The MIT Faculty Newsletter

A Condensed History of the CMRAE
A. P. French

Although the current discussion within MIT is focused on the events and procedures that led to the decision to close down the Center for Materials Research in Archaeology and Ethnology (CMRAE) at the end of this academic year, it may be of some interest at this time to review the history of the Center since its inception. I have drawn mainly on the annual MIT President's Reports – a rich source of information about all aspects of the Institute.

To back-track just a little, a separately identified program in anthropology was not begun until the year 1971-72, with a primary emphasis on undergraduate education. In 1975, however, a graduate seminar-laboratory program was initiated, its theme being materials technology in ancient societies – metals, stone, ceramics, floral/faunal materials. At the same time, detailed plans were being developed for the creation of CMRAE, as a program involving eight participating institutions – Boston University, Brandeis University,

Changes in MIT's Budget:
Investing in Our Future
Mark S. Wrighton

How do you keep MIT innovative and strong while taking actions to reduce a serious budget deficit? This is the challenge we face as we seek to reduce the gap between our income and expenses by $40 million over the next several years.

When we began this effort with the FY93 budget planning process, we set out a number of institutional objectives to help guide our decisions. When I say "our," I mean all those who are involved in program planning, whether on the academic or the administrative side of the house. The first of these objectives is to maintain MIT's position as the leading academic institution focused on science and technology. Other objectives include: maintaining merit-based admission and need-based financial aid for undergraduates, tempering the rate of tuition growth, enhancing the diversity of our community, fully supporting academic year salaries for faculty (rather than relying on "soft money" from grants and contracts), compensating our

Walking the Infinite Corridor
Notes on the Journey, from a New Member of the Faculty
Kristina Hill

On March 16, I attended my first meeting of the MIT faculty and stated the obvious. I remarked that as a new woman on the faculty, I am carefully watching the responses of faculty and administrators to Professor Lechtman's charges that her Center (the CMRAE) was unfairly reviewed. A number of Institute staff and faculty colleagues have asked me why I was concerned enough about this issue to speak at that faculty meeting. I'm part of the youngest generation now coming into faculty positions, the twenty-somethings, and I'd like to take you with me for a walk through some of my impressions of this place, especially as they relate to the politics of diversity.

I walk down the corridors of Buildings 7 and 3 looking at murals and bulletin boards, architectural styles, the black-painted letters on the office doors, the "closed" visual quality of those corridors. It strikes me almost daily that most of the visual signs along that route seem to date back to either the 1950's or the

Printed On Recycled Paper

Contents

Authors

Jeanne Cavanaugh is Manager, Training and Publication Services.
A. P. French is Professor Emeritus.
Kristina Hill is Assistant Professor, Urban Studies and Planning.
Ernst G. Frankel is Professor, Department of Ocean Engineering.
Walter H. G. Lewin is Professor of Physics.
Judith Thomson is Professor of Philosophy; Officer, MIT-AAUP Chapter.
Mark S. Wrighton is Provost.

Editorial

Hard Times, Hard Problems

The Center for Materials Research in Archeology and Ethnology (CMRAE) is a very small part of the Institute when measured by personnel and budget. However, news of its impending demise – first revealed through Professor Heather Lechtman's pamphlet – reminded many of us of the precipitous closing of the Department of Biological Sciences several years ago. That closing, or more precisely the manner of that closing, left psychological scars that are still visible.

The faculty moved quickly in the CMRAE situation to avoid another such contretemps, with 40 senior faculty introducing a resolution to set the decision aside. The resolution was overwhelmingly approved at the March 16 faculty meeting, with President Vest responding and supporting the sense of the body.

Nonetheless, the CMRAE affair forces us, once again, to confront issues that, for the most part, we would rather ignore. These include issues of accountability, the protection of interdisciplinary activities, and the roles of the administration and the faculty in deciding the future of MIT.

At every level, science and scientists are under intense public scrutiny with respect to research and publication. Academic institutions, subject to the same scrutiny, are expected to exercise scrupulous fairness in matters of promotion and evaluation. Quite properly, we are all under continual pressure to ensure the academic honesty of our undergraduate and graduate students and postdoctoral fellows. Nor can we ignore the difficulties that attend the effort to establish and maintain the highest possible standards of principled behavior in the intensely competitive research environment in which we ourselves work. The highest moral and ethical standards are expected to be observed and demonstrated at all levels of academic activity and governance. It is not enough to assume that our own knowledge of our own righteousness will be obvious to everyone. Both faculty and administrators must be accountable to students, staff, peers, supporters, and to the public.

The CMRAE decision failed the accountability test in that it had at least the appearance of predetermination and undue pressure. In announcing that he would comply with the faculty's wishes to set aside the decision to close CMRAE pending a review of the decision process, President Vest showed that he clearly recognized the dangers posed by the erosion of consistent standards and is prepared to take decisive actions to avoid the appearance of special privilege and to show respect for faculty concerns.

A second concern brought to light by the CMRAE case relates to the depth of the administration's commitment to genuinely creative cross-disciplinary, inter-scholastic, and international activities. As indicated elsewhere in this issue [see French, Page 1], CMRAE is a consortium involving a number of Boston-area educational institutions and not merely a unique and outstanding MIT program effectively implementing cross-disciplinary on-campus interaction among engineering, the sciences, and the humanities. It is also particularly valuable as a resource for students of Inter-American economics and politics. If the opinions of the majority of the members of the review committee are to be accepted, the closing of CMRAE would deprive a significant segment of the international academic community of access to an irreplaceable resource, in addition to forcing out a valuable colleague and one of the all too few senior female faculty. The decision to take such a step simply cannot be evaluated in terms of dollars saved or positions eliminated. And even by those criteria, the amount saved was inconsequential in comparison with other savings made and contemplated.

It is bad enough that the provost proposed to close CMRAE without giving full weight to the implications of that closure on the Institute and the academic community. To compound the problem, the CMRAE decision was made without even notifying the faculty. And this brings us to the third matter of concern: the issue of who controls the evolution of the Institute. Many of us would much rather work in the sort of Institute where CMRAE exists and cuts, if necessary, are taken in areas where MIT is not unique. Who is to decide in what sort of Institute we will work?

We have grown used to writers and reporters telling the world that MIT is a strange place, full of strange people doing strange things. But for our colleagues at other universities and visiting professors, the strangest thing of all is the governance of the Institute. Many of our academic colleagues are suprised to learn that despite its dependence on public funding, MIT is a corporation with all authority residing in the corporate officers, that there is no such thing as a faculty senate, that the faculty chair is appointed by the administration, and that the president of the Institute presides at faculty meetings.

The flows of administrative authority and the flows of intellectual and financial capital at MIT are not presently congruent. The ideas and funds that

Hard Times,
Hard Problems
(Continued from preceding page)

motivate and support the Institute flow upward from the faculty; but authority comes "down" from the administration. The money that we bring in not only supports our own research, but also funds the Institute infrastructure, and contributes to the support of our students. The administration is given the responsibility to determine how best to maintain the financial integrity of the Institute, but the faculty and student body are responsible for its intellectual vigor and academic integrity. It is essential to bring the administrative and academic aspects of this strange place into congruence if the Institute is to function harmoniously and effectively.

A top-down management system would appear to be particularly inappropriate for an academic institution that prides itself on the independence and entrepreneurial nature of its faculty. Nonetheless, MIT usually operates in a low key, non-confrontational manner. Faculty meetings are noteworthy primarily for lack of attendance. How has our system worked as well as it has for as long as it has? One possible reason is that many of the MIT faculty have been convinced that the admini-stration shares its goals, understands its difficulties, and is acting openly and honestly. And yet, there are occasional cataclysmic (at least for us) events when academic entities are closed or threatened with closure. Because of this, it has become commonplace in the present climate of budgetary constraint to hear it said that "the only problem is that we don't know how to close things down." This statement is a dangerous oversimplification.

Implicit in this remark is the notion that the Institute comprises a kind of consensual domain in which there exists a shared vision of institutional objectives. If that were actually the case, then decisions to close down academic units would engender no conflict; units that the administration wanted to close would simply disappear without a sound, without complication, without a trace. It is hard to imagine a more simplistic or an ultimately more dangerous capability. Some things should not be closed down. *The worst sin is to do well that which should not be done at all.*

It *is* hard to close things. It *should* be hard to close things. The decision to terminate an academic center whose activities are of interest to some of our colleagues should rightfully be a difficult decision, reached with anguish by the community acting in concert, in an atmosphere of trust, and only after complete discussion of the alternatives. At a minimum, we need to be informed of the criteria, process, and timing for such decisions, and the avenues for input and participation of appropriate faculty and staff, early enough to participate.

Repeatedly, in past editorials, we have argued that the manner in which MIT is governed must evolve; that the administration and the faculty jointly must develop a vision of MIT's future and the steps necessary to achieve that future. Until that is done, all important decisions will continue to have at least the appearance of being arbitrary and often opportunistic and each will further erode the moral authority that is essential to the delicate balance that has made MIT so successful and so congenial and attractive a home for its faculty.

Resolution requires action by both the faculty and the administration. The faculty needs to adopt mechanisms to assure its views can be independently developed and expressed; one necessary step is democratically elected officers and perhaps at-large members of a Faculty Steering Committee.

The president needs to take steps – in consultation with the corporation, the faculty chair, and the Faculty Policy Committee – to ensure that the faculty participate fully in deciding what MIT will look like as it enters the next century. There needs to be dialogue, discussion, exhortation, pleading – all the rich ferment of consensus-building in a strong group of bright, opinionated people. A model of management making decisions based on management's special understanding of the issues, doing "what's best for the institution in the long run," has been discarded by everyone except MIT in its own governance.

<div align="right">Editorial Committee</div>

• • • • • • • • • • •

Next Issue

Governance, budgets, radiation, retirement and more will be in the next issue of the *MIT Faculty Newsletter.*

The May edition will be the last for this academic year, and we encourage submissions on any topic of interest to the MIT community.

Nominations for the *Newsletter* Editorial Board will close shortly [see back page] so submit your nominations soon.

We can be reached by mail (38-160), e-mail (fnl@mit.edu), telephone (3-7303) or FAX (3-0458).

Downsizing For Productivity
And Quality Improvement

Ernst G. Frankel

The objective of downsizing is not service or output curtailment but productivity and quality enhancement by cutting out unnecessary levels in a management hierarchy, delegating authority to the lowest competent level, eliminating unnecessary functions and people, and reassessing the priorities of the organization.

This not only requires a reassessment of the need for assistants, associates, and deputies at the department or division head level, but also a reevaluation of the level at which decisions should be made in an organization. In recent years, decision-making powers in the U.S. have moved up instead of down in many organizations, particularly in institutions such as universities and hospitals, notwithstanding the fact that relevant information is more readily available at lower levels of such organizations.

In fact, it appears that this trend is often a response of management to the ready accessibility of information by restricting its effective use at lower levels. Instead of removing layers of unnecessary upper middle management, such organizations have in recent years added to them so as to further isolate top management. At universities, provosts are now supported by deputy, associate, and assistant provosts, all with their own staffs, a trend which is replicated at the dean's and department head level. The same is evident in hospitals, government agencies, and inefficient companies.

The proper functions of top management are strategic. Yet in recent years they have taken over more and more of the operational decision functions, reducing the authority at the department level. This is contrary to developments and experience of industry in recent years which has been downsizing to improve productivity and

quality by eliminating middle management and delegating decisions to the lowest level at which the required information resides. The response has universally been positive and companies, like Chrysler, Motorola, Boeing, and others who adopted this approach, have regained their competitive edge. It is based on the recognition that people will

> The proper functions of top management are strategic. Yet in recent years they have taken over more and more of the operational decision functions, reducing the authority at the department level.

in general do their best if trusted and given responsibility, particularly for decisions that affect them and their work. It is also working well in efficiently-run public agencies and institutions which have been downsizing from the top down and not from the bottom up.

Universities seem to move in the opposite direction, with the productive part of faculty entrusted with fewer and fewer decision-making powers. It seems that university management believes that faculty cannot be trusted with any but academic decisions. Had Chrysler management made that assumption, the company would probably be bankrupt now.

According to *Business Week* (December 20, 1993), in the new organizational model you manage across a flat organizational structure, with the productive factors assuming most of the operational decisions – not up and down. This is something most forward looking corporations have grasped by now, but something universities and similar institutions appear to resist, apparently not because they do not recognize the need for such a change in this information

age in which rapid change and bottom-up decision-making is required, but because they cannot perceive or allow the loss of power at the top.

Universities must become nimbler competitors by eliminating unnecessary administrative layers and become truly horizontal organizations. If corporations can organize workers into self-managing teams, delegating responsibilities to the productive or worker level, surely American universities can delegate more responsibilities to their productive level – the faculty, which is the only real output-producing level of any university. Obviously, faculty will have to take more responsibility for wider issues, something administrators abhor, and with which some faculty may no longer be comfortable. But regaining academic productivity and budgetary control requires that faculty reclaim their traditional responsibilities.

The hierarchical system used in corporations and universities is often defended as being essential to stop abuses, but in reality it delays decisions and results in incorrect and costly decisions, without reducing abuses. It also discourages motivation and eliminates incentives for novel contributions by faculty beyond their narrowly focused professional interests. In other words, it discourages faculty cooperation and thereby the ability of the university to address the relevant larger scale interdisciplinary problems which dominate today. ✤

Motion Will Ask Faculty
To Reassess Grievance Procedures

Judith Thomson

The following motion will be on the agenda for the April faculty meeting:

The faculty requests the Faculty Policy Committee to reassess the Institute's grievance procedures, and report back to the faculty its conclusion about whether they need revision.

In placing this motion on the agenda, I am not inviting the faculty to declare that our grievance procedures should be revised; I merely invite you to agree that there is enough reason to believe they **may** need revision to warrant asking the Faculty Policy Committee to consider the matter. But I can best bring out why I invite you to do so by bringing out why in my view our grievance procedures do need revision.

MIT does not in fact have a set of faculty grievance procedures. What appear in Policies and Procedures (P&P) are grievance procedures for "those who work at MIT" (P&P #3.33.1), these being procedures intended for use by both faculty and staff. The procedures are as follows:

(i) Climb the Ladder: bring your complaint to your "supervisor," and if your problem is not resolved to your satisfaction at that level, to your supervisor's supervisor, and so on up.

(ii) Jump up the Ladder: in "unusual circumstances," you may bring your complaint directly to (as it might be) your supervisor's supervisor, or to your supervisor's supervisor's supervisor.

(Can these two options be intended for use by faculty as well as staff? Evidently they are, though at a minimum it does not come naturally to faculty members to think of their department chair as their supervisor, or of their dean as their chair's supervisor.)

(iii) Side-step the Ladder: bring your complaint to a Special Assistant to the President, or, if your complaint concerns an "academic matter," you may seek "advice" from an Officer of the Faculty, or from the chair of the Committee on Faculty-Administration. [Different procedures are available in the case of complaints against students (P&P #3.33.1) and allegations of academic fraud (P&P #3.51), but I bypass them.]

And what if you choose one of these options but your problem is still not resolved to your satisfaction? P&P is silent on what happens next, except in the case of two kinds of complaints.

(i) If your complaint is about a negative tenure decision, then (P&P #3.33.1) you may write to the provost requesting review of the process that led to the decision, and the provost may decide to consult with the Officers of the Faculty and "establish a mechanism to determine the adequacy and fairness of the process."

(ii) If your complaint is about termination of tenure, then (P&P #2.25) you are entitled to a review by a faculty committee appointed by the president in consultation with the Committee on Faculty-Administration and the Officers of the Faculty.

But these are not the only kinds of complaints which are **in fact** responded to by establishing an ad hoc mechanism for assessing the matter, or by appointing an *ad hoc* faculty committee to assess it. *Ad hoc* faculty committees are appointed by the provost or president to look into the merits of complaints of many other kinds; most recently, for example, an *ad hoc* faculty committee was appointed to look into the merits of a complaint that the decision to close a Center was improperly arrived at.

Two features of our grievance procedures emerge:

(i) Faculty members are not entitled, as a matter of right, to be heard by a faculty committee unless their complaint is about termination of tenure, and even then, the faculty committee they will be heard by is one appointed, on an *ad hoc* basis, by the president.

(ii) In dealing with complaints that survive the trip up the ladder, or the side-step procedure, MIT relies on *ad hoc* procedures, adopted on a case by case basis.

These two features seem to me to mark our grievance procedures as unsatisfactory. Feature (i) marks us as in conflict with what seems to me a fundamental principle of faculty governance, namely that a faculty member should be entitled, as a matter of right, to present his or her complaint to an elected, standing, Faculty Grievance Committee. I will not comment further on this point here because it may pay to draw attention instead to the disadvantages of a grievance procedure that has feature (ii).

In the first place, an institution that relies on *ad hoc* procedures is ill-equipped for developing an institutional memory and principles for dealing with complaints. There can be little assurance under such a system that like cases will be treated alike.

Second, there is no official closure of a case under such a system. The complainant who remains dissatisfied can always request the formation of an *ad hoc* hearing committee, and indeed yet another after that one. (The appointment of successive *ad hoc* hearing committees is not unknown at MIT.)

Third, the wheel that squeaks loud gets the grease. Faculty members with high status, or with friends with high

status, squeak loud; faculty members without high status, and without friends with high status, make a barely audible squeak, and it is not for them that *ad hoc* mechanisms are established. Perhaps MIT's decisions about whether to establish ad hoc mechanisms **are** always made fairly, but it would be no surprise if a suspicion of unfairness remained.

Last, I mention two things that should surely be regarded as disadvantages of such a system by the very administrators who are in charge of it. In the first place, it devours an enormous amount of their time. Second, it opens us to legal trouble that a better system would contribute to protecting us from. Nothing can make a university safe against all faculty

lawsuits, but the best protection available is to have in force a set of faculty grievance procedures that do not rely heavily on the *ad hoc* – I refer to procedures of a kind that are in force in the other major universities across the country – and then, of course, to follow them to the letter. ✠

● ●

UROP Disaster:
It's Even Worse Than You Think
Walter H. G. Lewin

The latest decision to burden UROP salaries with overhead and benefit costs will have far reaching and very unpleasant consequences for both students and faculty alike.

For the first term, UROP students work in my group only for academic credit (never for pay). After one term of satisfactory work, we begin to pay the students (which they almost always want). In the first term, my graduate students and I together spend hundreds of hours to educate the UROP students and to familiarize them with our complicated software programs.

It normally takes one or two terms for a student to become productive; that is, she or he is capable of adding to our scientific output which generally leads to publications. All students, without exception, who do a senior thesis with me are drawn from my UROP pool.

I have typically three UROP students per year for pay. That covers the summer, IAP, and about 12 hours per week during the school year. Each student costs me about $6k per year. With the new rules, this will rise to about $14k per student (compare this with $32k per graduate student). The $14k is so high that I can no longer justify in my grants the hiring of an undergraduate student. Two such UROP students would be equivalent (financially) to about one graduate student, yet one graduate student, in general, produces much more science than two undergraduates.

The new rules are therefore a disaster for me. UROP for credit is not a solution. I only accept UROP students if they have the intention (at least in principle) to stay in my group for at least three terms (but preferably more). One term is unacceptable because of the high time

investment of myself and my graduate students with little or no scientific return. Students, understandably, want to be paid and will not stay three terms or more for credit. The result, therefore, will be that I will no longer employ UROP students nor will I have senior thesis students.

One may ask: How did this work in the past when UROP did not exist? Because grant money was more readily available then, I would pay my undergraduates, and some would remain to do a senior thesis (for which they did not get paid, of course). I had plenty of senior thesis students!

Thus the introduction of the new rules, combined with the present shrinking budgets, is a deadly combination. I think that it is important for both the faculty and the undergraduate students that our administration try to turn this situation around.

A Condensed History of the CMRAE

(French, from Page 1)

Harvard, MIT, the Boston Museum of Fine Arts, the Peabody Foundation for Archaeology, Tufts University, the University of Massachusetts (Boston), and Wellesley College. Professor Heather Lechtman was the coordinator of the project and was chosen in 1976 as director, at which time the program was already in operation. The Center itself was formally established in the summer of 1977 with the help of a 3-year grant totaling $200,000 from

archaeological materials. To these was added, in the year 1981-82, a summer institute program that attracted both graduate students and practicing professionals.

In 1983-84 an archaeoenvironmental laboratory was established; the Center also had its first post-doctoral fellow. In this same year the work of the director was recognized by her selection as a MacArthur Foundation Prize Fellow for a 5-year term.

very recent past its geographical areas of research were extended to Europe.

The scale of the activities of the Center has remained quite modest, but the quality of its work has been widely recognized. In the year 1992-93 – its 16th year of continuous operation – the Center had its first formal external review since it was established. In her contribution to the President's Report for that year, the director expressed her sense of the review in the following words: "The Committee was highly impressed with the Center's programs and accomplishments, and expressed the conviction that, with relatively little difficulty, MIT could establish itself as having the strongest academic program in archaeological science in the world."

> In 1983-84 an archaeoenvironmental laboratory was established; the Center also had its first post-doctoral fellow. In this same year the work of the director was recognized by her selection as a MacArthur Foundation Prize Fellow for a 5-year term.

the National Endowment for the Humanities. Research was based on individual grants, but the NEH also provided a grant of $50,000 for coordination among the participating institutions.

At the end of the 1978-79 academic year, the first cycle of graduate seminar/ laboratories – one year for each of the four areas mentioned above – was completed. This cycle, or an approximation of it, was repeated in subsequent years. Graduate students came from a number of the member institutions.

The two main activities of the Center in its first few years were graduate education and research on

From this time on the Center continued to follow fairly closely the pattern established during its first few years. Its chief areas of interest were in pre-Columbian south and central America, and these have continued to be its main concern. However, in 1986 the Center was awarded a handsome 3-year grant from the J. Paul Getty Grant Trust that provided funding for four scholars, two concerned with pre-Columbian America and two specializing in precolonial Africa, always with an emphasis on materials research. In 1989 the Center's research facilities were augmented with a ceramics research laboratory (funded by the Sackler Foundation). In the

To that account based on the record, I should like to add a personal tribute to Heather Lechtman herself. She joined the MIT faculty in 1971. Since that time, she has devoted her talents, energy, and dedication to the development of the programs of research and education that CMRAE represents, and for which she has served throughout as director. As has been said by many, the particular combination of science, technology and humanistic studies embodied in the Center's programs is superbly matched to MIT's own strengths and to its professed ideals of bringing the scientific and humanistic cultures together. It would, to my mind, be regrettable – to use the mildest possible word – if Heather Lechtman's reward for her many years of devotion to CMRAE and to MIT was to be a confirmation of the decision to terminate the Center's existence. ⬧

A Letter from the CMRAE Program Committee

The following letter was recently submitted to the Faculty Newsletter for publication. In addition to its obvious pertinence to the CMRAE discussion, it also presents a view of MIT from the outside, as well as providing a possible model for one way in which academic institutions can pool resources now and in the future.

May 11, 1993

Dear Provost Wrighton,

In the course of the recent review of the Center for Materials Research in Archaeology and Ethnology (CMRAE) it became apparent that MIT perceives its relationship with the other institutions in this consortium as asymmetric. The signers of this letter deeply regret this perception, but point out that it exists largely because MIT has not developed formal education programs that would allow its own students to take advantage of the rich opportunities presented by the Center.

At the CMRAE Program Committee meeting on April 30, 1993, the institutional representatives unanimously and enthusiastically agreed, with the concurrence of the Director:

- to design an undergraduate and graduate curriculum in archaeological science for MIT students that will provide them considerably more breadth than MIT alone could possibly afford. Development of these new MIT programs will constitute the Program Committee's main agenda for the Fall 1993 semester;

- to approach their respective institutions to discuss the provision of financial resources in support of the Center's operations.

A major motivation for our participation in the Center is the opportunity it provides CMRAE faculty to work with interested and talented students from all the consortium institutions. The education and interests of MIT students are especially appealing and of concern to us because of the Center's role in developing the field of archaeological science. If MIT were to develop a new and, we believe, unique graduate and undergraduate program in archaeological science, it would not be necessary for the Institute to hire a full complement of new faculty. Center faculty are already in place and are eager to cooperate in the new endeavor. Some additional MIT faculty in archaeology would be necessary, of course, but procedures and structures already exist that would allow significant portions of a first-rate archaeological science curriculum to be provided by the other member institutions. We already have our own highly-regarded anthropology or archaeology programs at the undergraduate and graduate levels, and the participation of our faculty will provide curriculum enrichment well beyond what MIT could manage alone.

The recent review demonstrated that expansion of the CMRAE programs would allow the Center to continue its successful activities and accomplishments while creating a truly remarkable educational environment for MIT undergraduate and graduate students. Members of the Program Committee are resolved to participate fully and actively in these important and exciting initiatives.

Sincerely,

Barbara Luedtke, Associate Director
for the members of the Program Committee

Miriam S. Balmuth, Tufts University
Arthur Beale, Museum of Fine Arts
Julie Hansen, Boston University
Dorothy Hosler, MIT
Lawrence Kaplan, University of Massachusetts/Boston
Philip Kohl, Wellesley College
Nikolaas J. van der Merwe, Harvard University
Robert Zeitlin, Brandeis University

<u>**Walking the Infinite Corridor**</u>
Notes on the Journey,
from a New Member
of the Faculty
(Hill, from Page 1)

1970's. I don't have a lot of nostalgia for either decade – I think my best chances for success are in the 1990's, thank you! In spite of the critics of "political correctness," the range of images we have in the 1990's of race, class, gender, and sexuality have come a long way since the 1970's. I walk down that long corridor wondering whether MIT has also come a long way.

The students I see here are more racially diverse than in any other school I've taught at or attended. That's an important positive sign on my road map. And the bulletin boards the students maintain present important juxtapositions – the Christian students have their bulletin board just across from the gay, lesbian, and bisexual organizations. Passing by those two always makes me smile. The educational process owes much to serendipity.

But what about the faculty? Does it seem diverse? What are my prospects for joining this community of scholars with my identity as a woman and a lesbian intact? At faculty meetings and in photographs on the walls, I see an overwhelmingly white and male group of faces. In my own department, Urban Studies and Planning, we have recently "let go" two women faculty (Louise Dunlap and Patricia Hynes) who were actively involved with challenging and supporting our students. Two new women, myself included, were hired this year – but there's no denying that we're starting over, when we

could instead be building ties with the women who were let go.

At the faculty meeting March 16th, several colleagues remarked to me that MIT has a very congenial faculty, as a whole. I think the point was to reassure me that any "apparent" conflicts of interest won't affect the

> **At the faculty meeting March 16th, several colleagues remarked to me that MIT has a very congenial faculty, as a whole....The idea that congeniality between members of the faculty should be reassuring is an "insider" view. "Outsiders" (those who are new, or feel excluded) can't rely on congeniality – they want fairness, a chance to be reviewed by people who have nothing either to lose or to gain from the review decision.**

actual decisions of members of President Vest's review committee on the CMRAE decision process. The idea that congeniality between members of the faculty should be reassuring is an "insider" view. "Outsiders" (those who are new, or feel excluded) can't rely on congeniality – they want fairness, a chance to be reviewed by people who have nothing either to lose or to gain from the review decision. Professor Lechtman might in a different context be considered an insider – a tenured member of the faculty. But the decision to close her research center has left her and myself, one of the most junior professors,

in ironically similar positions – as outsiders.

When the Institute tries to increase and retain faculty diversity, my view is that it is indirectly trying to increase the likelihood of innovation at MIT. Putting seemingly unrelated ideas together, and seeing their connections, is a major source of new approaches. Putting seemingly unrelated people together, brown skin next to white, feminist lesbians next to military men, archaeologists next to engineers, may at least allow our students to see more connections than we could when we were in their positions – or indeed than we can still see, even today. The future of MIT relies on a similar juxtaposition of values, identities, and talents in its faculty.

If a diverse faculty gives rise to more innovation, and if gender diversity is a factor in achieving this positive effect, how can the Institute's

<u>Walking the Infinite Corridor</u>
**Notes on the Journey,
from a New Member
of the Faculty**
(Hill, from preceding page)

deans preserve that positive effect when they (an all-male group of administrators) decide which research efforts will receive their interest and support? Is the Institute putting a lot of effort into diversifying the faculty and its research efforts, only to set budgetary priorities which effectively cut back (and cut out) that diversity by closing the only research center at MIT directed by a woman? Some of the new budget priorities may be set without asking this question, and without trying to separate the selective force of "interest" on the part of the deans from the generative force of "excellence," as it is practiced by a diverse faculty. If women's research interests (and those of other underrepresented groups) are newer to MIT and not yet represented in the interests (and gender) of the administration, they will be more vulnerable to being labelled "low priorities." I say this with no knowledge of the history of the CMRAE, basing my remarks on the politics of power rather than any bias for or against Prof. Lechtman's Center.

Finally, I'd like to make a point about empathy. There's a phenomenon I've observed here and elsewhere which is a real obstacle to improving and retaining faculty or graduate student diversity, in particular. I call it the "universal I" problem. It simply isn't logical to say that if I, as a woman, have not experienced gender discrimination

personally, it must not exist. My experience is not the experience of all women, and that's why they're all relieved I'm not their spokesperson! Neither can the experience of one African American student be taken as representative of all others'

> **If a diverse faculty gives rise to more innovation, and if gender diversity is a factor in achieving this positive effect, how can the Institute's deans preserve that positive effect when they (an all-male group of administrators) decide which research efforts will receive their interest and support? Is the Institute putting a lot of effort into diversifying the faculty and its research efforts, only to set budgetary priorities which effectively cut back (and cut out) that diversity by closing the only research center at MIT directed by a woman?**

experiences. Dealing with any individual person's experience of discrimination requires that we accept their feelings at face value and respond to the existence of those feelings – instead of sitting in judgment and declaring those feelings impossible or inappropriate. It's also important that we not lump all experiences of powerlessness together, automatically equating our difficulties (by saying, "hey, we all have it tough"). The intention of that strategy seems to be to increase the general levels of empathy in MIT's community, but in effect it substitutes

the appearance of a level playing field for the very real and uneven terrain of historical differences.

So, with all of these barriers and questions about insiders and outsiders, why would someone who feels like an outsider expect to be

heard in a faculty meeting? Some in my generation might worry that it's the modern equivalent of a message in a bottle, forever at sea. For me it's very simple: I can withdraw, and start putting up defenses. Or I can engage, putting my integrity ahead of my job security, and taking the opportunity to change things by simply acting "as if" – as if our community's attitudes towards diversity were already genuinely positive and affirming. As near as I can tell, they are not. But someday they will be.

Thanks for walking the halls with me.

Changes in MIT's Budget: Investing in Our Future
(Wrighton, from Page 1)

employees properly, and maintaining enough flexibility to take advantage of new ideas and opportunities advanced by the faculty.

Financially, our goal is to curb the rate at which our expenses grow, bringing this growth into line with the more modest growth in our revenues. Ironically, the only source of revenue over which we have direct control is tuition, and we are committed to holding down increases on that front as much as possible. Thus, achieving progress on our goal of reducing the operating gap by $40 million and in achieving our institutional objectives depends on reducing sharply the budgets in some areas, while providing significant new resources in others.

Some of the budget decisions in the past two years will illustrate some of the changes that have taken place. These have, generally, come about through discussions among the deans and affected faculty or administrative staff. Space here does not permit a complete accounting of all budget actions, but examples of reductions include:

• Closing of the supercomputer facility – about $150,000 per year.

• Elimination of offerings in dance – about $56,000 per year.

• Elimination of central funding for the Technology and Culture Seminar – about $35,000 per year.

• Elimination of the centrally funded travel program for faculty – about $225,000 per year.

• Elimination of the central budget for equipment purchases by departments – $700,000 per year.

• Elimination of five faculty positions in the Department of Physics (as they become open) – eventually about $350,000 per year.

> **Financially, our goal is to curb the rate at which our expenses grow, bringing this growth into line with the more modest growth in our revenues. Ironically, the only source of revenue over which we have direct control is tuition, and we are committed to holding down increases on that front as much as possible. Thus, achieving progress on our goal of reducing the operating gap by $40 million and in achieving our institutional objectives depends on reducing sharply the budgets in some areas, while providing significant new resources in others.**

• Elimination of about 10 other faculty positions across the Institute (as they become open) – about $700,000 per year.

• Consolidation and downsizing of purchasing functions – about $360,000 per year after the transition period.

• Reduction of central funds for the Sloan School budget over three years – $1.5 million per year.

• Elimination of table service lunch at the Faculty Club – about $250,000 per year.

The sum of these actions alone is quite significant: a reduction in the annual budget of about $4 million. In some instances, actions have resulted in reduction in staffing, including in Information Systems and the Libraries (not included in the list above).

While we have made some significant budget reductions, we also have made some meaningful investments in line with the institutional objectives mentioned above. Examples of these investments include the following:

• We have made major progress in fully supporting academic year faculty salaries (rather than relying on "soft money" from grants and contracts.) Over the past three years, the percentage of academic year faculty salaries supported by soft money has been reduced from about 14 percent to about 10 percent, at a cost of about $5.5

Changes in MIT's Budget: Investing in Our Future
(Wrighton, from preceding page)

million annually.

In the School of Science, only the academic year salaries in the Departments of Biology and Brain and Cognitive Sciences are not fully "hardened" as we begin FY95. The School of Engineering has about 17 percent of its academic year salaries for faculty on soft money, and the FY95 budget will include another $250,000 for hardening salaries in that School.

• We have won our case with the Department of Justice in connection with the anti-trust lawsuit, and we are committed to maintaining our need-based aid policy and meeting the full need of admitted undergraduates. The amount of general funds MIT spends on undergraduate financial aid (in addition to funds generated by the endowment for this purpose) has grown from $11.6 million in FY91 to an anticipated $16.5 million in FY94.

• We have made progress in attracting more women and minority faculty to MIT, and new recurring budget commitments in this area total about $1.5 million annually.

• We have maintained salary increase programs, in order to properly recognize the outstanding contributions of all those who work at MIT. This has accounted for a net increase of $8.4 million in general Institute funds for the current year.

• We have invested in a number of new academic programs in order to respond to important needs. These include new resources for the Biology Department in connection with the new core biology requirement ($325,000 in annual costs) and for the Department of Electrical Engineering and Computer Science in connection with the new Master of Engineering five-year degree

Fiscal Year	Academic	Administrative
FY92 (budget)	$168.5 million	$121.4 million
FY93 (budget)	$177.8 million	$128.5 million
FY94 (budget)	$186.3 million	$129.8 million
FY95 (estimate)	$189.3 million	$127.9 million

program ($450,000 in annual costs).

• We have continued to enhance the computer resources available to students. This year, we brought the living groups onto the campus network, for a one-time implementation cost of $500,000 and recurring annual operating costs of $570,000.

• The Athena computing environment equipment renewal program has been increased from zero in FY91 to an annual amount of $1.6 million in FY95.

We are making progress in closing our operating gap — by reducing the rate at which our expenses are growing, particularly in the administrative areas, where we are estimating an actual decrease for next year. A review of the current and recent budgets gives the picture [see box]. Remember, these are figures for general Institute funds,

not research funds or indirect costs supported by outside research sponsors. "Academic" refers to those areas reporting to the Provost; "Administrative" refers to those areas reporting to the Senior Vice President.

The key to bringing our budget into balance while maintaining our ability to invest in new faculty-based initiatives is not simply to cut budgets across the board. Such actions would erode our strength and morale. We need to make programmatic decisions based on the long term, strategic plans that are developed by each department and School. On the administrative side, we are beginning the process of "reengineering" a number of key support services. This work will involve designing services from the ground up, eliminating unnecessary or redundant work, improving service, and substantially reducing costs. While the focus of reengineering is on administrative operations, everyone who is supported by these activities will be affected, and our success in these efforts will depend on a spirit of goodwill and cooperation during this period of change.

Keeping Up With (Computer) Changes:
Faculty Computer Workshops

Jeanne Cavanaugh

Since Provost Wrighton's project to seed laptop computers to faculty members in the Schools of Architecture and Planning and Humanities and Social Sciences, many faculty members have expressed an interest in hands-on training on Macintosh, DOS, and Athena applications. You told us that courses of interest include electronic mail, navigating the Internet, quick tips and shortcuts in word processing and other programs.

Information Systems now offers a new training program, Faculty Computer Workshops, to provide hands-on training to faculty members. This program is open to faculty members from all schools.

Since our regular training classes, offered during the daytime, present a time conflict for professors who have their own classes to teach, the Workshops are held on Monday and Wednesday evenings from 5:00 pm – 7:00 pm. Beginning in May, we'll offer classes on Tuesday evenings as well. Courses are held in the Training Lab (Room 11-206), with a maximum enrollment of six faculty members per class.

We understand that you don't necessarily need desktop publishing features, but would rather learn efficient ways of creating and editing documents and bibliographies; enhancing your electronic research skills, and communicating with your students and colleagues around the world via e-mail.

The Workshops are described below. We encourage you to select and take one or more according to your individual needs. We will be repeating these courses and adding others you may wish to suggest during the late spring and summer months, so don't be concerned if the date has already passed. If you are interested in taking these courses at a later date, please contact me, and as there is interest expressed, we'll schedule each additional Workshop.

To register or comment, please send mail to Jeanne Cavanaugh, Manager, Training and Publication Services (cavan@mit.edu), or telephone x3-0852.

Faculty Computer Workshops
Course Descriptions

Converting to the Mac (for DOS users)   **Monday April 4**

How to manage the Mac environment for people already familiar with the IBM systems. The finder, starting applications, creating a document, cut, copy, and paste. Converting documents from IBM disks.

E-Mail on Athena and Faxes (ThinkPad/DOS machines)

Select one section: Section A: **Wednesday April 6**
                       Section B: **Monday May 9 (6:00 - 8:00 pm)**
Use your modem to dial Athena for electronic mail. Include a long document in your e-mail and send it to a colleague. Manage your e-mail and faxes.

Exploring the Internet (Mac or DOS using your Athena account)

Select one section, meets twice: Section A: **Wednesdays April 20 & 27**
                                               Section B: **Mondays April 25 & May 2**
                                               Section C: **Mondays May 16 & 23**

1.   *Use Gopher to explore the Internet and find out what information is available. Read electronic journals. Use telnet (remote login) to search online libraries and databases around the world.*

2.   *Learn to use the file transfer program (ftp) to connect to a remote computer, and transfer text files and programs to your desktop.*

*Demonstrated ability in e-mail is a prerequisite for the Internet course.

Intermediate Word (Mac and Windows)

Select one 2-hour section: Section A: **Monday March 28**
                                                    Section B: **Wednesday May 11**

For users who are familiar with the basic editing and formatting features and are ready for more advanced topics. We'll briefly review formatting bibliographies, then work on footnotes, multiple documents, create and manage headers and footers.

Introduction to Windows   **Wednesday March 30**

Manage and explore Windows; menus; find files; format disks; program and file manager; customize your desktop. Brief excursion into programs such as Word and WordPerfect for Windows, Excel, WinFax.

Introduction to Word (Mac and Windows)   **Monday April 11**

This course is intended for people new to Word on either the Mac or the IBM.   Create and edit documents; move through a long document quickly; cut, copy, and paste text; format characters; print preview, bibliographies.

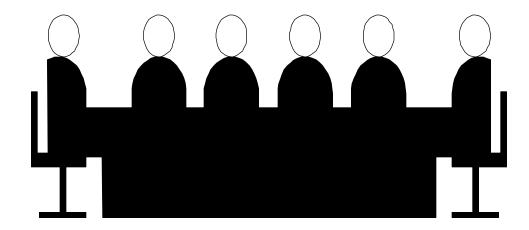### Introduction to WordPerfect for Windows   **Wednesday May 4**

This course is intended for people new to WordPerfect for Windows.   Create and edit documents; move through a long document quickly; cut, copy, and paste text; format characters; print preview, bibliographies.

TechMail and Faxes (PowerBook/Macintosh)

Select one section: Section A: **Wednesday April 13**
                                                    Section B: **Monday May 9 (3:30 - 5:30 pm)**

This hands-on course will teach you how to create, send, and reply to electronic mail using TechMail (and TechMail-S). Create an electronic address book; include a document typed in Word; send an enclosure (attachment).

Nominations to the *Faculty Newsletter* Editorial Board for next year will close at the end of April.

If you would like to nominate a faculty member to the Editorial Board, please send us their name with a brief note indicating their interest, sensitivity, and commitment to the concerns of their colleagues and the *Newsletter*.

Contact the *Newsletter* office or any Editorial Board member for further information.