

The MIT Faculty Newsletter

Vol. XI No. 2

November/December 1998

Letters

Are We Really Bringing Biological Science into Engineering?

To The Faculty Newsletter:

In “A New Kind Of Department To Bring Biological Science Into Engineering,” in the September/October 1998 issue of the *Newsletter*, the authors, Douglas A. Lauffenburger and Stephen R. Tannenbaum, observe that “Formation of administrative structures to coordinate inter-departmental research initiatives has traditionally been easy for the Institute...,” while “...formation of an administrative structure for education at disciplinary interfaces requires more careful consideration.”

Yet the “New Kind Of Department To Bring *Biological Science* Into Engineering” has no formal connection with the department that is Biology at MIT, nor to the Whitehead Institute, nor to the Department of Brain and Cognitive Sciences, that is to say, no connection with the School of Science. As I said in my letter in the January/February 1997 issue of the *Newsletter* “Biomedical Engineering - A Cornucopia of Challenging

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New Communication Requirement Needs to Take Wide Perspective

To The Faculty Newsletter:

My colleague John Hildebidle’s remarks on the problems, rewards, and value of teaching Humanities at MIT [Vol. XI, No. 1, September/October 1998] are especially timely, since the Institute is now engaged in the process of developing a new “communication” requirement, in response to alumni complaints about the deficiencies of their MIT training in this area. I believe that Humanities faculty have a particularly valuable contribution to make to this effort, so long as the aim of improving communication skills is not defined too narrowly.

A narrowly conceived aim of improving communication skills would be mainly instrumental: students ought to be trained to communicate effectively in the professional settings in which they will find themselves after graduation. This is a perfectly worthy aim, one that might best be addressed by each student’s major field of study, probably during the

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The MIT Chancellor: A Job Description

Lawrence Bacow

Since I was named Chancellor in June, faculty colleagues and others have frequently asked me, “What is a Chancellor?” The simple answer is that a Chancellor is half a Provost. Essentially, Bob Brown and I have each assumed a share of Joel Moses’ prior responsibilities. (Since our appointment, Chuck Vest has quipped on more than one occasion that it takes two people to replace Joel. Nothing could be truer.)

Of course, to say that we have divided the job invites the inevitable question, “How?” Chuck invited Bob and me to work out the division of labor together. Fortunately, we were able to accomplish this potentially difficult task in about 45 minutes over a bagel at the S&S – a sign of a good partnership. If one thinks of MIT’s academic organization as a matrix organization with schools and departments forming the columns, and other functional activities forming the rows, I have responsibility for the rows and Bob has responsibility for the columns. The School Deans report

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From The Faculty Chair

Proposed Changes to Retirement Plan Create Interest and Concern

Lotte Bailyn

The MIT Retirement Plan. Not usually of much interest to faculty except when they first come and enter the plan (where some decisions have to be made) and as they get close to retirement. Yet the way it works can make a big difference in one's pension, as do the choices one makes along the way. That is why the contemplated changes to the Plan have created some interest and some concerns.

The MIT Retirement Plan consists of two plans, the Basic Plan—a defined benefit plan, and the Supplemental Plan—a contributory plan with a 401(k) feature. At the time of retirement, the Supplemental Plan provides about two-thirds of the total benefit if the long-term faculty member has contributed the maximum amount over his or her career.

The Basic Plan benefit generally is expressed as a fixed annuity payable at retirement. This annuity may increase due to the application of triennial cost-of-living adjustments. The Institute funds this benefit through periodic contributions to the Benefits Fund of the MITRP's trust. The value of an account in the Supplemental Plan at retirement (where the contributions are defined, but not the benefits) depends on the allocation choices made by the faculty member between the Fixed and the Variable Funds, and the market value of the account at the time of retirement. Faculty have the opportunity to contribute 1% - 5% of salary to the Supplemental Plan. The Institute

matches these contributions dollar-for-dollar. At retirement, faculty can take this amount out in cash, or can take a fixed or variable annuity, with the latter varying annually according to the market. There is no indexing to

when rates are dropping, but works against the faculty when interest rates are rising. The Institute has provided record-keeping services and the trustees of the plan have guided the investment policy, even though almost

Certain practices must be amended in order to preserve our tax-qualified status. . . . Second, for many faculty the options feel very limited, with only the choices of the Fixed and Variable Fund to choose from (and no ability to move between them until age 55 and then only in the direction of Variable to Fixed). Faculty feel they are not getting all the returns they might, and do not have additional options that would allow them to build an investment portfolio to meet their needs.

these annuities, although purchasing a variable annuity is a strategy designed to be responsive to inflationary pressures.

Like an account in the Supplemental Plan, accounts accumulated under the former Retirement Plan for Staff Members (RPSM) are invested in the Fixed and Variable Funds, and can be taken as fixed or variable annuities at retirement. Alternatively, two-thirds of RPSM accounts can be taken as cash at retirement.

On the whole, this plan has worked well for MIT faculty. The Institute has set annuity rates by a smoothing formula that limits the maximum quarterly increases or decreases to the annuity rate to .25%. This is helpful

all day-to-day investment decisions were made by outside firms. The Institute has picked up almost all the costs associated with the plan, such as investment, custodial, legal, and actuarial fees, instead of taking those out of the investment returns, which is done by TIAA/CREF and other retirement plans.

So, if everything is going well, why change? Certain practices must be amended in order to preserve our tax-qualified status. A tax-qualified plan allows us to contribute on a tax deferred basis, protects our accounts from creditors, and offers us special tax treatment on certain benefit payments. Second, for many faculty the options

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Proposed Changes to Retirement Plan Create Interest and Concern

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feel very limited, with only the choices of the Fixed and Variable Fund to choose from (and no ability to move between them until age 55 and then only in the direction of Variable to Fixed). Faculty feel they are not getting all the returns they might, and do not have additional options that would allow them to build an investment portfolio to meet their needs. Finally, the servicing of the plan has gotten beyond the capacity of MIT to manage, and the question arises as to whether the mission of MIT should include being in the business of 401(k) record keeping.

So the Benefits Office, in consultation with the Strategic Review of Benefits Committee and the Committee on Faculty Administration (both of which include faculty members), has come up with a set of proposals to deal with these issues. Some of the proposed changes are required to keep the plan tax-qualified, and will be instituted by January 1, 1999. Changes that are mandatory as well as some improvements to the plan (e.g., immediate 100% vesting) are being announced by the Benefits Office. The net effect results in little, if any, change in the pensions that will be available to faculty.

Some other proposed changes are meant to deal with the request for more options and better services by outsourcing the administration and the management of the plan to an outside financial services institution, such as Fidelity. This will be seen as a benefit by many faculty who have asked for this, but also may be of concern to other faculty who are not financially

sophisticated and prefer the more limited choices that seem safer to them. For these people, the proposed changes allow for the continuation of the current Fixed and Variable Funds. The investment guidelines of the "cloned" Fixed and Variable Funds will continue to be set by MIT, and day-to-day investment decisions would now be made by the financial services company that is administering the plan. A potential concern of this for the accumulation in faculty pension accounts is that expenses of managing these funds would now be taken out of gross investment returns, which could adversely affect final accumulations for faculty now at the beginning of their MIT careers.

Another expressed concern has been that an outside firm would not set annuity rates using the same formula that MIT has been using to set them, and would therefore subject retiring faculty to greater risk from interest rate fluctuations. To meet this concern, MIT will provide retirees with a choice, for a period of time, between using an MIT-set annuity rate or the commercial one. Which is higher will depend on whether interest rates are going up (which would favor the commercial rate) or down, since by design the MIT rate is slower to respond to interest rate changes.

There are many other proposed changes, including some designed to help early retirement, and the details are complex. The Benefits Office has been meeting with various groups in the Institute to explain the outlines of the changes and to solicit comments and concerns. But it takes more than

one session to fully understand the implications of all the proposed changes. For this reason, the Faculty Policy Committee has appointed a subcommittee to take a close look at these proposals, to see how they differ from the current plan in terms of changes in amounts and in risks, and to recommend modifications, if necessary, to meet faculty concerns. The committee is being asked to write a report on their findings for the Faculty Policy Committee, and will give an interim report along with a discussion of the proposed changes in an upcoming faculty meeting.

The committee consists of the following:

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Roy Welsch
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Please feel free to get in touch with any of them if you have concerns about this, or you may also get in touch with me since I will be sitting in with the committee.

We hope to have this settled early in the next year so that the agreed-upon changes can be implemented by April.♣

[*Lotte Bailyn can be reached at lbailyn@mit.edu*]

TEACH TALK

Working With TAs

Supervising TAs Calls for Faculty to be Managers, Team Leaders, Role Models, and Mentors

Lori Breslow

There is more good news about programs to improve teaching at MIT: Every department with a subject in the science core (i.e., math, physics, biology, chemistry) now has a program in place to train its Teaching Assistants (TAs). (Not to overlook other efforts, it should be mentioned that many MIT departments – Course 6 and Course 9, for example – do TA training as well.) These training programs are usually held at the beginning of the semester for two to three days, and cover material on student learning, course management, ethics, grading, classroom dynamics, etc. All include microteaching in which the TAs plan and present a 10-minute sample lesson that is then critiqued by faculty, a teaching consultant, and fellow students. (To find out more about microteaching, consult the Teaching and Learning Website at <http://web.mit.edu/odsue/tll/www/>.) Several departments continue some kind of training throughout the semester.

But teaching workshops can only accomplish so much. The success of the TA experience—both for the faculty member and for the TA – depends upon a good working relationship between the two. And the success of that relationship, in turn, depends, in part, on how well the faculty member accomplishes his/her role as supervisor, mentor, and team leader. Managing even one TA, let alone a whole group, is not an easy task, as anyone who has done so knows. But there are ways you can maximize the TA experience, so that students gain

valuable skills in teaching, and you are aided – not impeded – by working with teaching assistants. This *Teach Talk* presents some guidelines on how to manage the faculty/TA relationship well.

Set specific expectations and policies at the beginning of the semester

As any other new employee, the TA needs to be oriented to the job. The more concrete you can be about the responsibilities of the position and your expectations as his/her supervisor, the more likely it is that your TA will be able to meet your needs as well as those of your students. Review the syllabus with your TAs before the semester begins so that everyone is on the same page. More importantly, talk about the subject's overall goals; your specific objectives for recitations, problem sets, and exams; and how the TAs' work will contribute to the success of the course.

Set some ground rules: Do you expect your TAs to have office hours? If so, how many per week? What happens if the TA can't make his/her office hours? Will you hold regularly-scheduled meetings that you expect your TAs to attend? (More on this below.) How quickly do you expect problem sets and exams to be returned to the students? How much time do you expect the TA to work? (Be realistic.) Do you expect TAs to attend lecture?

I realize that attending lectures is often not one of the responsibilities of MIT TAs. I understand that the technical nature of the material we

teach and the pressures on TA time lead to this policy. But I want to plead for a reversal of that norm. Requiring TA attendance at lectures leads to greater coherence in the subject. Even if the scientific principles covered in your class haven't changed since Newton, no one teaches them quite like you do. Your students deserve uniformity in course content and course policies. TA attendance at lectures goes a long way to achieving that. Besides, as teachers-in-training, your TAs will benefit from watching you in action.

Define the TA's role within the subject

TAs are members of the subject's instructional team, and they should be presented that way to the class. If possible, put the TAs' names on the syllabus. Introduce them to the students at the first class meeting and define their responsibilities. If the TAs will be leading recitations, explain the purpose of recitations in the course, and emphasize how attending them will help the students succeed in the subject. The way you relate to your TAs will signal to the students how they should relate to them. Use your credibility to help your TAs build their own.

Give TAs an understanding of the kind of students with whom they will be working

As we all know, MIT undergraduates are a unique bunch: smart, serious, typically shy (at least in class). Often, graduate students who have done their

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undergraduate work at other universities are not prepared for the kind of students they will meet as MIT TAs. This is particularly true for international students, who may be confused by everything from their students' behavior in the classroom to their level of knowledge in a subject. At the beginning of the semester, then, it's a good idea to talk to your TAs about the kind of students they are likely to encounter, how to motivate MIT undergraduates, and the general skill level they will find in the class. Of course, the TAs should realize that you need to talk in generalities, and that any one generalization might not hold true for the students they have in their particular class.

Establish a flow of information

Many subjects hold regular weekly meetings for their TAs; in my opinion, this is an absolute necessity if the subject is a large, multi-section lecture. Weekly meetings allow TAs to discuss problems they're having, brainstorm ways to teach material, give the lecturer the opportunity to interact with the TAs, and make sure that everyone is up-to-date about course schedules, policies, etc. If the subject has a Website attached to it, TAs should be expected to check in with it regularly. An e-mail list specifically for TAs also helps with communication.

Provide information on what to do in recitation sections

First-time TAs typically are anxious about their ability to teach. After all, it's a huge leap from sitting in class as a student to standing in front of a class as an instructor. Yet lecturers often don't provide TAs with much – if any – direction on what to do in recitations. This often results in sections that waste both the students' and the TA's time.

In the proceedings of a Berkeley faculty seminar on "Teaching with Graduate Student Instructors in Large Enrollment Courses," the authors write, ". . . lab/discussion leaders, in the absence of clear pedagogical directives from the course instructor, will underprepare, overprepare,

come to the conclusion that one of the things TAs have the most trouble with is getting students to participate in class (as we all do!).

There are several ways you can help your TAs to deal with this problem: organize meetings during the semester so they can share ideas about

The degree of flexibility and freedom that TAs are allowed in planning their own recitations will vary from subject to subject. Yet in talking to many MIT TAs over the past few years, the sense I get is they are usually looking for more, not less, direction about how to structure that hour class period.

flounder, or thrive, achieving wildly disparate results." (p. 23).

The degree of flexibility and freedom that TAs are allowed in planning their own recitations will vary from subject to subject. Yet in talking to many MIT TAs over the past few years, the sense I get is they are usually looking for more, not less, direction about how to structure that hour class period. In giving TAs guidelines for leading sections, include such things as a summary of the main concepts presented in class that week, an overview of common errors students make or common misunderstandings they have, sample problems to work, or points for discussion. At the very least, you should clearly communicate to your TAs the goals of that week's recitation section(s), and provide some suggestions for achieving those aims.

Discuss how to engage students

After watching hundreds of videotapes of MIT recitations, I've

encouraging participation; give each of your TAs a copy of *The Torch or the Firehose: A Guide to Section Teaching* by Professor Arthur Mattuck, which has much good advice on fostering interaction; arrange to have a member of the Teaching and Learning Laboratory facilitate our workshop "Leading Recitations"; or organize a microteaching workshop where participants can experiment with different tactics to get students to become active learners.

The important point is to reassure your TAs that they are not the only ones who have this problem – it's endemic at MIT. The TAs who are most successful in engaging students are those who are enthusiastic and energetic in class themselves, and who make the classroom a safe place for students to take risks. And it is the lecturer who can serve as a powerful role model in helping TAs adopt those behaviors in his/her own class.

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Working With TAs

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Outline criteria for grading

Whether you have separate TAs who grade, or the TAs who lead your recitations also grade problem sets, exams, and/or papers, you need to provide detailed criteria for how assignments are to be evaluated. For example, in a TA workshop associated with "Introduction to Psychology" (9.00), Dean Leslie Perelman led a session on grading student papers. Dean Perelman brought in a group of essays for the TAs to grade. After each participant graded the samples individually, the group as a whole discussed the grade each paper should receive and why. In that way, the TAs could see what an "A" paper was as opposed to a "B" or "C" paper, and they were able to develop an appreciation for the criteria to use in evaluating undergraduates' written work.

Prepare students for difficulties they may encounter

In a discussion on "how it is going" at a TA meeting midway through this past semester, one TA told us that a student had revealed to him that she was a lesbian. The TA wanted to talk about how he should have responded. The group discussed the situation, and finally decided there was no one right way to handle it. They concluded that any response would have to be determined by the student's reason for sharing this information, the emotional state in which she revealed this about herself, and how the TA felt as he listened to her.

There is no way that you can prepare your TAs for every situation they will meet in the classroom. They will have to deal with students who want to turn in papers and/or problem sets late, students who disappear during the semester, students who challenge them

in class, students who are in academic peril, students they may be physically attracted to, students who have personal problems. Teaching means dealing with the gamut of human situations.

"It was sort of the eye contact ratio. And then there was the smile ratio . . . I mean [feedback] was pretty subtle. You had to sort of pick up on it. And, sometimes, if [the professor] had a fight with his wife, you thought you

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What you can do is alert your TAs to the range of possible problems, make it clear that you are available to help them handle anything that arises, and make other resources available to them (including other TAs). A list of resources for TAs at MIT accompanies this article [see Page 9].

Monitor TA's progress; solicit their feedback

Researcher Lisa Duba-Biedermann, in a 1993 study done at the University of Oregon, reported that only 41% of the TAs interviewed said they received regular feedback during the term. Instead, they relied on indirect feedback to get a sense of how they were doing. (I don't think it is far fetched to assume a similar situation exists here.) As one TA explained, in a comment that Duba-Biedermann cites as representative of many others:

had screwed up the week before, and later you would find out that it wasn't really you at all." (in *The TA Experience: Preparing for Multiple Roles*, edited by K. G. Lewis, p. 9).

Common sense dictates that the more feedback a person gets on his/her performance, the more he/she will be able to fine tune that performance. Teaching is no different; it is a skill that can be improved by receiving and using feedback.

How can you find out how your TAs are doing? Some obvious answers are attending recitations, having the TA videotaped and watching the tape with him/her, using student evaluations gathered over the course of the semester. All these are time-consuming, but worth the effort. Another idea is to have TAs buddy up either with students

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who have TAed the subject before, or who are currently TAing the subject. Partners can be another important source of feedback, and can take some of the pressure off of you.

Finally, ask the TAs how *you* are doing, and how they think the subject

What do you do?

As with many problems you face as a supervisor, there are no easy answers to that question.

It's a cliché, but it's true: Communication is the beginning point. If you have already established a good

As Duba-Biedermann writes, “[TAs] must step gingerly through delicate relationships with faculty on whom they depend for their current livelihood as well as for gaining entry into the scholarly professions.” (p. 7).

This situation can be particularly difficult if the faculty member for whom the TA is working is also his/her thesis advisor, because the need to perform superbly can be especially felt. On the other hand, TAs report being caught between two professors: the faculty member for whom they are TAing who is demanding excellent work in the classroom, and their thesis advisor who is unhappy about any time being taken away from research.

On top of that, TAs have particular concerns about their roles as “middlemen” between students and professor. What should they do if students come to complain to them about the professor's teaching? How should they handle it if they suddenly find themselves with twice as many students as other TAs have? What if students feel an exam was unfair, or the workload is too burdensome – and they agree with the students?

I bring up these issues because I want to remind you of what it is like to be a TA in a major research university. It's not an easy task; we can make it easier.

In the end, managing TAs well bears fruit: TAs grow in their professional development, faculty have a tremendous resource they can rely on to share their teaching responsibilities, and the students get the kind of personalized attention that contributes so much to their educational experience. It's a win-win situation for everybody.❖

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. . .TAs have particular concerns about their roles as “middlemen” between students and professor. What should they do if students come to complain to them about the professor's teaching? How should they handle it if they suddenly find themselves with twice as many students as other TAs have? What if students feel an exam was unfair, or the workload is too burdensome – and they agree with the students?

is going. Talk with them about your strategies for teaching – why you're presenting the material in a certain way, or choosing the kinds of problems you are. Because they are in the “trenches,” TAs have an excellent perspective on the strengths and weaknesses of the class. Make it safe for them to give you an honest appraisal of how the subject is progressing throughout the semester.

Think about ways to deal with underperforming TAs. You've heard through the grapevine that students are leaving one TA's section in droves because he/she speaks with a thick accent. Or a student comes to you and complains that the TA is not respectful of the students in the class; he/she is often openly critical of them and their work. Or you have heard from other TAs that one of their colleagues is always unprepared when he/she comes to class.

relationship with your TAs, that will give you a basis from which to work if problems arise. Perhaps the person doesn't realize he/she is responding negatively to students. Maybe his/her research is particularly problematic, and there just isn't time to prepare for class. In any case, exploring the roots and dimensions of the problem with the individual is the first step.

Check out other resources that could help, including other TAs in the group. (Often having one TA sit in on another's class and pointing out problems in communication is all that is needed.) The Teaching and Learning Laboratory can work with TAs who are having problems getting material across in the classroom. And Foreign Languages and Literatures has resources for TAs whose first language is not English.

Anticipate TA concerns

Being a TA is fraught with anxieties.



Resources for TAs

Accessibility Services, E19-226, 253-1674, <<http://web.mit.edu/dso/www>>

Accessibility Services aids students with learning or physical disabilities. For example, the office can arrange scribes for tests, or evaluate students' needs for extra accommodations during exams.

Counseling and Support Services, 5-106, 253-4861, <<http://web.mit.edu/counsel/www>>

Counseling and Support Services provides both academic and personal counseling. It also organizes support groups for, among others, women, students of color, students with disabilities, gay and lesbian students.

ESL programs, contact Jane Dunphy, coordinator, 14N-312, 253-3069, dunphy@mit.edu, <<http://web.mit.edu/fll/www>>

Foreign Languages and Literatures offers a wide range of programs to help TAs whose first language is not English. These

services include courses in speaking, listening, and writing, and individual tutoring (on a fee-for-service basis).

The Mental Health Service, E23-368, 253-2916

Mental health professionals are available for students in need.

The Teaching and Learning Laboratory (TLL), 7-131, 253-9419, tll@mit.edu, <<http://web.mit.edu/odsue/tll/www>>

TLL offers a number of different programs, from workshops on teaching to individual consultations to recitation videotaping (see below). A teaching consultant can provide guidance on leading recitations, including how to improve delivery, encourage inter-action, or handle classroom dynamics. Two programs of particular interest to TAs are:

The Class Videotaping and Consulting Program. To arrange to have a recitation videotaped and to meet with a teaching consultant, complete our request form on-line at <<http://web.mit.edu/odsue/tll/www>>

The Orientation for Graduate Teaching Staff. Held at the beginning of each school year in conjunction with the Graduate Education Office, the Orientation is a full day of activities designed to acquaint TAs with teaching at MIT.

The Torch or the Firehose: A Guide to Section Teaching by Professor Arthur P. Mattuck.

To order call TLL, 253-9419

The Torch or the Firehose (now in its second edition!) is an invaluable guide to section teaching. Topics covered include, for example, basic communication skills, asking and answering questions, evaluating students, and getting feedback.

The Writing and Communication Center, 14N-317, 253-3090

Tutors are available to help students improve their writing.

And in the departments:

**The Graduate Administrators
Current and former TAs
Faculty members**

The MIT Chancellor: A Job Description

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to the Provost, as does the director of the Lincoln Labs and the director of the Libraries. Activities that cut across schools or departments report to the Chancellor. These include the Dean of Students and Undergraduate Education, the Dean of Graduate Education, and the Vice President for Research (for most, but not all of his activities – more about this below).

In addition, I have responsibility for strategic planning, campus development, and the oversight of MIT's large-scale institutional partnerships, both industrial and international. The Provost retains responsibility for faculty development (although we consult on important issues like selection of Deans). Essentially we share responsibility for allocating the two scarce resources in the Institute, money and space. The Provost takes the lead on the budget as the Institute's chief budget officer, and the Chancellor takes the lead in allocating space as the chair of CRSP. Given that both resources are required to get anything done, this division of responsibilities ensures that we work very closely together.

The Vice President for Research is the only person with a dual reporting relationship to both the Provost and the Chancellor. As we considered how to organize the office of the Chancellor, Bob and I realized that if the VP for Research reported to the Chancellor only, some labs and centers at MIT would report to the Chancellor while others would report to the Provost. This anomaly would occur because some labs and centers report to School Deans who report to the Provost, while others report to the VP for Research who would otherwise report to the Chancellor. After consulting with a few lab directors, we

concluded that it would be best if all labs and centers reported to one senior academic officer. Consequently, the VP for Research also reports to the Provost for purposes of oversight of interdisciplinary labs and centers.

Why split the job of provost in two?

In creating the new position of Chancellor, the President hoped to accomplish a number of objectives. First, there are now two senior academic officers at the table on major decisions with two complementary perspectives. Bob and I come from different intellectual traditions, and often see the world through different conceptual lenses. This diversity is valuable in decision-making. Second, by dividing the line reporting responsibilities, the amount of time available for direct interaction with faculty in each area will be increased. Bob and I also hope to be able to respond to issues in a more timely fashion. Better communication between the faculty and administration is one of our highest priorities.

Third, by creating a new position with responsibilities associated with both undergraduate and graduate education, this new structure promises greater attention to educational policy issues. Previously these issues had to compete for the Provost's attention with a myriad of other concerns, especially the budget. Fourth, as MIT prepares to launch a campaign, we now have two senior academic officers to support the President in a variety of ways. If Bob and I do our jobs right, Chuck's burden should be eased a bit, and we should all be able to get a lot more accomplished.

By creating a position with a primary focus on activities that cross school and department boundaries, we also hope to facilitate these types of

interactions. MIT is a more complex place to manage today than it was 10 or 20 years ago, in part because we keep inventing new ways to collaborate. For example, in the past five years, MIT has established major new collaborations with industry (e.g., partnerships with Ford, Amgen, Merck, and NTT), with other universities (e.g., the Alliance for Global Sustainability, as well as a number of initiatives in China), and with governments (e.g., the Singapore-MIT Alliance).

Similarly, our educational initiatives increasingly span multiple schools and departments (e.g., the Division of Bioengineering and Environmental Health, the Engineering Systems Division, Leaders for Manufacturing, and the new SM in Systems Design and Management). Invariably, each of these new types of collaborations raises important policy questions. Resolving these issues often requires enormous investments of time and energy to say nothing of exquisite diplomatic skills. (I am not sure what is more challenging – the negotiations between MIT and its industrial and international partners or the negotiations between different academic units internal to MIT.) Part of my job will be to try to coordinate and manage such efforts whether they involve curricular reform, international collaborations, or industrial partnerships.

What are my priorities?

Most of us keep "to do" lists. I am no different. I keep my long-term "to do" list on a white board in my office. The list currently includes getting the new undergraduate residence designed, built, and open by fall 2001; managing the transition to a new housing system with all freshmen living on campus by

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The MIT Chancellor: A Job Description

Bacow, from preceding page

fall 2001; getting the new graduate residence open by fall 2002 (to be built at Sydney and Pacific Street in University Park); implementing the recommendations of the Task Force on Student Life and Learning; redesigning the process by which we make decisions regarding space planning and administration at the Institute (known to the cognoscenti as CRSP or Committee for the Review of Space Policy); organizing an Institute-

wide strategic planning initiative; organizing a new Research Council to address research policy issues that often arise among labs, centers, and departments; developing a long-term strategy to govern our international initiatives; and identifying how we can act more strategically in developing our industrial partnerships. Lots of other issues occupy my time, but these are my long-term priorities.

I feel incredibly fortunate to have

the opportunity to serve the Institute in this new capacity. Both the challenges and the opportunities are exciting. Chuck, Bob Brown, and John Curry are wonderful partners and colleagues, as are all of the members of Academic Council. While the days are long, the work is both exceptionally interesting and rewarding. I am looking forward to getting lots done.♣

[Larry Bacow can be reached at bacow@mit.edu]

The Chancellor Responds to Faculty Concerns About “Grandfathering” and “Trust”

Coincident to the preparation of the above article, the following communication between Professor Bacow and Professor Steve Kleiman was forwarded to the Faculty Newsletter by each party.

Dear Larry,

I am writing about two serious and troubling issues: grandfathering and trust – MIT’s grandfathering of faculty, and faculty trust in MIT’s governance. Last Thursday, I raised these issues at one of Jay Keyser’s faculty dinners, and a number of people took up the discussion. Jay suggested that I send you a summary. An editor of the *Faculty Newsletter* suggested that I publish a copy to widen the discussion.

My immediate personal concern is a change in the children’s scholarship plan, which may affect me. Last May 18, MIT’s Vice President for Human Resources Joan Rice sent around a notice, which stated that MIT will eliminate the benefit for graduate study

at MIT for all *current* and future employees, including tenured faculty. Many of my colleagues may not have read the notice carefully, since they would not be affected. However, a greater issue is involved: the lack of grandfathering. This is not the first time in the last few years that MIT has failed to grandfather its tenured faculty: MIT eliminated the benefit of support for further education, and it eliminated the benefit of support for professional travel.

Has MIT really changed its long-standing policy of grandfathering? It appears so. What does this apparent change portend for the current review of retirement benefits? Must we also worry about future changes in medical benefits? What is going on? and why? A number of years ago, Stanford attempted to eliminate a similar benefit without grandfathering. Some professors threatened to sue. The benefit was, presumably, one of the attractions of the university, and the withdrawal was a violation of a long-standing “promise.” Moreover, the

initial decision was made without involving a truly representative group of faculty, some of whom were losing the benefit. Stanford set up a new committee, which reversed the decision. I learned about the Stanford case from a colleague, now at Harvard, who served on the new committee.

MIT is different, and I am sure that our concern about grandfathering will be relieved without anyone’s feeling the need to sue. My department, Mathematics, like many other departments, competes with Harvard, Princeton, and so on for new faculty. We tell our prospective new members that they will like doing research and like teaching at MIT. Often, we can say happily that the dean has agreed to help us meet Princeton’s salary offer. To be honest, will we have to add: “But we have to tell you that MIT may not keep its promise to continue to provide you with its current benefit package”? An even greater issue is at stake: faculty trust in MIT’s governance.

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The Chancellor Responds to Faculty Concerns

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Unlike at many other places, at MIT large attendance at faculty meetings has normally been unnecessary, because faculty have felt confident that MIT is well run. This trust has been one of the greatest benefits of being at MIT, for it has allowed faculty to devote more time and energy to research and teaching. In particular, faculty have considered grandfathering to be a basic axiom of MIT policy. Along with other issues, the apparent change in this policy has made many faculty begin to worry that their trust has been misplaced. Doubtless it would help to increase communication. Before any major administrative decision is made, the case ought to be presented for open discussion with faculty. Of course, adequate time must be allowed for faculty to consider the matter and express their thoughts. One good forum is the *Faculty Newsletter*.

Yours,

Steve Kleiman

Professor of Mathematics
MIT Class of 1961

Professor Bacow's Response

Dear Steve,

Thank you for your letter. You raise a number of important issues, each of which merits a thoughtful response. Let me try to address them by first describing the process we use at MIT for considering changes in benefits policy. By the way, most of what I know about this topic dates from my days as faculty chair.

There exists a little known committee at MIT that is formally described as the Strategic Review of Benefits Committee. For years it was chaired by Bill Dickson. I assume that

John Curry will chair it in the future. Other members of this committee include the Chair of the Faculty, the Chair of the Committee on Faculty Administration, the Deans of at least two schools (during my term as Faculty Chair they included Engineering and Science), the Vice President for Human Resources, the Director of Benefits, and the personnel director for Lincoln Labs. The SRB as it is known, meets a few times a year (or more if necessary) to review our benefits policy. Many things can motivate a review of our benefits package: changes in federal law or government reimbursement policy, changes in the labor market, changes in the preferences of members of our community, the budget, etc.

The SRB does not act with power. Rather, it reviews the benefits package and makes recommendations to the President and the Executive Committee of the Corporation. As a practical matter, no major change in benefits is considered without discussion at Academic Council. In addition, it is common for the Committee on Faculty Administration to also discuss (or even initiate) changes in the benefits package. Major changes also tend to get discussed in other forums. For example, Roy Welsch during his term as chair of the Committee on Faculty Administration raised the question why the pension plan offers members so few investment options. (Members of the plan can only elect to invest in the fixed or variable fund. By contrast, most institutions are now offering a host of investment options through third party managers.) This action by the CFA has prompted consideration of outsourcing the management of the plan to a private firm in order to be able to offer investment choice

comparable to that available at many of our peer institutions. No decision has yet been made on this issue, although it has been presented for discussion at the Faculty Policy Committee. In addition, presentations of the alternatives are being made to each of the School Councils, to departments, and to other faculty groups [see [From The Faculty Chair](#), P. 3]. My point in describing this process is to give you some sense that decisions about benefits are not made arbitrarily or without faculty input. To the contrary, the faculty members of the SRB as well as the Deans play a very important role in helping to shape benefits policy. The Deans are especially sensitive to the recruiting and retention issues that you describe in your letter.

How is it that this group decided to recommend a change in the policy governing partial reimbursement for graduate student tuition for children of MIT employees? A review of this benefit revealed that it was used relatively sparingly. Moreover, because the vast majority of graduate students at MIT are funded through traditional graduate student awards, providing a benefit for children of employees turned out to be more of a benefit to departments rather than to the employee. In effect, the graduate children's scholarship benefit typically offset another graduate student award. In those cases where it did not, students were enrolling disproportionately in professional degree programs such as Sloan where we typically assume that students finance their own graduate education without parental support. In short, this benefit did not seem to help much in either recruitment or retention of faculty.

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The Chancellor Responds to Faculty Concerns

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Ironically, the change in the graduate student tuition program was also motivated by a desire to redress a problem that arose through grandfathering of people under the old children's scholarship program. Prior to 1978, all MIT employees could send their children to MIT tuition-free. In 1978, the policy was changed to restrict this benefit to children of tenured faculty and those employees hired before 1978. This grandfathering has produced a number of inequities with people hired just a few months apart enjoying vastly different benefits. Two people may literally work in the same lab together for over twenty years, but if one had the good fortune to be hired before 1978, their kids would go to MIT tuition-free while the other did not.

This situation illustrates one problem with grandfathering – it creates two classes of employees, and in the process, often breeds resentment. The SRB wanted to address this problem, so it eliminated the partial graduate tuition benefit to pay for extending the free MIT tuition benefit to all employees. I think there is one other consequence to grandfathering that we should acknowledge. If we formally adopt a policy of grandfathering for all benefits, not only do we create the kinds of problems noted above, but we also may make the institution reluctant to experiment with certain types of benefits. If we routinely grandfather as a matter of policy, then benefits become a ratchet function. This may make future administrators hesitant to extend new benefits if they believe these benefits can never be modified regardless of the circumstances. Grandfathering for everything also makes benefits administration cumbersome.

Before turning to the issue of trust, let me comment specifically about the future of the children's scholarship program. In my mind, this program differs substantially from the graduate scholarship program that only applied to offspring who did graduate work at MIT. Many of us have kids, and I would venture that almost all the children of faculty and the vast majority of children of staff will go to college. Moreover, most of these kids will look to their families for financial support through the college years, and colleges and universities will expect families to provide this support. Most people begin saving for this expenditure when their kids are quite small. For those of us fortunate to work at MIT, the children's scholarship program strongly influences our planning for this expenditure. In contrast to the graduate tuition program, it is a very important benefit for both recruiting and retention. We all count that it will be there when we need it.

In addition, it is worth noting that the Institute has continued to support the children's scholarship program even though the federal government recently moved to disallow this expenditure in our indirect cost recovery. In effect, this action substantially raised the cost of the program to the Institute by the amount of the overhead rate. Notwithstanding this vastly increased cost, the program was not touched. For these reasons, I cannot foresee the circumstances under which the Institute would materially change this benefit. Does this mean that it will exist in perpetuity? I cannot say this with certainty any more than I can tell you that any other MIT policy will never change. However, I can say that those of us

with responsibility for such decisions completely understand and appreciate the degree to which faculty have relied upon the existence of this benefit in their own financial planning. As someone with kids who have yet to go to college, I don't worry about whether the children's scholarship program will be there when I need it.

Trust is essential to the future of MIT. One reason that MIT is a special place is that historically we have not drawn sharp distinctions between faculty and administration. During most of my 22 years as a faculty member, I have felt that the administration's interests were reasonably well aligned with my own. To be sure, there were occasional events that turned out hundreds of faculty members at a faculty meeting (myself included) but fortunately these have been exceptional, not routine occurrences. Candidly, reengineering also strained the relationship between faculty and administration.

When Chuck asked me to join the ranks of the senior administration, I did so in part because I thought I could contribute to improved communication that is so essential to preservation and restoration of trust. I know that Chuck and Bob Brown also deeply value the special relationship that has existed between faculty and the administration. We all are committed to preserving and enhancing this relationship.

Thanks again for writing. I hope I have shed some light on some of the issues you have raised. If I have not, please let me know. In the spirit of better communication, let's continue the conversation.

Best regards,

Larry

Does Poetry Matter?

John Hildebidle

When I reveal that I frequently teach the reading and analysis of poetry to MIT undergraduates, the response varies from, “Oh, my *God!*” to, “They do that there?” I am willing to testify that we *do* teach poetry here, and have long done so, and do it to satisfied students, I have reason to think.

But then the African-American poet Audre Lorde insisted that “Poetry is not a luxury,” and although she was certainly not thinking of this august institution of higher learning, many of us have come to think of ourselves as (nearly) missionaries offering Civilized Thinking and Humanity to the Heathens of Orthodox Numerosity. I was told recently that Freud said (was he lamenting?) “Wherever I go in human psychology, I find that a poet has been there before me.”

To quote another contemporary poet, Mary Oliver, “to pay attention, this is our endless and proper work.” Poetry makes or helps us pay attention in two ways. First, by encouraging us to look at what we might let pass by unnoticed. Let Oliver have the podium again, now about (of all things) snails.

When you look at them, nothing happens, not like the startle of your heart when the heron rises, or when the wind shutters shut then opens and falls over the hill. Still you know this

moment is important, like a page from an ancient document, found in a dusty jar, in a dry cave. Who are we? What are our chances?

I know, that looks like prose, not verse – but it is in fact a particular intersection of the two, called a prose poem, so I don’t shy away from invoking it. That’s a bit of observation and meditation that will have me scouring the pavement for snails, the next wet morning I walk my daughter to school.

Here is another account of the trade of poet, by the contemporary Irish writer Eavan Boland:

THE POETS

*They like all creatures, being made
For the shovel and the worm,
Ransacked their perishable minds and found
Pattern and form
And with their own hands quarried from the hard words
A figure in which secret things confide.*

Boland’s first line is tricky – poets do in fact *like* all creatures, or if not quite all, many. They are, you might say, omnivores of potential subject- or metaphor-matter. Some – like Marianne Moore, who spent hours as a librarian poring over obscure volumes of natural history, fill their poems with remarkable and unfamiliar (even if you are a regular watcher of *Nova* or *Nature*) beasts. Others are more satisfied with the day-to-day (Oliver is clearly one of these), but take the time to look and to think more than most of us do. But notice that Boland refuses to make poets distinct (peculiar? eccentric? even lunatic? those are not uncommon popular notions of versifiers, in these times. Also time-wasters and daydreamers). The poets are *like* others, in having work to do, and even useful work. Part of that “work” of poetry, what it does and invites us to do along with it, is to look at the world through which we live, no matter how unprepossessing it may seem. William Carlos Williams wrote poems about weeds, wet red wheelbarrows, plums left in a refrigerator for breakfast, and (once) a brown paper bag being blown down a city street.

A second kind of “attention paying” is attention to language: we must not, poets tell us, ignore both the way the world looks and the way it sounds. Here is Oliver again, rebuking an instance of sloppy use of a familiar word, or perhaps sloppiness (and sopiness) of thought about a familiar concept:

*And what did you think love would be like? A summer day? The
brambles in their places, and the long stretches of mud? Flowers in
every field, in every garden, with their soft beaks and their pastel
shoulders? On one street after another, the litter ticks in the gutter.
In one room after another, the lovers meet, quarrel, sicken, break
apart, cry out. One or two leap from windows. Most simply lean,
exhausted, their thin arms on the sill. They have done all that they
could. The golden eagle, that lives not far from here, has perhaps a
thousand tiny feathers flowing from the back of its head, each one
shaped like an infinitely small but perfect spear.*

That is the same work that Shakespeare undertook, three hundred years ago, and yet we still throw around the word *love* as though it were the simplest monosyllable on the market. “I love my wife.” “I love the Red Sox.” “I love my parents.” “I love *pesto*.” “I love U-2.” “I love Siamese cats.” I hope, as parent and husband (and despite being a baseball and pasta and cat fan) that there are subtle but significant shades of meaning at work here.

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Does Poetry Matter?

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It is not as though, as Shakespeare's sonnets demonstrate, "paying attention" to language necessarily produces ease of comprehension. I once served on a faculty committee charged with the task of drafting legislation adjusting the GIRs. One of my fellow committee members grew impatient and demanded that we find and use "algorithmic language." Alas, the beast does not exist, nor (and I've tested this, over nearly 20 years, with the help of some of the smartest students ever) are there any pure and absolute synonyms in our language. Look up any word in any dictionary, and you will find multiple (and often contradictory) meanings. Language, we now say in the lit biz, is "polyvalent."

From Oliver, again:

There is so much communication and understanding beneath and apart from the substantiations of language spoken out and written down that language is almost no more than a compression, or elaboration – an exactitude, declared emphasis, emotion-in-syntax – not at all essential to the message. And therefore, as an elegance, as something almost superfluous, it is likely (because it is free to be so used) to be carefully shaped, to take risks, to begin and even prolong adventures that may turn out poorly after all – and all in the cause of the crisp flight and the buzzing bliss of the words, as well as their directive – to make, of the body-bright commitment to life, and its passions, including (of course) the passion of meditation, an exact celebration, or inquiry, employing grammar, mirth, and wit in a precise and intelligent way. Language is, in other words, not necessary but voluntary. If it were necessary, it would have stayed simple; it would not agitate our hearts with ever-present loveliness and ever-cresting ambiguity; it would not dream, on its long white bones, of turning into song.

Even poets, in other words, get frustrated; but turn frustrations into virtues. I cannot resist observing that, in contradiction to what Ms. Oliver argues, the role of language (and thus, I am arguing, of poetry) in making of "meditation" an "exact celebration or inquiry" is especially *necessary* at a place like MIT, which so privileges inquiry and so often ignores or defeats (by the sheer weight of time-overload) aspects of meditation and celebration.

The frustration that is part of Oliver's formulation is characteristic of the way poets talk about language, as they try to tinker/mold/coerce/weld/hammer words into fitting the moment and the response. "Poetry is the art of saying in two words what is better said in ten" (Brian Sewall). Or, "writing poetry is like trying to catch a black cat in a dark room" (Robert Greacan). Or this poem, by an Irishman long resident in the U.S., Greg Delanty, raised by a printer-

father and a printer by trade himself. The "mystery" he talks about is partly the trade of typesetting, but surely it's more than that as well. The meeting is one with his now-dead father. We have reached another of Freud's "corners" but not perhaps just a psychic one. I am tempted to invoke metaphysics, in fact.

*Grant me the skill to free the leaden words
from the words I set, undo their awkwardness,
the weight of each letter of each word
so that the words disappear, fall away*

*or are forgotten and what remains is the metal
of feeling and thought behind
and beyond the cast of words
dissolving in their own ink wash.*

*Within this solution we find ourselves,
meeting only here, through The Mystery . . .*

One last bit of Oliver. An old friend insisted I get to know her poetry, so I've been reading a lot of it lately, and may be overusing it. In an essay about poets she was fond of in her younger days, she has this to say about Whitman:

I learned from Whitman that the poem is a temple – or a green field – a place to enter, and in which to feel. Only in a secondary way is it an intellectual thing – an artifact, a moment of seemly and robust wordliness – wonderful as that part is. I learned that a poem was made not just to exist, but to speak, to be company.

"Seemly and robust wordliness" – I like that phrase, all the more so since it works just as interestingly if you misread "wordliness," as I did the first time I read the paragraph, making the characterization "seemly and robust wordiness." Whitman was hardly *seemly*, in his life or his art; but wordy he surely was. And then again "wordy" poetry is what poetry is (in the sense that calculus is numerical, I suppose), with all the rich and complex implications I've been trying to sketch out.

"To speak" – and, as Adrienne Rich reminds us, to speak *about* something that matters, not just passing moods and impressions:

*Poetry wrenches around our ideas about our lives as it grows
alongside other forms of human endeavor. But it also recalls us to
ourselves – to memory, to association, forgotten or forbidden
languages.*

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Does Poetry Matter?

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But let me diverge a bit from the poets-on-poetry line, and call upon two scientists. The first, Chet Raymo, teaches college physics and writes a regular science column in *The Boston Globe*. He, having laid out a paragraph of scientific writing, numbers and all, offers this:

Scientific literature emphasizes that part of our experience which is common to anyone who makes the observations in the same way. . . . Yet it is not enough. We are emotional creatures. We have appetites. We are driven – by awe, terror, love, hate. A diet of purely objective knowledge is oppressive. . . . Facts, yes, a flood of facts. But more.

That “more” (notice – not just *other*) he calls by its rightful name, poetry.

My other scientist, Stephen J. Gould, holds a chair in paleontology at Harvard and writes like a dream. Indeed the only flaw in his credentials is that he is a lifelong Yankees fan. In an essay called “For Want of a Metaphor,” he writes about an altogether obscure eighteenth century French “*savant*” (his word for it) Pierre- Louis Moureau de Maupertuis. His argument is that the roundly, richly-richly named gent might well have beaten Mendel to the punch by . . . what, a century? But instead he is no more than a curiosity? Why?

We often think, naively, that missing data are the primary impediments to intellectual progress – just find the right facts and all problems will dissipate. But barriers are often deeper and more abstract in thought. We must have access to the right metaphor, not only the requisite information.

And where better to find metaphor than poetry, which is the most compressed and high-grade metaphor-ore we have.

We should, surely, round things off with a poem. Recently a book came out with the not-facetious title *Very Bad Verse*. The editors were bold enough to name, and print, what they averred is the worst poem in the language. I am convinced, by the way, that they are well wide of the mark; but as my father used to say, “That’s what makes horse races.” In any case, let me offer what I think is perhaps the best poem in English written in this century. I offer it as an instance of the way poetry can force our attention toward the deepest and often the most painful of elements. If Freud was right, he found the poets awaiting him in many a dark, melancholy corner. This is a poem about loss. I’d always

thought it was about the death of a loved one; it seems I was wrong, and the biographical roots of the poem have to do with the end of a long-standing relationship. But the poem leaves that unsaid, and for once “vague-ness” is no vice. Indeed part of the point of the poem is the way it avoids the point, and masks it in cliché and joke:

ONE ART

*The art of losing isn’t hard to master;
so many things seem filled with the intent
to be lost that their loss is no disaster.*

*Lose something every day. Accept the fluster
of lost door keys, the hour badly spent.
The art of losing isn’t hard to master.*

*Then practice losing farther, losing faster:
places, and names, and where it was you meant
to travel. None of these will bring disaster.*

*I lost my mother’s watch. And look! My last, or
next-to-last, of three loved houses went.
The art of losing isn’t hard to master.*

*I lost two cities, lovely ones. And, vaster,
some realms I owned, two rivers, a continent.
I miss them, but it wasn’t a disaster.*

*Even losing you (the joking voice, a gesture
I love) I shan’t have lied. It’s evident
the art of losing’s not too hard to master
though it may feel like (Write it!) like disaster.*

– Elizabeth Bishop

The poem is a villanelle, one of those maddeningly repetitious forms that demand that the same words, even whole lines, not just the same sounds, keep coming back and back. And we realize at the very end that the sound that has been haunting the poem is “disaster.” Veiled, resisted, but there all the while. I’ve seen the working drafts of the poem, and it’s striking how prosy and dull and “safe” it is, until she begins to scribble rhymes, and let the possibility of her real impulse show through. The uncertainties of the poem fall away, in the end, and what becomes bluntly, painfully “certain” is the note that has been haunting the poem through all the flippancies and denials and avoidances – “disaster.”

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Does Poetry Matter?

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The second poem is by Seamus Heaney. It is about his father, and at another level about parents and children. He has written beautifully about his mother as well. But being an only son and the father of one son in turn, I can't help but be struck by this poem. Not because I was raised on a farm, by any means, but because the role-reversals and mutual annoyances seem so true to the experiences of sonhood and fathering:

FOLLOWER

*My father worked with a horse-plough,
His shoulders globed like a full sail strung
Between the shafts and the furrow.
The horses strained at his clicking tongue.*

*An expert. He would set the wing
And fit the bright steel-pointed sock.
The sod rolled over without breaking.
At the headrig, with a single pluck*

*Of reins, the sweating team turned round
And back into the land. His eye
Narrowed and angled at the ground,
Mapping the furrow exactly.*

*I stumbled in his hobnailed wake,
Fell sometimes on the polished sod;
sometimes he rode me on his back
Dipping and riding to his plod.*

*I wanted to grow up and plough,
To close one eye, stiffen my arm.
All I ever did was follow round the farm.*

*I was a nuisance, tripping, falling,
Yapping always. But today
It is my father who keeps stumbling
Behind me, and will not go away.*

One of the things I admire about this poem is the way it crosses all boundaries of place and occupation and class.

I don't know exactly what a "headrig" is, and I couldn't sketch a "sock" with any precision. But it makes no difference at all: "An expert." That fits widely, no matter whether you are thinking of plowing or selling furnaces (my father's trade) or art or mechanical engineering, or whatever. And the poem can transgress or overcome change and loss. The father is older, weaker (biographically, not yet dead; but again who cares?), no longer purely an "expert." But that more powerful figure is alive again, in words at least. And is that what haunts the voice of the poem? "Beware of what you wish for," the old folktale says, "You might get it." Or "beware of what you remember. It might not stay sedately under wraps."

If this were a truly MIT exercise, I would set you a final exam, taken from the riddle-poems by the master riddler in our language, Emily Dickinson. But I will spare you that. The moral of the story is really two-fold: poetry matters because paying attention to both the inner psychic world and the outer physical world is of great importance, and not just to scientists or psychiatrists, either. And paying attention to the language we all live in, and perhaps are formed by, is just as important. Ask Bill Clinton. Or ask a recent poet-laureate, Rita Dove:

Sometimes

*a word is found so right it trembles
at the slightest explanation.
You start out with one thing, end
up with another, and nothing's
like it used to be, not even the future.*

That's a hard standard, any way you look at it. It is a challenge, to those of us who like to lay claim to the title "poet." But it strikes fear into our minds, as well. How you say it affects – *determines*, in fact – what you say, and what you say has impact and effect, both back to the past and ahead to the future. That is what we need poets – especially – to remind us.♣

[John Hildebidle can be reached at jjhildeb@mit.edu]

Institute Repeating HERI Faculty Survey 20 MIT-Specific Questions Included

Lydia Snover

During the months of November and December, MIT is repeating the *Higher Education Research Institute (HERI) Faculty Survey*. This survey was last conducted in 1995. HERI conducts several national surveys every year and is well respected in the area of Higher Education Research. This fall MIT participated in its national study of college freshmen for the first time.

When MIT administered this survey in 1995, the data on faculty stress, factors leading up to retirement, work, and personal satisfaction provided some valuable insight to the particular needs of our faculty.

When this data was compared to national and peer norms, we were better able to understand some of the

specific aspects of MIT's unique culture.

Using results from the 1995 and 1998 survey, MIT will examine changes in faculty issues at MIT.

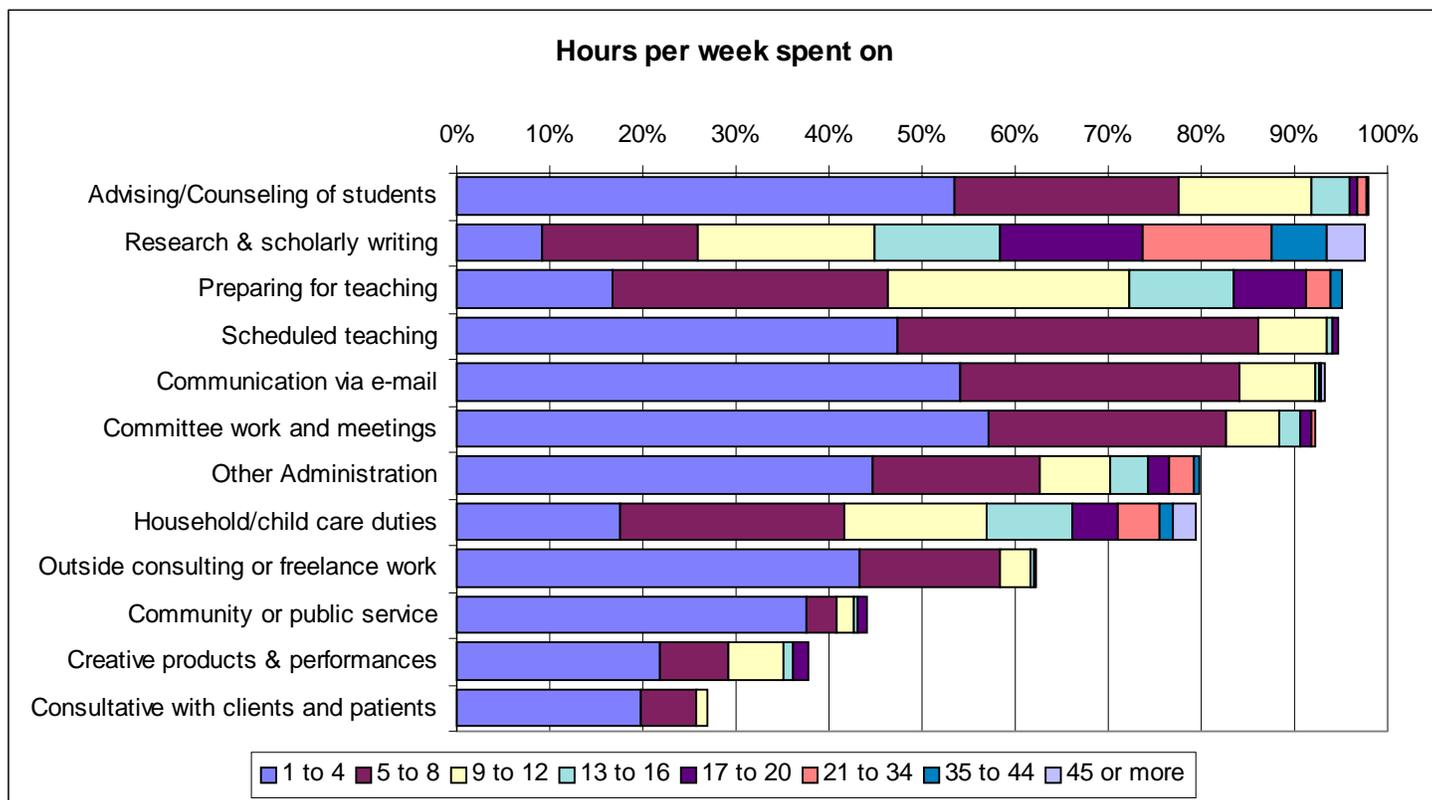
The base of the HERI survey is almost identical to the 1995 version. Faculty members are asked for basic demographic data, ratings of satisfaction with MIT, information on teaching methodology, sources of stress and personal perceptions of MIT and MIT students. This year's survey includes 20 local MIT questions that address issues of particular interest to our faculty and the environment at MIT. One set of questions focuses on the residential resources available to faculty on campus. The MIT Planning Office has begun the first phase of

planning for the construction of housing for faculty and staff on the western perimeter of the campus. Faculty preferences for types of housing, ownership models, and location will guide MIT's planning efforts.

Another important set of questions asks about retirement and post-retirement plans. There are also several questions concerning communication, formal and informal, and community issues.

Individuals are asked to return completed surveys directly to HERI. No one at MIT will see individual responses and the data will be examined in the aggregate.♣

[Lydia Snover can be reached at lsnover@mit.edu]



From: 1995 HERI Faculty Survey;
Source: MIT Planning Office

Sample of MIT-Specific Questions From HERI Faculty Survey

49. If MIT were to build faculty and staff housing on or adjacent to campus (not part of the undergraduate student residential system), at what time point do you think you might participate?
- A. Now
 - B. Would have earlier
 - C. In the future
 - D. Never
 - E. Don't know
50. If MIT were to build faculty and staff housing, which of the following types of housing would you be most likely to consider for yourself and your family?
- A. Detached single family structure
 - B. Attached single family structure (townhouse)
 - C. Two or three family house
 - D. Apartment style housing
51. If MIT were to build faculty and staff housing, which of the following communities would you be most likely to consider for yourself or your family?
- A. Existing Cambridge neighborhood
 - B. Faculty and staff complex or enclave adjacent to campus
 - C. Faculty and staff complex on campus
 - D. Faculty and student complex adjacent to campus
 - E. Faculty and student complex on campus
52. If MIT were to build faculty and staff housing, which of the following would you prefer?
- A. Own
 - B. Rent
53. Which of the following would be most likely to motivate you to participate in a MIT faculty-housing program?
- A. Temporary housing prior to choosing a community for myself and/or my family
 - B. Ease of commuting to MIT
 - C. Need to be close to my work/research as much as possible
 - D. Desire to participate more fully in the MIT community
 - E. Desire to participate in Cambridge/Boston activities (arts, politics, etc.)
54. Which of the following would you consider your best source of information concerning MIT issues and events of interest to you?
- A. Formal MIT publications (TECH TALK, Faculty Newsletter, etc.)
 - B. My department's administrative staff
 - C. Faculty colleagues from my department
 - D. Faculty colleagues from outside my department
 - E. Electronic communications
55. Which of the following would you consider your second best source of information concerning MIT issues and events of interest to you?
- A. Formal MIT publications (TECH TALK, Faculty Newsletter, etc.)
 - B. My department's administrative staff
 - C. Faculty colleagues from my department
 - D. Faculty colleagues from outside my department

ILP KnowledgeBase Provides 24-Hour Access to Faculty and Research Information

K. C. Klingensmith

For many years now there has been a market for 24-hour-a-day news stations, sports stations, and music stations. And now with the internet and the World Wide Web, constant access to virtually any subject matter is but a URL away.

But what about All-MIT-Knowledge, All-the-Time? With the internet and the new Industrial Liaison Program (ILP) KnowledgeBase, you can now spend 24-hours a day, 365 days-a-year exploring the wide variety of Institute resources.

The KnowledgeBase (KB) is a comprehensive, on-line searchable database of current information about faculty and research staff associated with each MIT department, laboratory, and center. It can be used as its own separate "data tank" to find out what's going on at MIT. The KnowledgeBase is available to both the MIT community as well as to all members of the MIT Industrial Liaison Program in the U.S. and abroad through the ILP Website.

In the past, the ILP has published periodic guides to the broad spectrum of interests (*MIT Expertise*) and research projects (*Research at MIT*) underway at the Institute. These published handbooks were circulated to the faculty, and were made available to members of the ILP and other organizations interested in building mutually-beneficial relationships with MIT. But as with all printed material, updating or correcting information was both time-consuming and costly – and occurred far less frequently than one would desire.

Now the information gathered for these guides is not only available

electronically on the Web, but is also searchable and instantaneously updatable!

The fundamental goal of the KnowledgeBase is to capture and store information on cutting-edge technology and research being performed at the Institute. Currently, research projects, biographies of

abstracts and hyperlinks to faculty-maintained Web pages.

- 3000+ MIT faculty and research and administrative staff personnel listed.
- 4600+ projects maintained in the KB and linked to principal investigators.

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faculty and staff, collegia and consortia, research groups, patents, and related interest stories are all being collected to eventually become part of this database. It is important that this information is up-to-date, accurate, and as comprehensive as possible.

KnowledgeBase Quick Facts

• KB serves as *the* definitive source for comprehensive information about all MIT labs, centers, departments and programs, and all faculty and researchers at MIT.

• Searchable on-line database of faculty/research staff expertise and research projects complete with

• Faculty/research staff able to update their records on-line at any time; changes implemented in a timely manner.

• Continuous updating, maintaining, and entering of data into the KB.

• Research information may be obtained in a "CV-type" format.

Accessing the KnowledgeBase

Keep in mind that the KnowledgeBase contains data that can be verified and updated by faculty and research staff at any time to ensure accuracy and timeliness. The information is

(Continued on next page)

ILP KnowledgeBase Provides 24-Hour Access

Klingensmith, from preceding page

easily accessible to Corporate Relations/ILP and the MIT community through an internal “mit-only” Website.

There are three ways to submit updated research information—interdepartmental (campus) mail, e-mail (klingensmith@ilp.mit.edu) or the new on-line site at http://cr.mit.edu/ilp/mit_only/knowledgebase/faculty.taf>. This on-line service is available only through the *.mit.edu domain.

How to update your record in the KnowledgeBase

- Go to the correct URL: http://cr.mit.edu/ilp/mit_only/knowledgebase/faculty.taf
- Type in a faculty name in the “Faculty Search Criteria” field and

click on the FIND FACULTY button. (*Example:* type in the name “adams” in this field)

- The next screen gives you the matches to your search (5). Click on the name you want (*Example:* Adams, E Eric)
- This screen has all the information on Eric Adams from Civil and Environmental Engineering. Scroll down to the very bottom of this screen or else click on the “Skip to Project Section” button in the upper right-hand corner.
- Examine all the information. If you need to make changes, click on the “Enter Update Mode” button. Make changes in any field, then click on the “SUBMIT” button.

How to print out CVs from the KnowledgeBase

At the bottom of the screen, there are three buttons under the “ILP-Only Section.” These buttons give three different options for printing/copying CV information:

- View CV in Printable Form—prints out pre-formatted CV
- View CV in Copyable Form—use this to copy/paste specific sections in the CV
- View CV with Long Fields—copy/paste all CV info into a file to edit or format as you like; saves time because there are no carriage returns <CRs> or other unwanted characters to replace. ♣
[K. C. Klingensmith can be reached at klingensmith@ilp.mit.edu]

Tips on Using the KnowledgeBase

(1) Enter a name in the “Principal Investigator” field to find out what projects are listed for that particular person.

(2) Use the “Text Field Search” to look-up a specific topic or keywords. For multiple word searches, use quotation marks. (*Example:* “artificial intelligence” or “game theory”)

(3) The “Project Search Criteria” section works basically the same way. Both the faculty and projects

section have some sorting capabilities for the search results. Just change the pull-down menu for the sort order criteria.

(4) To find out more information, click on the “alien head” icon next to each field (in submit mode) for definitions or explanations of each field. A pop-up screen will appear and give you a definition and examples about the information requested in this field.

(5) When you are finished entering new data, your name and phone number must be entered (these are

required fields), click the “SUBMIT CHANGES NOW” button. Information goes to a “holding” site, then notification is sent that an update should be made. New information will be entered into the KnowledgeBase within 1-2 days after it was submitted.

(6) Since this is a restricted site, you will not be able to access this page unless you are either using a computer on campus, have established an MIT remote “tether” account, or have acquired the appropriate electronic certificates.

Annals of Reengineering**Saving Money with Vendor Partnerships**

Janet Snover

Three years ago, MIT began establishing partnerships with external vendors as part of the “supplier consolidation” effort. Newer faculty may not be aware of why these partnerships were formed, and other faculty members may be curious about how this effort is working.

Background

When the supplier consolidation research began in 1994, MIT had more than 45,000 suppliers in its vendor base. Some of these vendors had provided only one very specialized product, but even so, MIT was spreading its purchases out among too many suppliers.

People who purchased goods and services for their areas were expected to spend Institute money wisely, but they could decide which companies they wanted to buy from. (Larger purchases did require a justification form proving that a buyer had “shopped around” for a decent price.)

The Institute had an internal Office of Laboratory Supplies (OLS) for scientific and office products, chemicals, gas cylinders, and furniture – with “stores” and a warehouse on campus. However, OLS had to mark up the price of its products in order to be self-supporting, so buyers were not really getting the lowest prices if they purchased from this internal source.

The supplier consolidation effort began with the formation of teams whose members had expertise in particular commodity groups. After reviewing what MIT was buying and from whom, it became clear to the teams that the Institute needed to reduce its number of suppliers in order to take advantage of our combined buying power. “Market basket” price surveys with large vendors also showed that MIT could get significantly lower prices by buying direct, rather than through our own Office of Lab Supplies.

Establishing partnerships for repetitive, commonly purchased goods and services would not only reduce prices but also allow MIT to do a better job of measuring a vendor’s performance and service. Another objective of supplier consolidation was to minimize paperwork by having partner companies bill MIT electronically for all transactions, rather than having separate purchase orders and invoices for each transaction. The senior administration agreed with the recommendation to improve the buying process through partnerships, although participation was not mandated.

Customers who use MIT’s electronic catalog, ECAT, to order from partner companies see the MIT-negotiated price for products. This makes it much easier to accurately calculate the cost for an order.

The partners and how they’re doing:

Olsten Staffing Services

The first partnership was with a company providing temporary secretarial and clerical services. Prior to the redesign, MIT had used 30 different agencies for temporary help. Our partner company, Olsten, subcontracts with several other agencies, but Olsten coordinates all the requests. They provide temporary workers who are familiar with MIT procedures, and the partnership ensures price uniformity and competitive rates.

The Olsten partnership saved customers \$280,000 in fiscal year 1997. Savings in fiscal 1998 were down slightly, to \$230,000, because MIT used fewer temporary staff, and Olsten’s market share at MIT dropped by 10 points. The partnership manager at MIT is working to determine why previous customers of Olsten have contracted with other agencies.

VWR Scientific

Based on the findings of supplier consolidation teams, MIT closed the Office of Laboratory Supplies, effective July 1,

1995. (This meant that the Institute would no longer be carrying the costs of MIT-owned inventory, typically \$1 million or more at any time, and that the space occupied by the warehouse and store operations could be used for other purposes.) A partnership for scientific supplies and chemicals was established with VWR, which set up a small stockroom on campus. This gives technicians, researchers, and students access to the most commonly used lab supplies.

Savings to customers were \$610,000 in fiscal 1997. However, because of slow growth in the first three-quarters of fiscal 1998, discounts were reduced and the savings number dropped to \$550,000. Volume will need to grow by at least seven percent in the current fiscal year to reach the savings target of \$650,000.

BOC Gases

MIT has an exclusive arrangement with BOC for gas products and cylinder management. (Customers can still specify another vendor, but BOC serves as the agent.) BOC tracks all the gas cylinders on campus and bills customers electronically for cylinder rental. The process is both more cost-effective (saving MIT \$140,000 in fiscal 1998) and more efficient (because MIT does not have to process additional purchase orders since all requests go through BOC).

Office Depot

This partnership got off to a rocky start, primarily because the outside vendor wasn’t sufficiently geared-up to handle the initial volume of orders from MIT. However, once the start-up problems were resolved, the partnership has been working well. The fulfillment rate for next-day desktop delivery to the customer averages at least 98 percent.

Perhaps out of habit, some customers continue to buy office supplies from other

(Continued on next page)

Saving Money with Vendor Partnerships

Snover, from preceding page

vendors, despite the fact that Office Depot's MIT-negotiated prices on most items are significantly lower. For example, here's a comparison of some commonly purchased office supplies and the prices (for the same brands and quantities) from both Office Depot (OD) and a local competitor:

One HP toner cartridge	\$75.12 (OD)	\$105.60 (competitor)
Carton Xerox brand 8 1/2 x 11 copy paper	\$25.95 (OD)	\$39.19 (competitor)
Dozen Papermate medium stick pens	\$.91 (OD)	\$2.88 (competitor)
Box 1/3 cut manila file folders	\$4.65 (OD)	\$11.04 (competitor)
Box of 5M standard staples	\$.42 (OD)	\$1.84 (competitor)
TOTAL	\$107.05 (OD)	\$160.55 (competitor)

On these five typical office products, the direct savings to the customer purchasing from Office Depot would be \$53.50. There would also be savings to MIT on both delivery costs and the work associated with approving, pricing, ordering, and paying for goods. For example, partner companies deliver products to the customer's desktop at no extra charge. (If an office purchases from a non-partner, the products will usually be delivered to an MIT loading dock, and then a Mail Services employee has to bring the supplies to the customer.) And the partner companies bill MIT electronically, thus reducing processing costs in the Procurement and the Controller's Accounting offices. (Orders to non-partner companies result in more steps and paperwork.)

Savings to customers who used the Office Depot partnership in fiscal 1997 were \$600,000 on a volume of \$2.7 million. Savings grew in fiscal 1998 to \$680,000 on a volume of \$3 million. Office Depot is currently providing 87 percent of MIT's office supplies.

NECX for Desktop Devices

In the summer of 1997, MIT's Computer Connection (MCC) began a transition from a retail storefront operation for hardware and software to electronic commerce. The MCC still maintains its on-campus showroom in the Student Center, where customers can try out demonstration models of MIT-recommended computing products and get help from MCC consultants. (Closing the retail operation

software will be required with ECAT2 – just a Web browser such as Netscape.

After ECAT2 is up and running with NECX, MIT will begin to move the original partner vendors (VWR, Office Depot, and BOC Gases) to the new system as well.

In fiscal 1998, the partnership with NECX resulted in savings of \$300,000. About 75 percent of that savings was to departments and the rest was to individuals making personal purchases.

MCC's partnership with NECX provides a Web-based catalog and ordering system for software and hardware products. Educational discounts with Sun, Apple, Dell, and Silicon Graphics have been maintained.

eliminated the carrying costs of inventory, which averaged \$2.5 million. In addition, 13 positions were eliminated, and space was freed up for Athena cluster support and PC Service.)

MCC's partnership with NECX provides a Web-based catalog and ordering system for software and hardware products. Educational discounts with Sun, Apple, Dell, and Silicon Graphics have been maintained. In the first 12 months of the partnership, total sales volume was \$8.1 million. Though sales have been increasing steadily (now averaging about \$900,000 per month) there have been some recent problems with availability and delivery. MIT is working to "shake out the bugs" with both manufacturers and with NECX.

Some customers have been frustrated by the extra layers of processing that are still required. Until ECAT2 is available later this year, departmental buyers must place orders via MIT requisition to the MCC or Procurement Office for processing. ECAT2 will eliminate that step because it will be fully integrated into SAP, MIT's financial system. No special

What Else is Happening?

MIT's vendor database is now a lot smaller – with 21,280 suppliers.

Other efforts in supplier consolidation also resulted in fiscal 1998 savings, as follows: \$350,000 on furniture and carpeting; \$600,000 on travel-related costs; \$750,000 on publishing-related services; and \$1.2 million on long-distance telephone rates.

As noted in the September/October issue of the *Faculty Newsletter*, MIT continues to provide options to simplify the purchasing of goods and services. For example, use of the VIP Visa card at MIT is growing, with more than 650 cards issued so far. As of mid-October, there had been more than 6,000 transactions using the card, with total expenditures of \$900,000. (The average purchase price per transaction was \$145.) Currently, the credit card is used primarily with non-partner companies, but usage in the VWR stockroom is expected to grow as more departments sign up for cards.♣

[Janet Snover can be reached at jsnover@mit.edu]

Are We Really Bringing Biological Science into Engineering?

Continued from Page 1

Engineering Tasks,” concurring with the central thesis of Professor Griffith-Cima in her October/November 1996 article “A Modest Proposal for Biomedical Engineering Education,” “much of the present promise and challenge of biomedical engineering is at its interface with biology.” That research at this interface was difficult at MIT became clear to me in the early 80s when my *in vitro* experiments exercising human hips under physiological conditions showed a pronounced temperature rise in cartilage [Tepic, S., Macirowski, T. and Mann, R.W., *J. of Orthop. Res.*, Vol. 3, No. 4, 1985, pp. 517-520]. I couldn’t interest any biology faculty at MIT in collaboration exploring the cellular consequences, so the follow-up research was done at MGH [Madreperla, S.A., et al., *J. of Orthop. Res.*, Vol. 3, No. 1, 1985, pp. 30-35].

Not that I discount the “careful consideration,” if not direct obstruction, which can be generated at MIT when change which impacts and threatens traditional prerogatives is proposed. In 1972, the then Institute president and

provost asked me to chair what was to become the MIT Division of Health Sciences, Technology, Management and Planning, with a steering committee composed of faculty, mostly department heads, from all relevant schools, plus the director of the Harvard-MIT (then) Program in Health Sciences and Technology. (I had been the only “working” faculty member, among university presidents, provosts and deans, on the Executive Committee which formed the Harvard-MIT Program/Division.) I have never spent a more frustrating two years and was relieved when my resignation was accepted and I went back to the student teaching and research which is the joy and fulfillment of faculty status at MIT.

But over 25 years have passed, biology and cognitive science are secure in the School of Science, freshman biology is now a requirement, and bio- and medical engineering have matured. Isn’t it time to “Bring Biological Science Into Engineering” through a collaborative effort which includes both Schools and their respective departments? Following



Forwarding Mail

Penny Guyer

Okay, so you’ve been forced to move out of the office you’ve occupied for years. After unpacking boxes, arranging for telephone service, getting computers hooked up, etc., etc., up comes the question of “How do we get our mail forwarded?”

Sounds like a no-brainer, eh? It’s not. There are 18,000 people at MIT, all, it seems, office nomads. The problem, is that with so many people moving so often, it’s nearly impossible to track who’s on first. Therefore, MIT Mail Services delivers according to room number, and, generally, not by name. When your old office is closed down, this is no problem. We simply remove the mail slot from the sorter in your old Mail Center, and post a

note to forward all mail to the new office. But... that almost never happens. New people generally move right into your old office, and expect their mail in that slot. So – we’re left with trying to sort out mail for new people from mail to be forwarded. Notes are posted near the mail slots to remind sorters of who moved out, but that’s no guarantee all the mail to be forwarded will get caught.

The key, of course, is getting your address changed with the people who send you mail. Again, a no-brainer that isn’t. At MIT, the main database is maintained by Personnel, and changing that address is fairly easy. You can change it on-line or in the back of the faculty/staff directory. But this changes your address only with those

the 1996 article and letter, informal follow-on discussions led to my sending a copy of my letter to Professor Griffith-Cima to the dean of the School of Science. In reply the Dean wrote that “these issues are of fundamental importance to the School of Science” and that “we must be intimately involved.” The then dean of Engineering is now the provost. Enough said!

Robert W. Mann
Whitaker Professor Emeritus
Biomedical Engineering

P.S. *Added on 19 November 1998:* The just-past faculty meeting considered “A proposal to establish a Ph.D. in Bioengineering.” In Enclosure B, describing the proposed program, Professor Lauffenburger stressed the “science of biology” in “the interface between engineering and biology” as the mission of the Division of Bioengineering and Environmental Health, and biology figured prominently elsewhere in the text, as well as in the curriculum and theses of the new Ph.D. program. Yet another reason for the formal participation of the MIT Department of Biology.

departments that use Personnel’s database for their mailings; not with the Credit Union, with Accounting, with MIT Medical, with... you can see the problem.

Here’s the best procedure:

1. Change your address with Personnel, either electronically or via the card in the back of the faculty/staff directory.

2. Contact Mail Services at mailsvc@mit.edu with the old and new room numbers and names of the people moving.

3. Use the Change of Address postcards that Mail Services supplies to notify correspondents both on and off campus. We’ll supply as many as you want.

And we’ll do the best we can. ♣
[Penny Guyer can be reached at pguyer@mit.edu]

New Communication Requirement Needs to Take Wide Perspective

Continued from Page 1

student's junior and senior years. Biologists need to learn to write and speak effectively as biologists; engineers as engineers; and so on. No single method or standard would cover all fields, since the precise professional demands and the relevant expertise would vary from one to another. Furthermore, there could be no general consensus about which of the two components of "communication" – speaking and writing – ought to have more time devoted to it: Field A may place greater weight on oral presentation, Field B on writing. At any rate, training in those specific modes of writing or speaking that are deemed necessary for the accomplishment of professional goals would have the greatest impact if it were carried out within each student's chosen discipline during the second half of the student's college career. Having mastered their disciplines' basic principles, juniors and seniors would then start being prepared to conduct themselves as professionals who, in the normal course of their work, must be able to communicate effectively with each other.

But it is obvious – or it ought to be – that there is a much broader, not so immediately instrumental manner of interpreting the aims and benefits of "communication." Besides devoting itself to producing the best young practitioners of various professions, MIT is – or it ought to be – in the business of helping to shape citizens. Or rather, MIT is in this business, willy-nilly, as an institution of higher learning; but it is not turning a profit in it. Our interest in seeing that the holders of MIT degrees are capable of expressing themselves in effective writing and speech goes far beyond the legitimate desire to see them do

better in their jobs. To the extent that, after they leave MIT, we are still going to be living with them, voting alongside them, handing over important institutions of the country to them, we have a vital interest in making sure they can use language – as writers, speakers, and "readers" –

And these are the students, as John Hildebidle points out, who are not compelled to take my courses, but who arrive in them through some combination of choice, HASS requirements, and the coercion of an otherwise crowded schedule. Behind them lies that larger body of students

We are very, very far from achieving this goal. The majority of the students I teach here (and I believe my experience is not out of the ordinary) are very bright, and they are often very interested, but most of them are terribly deficient in the ability to read closely and critically, and their writing and speaking comes nowhere near doing justice either to the complexity of the material they are confronted with or (and this is the saddest part) to their own intelligence.

to reason well, to analyze, interpret, and argue persuasively, to experience and share new areas of intellectual and aesthetic pleasure, to enrich their lives and ours.

We are very, very far from achieving this goal. The majority of the students I teach here (and I believe my experience is not out of the ordinary) are very bright, and they are often very interested, but most of them are terribly deficient in the ability to read closely and critically, and their writing and speaking comes nowhere near doing justice either to the complexity of the material they are confronted with or (and this is the saddest part) to their own intelligence. None of them get to spend anything like the time it would take to develop the skills and knowledge they would need for this; none of them have the time even to cultivate the "interest" in developing such skills and knowledge.

I never see. Some of these, of course, are taking other HASS subjects that do place a premium on verbal abilities, but others of them find ways of fulfilling HASS requirements in courses that do little to assist them in this area. Exploiting the loopholes in the current HASS-D system, the members of this last group, no doubt because they accurately assess their own weaknesses, avoid courses in which their writing will be held up to serious scrutiny, courses that will challenge the notion that the "what" of writing is something entirely separable from the "how."

If it can be agreed that good writing and speaking are matters of more than simply professional concern, that they are skills adaptable to and essential to all areas of public life, then how are we to nurture them? There are both narrow and broad, instrumental and

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New Communication Requirement Needs to Take Wide Perspective

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non-instrumental answers. People will profit from intensive work on their writing and speaking, conducted in small classes with lots of individual attention and lots of practice. The “Freshman English” classes offered at many institutions are the most familiar

perspective and voice above the merely competent, in rendering it distinctive and memorable – is achieved much more by absorption, imitation, and experimentation than by drilling; which means that it is gained more slowly.

For my part, and at the risk of being thought delusional, I would advocate the creation of a core freshman and sophomore curriculum in the Humanities and Social Sciences, requiring all undergraduates to take certain writing-intensive courses that would introduce them to an important body of literature, history, philosophy, and social and political thought.

model, though the gains achieved in them are often lost in the ensuing college years, after the minimal requirement has been fulfilled. As the faculty has properly grasped, students ought to work at their writing and speaking in each of their four years at the Institute: there should be no way out of or around this principle.

But beyond mere competency lies the region of real sensitivity to the possibilities and perils in language, of full appreciation for the range of achievable effects. No one ever gets to this Shangri-La; improvement is never finished. But to get anywhere near it, even to become aware of its existence, can be done only by those who spend time reading, thinking about reading, talking about reading, and writing about reading. Good writing – and I mean writing whose effectiveness resides not just in making no mistakes but in lifting the writer’s

The recent debates and deliberations over the communication requirement have had the effect of clarifying a problem with MIT’s identity that has been long in the making. Now more than ever before, MIT wants to be regarded as the peer (or superior) of institutions such as Princeton, Stanford, Cornell; it cares enormously about how it is ranked in comparison with these. Yet they are universities, whose curricula at least attempt to reflect the universe of learning which the title conveys. Our Institute has always rejected that model; so that, in appearing on those lists of “top universities,” its name will always be accompanied by an invisible asterisk, its claim to a place among the others will always remain moot. Full and unqualified membership in that exclusive club comes only at a price MIT has been unwilling to pay, or even to consider paying.

For my part, and at the risk of being thought delusional, I would advocate the creation of a core freshman and sophomore curriculum in the Humanities and Social Sciences, requiring all undergraduates to take certain writing-intensive courses that would introduce them to an important body of literature, history, philosophy, and social and political thought. Such a program might best begin with small writing-intensive workshops, offered by the Literature and Writing sections, and then proceed in the second year to more substantive courses in the above areas. At a minimum, one course per term for the first two years, with the amount of class time devoted to writing workshops declining and the amount devoted to substantive intellectual issues increasing, as one went along. No doubt there would be much debate about just what such courses should cover, but that is a secondary matter. The first is to acknowledge the benefits that could be derived from such a program, both for the Institute and its students. I agree with John Hildebidle that teaching only those students who have chosen to take our courses is a blessing, but it is the blessing that comes with accepting our marginality.

I hope you will credit my sincerity when I say that I went into the Humanities because I believed the kinds of things I’ve written here, and that my believing them is not just the result of my wish to improve the institutional standing of the discipline to which I happen to belong – though, like everybody else, I am hardly averse to that idea.

James Buzard
Associate Professor
Literature

Alumni Education and the Faculty

Louis Alexander

An ongoing connection with MIT faculty is the single most important connection to the Institute that alumni tell the Alumni Association they want from us. To this end, we have established the Speakers Bureau as a way of channeling these requests from the 90 MIT Clubs worldwide to you. Our goal is to coordinate these requests so as to reduce the number of times we call on any one faculty member, as well as to maximize the funds we have for faculty travel.

Now, back to the opening point – the importance of ongoing connections to you, the faculty. This year, as in years past, we will be calling on you to help us cultivate this very important tie with our population.

Beginning this year, to underscore the value we place on your participation in the work of the Alumni Association, all faculty and senior administrator presentations to MIT Clubs will be advertised under the rubric Alumni Seminar.

We realize we ask much of you, and that you give us much. In this regard, you are not only acting as ambassadors for MIT but as volunteers for the Association, and for this we are most grateful. One of the few things we can do for you in return, though, is to pay the expenses of these trips. Perhaps this could even be turned to your advantage if there is that odd trip you would like to make, but that just is not in the department's budget – say, for a conference.

At the present time, we only cover expenses for trips to the North American MIT Clubs. While the Clubs outside of North America are as eager to host faculty guests as are the domestic ones, our budget simply cannot be stretched that far. Therefore, we ask that if you are traveling abroad and are interested in meeting with alumni to please contact me, Louis Alexander at <lalexan@mit.edu>, to see if we could arrange an event for you.

On behalf of the many MIT Clubs who have had the privilege of your contact with them, we thank you for all your efforts to keep MIT in the lives of its alumni. Of course, we hope your interactions with alumni have been equally as rewarding for you as they have been for them.❖

... and Thank You MIT Faculty, from the Alumni Association

Over the years, hundreds of faculty members have answered the call from MIT alumni worldwide to give presentations at one of the more than 90 MIT Clubs. In numerous surveys the Alumni Association has conducted, by far the connection alumni want most for us to provide is contact with the faculty. For your participation in this endeavor, the Alumni Association gives you our deepest thanks.

A special note of thanks to Rebecca M. Vest for her time and commitment to Alumni Association events. To the following faculty members and senior administrators who gave presentations

to the MIT Clubs and MIT On The Road in the 1997-98 season, thank you.

Emilio Bizzi
V. Michael Bove
Rafael L. Bras
Alan Brody
Claude R. Canizares
Joshua Cohen
Edward F. Crawley
Alexander V. D'Arbeloff
Herman N. Eisen
Kerry A. Emanuel
Shaoul Ezekiel
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M.I.T. Numbers

From the 1995 HERI Faculty Survey Comparison Data From Selected Peer Institutions

	<u>All Faculty</u>	<u>Science & Engineering</u>	<u>MIT</u>
Professional Goals Noted as Very Important or Essential			
be a good teacher	97.2%	96.2%	97.1%
engage in research	87.0%	91.2%	94.3%
be a good colleague	82.4%	80.3%	83.9%
engage in outside activities	44.6%	41.2%	51.0%
provide services to the cmtly	29.1%	23.1%	24.8%
participate in comm/admin work	16.7%	14.1%	15.5%
Reasons Noted as Very Important for Pursuing an Academic Career			
intellectual challenge	93.1%	94.8%	96.6%
intellectual freedom	87.0%	87.8%	92.3%
freedom to pursue interests	87.8%	88.7%	87.3%
opportunities for research	74.5%	81.5%	85.8%
autonomy	79.1%	80.4%	78.0%
flexible schedule	64.3%	61.0%	60.2%
opportunities for teaching	54.7%	46.3%	47.1%
prestige & status	23.7%	24.9%	30.1%
oppty to influence social change	17.2%	12.9%	14.8%
expected of me after grad school	3.9%	3.4%	2.8%
no other optpies given training	3.9%	2.9%	1.3%
Amount of Stress Experienced Over the Last Two Years			
extreme	31.9%	30.1%	36.2%
moderate	56.2%	56.6%	54.0%
little	11.9%	13.2%	9.8%
Aspects of Job Noted as Very Satisfactory or Satisfactory			
autonomy and independence	92.4%	95.4%	96.0%
quality of students	77.6%	75.2%	92.3%
competency of colleagues	82.9%	84.9%	91.4%
opportunity to develop new ideas	86.2%	88.0%	89.8%
graduate course assignments	88.1%	89.9%	88.2%
overall job satisfaction	81.6%	83.1%	87.3%
undergraduate course assignments	87.5%	87.0%	86.4%
visibility for jobs	71.9%	72.9%	86.0%
teaching load	80.4%	81.0%	85.4%
oppty for scholarly pursuits	76.9%	80.6%	85.1%
working conditions	82.1%	83.1%	82.5%
job security	79.5%	82.5%	79.4%
professional relations w/faculty	72.3%	74.6%	76.6%
salary and fringe benefits	58.8%	62.8%	73.0%
relationships with admin	55.6%	55.2%	68.6%
social relations w/faculty	56.8%	57.1%	54.8%

Source: MIT Planning Office; See article, Page 18.