee whose charge includes coordinating and “providing guidance and direction” to the other committees as well as “establishing Ad Hoc Committees as appropriate.” The FPC has the responsibility “to formulate policy on matters of concern to the Faculty, for approval by the Faculty” and to “interpret and implement policy as approved by the Faculty.” These and other duties and responsibilities of the FPC are outlined in *Rules and Regulations of the Faculty*, Section 1.72.

The FPC is led by the three Officers of the Faculty: the Chair, Associate Chair, and the Secretary. The Faculty Officers meet regularly with the Senior Administration and with each of the five School Councils “to enhance the interchange between the Faculty and Administration on matters of concern to the Faculty.” The Chair represents faculty interests as a member of the Academic Council and Deans Group, attends meet-

ings of the MIT Corporation, and meets individually with each member of the Senior Administration, as well as the Chair of the Corporation, on a regular basis. The Chair and other Faculty Officers serve ex officio on several other Institute committees, and collaborate with the members of the Senior Administration in setting the agendas for the monthly Institute Faculty Meetings.

Several aspects of faculty governance are on the agenda for discussion at meetings of the FPC this year; some have already received attention at our meetings this fall.

MIT operates with a system of “shared governance” involving the Corporation, the Administration, and the Faculty. Eleven “Standing Committees of the Faculty” serve as the core of faculty governance, with the Faculty Policy Committee functioning as an executive committee whose charge includes coordinating and “providing guidance and direction” to the other committees as well as “establishing Ad Hoc Committees as appropriate.”

• *The Application of Electronic Technology.* It has been suggested that the election of the Faculty Officers and perhaps even the election of faculty committees could be carried out more democratically through online voting rather than by a show of hands at the usually sparsely attended May Institute Faculty Meeting. A related proposal calls for voting on motions to be carried out online rather than at faculty meetings. These changes would certainly enable wider participation of the faculty in elections and decision-making. Online voting was in fact suggested as far back as 2004 by former Faculty Chair Rafael Bras (“Improving Our System of Faculty Governance,” *MIT Faculty Newsletter*, Vol. XVI No. 4, February/March 2004) and was also discussed by former Chair Steve Hall in a column in 2013 (“Initial Thoughts,” *MIT Faculty Newsletter*, Vol. XXVI No. 1, September/October 2013). The creation of an online discussion forum to debate important topics has also been proposed. There are pros and cons to

all of these ideas and their variants, and the Faculty Policy Committee will be considering these and related proposals in the coming year. We welcome your input!

• *The Committee on Nominations.* As discussed further below, there are 11 Standing Committees of the Faculty. The members of 10 of these committees are elected by the faculty from a slate of candidates chosen by the Committee on Nominations based on the responses to the annual Preference Survey which is sent to all faculty. In developing the slate of candidates, the Committee on

Nominations carefully considers matters of diversity and ensures that there is balanced representation across the five Schools. Additional candidates can be nominated from the floor, although the last time that option was exercised was in 2005. Since the election of committee members is rarely contested, the Committee on Nominations obviously plays a key role in determining who represents the faculty on the standing committees. It is therefore noteworthy that in contrast to the manner in which candidates for the other 10 committees are chosen, *Rules and Regulations of the Faculty* calls for the members of the Committee on Nominations to be appointed by the President, who also selects the Chair of the committee. If nothing else, this encourages a perception that the Administration exercises significant influence over the membership of the committees of faculty governance. Proposals to change this system have been discussed as far back as 1951, and several

former Faculty Chairs have suggested alternatives. Professor Michel DeGraff (then a member of the Committee on Nominations) published an excellent discussion of this issue in the *Faculty Newsletter* in 2008 (“Reflections on Nominations and Elections for Faculty Officers and Committees,” *MIT Faculty Newsletter*, Vol. XX No. 5, May/June 2008). This question of the procedure for the appointment of the membership of the Committee on Nominations has been debated in several meetings of the Faculty Policy Committee this fall, and we will be continuing this discussion with the possibility that we will bring a motion for change to the full Faculty for consideration this spring.

• *Alternative Systems of Governance.* Is our “peculiar concoction” the best system of governance for MIT? Over the years there have been a number of calls for the creation of alternative systems such as a faculty senate. See the 2008 editorial “Difficult Times Ahead Require a Higher Level of Faculty Participation in Setting Policies,” *MIT Faculty Newsletter*, Vol. XX No. 4, March/April 2008 for one such proposal. Would the creation of a faculty senate be a panacea for any deficiencies associated with our current system? This is not clear. Last May, Faculty Chair Susan Silbey co-organized a one-day meeting of faculty chairs and faculty senate presidents that was held at Yale. Invited were representatives from the eight Ivy League universities as well as MIT, Stanford, Chicago, and Berkeley. The discussions at this meeting focused on the advantages and disadvantages of the governance systems in place at each school. Among these universities, seven have faculty senates, and five do not. This discussion and comparison of governance systems will continue at a second meeting of faculty leaders which is planned for this coming May and which will be held here at MIT.

Along with consideration of the above, the Faculty Officers and the Faculty Policy Committee have been trying to under-

stand the underlying reasons for the relative lack of interest in faculty governance at MIT and have been working on short-term measures to improve our current system by increasing attendance at faculty meetings and by encouraging greater participation on the committees of faculty governance.

Informed debate and the representation of a diversity of views is not possible at [Faculty] meetings when only 5% or fewer of the 1,056 MIT faculty are in attendance. . . . Over the years several Chairs of the Faculty have suggested a system in which departments would assign a faculty member to attend each Institute Faculty Meeting. . . . To foster more interest in Faculty Meetings, it is of course important to make attendance at the meetings appear more worthwhile.

Faculty Meetings

Informed debate and the representation of a diversity of views is not possible at meetings when only 5% or fewer of the 1,056 MIT faculty are in attendance. The Faculty Officers have introduced several measures aimed at encouraging greater attendance at faculty meetings.

• Over the years several Chairs of the Faculty have suggested a system in which departments would assign a faculty member to attend each Institute Faculty Meeting. Susan Silbey proposed such a scheme at the monthly Department Heads Lunch in May, and there was general enthusiasm for trying out the idea. At the beginning of September, the Provost and I contacted the Deans of each of the five Schools asking them to have each of their Department Heads designate one or more of their colleagues to attend the monthly Institute Faculty Meetings. This plan should ensure that there is at least some representation from each department at all meetings of the Faculty.

• To foster more interest in Faculty Meetings, it is of course important to make attendance at the meetings appear

more worthwhile. Last year a number of modifications in *Rules and Regulations of the Faculty* were approved that eliminate the need for some of the routine time-consuming “housekeeping” discussions and votes that had filled the agenda of some meetings in the past.

• One past complaint is that reports at Faculty Meetings are often purely informational and are only scheduled after the reports of working groups and committees are completed and key decisions are already made. Beginning last year, interim reports have been scheduled where working groups and committee chairs update the faculty on the status of their deliberations and invite comment and discussion while their work is still in progress.

• In conjunction with the above, the agendas of meetings have been arranged so as to allow more time for discussion and debate. The agendas for the Institute Faculty Meetings are set at a monthly meeting of the Faculty Officers and members of the Senior Administration. This year, at the suggestion of the Faculty Officers, the entire September meeting and most of the October meeting were devoted to discussion of the Epstein donations and the new committees that have been created to develop guidelines and processes for evaluating outside engagements.

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“A Peculiar MIT Concoction”

Danheiser, from preceding page

• Although normally the President chairs the meetings of the faculty, the September meeting was chaired by the Chair of the Faculty, as was a major part of the October meeting.

Hopefully these short-term measures will serve to foster greater interest in attending Faculty Meetings, but ultimately more innovative and radical steps may be necessary to increase participation in the discussion of issues, in voting, and in elections.

Service on Faculty Committees

Much of the business of faculty governance takes place at meetings of the Standing Committees of the Faculty. This is particularly true with regard to academic matters – it will be recalled that *Policies and Procedures* assigns responsibility for the undergraduate and graduate programs to the faculty (“Educational policy for the Institute is determined by the Faculty,” *Policies and Procedures*, Section 1.5). It is therefore disturbing that each year the Committee on Nominations struggles to identify sufficient faculty to staff the committees based on the tepid response to the annual Preference Survey. Typically, only 50% of the faculty respond to the survey and 60% of those responding indicate no interest in serving on a committee.

Addressing faculty apathy toward service on committees is clearly essential. What are the reasons for the lack of interest? This is a question that has been discussed in prior columns by the Chairs of the Faculty (see, for example, Bish Sanyal’s 2008 column “Reconsidering the Value of Service to MIT,” *MIT Faculty Newsletter*, Vol. XX No. 5, May/June 2008) and which the current officers have probed in discussions at Random Faculty Dinners and a Random Faculty Lunch this semester. To summarize, several factors have been identified as playing a role.

• Time is precious and many colleagues simply do not feel they can spare the time for service on committees. For the great majority of faculty the top priority is research (including fund raising) and scholarly activities that contribute to professional advancement. Teaching responsibilities also are a high priority for most of the faculty, leaving little time for Institute service.

• Some faculty do not volunteer for Standing Committees because they are already committing significant time to

• Finally, and perhaps most importantly, there is a sense among many faculty that these committees lack the authority to significantly influence important decisions and that the role of faculty on the committees is diluted by the presence of members of the administration. In that connection it should be noted, however, that on many of the committees the members representing the Administration (and their designees) are ex officio, *non-voting* members. It is also true that the Standing Committees of the Faculty have had a major impact on many key

There is a sense that service on faculty committees is not recognized and appreciated by colleagues and that such service is not rewarded by Department Heads and administrators. In the Quality of Life surveys conducted every two years, a significant number of faculty report that they feel that service to MIT is “valued slightly or not at all.”

service within their department such as serving on curriculum, graduate admissions, and faculty search committees. Many faculty are also involved as members on one of the numerous Institute ad hoc working groups and committees, as well as on one or more of the 36 “Standing Institute Committees Appointed by the President.” Women and members of underrepresented minorities are in particular demand for these service assignments.

• There is a sense that service on faculty committees is not recognized and appreciated by colleagues and that such service is not rewarded by Department Heads and administrators. In the Quality of Life surveys conducted every two years, a significant number of faculty report that they feel that service to MIT is “valued slightly or not at all.”

decisions and developments at MIT over the years. I intend to devote a future column to further discussion of the roles and impact of the faculty committees, but for now I refer readers interested in more information to the excellent column by former Faculty Chair Krishna Rajagopal on “The Roles of the Standing Committees of the Faculty in the Governance of MIT,” *MIT Faculty Newsletter*, Vol. XXVIII No. 3, January/February 2016.

The Faculty Officers welcome input and proposals relating to all aspects of faculty governance. Please send your thoughts and suggestions to facultychair-reply@mit.edu. ■

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A Bookstore Without Books

Perry, from page 1

Students now had to choose their classes without seeing what they would be reading. Once they worked out their schedules they were supposed to go to the website, put in their orders, and wait. But who had really thought about the consequences of not having books on the first day – or the first week – of class? What decent educational institution would put up with such a situation? Could it be that classes that read books had a secondary status at MIT? It took at least another week after that before students actually had books in their hands – and were able to read assignments or to discuss passages in class. Try teaching math or chemistry without a blackboard – or computer science without computers. That’s what it is like to teach literature without books.

Changes at the MIT Coop bookstore over the last 25 years have not been for the better. Once upon a time it was a real bookstore, with a buyer who searched out interesting books from small presses as well as the big publishing corporations. Browsing its shelves, one found fascinating new books to buy or to dip into in order to learn something new. Then Barnes & Noble took over most of the college bookstores in America, a dangerous monopoly if there were books it chose to suppress. Suddenly *Popular Mechanics* and other “how to” books lined the shelves of our campus bookstore – completely irrelevant to our undergraduates – and expensive clothes appeared on racks. Many – including the late Margaret MacVicar – were appalled at how the store had turned into a merchandising venture rather than a service for our students. One day the literary scholars among us even found a pyramid shelf of *Cliff Notes* for sale right at the front door of the Coop – short cuts to cheating rather than reading the masterworks of literature, the equivalent in our field of fraternity compilations

of previous problem sets. We had to argue with the manager to remove them from the store for they directly undermined our intellectual mission.

This latest incarnation of the campus bookstore seems a perfect emblem of the direction MIT has been taking during the last two administrations. No longer even

Changes at the MIT Coop bookstore over the last 25 years have not been for the better. Once upon a time it was a real bookstore, with a buyer who searched out interesting books from small presses as well as the big publishing corporations. Browsing its shelves, one found fascinating new books to buy or to dip into in order to learn something new. . . . This latest incarnation of the campus bookstore seems a perfect emblem of the direction MIT has been taking during the last two administrations. No longer even giving lip service to education and intellectual exploration, the Institute has come publicly to serve the purposes of corporate capitalism. . . . A bookstore without books is a perfect symbol of the current Institute ethos.

giving lip service to education and intellectual exploration, the Institute has come publicly to serve the purposes of corporate capitalism. Its resources and brainpower are increasingly placed at the disposal of corporate “partners” who direct its research and profit from its results. Students are being trained to be cogs in these businesses, rather than independent thinkers. Campus job fairs offer few alternatives to positions in huge corporations. Every week we get another announcement from the MIT Administration about a new initiative encouraging new businesses or offering entrepreneurial training; it is as if no other mode of intellectual exploration exists. Profitable online modules for distance learning are encouraged over small-scale residential classes because those are the educational experiments with commercial potential.

Our leaders are proud of turning Kendall Square into a mini-Silicon Valley, where a well-placed faculty member can move with efficiency and ease between the offices of his start-up company and his academic department. The line between academic inquiry and corporate research and development is fatally blurred. Just

look at the potential products advertised every week on the MIT website.

A bookstore without books is a perfect symbol of the current Institute ethos. Instead of books it sells its brand – on T-shirts and jackets and coffee cups. The educational mission of those who still use books is sidelined because those ventures are rarely profitable the way computer-driven commercial endeavors are. But our students are missing out – on developing a feel for the language, on thinking about other cultures including the brilliant intellectual monuments of the past, on pondering the existential questions of human life including what really matters – and on classes that begin their teaching programs on time. ■

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In Memoriam Woodie Flowers

Bryan Marquard



The following appeared in The Boston Globe on October 23, 2019.

Woodie Flowers, MIT robotics guru who championed ‘gracious professionalism,’ dies at 75

WOODIE FLOWERS GOT HIS START in the field of robotics during a boyhood far removed from the MIT campus where he would become a beloved and inspirational professor.

“I grew up in a very small town in Louisiana,” he recalled in a 2014 interview posted on the *flatlandkc.org* website. “My first robot was a hot rod roadster and my father was my mentor. That was a wonderful introduction to engineering.”

Taking a cue from his always-inventive father, Dr. Flowers became a mentor to others to the umpteenth power: first when he popularized an engineering design class at the Massachusetts Institute of Technology, and later when he helped launch the FIRST Robotics Competition, which has since engaged the imagination of hundreds of thousands of high school students around the world.

Dr. Flowers, who was 75 and lived in Weston, died Oct. 11 after a brief illness.

He had been the Pappalardo professor emeritus of mechanical engineering, though no title could quite encompass his impact and presence at robotics competitions.

With a voice that never lost its Deep South beginnings, along with his mus-

Engaging and charismatic, Dr. Flowers was as unforgettable as a professor in his famous class – initially called 2.70, and now 2.007 (Design and Manufacturing I) – as he was in other venues as a teacher and mentor.

“Woodie Flowers lived a life of impact,” Don Bossi, president of the non-

With a voice that never lost its Deep South beginnings, along with his mustache and longish hair that in later years he tied back in a gray ponytail, Dr. Flowers was a cheerleader and taskmaster who stressed the importance of individual accomplishment and of learning to work as part of a team.

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Decades ago, he coined the term “gracious professionalism,” which he described as “a balance between the two sides of your brain.”

“If we were to super stereotype the brain’s behavior and say it has an empathetic or passionate side and a rational side, gracious professionalism is a blend of those two things,” he said in the 2014 interview. “I believe that’s where most of the population should be if they are to be considered a well-educated person.”

profit FIRST (For Inspiration and Recognition of Science and Technology), said in a statement.

“Clearly a brilliant technical mind, he also embodied kindness and effortlessly communicated the inherent marriage of technology and humanity in everything he did,” Bossi said. “‘Gracious Professionalism,’ the ethos of FIRST which Woodie established early on, will live indefinitely through the millions of students he inspired through his words and actions.”

Early in his tenure motivating creativity, Dr. Flowers began instructing MIT students to build machines that could achieve a set task, such as in 1977’s “Thing of the Mountain,” when mini-robots

raced to climb to the summit and get back down the other side of a pair of tilted ramps covered with sand.

“We try to pick problems in which the students have to make some visceral trade-offs,” he told the *Globe* that year. “They have to learn, in their guts, about having to give up one thing to gain another . . . as in giving up some speed to gain pushing power.”

Dr. Flowers extended his influence to the world stage upon joining with FIRST founder Dean Kamen to launch the FIRST Robotics Competition in 1992.

“Woodie Flowers is not only leaving behind a legacy of great work and important contributions to education and engineering, but more importantly, he leaves behind a legacy of kindness,” Kamen, who also invented the Segway, said in a statement.

“The things Woodie valued the most, he made sure to give back to the world,” Kamen added. “As someone who strived for graciousness in his every action, he urged the students he mentored to be kind and use their talents to do good.”

Born in 1943, Woodie Claude Flowers (“It’s really on my birth certificate,” he told MIT’s *The Tech* in 2011) was named for his grandfathers – Woodie and Claude – and grew up in Jena, La.

He was the younger of two siblings whose parents were Abe Flowers and Bertie Graham. His mother was an elementary and special education teacher. His father was a welder and inventor, though he wasn’t quite as inventive with family finances.

“We were literally dirt poor – never owned a house – but he did things in interesting and creative ways and I think I mimic him,” Dr. Flowers recalled in the Flatland interview.

Money was so tight that he thought college was beyond reach until a high school shop teacher arranged for a rehabilitation scholarship. Dr. Flowers had broken an arm as a boy, and the injury wasn’t set properly.

He graduated in 1966 with a bachelor’s degree in engineering from Louisiana

Tech University, where he met Margaret Weas. An education student, she initially stayed to finish a master’s at Louisiana Tech when he headed to MIT. They married in 1967 and she supported him through graduate work, switching from teaching to working in the computer field as they settled in Greater Boston.

From MIT, Dr. Flowers received a master’s in mechanical engineering, an

Dr. Flowers extended his influence to the world stage upon joining with FIRST founder Dean Kamen to launch the FIRST Robotics Competition in 1992.

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engineering degree, and a doctorate, and as a graduate student he began designing prosthetics for above-knee amputees.

“He always wanted to learn,” Margaret said, and that continued into retirement.

They rose early to read together – “our 4 a.m. book club,” she said.

Interested in more than just a life of the mind, Dr. Flowers learned race car driving techniques in Watkins Glen, N.Y., and he took lessons on the trapeze and in hang-gliding and polo.

After he retired in 2007, “we thought, ‘Oh, he’s going to slow down,’ but he never did,” said his niece, Catherine Calabria of St. Augustine, Fla.

When Catherine bought a house, Dr. Flowers offered to help her build a table and found slabs of walnut and ash to craft into a one-of-a-kind piece of furniture, even though he hadn’t made one before.

“We treated it as a learning thing; ‘We’re going to learn a lot from this adventure,’” she said. “We just finished it two months ago.”

In addition to his wife and niece, Dr. Flowers leaves his sister, Kay Wells of St. Augustine.

FIRST, which is based in Manchester, N.H., and MIT will announce memorial gatherings to celebrate his life and legacy. Along with teaching, Dr. Flowers hosted the national PBS series “Scientific American Frontiers” in the early 1990s and was awarded a regional Emmy.

He formerly was head of the system and design division in MIT’s department of mechanical engineering and had

been FIRST’s Executive Advisory Board co-chair and distinguished adviser.

Dr. Flowers, who was elected to the National Academy of Engineering, counted among his many honors the Ruth and Joel Spira Outstanding Design Educator Award and the Edwin F. Church Medal, both from the American Society of Mechanical Engineers.

Yet he always stressed the necessary duality of his “gracious professionalism” approach.

“I don’t believe we can afford to have people claim to have a liberal education without understanding the universe. I don’t believe we can afford to have large numbers of technologists and scientists who choose not to pay attention to humanism,” he said in the Flatland interview.

On that point, he was sure his legacy was secure.

“I believe that gracious professionalism is alive and well at MIT,” Dr. Flowers told *The Tech*. ■

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Unintended Downsides to Recent Changes to the P/NR Policy

Peter H. Fisher
Robert P. Redwine

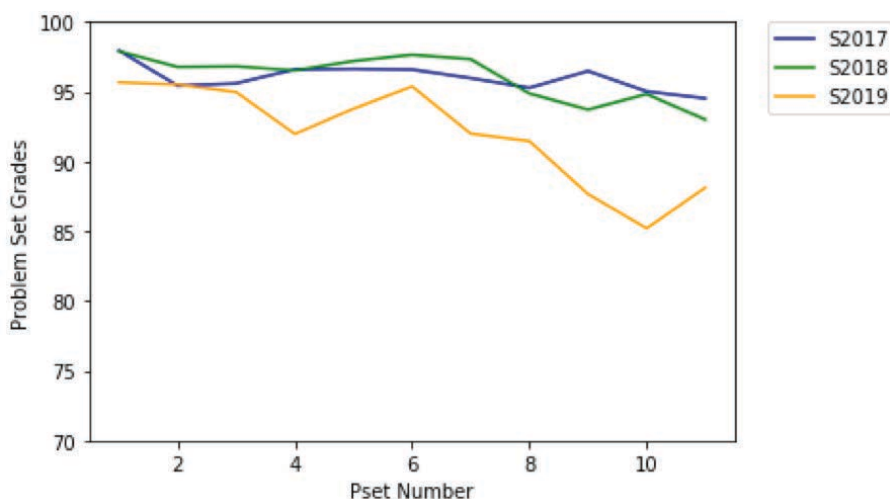
AS MANY READERS OF this newsletter will recall, in the summer of 2018 the Committee on the Undergraduate Program (CUP), with the strong urging of the Vice Chancellor, authorized an “experiment” with the entering undergraduate class of 2022. The main goal of the experiment was to provide the students more opportunity to explore possible majors before having to declare a major. A critical change that was authorized involved allowing the students to take up to three of the STEM GIRs P/NR any time after their first semester. A number of us worried at that time that such a change would likely have significant unintended negative consequences. This article describes some of our experiences teaching the GIRs last academic year, especially in Physics, and what the data tell us about the consequences of the change.

First, let’s look at enrollment. The class of 2022 did not see a very significant change in enrollment in the Mathematics and Physics GIRs last academic year compared to previous classes in previous academic years. This is presumably because students view Mathematics and Physics as foundational for many majors at MIT. There was, however, a very significant enrollment drop last academic year in the Chemistry and Biology GIRs for the class of 2022. So hundreds of students in the class of 2022 will be taking introductory Chemistry and/or Biology subjects P/NR when they are sophomores, juniors, or seniors. This will certainly be a challenge for the faculty teaching those subjects.

Now, let’s look at student engagement and performance. We will focus on the Physics GIRs because this is what we

know best and where we have the most data. We and our colleagues compared engagement and performance of first-year students for 8.01 in the fall semester 2018 with similar measures in the fall semesters of 2016 and 2017. We also compared engagement and performance for

semester. An example is shown in the figure, which plots average problem set grades throughout the semester for the three spring semesters of 8.02 under consideration. It is striking how engagement and performance by this measure were significantly worse in spring 2019 than in



first-year students for 8.02 in the spring semester 2019 with similar measures in the spring semesters of 2017 and 2018. The measures we considered were class attendance and completion of in-class assignments, problem sets completed and the resulting grades, a weekly outside-class online assignment, and of course the final grade. For students on P/NR this last measure was the so-called “hidden grade.”

We did not see significant differences in these measures for 8.01 in the fall semester. This is not surprising, as the enrollments were similar and the first-year students in all three fall semesters were on P/NR.

We did see significant differences in these measures for 8.02 in the spring

the previous two springs, and how they got a lot worse as the semester progressed. Another example is shown in the table (next page), which contains the fraction of first-year students who received various final grades (A, B, C, D, or F) in the three semesters of 8.02. A small fraction (17%) of the first-year students in spring 2019 took 8.02 on a graded basis and most of those had early sophomore status; for the rest this represents their hidden grade. Obviously the opportunity to take 8.02 in spring 2019 on a P/NR basis led many students to underperform and some to cut it too close and not in fact pass.

The large increase in the number of first-year students who did not pass 8.02 in spring 2019 is especially frustrating, as

Final grade distribution for first-year students in 8.02 during the past several spring semesters

	Spring 2017	Spring 2018	Spring 2019
A	52%	58%	23%
B	35%	32%	47%
C	9%	7%	22%
NR (D or F equivalent)	4%	2%	7%

we had seen a major decrease in the failure rate with the introduction of the TEAL model based on active learning 18 years ago (2001). Twenty-five more students receiving No Record in 8.02 is a tragic outcome and cannot be compensated by the fact that the rest of the class was able to explore options for their major. The 8.02 teaching team, with the help of the Office of the Vice Chancellor, will put measures into place to minimize the failure rate in subsequent semesters.

Our understanding is that the Chemistry and Biology Departments did not see a significant reduction in engagement and performance by first-year students in introductory subjects during the academic year 2018-2019. Given that many students (presumably mostly those with less interest in those subjects) chose to postpone taking those subjects until later years, this is not at all surprising.

We do not know in detail the results of first-year student engagement and performance in the Mathematics GIRs during academic year 2018-2019. This would be very interesting to compare to our results in Physics.

So, what does this tell us? We believe that no one who has significant experience with the MIT GIRs should be surprised at the results we saw in 8.02 last spring. In 2001 the MIT Faculty voted to change second semester first-year from P/NR to ABC/NR. The reason for this change was because we were seeing many first-year students getting into bad academic habits with P/NR second semester. These bad habits affected their performance that semester but also affected their

preparation and performance going forward. These phenomena are exactly what we observed in 8.02 last spring.

It is important to remember that P/NR was never intended to apply to individual subjects, but rather to the transition period from high school to MIT. Our

It is important to remember that P/NR was never intended to apply to individual subjects, but rather to the transition period from high school to MIT. Our experience is that the key transition period is the first semester and that P/NR really helps the students make this transition. After that period many students will simply use P/NR as an excuse to do minimal work, thus missing educational opportunities and developing bad habits.

experience is that the key transition period is the first semester and that P/NR really helps the students make this transition. After that period many students will simply use P/NR as an excuse to do minimal work, thus missing educational opportunities and developing bad habits.

In the meantime, the CUP has authorized a somewhat modified experiment for the class of 2023 (this year's first-year students) that still allows them to take up to three of the STEM GIRs P/NR after the first semester. We will, of course, continue to monitor data on engagement and performance, but there is every reason to think that the problems we noted for the class of 2022 will exist for the class of 2023 as well. In this article we have been discussing the results of the experiment with the class of 2022 through their first year. The faculty and others at MIT will not

know the full implications of the experiment until the class of 2022 has graduated and perhaps even beyond. It seems appropriate not to make any changes permanent, or to initiate significantly different experiments, until we understand all the consequences of the current one.

We understand that there is broad support for the idea of allowing first-year students the opportunity to explore majors, but the experiment that has been initiated recently appears to have significant downsides. Down the road we should find a way to provide such opportunities without so much collateral damage. One possibility that has been suggested by a number of people is the idea of allowing students to take STEM GIRs ABC/NR (not P/NR) any time after the first semes-

ter. This would give them flexibility to explore majors in their first year, while still preserving the importance of the GIRs. This seems like an excellent suggestion and we hope very much that the CUP will consider making this or some similar adjustment for future classes.

We would like to thank our many colleagues in 8.02 for their dedication to our students' education. Special thanks go to Michelle Tomasik and Peter Dourmashkin for their help in analyzing and presenting the 8.02 engagement and performance data. ■

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Robert P. Redwine is Professor of Physics and Faculty Lead in 8.02 Spring 2019 (*redwine@mit.edu*).

What We and Our Students Value

An update on the first-year undergraduate experiments

Ian A. Waitz
Kate Weishaar

WE WERE PLEASED TO SEE the article by Professors Peter H. Fisher and Robert P. Redwine (see “Unintended Downsides to Recent Changes to the P/NR Policy,” page 12 in this issue) about the CUP experiments, and to have the opportunity to both respond to their article and share what the study team has learned so far.

The study team are not the only individuals involved in this work. It has in fact been a community-wide effort. The experiments stem from ideas generated by faculty, staff, and students, draw upon past studies, and have been shaped by hundreds of conversations with MIT community members and within the Committee on the Undergraduate Program (CUP), have been implemented by staff and various DLCs including the Registrar’s Office, the Teaching + Learning Lab, the Office of the First Year, and Institutional Research. Moreover, since the Phase I and Phase II efforts have been implemented, we have benefited from engagement with many stakeholders as we present interim findings from the experiment.

It is up to the faculty to craft any lasting policies for the first year, and we hope that this article will inform that discussion.

The Experiment in Action: What We’ve Learned to Date

First, it is good to remind readers that in the summer of 2018, building on the 2014 Task Force on the Future of MIT Education report, and with the support of student and faculty leadership including all five School deans, we worked through the faculty governance process, leading to

a CUP-authorized educational experiment to promote flexibility in the first year.

The experiment was structured to encourage a modest shift in student scheduling behavior: moving one science core GIR out of the first year in exchange for roughly 12 units of academic exploration. This was motivated by widely expressed needs for improving the first-year experience: more opportunity to explore majors, minors, and HASS concentrations; earlier access to hands-on learning; and greater opportunity to be challenged and inspired without becoming overly stressed.

The Phase I policy enabled students in the Class of 2022 (our current sophomores) to take up to three science core GIRs as Pass/No Record any time after the first semester (with all classes in the first semester remaining P/NR as they have been for many years). Passing is defined as C or better, where C corresponds with the Institute definition of grades and means “. . . adequate preparation for moving on to more advanced work in the field.”

We encourage you to read the full interim report of the study team. The following is a summary of the high-level results to date:

- **First-year students – who were selected to join the MIT community for their intensity, curiosity, and excitement – explored more fields and topics.** The magnitude of the Phase I policy impact was 8.7 fewer science core GIR units taken in the first year for the class as a whole (or roughly one fewer science core GIRs taken by three-quarters of the class on average).

In fall 2018, 44% of the first-year class took three or more science core GIRs compared to 77% in 2017, and they used this extra schedule space on a broad range of subjects. In the past, first-years took about 280 unique subjects in the fall term. In fall 2018, they took 318, an increase of 14%, spread across all five Schools. Spring term saw a 7% increase in unique subjects.

- **The two GIRs that the students most often elected to delay were Biology and Chemistry.** In the year before the experiment, 27% of the class delayed Biology beyond the first year, and 25% delayed Chemistry beyond the first year. After the experiment, these numbers increased to 58% delaying Biology and 41% delaying Chemistry beyond the first year. While this shift will lead to a more diverse class composition in future Chemistry and Biology offerings, we have had hundreds of students taking these subjects as sophomores, juniors, or seniors in the past. However, we anticipate many students may be taking these subjects on P/NR grading in later years, which will be different from the past.

- **The ways the students used the flexibility were varied.** Formal interviews with a cohort of students are described in more detail in our interim report, but examples shared by students include, “If I didn’t have [the P/NR policy], I probably would not have taken 6.00 last semester, but replaced it with a biology, so that it could still be P/NR. And then I wouldn’t have like realized, through 6.00, that I was not meant to be Course 6. Yeah, it’s been helpful.”

• **Many students took advantage of the P/NR option.** In the spring, 60% of the class took one or more science core GIRs on P/NR. Their reasons for doing so included a desire to focus energy elsewhere, concern that their performance in a class would lower their GPA, or a desire to relieve grade-related stress.

• **There was no change in overall GPA.** The full-year class GPA (including hidden grades) saw no significant change (it increased +0.01), but some component groups of subjects saw statistically significant shifts: -0.05 decrease in science core GIR GPA and +0.07 increase in HASS GIR GPA. The overall picture that emerges is one of students redistributing their effort. The diagram provides a visual representation of that redistribution. While we can point to quantitative and qualitative data supporting the paths, we cannot quantify how much effort is being spent on various activities.

• **The students reported a drop in stress related to the major selection process.** They also appreciated the additional pressure relief and schedule flexibility that came with being able to select P/NR grading for a subset of classes. In the interviews some referred to the P/NR option as a “safety net.”

• **A large majority of the students was very positive about the experimental grading policy.** When asked how they would describe the experimental grading policy on a recent survey of the Class of 2022 with 644 respondents, 78.1% responded “very positive,” 11.2% responded “somewhat positive,” 8.4% responded “neither positive or negative,” 1.7% responded “somewhat negative,” and 0.6% responded “very negative.”

Given the high-level summary of increased exploration, little or no change in class performance, reduced stress, and a large majority of students being very positive about the experimental grading policy, what is the basis for the concerns voiced by Professors Fisher

and Redwine? That can be found by looking more deeply at the data collected for the spring semester, particularly in 8.02. The table below shows the component and overall changes in GPA semester-by-semester. Typically, students take

additional 3.7% of the 8.02 class got an NR last year (above the 2%-4% baseline). The detailed data which Professors Fisher and Redwine discuss shows that as the semester proceeded, some students participated less and ultimately did not

Redistribution of Effort



one science core GIR subject in the spring, which is why the reduction in GPA in that component averages out to a much smaller GPA change overall.

perform as well. Note that this behavior happened in the past, but occurred to a greater extent under the experimental grading policy.

Changes in Hidden GPA for Experimental Cohort

	Fall Only	Spring Only	Full Year
Science Core GIRs	+0.06*	-0.36***	-0.05*
HASS GIRs	+0.06**	+0.08**	+0.07***
Subjects in declared major	+0.08	+0.06*	+0.03
Overall	+0.06**	-0.05*	+0.01

Sample is undergraduate classes of 2018 through 2022, changes based on regression analysis * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

We also analyzed performance in the individual science core GIRs. We saw no statistically significant change in performance in 18.01, 18.02, 8.01, Chemistry, or Biology, but we note that many students chose to delay Chemistry and Biology until after their first year so we do not yet have the performance of the full experimental cohort for those GIRs. However, most of the students have completed 18.01, 18.02, 8.01, and 8.02, so the results are more meaningful for those subjects.

In 8.02, we observed an overall GPA reduction of 0.5 grade points after accounting for demographic factors, and we saw an increase in the rate of NRs. An

Given that first-year students took an average of 12.8 units of science core subjects in spring 2019 (~1 subject), we have reason to believe that grade shifts are not evidence of students adopting bad habits as Professors Fisher and Redwine suggest, but rather reprioritizing their energy. Alongside the reduction in spring science core GIR GPAs, we saw an increase in spring HASS GIR GPAs, and also in GPAs in subjects in departments which students ultimately selected as their major. Overall the units taken were the same, and the GPA was nearly the same (-0.05) for the experimental cohort in the spring semester.

continued on next page

What We and Our Students Value

Waitz and Weishaar, from preceding page

We certainly share the authors' and Physics Department's concerns about the performance in 8.02. The drop in performance may be linked to issues of motivation. While letter grades can provide one form of motivation, the education literature has long pointed to intrinsic motivation as a strong way to keep students engaged. The Physics teaching team is working closely with the Teaching + Learning Lab to implement changes focused on improving student performance going forward. This will be important for the Class of 2023 who are participating in Phase II of the CUP experiment. We must also reevaluate how we are communicating the value of the science core to our students. Since this is foundational content that every MIT graduate must have, how can we help ensure that our students share this belief? How do we build intrinsic motivation?

The experiment has also highlighted longer-standing concerns. For example, we now have greater clarity on the challenges related to enforcing prerequisites. We value this increased attention to our educational programs as it informs pointed efforts to improve our programs in collaboration with faculty and departments. More detail about our efforts to alleviate these concerns can be found in the interim report.

We have also gained insight into the ways different populations of students explore majors. Our students have varying definitions of "academic exploration" and varying capacities to explore. Many students with advanced credit for zero or one science core GIRs still chose to take three or four science core subjects in fall 2018, citing reasons like feeling behind their peers. These students had no room for a 12-unit exploration subject until spring term at the earliest. Phase II of the experiment includes a separate credit limit for 1-3 unit First-Year Discovery Subjects to give these types of students, many of whom arrive undecided about majors, a chance to explore. For other stu-

dents, 12-unit subjects worked well as exploration, and they chose to take classes during fall P/NR as a low-risk way to try out majors of interest.

The Bigger Picture: Values

The experiments suggest to us that increased flexibility better enables students to prioritize their time and energy to align with their academic interests. Ultimately, the data we and others have gathered matters, but it comes down to what values we are (or ought to be) teaching our students in the classroom and through our messaging and policies. More than that, it comes down to how much freedom we give students to focus on what they value. We know from our colleagues in Admissions (an area of pride thanks to our clear and transparent practices) that the incoming students, whatever their disciplinary identities and values, seek guidance on how to use their many talents to make the world a better place, but they also value autonomy in their decision-making.

We, like many students, faculty, and alumni, want to keep the MIT rigor intact so that our graduates are prepared to tackle whatever comes their way. At the same time, our students, with faculty guidance and encouragement, deserve a chance to take ownership of their education and practice making tough choices. Good habits, experiences, and relationships built in the first year could keep students from burning out by the time they are seniors, as well as open them up to new possibilities they never imagined when first arriving on campus. MIT students arrive knowing how to work hard. What are we doing to help them determine what is worthy of their efforts, starting in the first year?

In a perfect world, we would wait until all the data were collected and analyzed before deciding on further changes, but we have another 1,100 talented first-years arriving on campus next August. We owe it to these students, the Class of 2024, to offer them what we believe to be the best first-year experience possible. Whatever it is, it will not be perfect. The ideal first-year

experience should strike a balance between rigor and well-being, and between structure and autonomy, while being simultaneously inspirational and foundational. We continue to believe that experimentation remains one crucial and necessary approach to determining how to get there.

Indeed, there are several alternatives to the current experimental policy for encouraging exploration in the first year that are in discussion. Professors Fisher and Redwine suggest one of these: to have the science core GIRs taken ABC/NR any time after the first semester. While this may address some of the concerns they have with the experimental grading policy, we do not think it will encourage exploration in the first year, which is the primary goal. We anticipate the difference between ABCDF grading and ABC/NR grading for the science core GIRs after the first semester would have little influence on student behavior and essentially be a return to the standing policies (i.e., those prior to the experiments). This is because few students are awarded grades below a C in the science core, and most of the grades below a C are already awarded on P/NR or ABC/NR within the first year. Specifically, only 4.3% of all science core GIR grades were below a C (for cohorts entering fall 2010-fall 2013, which have completed all of their GIRs); with more than 77% of these being awarded in the first year. Further, students who receive a D may prefer to get a letter grade, given that a D awards credit while a DN does not. Regarding alternatives to the current experimental policy, there are others that we are more enthusiastic about, especially some permutations of the flexible-P/NR option proposed by Professor Jesse Thaler. Some of these may have the effect of enabling exploration while simultaneously addressing some of the concerns expressed by Professors Fisher and Redwine.

It is up to the Faculty of MIT to continue to reflect upon our and others' findings and to consider ways to improve the first year. As disciplines and pedagogy continue to evolve, we should adapt our first year accordingly as we have done with

NEET and new joint degrees. We need a first-year experience that prepares our students to excel in the world as it exists today, and in the future. Given how important the GIRs are to the MIT educational experience – all of them, not just the science core – we hope the new insights about how today’s students navigate MIT will help inform conversations about the value, purpose, and potential evolution of the GIRs.

The faculty of MIT have the responsibility of shaping the first-year experience for future MIT students. We encourage you to share your ideas and to speak up for the educational experiences you believe our students should have, just as Professors Fisher and Redwine (and many others over the past year) have done. We are planning to host additional discussions at Schools and DLCs in the coming weeks and months and are open to engag-

ing with any interested groups. It is only together that we can make a better first year at MIT. ■

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A Peek Inside the Random Faculty Dinners

David A. Singer

THE ELEGANT EMMA ROGERS Room, with its mahogany tables, wood paneling, and oil portraits on the walls, is home to MIT’s Random Faculty Dinners and Lunches. Chef Tim Healey prepares a delectable meal using seasonal ingredients for a group of 20-25 faculty members from across the Institute. At the end of the meal, the Chair of the Faculty clinks a glass and asks, “What’s on your mind?” First-time attendees often stare politely at their napkins, but after discussion begins they quickly realize that this is no ordinary faculty meeting.

The RFDs, as the faculty officers like to call them, are designed to lure faculty away from their offices and labs for an evening (or, for the lunches, a 90-minute mid-day break) of fine dining and honest conversation about MIT affairs. The content of the discussions varies from month to month, but usually we hear a mix of thoughtful observations about students and the curriculum, comments about faculty governance and policy decisions, and grievances of various sorts. For

some faculty, the discussions are an opportunity to learn more about MIT; for others, they are an opportunity to voice concerns and communicate faculty perspectives to the Senior Administration.

As Secretary of the Faculty, I unobtrusively take notes during the discussions and create an anonymized summary – no names are mentioned! – to share with the President, Provost, and Chancellor. Over the course of a year, these RFD summaries offer a useful guide to what faculty are thinking. They also serve as a thermometer, giving off a warning when issues seem particularly hot.

As of this writing, Chair Rick Danheiser, Associate Chair Duane Boning, and I have hosted three random faculty meals, including two dinners and one lunch. A few topics have emerged repeatedly. Faculty are particularly interested in the Schwarzman College of Computing and raised concerns about the nature of cluster hiring. Faculty governance has also been a source of lively discussion, with attendees raising many

important questions: Should the members of the Committee on Nominations be elected? Should we have electronic voting for faculty meetings and online forums to discuss motions? How can we get more faculty to participate in governance? And finally, faculty are rethinking MIT’s tenure and promotion system, with its unusual combination of three external reviews. It appears that there is interest in simplifying the system, but faculty are not in agreement about which of the three steps – Associate without Tenure, Associate with Tenure, and Full Professor – to remove.

If you are a current faculty member, you have either received an invitation to an RFD or will soon. I hope you will join us. I can guarantee you the best meal on campus (thanks to Chef Tim) and a spirited discussion about MIT. ■

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Comments at MIT Institute Faculty Meeting September 18, 2019

Susan S. Silbey

The following is an excerpted version (by Prof. Silbey) of the comments she made at the September 18, 2019 Institute Faculty Meeting.

WHEN WE LIVE IN A CULTURE whose anthem is “move fast and break things,” when disruptive entrepreneurship is the ostensible purpose of education, we cannot really be surprised that a Level 3 registered sex offender is a courted financial donor to educational institutions and is celebrated for his imagination and creativity. Jeffrey Epstein, a known sexual predator who trafficked in young girls, is invited to campuses. We should be horrified but not surprised.

We all know that MIT, like all institutions of higher education, research, and the arts, needs capital. For nearly 40 years, our governments (federal and state) have increasingly abandoned their commitment to both public and private education, as well as to science and the arts. We have no choice but to rely – as we do – on the generosity of philanthropists: individuals, families, foundations, and corporations.

I have heard some make the argument that taking money from Epstein is no different than taking money from the Kochs. The Kochs harm more people with their philosophies and political activity, some suggest. Others think we should not take money from these alumni for cancer research because they also spend their money disseminating false and misleading information about the effects of fossil fuels on the earth’s atmosphere and also because they use their wealth, and its consequent power, to build organizations that impede the progress of science, knowl-

edge, and a more equitable and just world (which is what we say we are doing and tell our donors). Some think we should not take money from authoritarian governments that engage in what appears to be genocide of their population or their neighbors.

We are mistaken if we think what happened is simply a breakdown in process. No process – thorough or cursory – should have resulted in taking money from a person who is and was at the time a registered sex offender, known for prostituting minors, and had a reputation for such at the time MIT engaged with him.

I do not like the Kochs or their politics, and I am willing to debate the tenets of their political philosophies and the value of their philanthropy.

But, there can be no debate about sex trafficking of children. It is beyond reason, truly unspeakable. There is no defense.

If we cannot see the difference between the Kochs and Jeffrey Epstein, we are indeed in trouble. We are good at making distinctions; that is what scholars do. This is the heart of the issue, I think. So, how did we come to this place?

We are mistaken if we think what happened is simply a breakdown in process. No process – thorough or cursory – should have resulted in taking money from a person who is and was at the time a registered sex offender, known for prostituting minors, and had a reputation for such at the time MIT engaged with him.

Misunderstanding this as a process issue instead of a judgment issue is symp-

tomatic of serious problems deep in the organizational structure of MIT as well as cognitive and intellectual failures characteristic of the MIT culture.

First, the organizational and structural problem. What explains the failure of due diligence that enabled a donation from

Jeffrey Epstein? I imagine, frankly, that there was limited or no attention to the case. I imagine that a list of current and prospective donors went past a group of senior administrators, like many such lists, and no one paid much attention. Why?

Most likely, it is a consequence of organizational overload. Issues are treated as they are presented, already framed and packaged without sufficient time, or without a diverse group of advisors with multiple perspectives. Debate is unproductive, not lean. Thus, Epstein’s involvement was not seen for what it was. It was not noticed as a problem because there was neither time to discuss nor a sufficient range of persons with expertise and sensitivity to know better. The group lacked the cognitive ability and experiential variability to identify the harm Epstein’s donation and involvement with MIT would cause, to see the wolf in sheep’s clothing.

When leaders are surrounded by a relatively homogeneous group of like-thinking colleagues, they are less likely to be offered contrary interpretations of the situation, which compounds the organizational overload. Managing size and complexity, plus the absence of diverse points of view generates less conversation, not more, about the issues to be decided, impeding recognition of what may turn out to be a critical, game-changing decision.

There are other organizational features that threaten the governance of MIT. For example: we use the accounting procedures of a profit-making organization for a non-profit organization. As such, we try to balance revenue and costs: income (from tuition, research grants and contracts, endowment and philanthropy) and expenses (education, research, physical plant, administration, development, etc.). This accounting model obscures the fact that this is an expense-generating organization where there is no limit to what could be an expense, no limit to what we might dream to do, if we only had the money (e.g., starting online education, inventing new courses for prospective students, enhancing our teaching of ethics, expanding quality of life for students and staff as well as faculty, creating new Schools, developing new research programs).

Over the last five years, we raised 5+ billion dollars, and are in no better position than where we were to begin because our bottom line needs have escalated. We pursue the money to feed endless growth. The data on the increasing size of the faculty, the staff, the number of graduate students, and the square footage of the physical plant all attest to this exuberant but potentially calamitous growth. Thus, we appear to value growth above all, perhaps defining excellence by size and speed. Is this really who we are?

Second, this is not just an organizational and structural problem, but a deep cultural failure, which derives from and is enacted by prioritizing mechanical thinking and devaluing social knowledge, history, and expertise. We regularly return to this at MIT. In the last two years we had to deal with misunderstanding of: IQ in

setting up the quest for intelligence; the relations with Saudi Arabia and MBS; the invitation to Henry Kissinger for the opening of the College; the design of the College; and now Epstein. In each of these instances, mistakes were said to be unintended. But they are repeated and the injuries compounded because we have not understood that these issues are problems of social meaning. Intentions are not physical causes. Intentions enter the social world as words and actions that are interpreted by diverse audiences in multiple ways, which can be explained and are interpretable by the social and humanistic disciplines. The mistakes are repeated because

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those making them think intentions can be known and understood in singular ways, with a fixed meaning (and as good intentions) despite the words and actions being in fact received and experienced in many ways (some of them unfortunate).

Offering process as the explanation of and cure for these cultural failures reproduces the cultural failures. Technologies of decision-making – call this an algorithm or layers of review cannot overcome the necessity of exercising judgment within a social context at each step of the process – e.g., making a choice or choices.

Neither law nor machines eliminate the role of human judgment, which exists at every step of the governance structure. Legal and organizational processes provide backup, do-overs, and appeals to help improve outcomes and move us toward more reliable and valid decisions that are acceptable to the community. But at every step of a process, a person or persons make a choice. Processes are choice engines, and if a process is too narrowly conceived, it invites bad choices.

Misunderstanding this as a process problem instead of a judgment problem offends all of us who know that when we do business with predators, and we agree to give him even an ounce of pleasure by doing business with us, we fail to condemn his acts and fail to ostracize the person from the community.

If we cannot recognize a problem for what it is, we cannot exercise good judgment, but we also cannot even begin to solve the problem. Misunderstanding this as solely a process problem instead of a judgment problem prevents us from even beginning to see that the problem has been too narrowly framed. This applies to

the particular decision process that allowed us to take money from a sexual predator, and it also applies now to the response to this failure by looking for a new or improved process. What we have here is deep cultural failure, of which processes are a small piece.

However, and importantly, I urge us, as strongly as I can, not to see or say simply “the culture is to blame.” That is too facile. We must ask what aspects – practices and messages – of our culture led to the poor process and failure to deliver a good decision.

The fast and blinkered decision-making and narrow choices need not be the only way to govern.

The messiness of social action and human decisions is the subject of fields of study researched and taught here at the Institute, but these are devalued in the technological culture of disruptive entrepreneurship and big science. The inability to recognize a problem is a consequence

continued on next page

Comments at Institute Faculty Meeting

Silbey, from preceding page

of insularity, ignorance, lack of sufficient references and associated context to identify and interpret the phenomena or situation and thus recognize a problem when it stares you in the face.

It is not only normalized misogyny, but the devaluing of what too many at MIT describe as soft, not hard, knowledge. Even here there is a masculine picture of the world right down to our corporeal bodies. It is a matter of respect and resources that enable participation and productivity.

We effectively enact our values, make words into action and over time into habitual practices when we reward celebrity instead of scholarship, distribute our material resources to those who succeed in the marketplace not of ideas but of commerce, and fail to see the actual

and added value that organizational, social, and humanistic knowledge brings.

What is to be concluded about our enacted values when we allow men at MIT to advertise “hot girls” on their office doors and no one does anything about it? And what does it say about our values when someone who removes murals of naked women and references to sexual assault from the walls of dormitories is called fascist? The students justify their action promoting the murals as protected speech (which it is not) and local culture. Is it any wonder that our students develop AI that cannot recognize women’s or black persons’ faces, and our students populate Silicon Valley, building an Internet awash with pornography and destructive social media threatening constitutional democracies?

What choices are they making? Where did they learn to make those choices? Or do they think that they have no choices to

make? To many social scientists, these are all explainable consequences of an organizational structure and culture that silences opposition at the very top of MIT.

We are collectively ashamed because it looks like MIT cares more about taking money than we care about the harm specific people have caused to women and children. No matter how you consider it, we were balancing some sum of money against something most of us would think has no price. The only reason to take the money is if we did not know what we were doing. And so we have to figure out how such not knowing can be prevented.

We say that we want to teach about ethical conduct. This is a moment to show what that means. ■

Susan S. Silbey is Leon and Anne Goldberg Professor of Humanities, Professor of Sociology and Anthropology, and Professor of Behavioral and Policy Sciences (ssilbey@mit.edu).

An Open Letter to MIT Department Heads

Kimberly Jung

HI, I’M KIMBERLY, AN MIT grad student who attended the Epstein Forum tonight. Though we didn’t say it tonight, we students value and appreciate you for working tirelessly and thanklessly every day for students and the greater good, some of you for decades. You take care of us and are our mentors and leaders. Thank you for showing up to the Epstein forum tonight when you have children and spouses to go home to. We appreciate you.

I had hoped not to see most of you running out of the room but instead start engaging some of the student voices. There is palpable energy and you are the ones to harness it towards a meaningful, change-enacting conversation. If you don’t engage it, it goes in a direction you don’t want it to go.

Leaders can lead only when the population can trust them and know they can keep accountability. How do you build that trust?

My opinion is that it is taking way too long for any proper response from our leaders, our President, you and me. We cannot wait for President Reif to tell us what to do. This is our chance to show the world what MIT is made of and how we respond, like Roosevelt’s man in the arena. You are the Department Head for a reason, and it’s not just paperwork. You are responsible for everything your organization does or fails to do, even when you are not there. You are responsible for the

moral and cultural development of your students and faculty; otherwise, when the hammer falls unexpectedly, it's egg on all of our faces. If you thought your job was just to facilitate great research and win awards for your department, then you may be living in a bubble.

Now is the time to bring your students in, to have a talk with your professors, to enact process mechanisms on 1) how to receive funding honorably; 2) how to properly treat students; 3) why we never seem to have time to do anything but win awards and accomplish research at a frenetic pace. For some reason, we assume the status quo is fine. But when's the last time you had a real sit down with a group of students or professors to understand them, to ask them how they're doing and get feedback on the department, to make sure they're on the same page?

At the end of the day, this isn't about you or me. It's about ideas worth fighting for, change that's worth enacting not because you or I said it, but because they are the right things to do. If there's no change to be had, then we still want to hear from you. We want to spread culture throughout our organizations, and that's the main job of leaders. They propagate the right values and ideas and make sure everyone propagates them too. That's why the best organizations are the ones that run like butter even when their leader is absent.

If we don't have time, then the solution is that we need to make more time. MIT gets so lost in the daily grind that we can't even make moral decisions, let alone take care of our own. Let's make time to take care of ourselves.

Some suggestions:

1) Get in touch with your populace and see if there are problems or not. Do a survey, take the initiative to invite students to chat, listen, and be sure to make sure students and professors feel listened to and valued. Saying "My door is always open . . ." or "Email this address if you have problems . . ." is not leading. Leaders go to where their people work, play, live,

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do things side-by-side, talk to them, earn their trust. Encourage the leaders below you to do the same.

2) Carve out time to reflect and have conversations. The professors should be leading their students in these intimate forums. It keeps everyone thinking about the right things. We actually probably only need to do this once a year, honestly, in the future, but perhaps a little more frequently now.

3) Have real-world case studies (because the world is not black and white) to discuss complicated situations so even the quiet students can voice their thoughts and exercise their moral muscles and decision-making abilities, as they are the future leaders of the world, as you are the current leaders.

4) Make public statements by leadership for supporting victims of sexual abuse and strong support/\$ towards programs to support them.

5) I had hoped for an "All-Stop" from President Reif within 1-2 weeks of the news and a presidential address on Killian Court followed by circles of talking students and professors on the lawn. What a great visual response for the outside

world, too!

I'm sure there's more; you know way more than I. The students and professors are also sources. Let the best ideas surface to the top. It's your job to cultivate this process. The community is ripe for change. Your charge as the leader is to make it happen, make it easy and set a path forward, so the community can channel into action.

Many of you are taking great strides to do the right thing and enact change within your level. I'm glad we have a group of folks who care and take the mantle of leadership seriously. Thank you all for your hard work as faculty and Department Heads; you are all truly outstanding. ■

Kimberly Jung is a graduate student in the Department of Mechanical Engineering (jungk@mit.edu).

Reflections on Epstein and MIT

Alexander Slocum

I BELIEVE THE SAD EPSTEIN Events are a symptom of a serious disease that affects many “leading” institutions. This is a complex and sad situation we should be able to clearly see, and thus perhaps MIT could lead the world by opening our records, hearts, and minds. At our September Faculty Meeting held in the Student Center, we heard that many of us fundamentally believe the root of our problems is the never-ending quest to be bigger, better. . . . Indeed, that’s the root of humanity’s issues that have led us to perhaps imminent climate collapse. Close to home that translates to the perpetual quest to be #1, which ultimately has led to the quest to raise more money by any means available.

This has created an atmosphere amongst far too many in our ranks to do whatever they think should be done, regardless of the true spirit of MIT, to be labeled better. But labels are easily peeled off to reveal a container that is not really full. For example, how would you feel about a senior leadership person at MIT who says in an email (amazing the way people send things on and do not bother to read the long trail of emails attached) to another senior leadership person at MIT:

“I know committees are painful, but sometimes people need to feel as if they had a say in arriving at a solution, and it is almost more time (and energy) to fight that . . .”

The fact that this quote is not related to the Epstein issue indicates that we may have what looks to be a big wonderful tree that bears much knowledge of fruit, and

we have very deep roots, but the trunk has some rot that threatens the core health and vitality of the tree.

To think deeper about this, I went on some long runs . . . and reflected on my life at MIT, how it and the world have been changing. I conclude that the most fundamental challenge we face is the positive feedback loop which we have created for ourselves (which we geeks know is unstable), which is fed by the quest for money to enable us to prove we are bigger and thus better. To this end we must change, go back to our roots, and rebuild from the ground up.

MIT must lead, not follow, else our foundation becomes shallow

1. We must denounce all collegiate rankings. MIT is only #1 for those who cherish and relish our core focus, which is the quest for deterministic logical, moral, and ethical thinking with the goal of having a positive impact on the world.

a. College rankings are bad because in the attempt to boil down a complex thing into a simple number, they drive people in colleges to do sad things in an attempt to raise their ranking . . . AND students (& parents!) too often pick a school based on its ranking, not necessarily for what best meets their needs and goals.

b. MIT must from now on never acknowledge in any way any ranking number assigned to us, NOR must any MIT people participate in ranking other universities. Instead we will post on our website what our graduates do after they leave, as should all schools, and let prospective students decide for themselves if the school is right for them.

2. All of us must pledge to continually reflect, evolve, and be true to what we all need to be: NICE. We must each do our part to personally evolve and to remove from MIT policies and people driven by greed and short-term gain. ALL should watch “Miracle on 34th Street” over and over until the message sinks in! I would also like to suggest more community social events such as Monthly Moral Movie Nights followed by Walk & Talks, Trot & Talks, Chew & Chats. . . . Chances to really get to know and respect each other . . .

3. We must create a new Office of Moral Guidance (OMG) which will be comprised of willing-to-evolve members of the Office of General Counsel (OGC) and leaders of multiple theologies most-concerned about the future of humanity and MIT. Every OGC opinion given to the administration is accompanied by thoughts from the OMG.

4. Our leaders must all actually teach (or help teach) classes or cook meals for students, or coach students at academic, artistic, or athletic events. By spending quality time doing things with students, their hearts and minds will be invigorated, leading to new levels of endorphins to enable happier more creative thinking to solve pernicious pesky problems.

An important context reference is the poem I wrote (fortunately it was international talk like a pirates day) during the faculty meeting with fresh new President Reif when then Provost Kaiser announced his plans for Kendall Square:

*Avast yee Tech Geekies
Let's show the world we are not just a bunch
of mental freakies*

*Let's think big and earn and show our
worth
by helping to save the planet Earth
It starts centuries ago with the Charters of
Freedom¹ were written
So all citizens of a new country could be free
to think and speak and not be smitten*

*With our minds we at MIT designed special
environmental encasements
With our hands we made them and
installed the original Charters in these
emplacements*

*These great original Charters are now on
display for all to see
So people can learn how to be truly free*

*These documents have infinite potential
power
With them true freedom to think and do
can flower*

*But they are also very fragile
For they are useless if kept hidden and the
citizens are in denial*

*The same can be said for MIT
As it is the supposed place for great thinkers
to be*

*Complete openness and debate must
happen a priori
Our leaders, who come from us, must not
rule by decree*

*Open debate and welcoming of questions is
not enough
It takes vision, compassion, humility and
acting without vengeance to be truly tough*

*For anything that affects how we work and
live
True leaders must not take, but give*

*So here's to our new fearless leader President
and Professor Rafael Reif!*

It was at this time, however, that Rafael signed the gift acknowledgment letter that began the series of events that have come to haunt him and our community. If only all members of the Administration had paid attention!

On 18 September 2019 I attended the Faculty Meeting with friends, faculty, and regular folks. Before us was a person who the MIT community had just helped celebrate his 69th birthday with an amazing collection of positive thoughts put forth on Lobby 7 Column Posters. And now President Reif stood before us all. But this time we came to thrash Rafael, not to praise him. It was his time for prayaschittha², and he took a severe lashing with I believe great humility, sincere sadness and an open mind and heart. While memory of the evil that he has overseen will live on after him, the good things he has done must not also be interred.

One by one, many people said many things from helpful to hurtful, and all were sincere and justified. As people spoke I watched him... I saw his soul cry "Oh my God, what have I done." As the words lashed out, I added many to those I myself had come to speak and this is what I then said when it was my turn:

*In the continual quest for milk and honey
We sadly traded our principles for money
And now we must strengthen our funda-
mental roots*

And grow & nurture new blossoms and shoots

*The truth eventually we all will come to know
So let us all promise to continually reflect,
evolve and grow*

*We must look out and care for each other
With the love of a father & mother*

*For too often actions are ok'd with a legal
wink and nod*

*that later come to light and make us
exclaim "Oh My God!"*

*And in response some will propose many a
well-meaning contrivance*

*Let us now gather them in a new all-impor-
tant Office of Moral Guidance*

These words are few, but I hope inclusive of the many thoughts and feelings expressed by others at this meeting, and I hope this time, those in his Administration will listen and think deeply. My hope is that as we begin healing, we must judge not, else we will be judged; we must condemn not, lest we be condemned; and we must forgive, lest we not be forgiven (from Luke 6:37). I pray these words will help set up a resonance in our community that will evolve, grow, spread . . . lead to real positive change.

Indeed in my many years here (since 1978!) I have experienced cold hardness balanced by warm softness, and myself took some deep time to reflect more on the above as I ran the Berlin Marathon on September 29. I ran in a city that was once the capital of hate and is now the capital of a great nation that opened its doors to millions cast out, and that warmth tempered the cold rain in which I ran.

In closing I just want to share a source of strength and hope with all the women (and men like me) who feel sad, hurt, abused, unloved, cheapened... by the evil that was done, and are wondering what to do now... that helped my mother (Marianna Polonsky Slocum (1955)) when times were dark: "Footprints in the Sand" (author unknown), and "I Am Woman" (Helen Reddy). From these I pray for 'afw³ we hope we have a chance to do better, and if by ourselves pardoning others and give them a chance to do better, we all become wiser and stronger. ■

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¹ USA founding documents

² Penance (Hinduism)

³ Forgiveness (Islam)

Update on MIT's Open Access Policy and Continued Negotiations With Publishers

Karl K. Berggren
Ellen Finnie
Roger P. Levy
(On behalf of the MIT
Committee on the
Library System)

IN OCTOBER 2019, MIT Libraries announced a Framework for Publisher Contracts, developed in collaboration with MIT's Committee on the Library System and Open Access Task Force. MIT Libraries will be using this framework, endorsed as of November 3, 2019 by over 160 institutions, to guide ongoing and future negotiations with scholarly publishers, including for upcoming renewals of contracts with several major publishers that are due to expire at the end of 2019, notably Wiley, Elsevier, the American Chemical Society, and the American Association for the Advancement of Science. The framework calls for terms that are aligned with the recommendations of MIT's Open Access Task Force, preserving the control of scholars and scholarly communities over their own intellectual output while recognizing that publishers can provide value-added services for which MIT is prepared to pay a fair and sustainable price.

The benefits to society and to the world are greatest when the fruits of scholarly labor are immediately and freely available. All MIT faculty enjoy broad rights to share and reuse their scholarly articles due to MIT's Open Access Policy, established by the Faculty in 2009. Today, nearly 50% of MIT faculty authored articles published since 2009 are openly accessible through MIT's open repository. However, a small but influential group of publishers require that MIT authors waive the open access policy, undercutting MIT authors' rights. Publishers whose revenue stream depends on charging institutions

for subscription access to scholarly content have strong incentives to place this and other limits on open access and use. These incentives and the limited negotiating power of individual university

More recently, however, global developments have set more favorable conditions for a move toward immediate open access as a norm of scholarly dissemination. These developments include open access mandates from a wide variety of research funders, including the Gates Foundation, all major U.S. federal agencies, and most recently the international consortium cOAlition S.

libraries relative to major publishers have set the stage for the unsustainable trajectory of increasing costs for scholarly journals seen over the past decade.

More recently, however, global developments have set more favorable conditions for a move toward immediate open access as a norm of scholarly dissemination. These developments include open access mandates from a wide variety of research funders, including the Gates Foundation, all major U.S. federal agencies, and most recently the international consortium cOAlition S. The latter's PlanS will require all funded authors to meet particularly stringent open access requirements: publishing in a purely open access journal, on an open access platform, or making the article immediately available

in an open access repository. Equally important, open access repositories are becoming increasingly popular, and more and more are becoming available. MIT's Framework for Publisher Contracts aligns

MIT with this global shift and positions the Institute to continue playing a leading role in enabling immediate open access for MIT authors and advocating for open access for scholars around the world.

In addition to funders, universities are increasingly playing key roles in the push for open access. In recent years, subscription cancellations across Europe have signaled a major shift in the global environment. Consortia in Austria, Finland, Germany, Hungary, the Netherlands, Norway, Sweden, and the United Kingdom have been pushing for contracts that incorporate open access for articles written by authors at their universities. In cases where publishers have refused such deals, three national consortia cancelled contracts with Elsevier:

Germany's Projekt DEAL, Sweden's Bibsam, and Hungary's EISZ; and France's Couperin cancelled their contract with Springer. In the United States, the University of California ended negotiations with Elsevier in February 2019 when no agreement could be reached under the UC's proposal, which provided open access for all UC-authored articles published in Elsevier journals while containing costs. According to the UC Office of Scholarly Communication, Elsevier's proposal included much higher payments (an 80% increase), and reduced rights to perpetual access to journals.

During the remainder of 2019 and into 2020, representatives from the Committee on the Library System and MIT Libraries will be partnering to engage with individual departments and units throughout the Institute to provide further information about the Framework and the current state of negotiations, and to gather input from the faculty and broader MIT community. Our goal is to ensure that the Libraries' negotiating position reflects the interests of the entire MIT community. While all negotiations are undertaken with the hope and expectation of concluding in agreement, we recognize that adherence to our principles may require us to end, or at least suspend, relationships with certain publishers, and this could have a short-term negative impact on our community. We aim to communicate the range of potential outcomes and

ways to mitigate the impact, and to advance the broader dialogue around scholarly communication.

The present negotiations between MIT and scholarly publishers are one part of a larger transition toward a system that in the long run will be better for us all, a transition that involves multiple steps and

The present negotiations between MIT and scholarly publishers are one part of a larger transition toward a system that in the long run will be better for us all, a transition that involves multiple steps and multiple players. We envision a world in which the free flow of ideas and data accelerates scholarly progress and permits us to better address key societal needs.

multiple players. We envision a world in which the free flow of ideas and data accelerates scholarly progress and permits us to better address key societal needs. Achieving this vision will give MIT an ideal position from which to communicate its remarkable scholarly outputs to the entire world, simplifying or eliminating constraints on dissemination by MIT authors. However, adherence to this framework will help not only MIT. Removing barriers to publication and dissemination of scholarly content will make it easier for everyone to engage in scholar-

ship, both as producers and consumers. Practicing and aspiring scholars around the world who are currently unable to afford access to scholarly content will be more able to engage, better produce scholarship of their own, and disseminate this content. Broadening the range of organizations and individuals engaging in scholar-

ship, and removing obstacles to this engagement, will advance MIT's mission to "advance knowledge and educate" and ultimately benefit scholars and global society alike. ■

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2019-2020 Academic Calendar Changes

The Registrar's Office

LAST SPRING, THE FACULTY voted to move MIT's Commencement to late May in most years. This resulted in a number of adjustments to the 2019-2020 Academic Calendar. The Registrar's Office has published a new webpage (<https://registrar.mit.edu/calendar-change>) that outlines the ways that this year's Academic Calendar differs from last year. Of special relevance to faculty are changes to the start of term, class days, the final exam schedule, and grade deadlines.

Start of Term

Registration opens on Friday, January 24 and Registration Day is the following Friday, January 31, which is also the last day of IAP. Advisors are encouraged to schedule advising appointments any time during that window. "We want to get the message out that registration is a week-long process," says Vice Chancellor Ian Waitz. Utilizing the whole week for advising appointments will ensure that students are prepared for classes to begin on Monday, February 3.

Class Days

Although the total number of spring class days remains the same as last year at 65, the adjustments to the Academic Calendar have changed both the distribution by day and the number of class days for half-term subjects. See graphic.

Final Exam Schedule

The final exam period begins on Friday, May 15 and continues Monday through Wednesday of the following week. Exams will be scheduled in eight periods over four days, rather than 10 periods over five

“

SPRING CLASS DAYS

Although there are still 65 spring class days, the adjustments to the 2019-2020 Academic Calendar have resulted in the following changes:

- **One more Monday and Tuesday**
- **One fewer Wednesday and Thursday**
- **One more Monday in H3,** resulting in 34 days instead of last year's 33
- **One more Tuesday, one fewer Wednesday and Thursday in H4,** resulting in 31 days instead of last year's 32

”

days as in years past. "Although it will be challenging," explains Mary Callahan, Senior Associate Dean and Registrar, "I'm confident that our schedules team and algorithm will create a finals schedule that, first and foremost, benefits students."

Grade Deadlines

The grading period is three weeks long and opens on Monday, May 4. As always, there are separate deadlines for classes with and without final exams, but the amount of time between these deadlines

and the degree meetings has decreased. Submitting grades in a timely manner, therefore, is imperative. A failure to do so may result in students not being able to graduate in May. The grade deadline for subjects without finals is Friday, May 15, and the deadline for subjects with finals is noon on Friday, May 22.

For more information, please visit <https://registrar.mit.edu/calendar-change> or email registrar-www@mit.edu. ■

letters

Angered By Recent FNL Editorial

To *The Faculty Newsletter*:

I AM TRULY APPALLED by the editorial that was published in the recent *Faculty Newsletter* (“September Faculty Meeting Calls for Major Changes in Institute Policy,” Vol. XXXII No. 1), in which the editorial ended with “Though there was a call for the resignation of President Reif alone, we think that much of the senior leadership share the blame for the rot that has set in, and that there will be calls for other resignations in the days to come.” To my mind, this inflammatory bullshit should provoke calls for

the members of the editorial board of the *Faculty Newsletter* to resign. Who are they to say that the Institute is afflicted by rot?

There was clearly a breakdown in the policies used by the Institute to vet donors. But as usual, it is far easier to cast stones and react with outraged indignation than to rationally examine what actually happened and what was on the minds of those who did or did not approve of these donations. These minor considerations were clearly not on the minds of those who penned this extraordinarily irresponsible editorial. (Would the response have been any different if a

major donor had been revealed as a molester of boys, and if that donor and donation would have been equally inappropriate? How does the currently outraged indignation relate in any way to the purportedly inappropriate attitudes of administrators to the women on our faculty?)

Robert A. Weinberg, Ph.D, Member Whitehead Institute for Biomedical Research
Professor of Biology, MIT
Director, MIT Ludwig Center for Molecular Oncology

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BACK IN 1949
WHEN GERALD WAS BORN AUGUST 10TH IN CHICAGO, IL

THE FIRST VOLKSWAGEN BEETLE IS SOLD IN THE U.S.
The Basketball Association of America (BAA) & National Basketball League (NBL) merge to form the National Basketball Association (NBA)

STARS BORN
Jessica Lange
Bruce Springsteen
Meryl Streep
Lionel Richie
Billy Joel ★

RCA perfects a system for broadcasting color television

Films
The Adventures of Ichabod and Mr. Toad
The Third Man
On the Town
The Emmy Awards for U.S. television is first presented

WHAT THINGS COST:
Postage Stamp: \$0.03
Min. Wage: \$0.40/hr
Coca-Cola: \$0.05
Loaf of Bread: \$0.13
Gallon of Gas: \$0.17
New Car: \$1420
Avg. Wages Per Year: \$2,950

Sports
World Series: New York Yankees
Stanley Cup: Toronto Maple Leafs
National Football League: Philadelphia Eagles
Kentucky Derby: Ponder

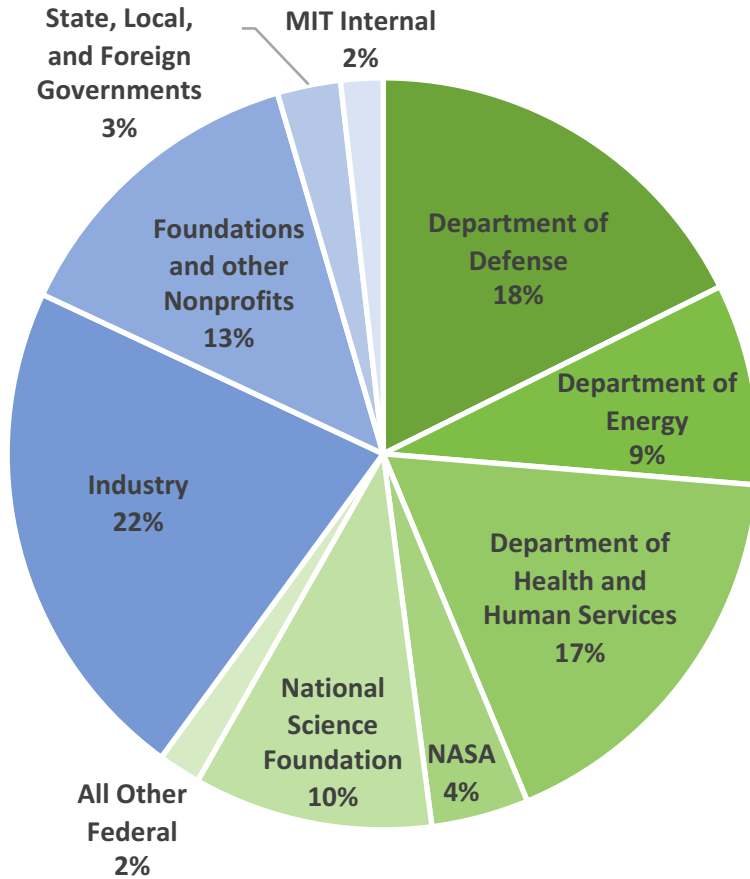
U.S. PRESIDENT
Harry S. Truman

Buttons and Bows by Dinah Shore was the #1 song in 1949

Harvard raised its tuition to more than \$500 a year

A Glance Back 70 Years Ago (Thanks to Eduardo Kausel)

M.I.T. Numbers Campus Research Expenditures FY 2019



Major Sponsor	
Department of Defense	\$136,743,000
Department of Energy	\$66,975,000
Department of Health and Human Services	\$134,773,000
NASA	\$32,430,000
National Science Foundation	\$79,617,000
All Other Federal	\$14,180,000
Total Federal	\$464,718,000
Industry	\$169,606,000
Foundations and other Nonprofits	\$104,471,000
State, Local, and Foreign Governments	\$21,052,000
MIT Internal	\$14,055,000
Total Nonfederal	\$309,183,000
Total	\$773,901,000

Source: Office of the Provost/Institutional Research