Responses

Dangerous Stereotyping

Harvey M. Sapolsky

In the flood of commentary after the savage attacks of September 11th wise advice has been offered by colleagues and others about the need for Americans to restrain their reactions, and especially for the U.S. government to be cautious and contained in its military response. We know that the attackers did not represent Islam. Probably most Afghanis do not support the Taliban. We should seek measured justice, not blind revenge. If we lash out we risk creating more misery, more hatred, and more terrorists. It was the international community as well as the United States that was attacked and thus we must seek a balanced, international response.

Dangerous misunderstandings can exist everywhere. I worry that many will not appreciate the depth of the challenge that has been offered to the American security forces, the U.S. military, and

Responsibility, Muddle, and Blame

John Hildebidle

Since I am (or intend to be) a student of how language operates, I approached the news of September 11th by that avenue. I was almost immediately struck by how far beyond the capacities of customary speech we were forced to move. Even the inevitable question seemed clumsy. "Are you OK?" But who was, that day or the next or the next? "Were you affected at all?" Who wasn't? "Did you have family at the World Trade Center?" Ah, but what of friends, working associates, ex-students, even passing acquaintances? "Did you know any of the casualties?" And yet what of the missing?

More centrally, what was the deed itself appropriately to be called? An *event*? Too bland. For many of us, Pedro Martinez having a good outing against the Yankees is an event. And buried within that small word are so many inapt positive connotations – parties,

An Update on MIT OpenCourseWare

Steven R. Lerman

In a press conference held on April 4, 2001, MIT announced its commitment to make the materials associated with virtually all its courses freely available on the World Wide Web for non-commercial use (see <http://web.mit.edu/newsoffice/nr/2001/ocw.html>). This new initiative, dubbed MIT OpenCourseWare (OCW), reflects our institutional commitment to sharing knowledge across the globe. This article is intended to update the faculty on where OCW now stands, and what the plans are for this program.

OCW stands in stark contrast to many initiatives in the private sector and by other universities that are attempting to use the "intellectual capital" of academia on the Web as a revenue source. We envision OCW not as an alternative to the intensive, residentially-based education we now provide our students. Instead, OCW is much more in the tradition of faculty publishing textbooks. We see OCW as providing a way to share our thinking about the content of a

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From The Faculty Chair

Open Questions

Stephen C. Graves

September 11th has changed our world in ways that are continuing to unfold. In the days to come at MIT, we will face a number of pressing challenges due to the events of September 11th. These challenges will test some of the core principles and values that we hold dear. In some instances we'll find that key principles are in conflict. As a faculty we need to work with the administration and student body to decide how to address these issues and how to find the right balance between conflicting viewpoints. In the following I'd like to outline a few of these issues that threaten our commitment to openness within our environment. I invite your input and advice.

Open Expression: We cherish the principle of free speech. We also have an extremely diverse campus community and a strong commitment to creating and maintaining an inclusive environment, free of hostility in any shape or form. One's right to free speech can lead to tremendous discomfort for others in our community. Where do we draw the line?

This is an age-old question, but one that is likely to become increasingly relevant in the days ahead. As the war against terrorism proceeds, many in our community will have a need and desire to express their views and emotions. Much like the Vietnam War, we might expect some level of divisiveness on campus, as the war escalates and various interest groups stake out their positions. How do we provide forums, and other outlets, for members of our community to express and demonstrate their views in peaceful, non-destructive ways? How do we do this in a way that preserves each individual's right to free speech? And how do we assure tolerance for differing viewpoints, and prevent any hint of hateful speech, targeted at individuals or ethnic groups?

Open Access: We live and work in a remarkably open campus, in which one is free to come and go with minimal restrictions and limitations. There is free access to most academic and administrative buildings, many of which are open 24 hours a day. For some facilities and events, there are nominal restrictions limiting access to the MIT community; yet, the enforcement of these restrictions is often not very apparent nor visible. Delivery trucks have relatively free run of the campus. Where we do have a need for increased security, we tend to make it not very visible, by design, so as to maintain the illusion of an open campus.

Similarly, there is fairly open access to a wealth of information available at MIT. Our libraries are generally open to the public, many seminars and colloquia are open to the community, and there are minimal restrictions on access to much of the information available from our Websites, posted both by the Institute and by individuals.

In light of the recent events, might MIT be a possible target for a terrorist attack? Might we be an unwitting source for material or information that could be used by terrorists? Certainly the level of fear and concern about our safety has risen to a point where some action is needed. But what amount of heightened security will the MIT community tolerate in exchange for increased safety? Should we lock up the buildings? Should we restrict delivery trucks? Should we require identification cards for access to buildings and events? Should we put protective restrictions on our Web pages?

Open Research: As do most research universities, MIT is committed to conducting open research, and its dissemination through the appropriate scholarly channels. Indeed, the *MIT Policies and Procedures*, section 14.2, states, "Openness requires that as a general policy MIT not undertake, on the campus, classified research or research whose results may not be published without prior permission...." The *MIT Policies and Procedures* (section 14.2) goes on to say, "Openness also requires that, once they are at MIT, foreign faculty, students, and scholars not be singled out for restriction in their access to MIT's educational and research activities."

Yet MIT also has a strong commitment to national service. There undoubtedly will be calls from our government to our faculty and our research labs to help discover, develop and deploy technology to help combat various forms of terrorism. Some of these requests may entail classified research and/or impose other restrictions on the conduct of the research. The *MIT Policies and Procedures* (section 14.2) provides some leeway for exceptions to the restriction on classified research when judged to be in the national interest,

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e.g., " . . .where the immediate distribution of research results would not be in the best interests of society." How do we as an institution decide what types of "closed" research to conduct on campus, if any? How do we segregate this research, both physically and intellectually, from our normal fare? How do we trade off the needs of our nation with our commitment to open research and the free dissemination of knowledge? What principles or guidelines should we apply to make these judgments?

I have laid out a series of questions that I expect we will see as we move forward in this difficult and uncertain time. All of these questions focus around the current way we conduct our business at MIT, namely in an environment that is open, inclusive, and transparent. For sure I don't have the answers. In my role as faculty chair, I'll work to assure that the faculty has a strong voice in addressing these questions in whatever form they might arise. Indeed, the answers to these questions *must come* from the faculty, who need to work with the administration and the student body to find the right path forward for MIT.✥

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Task Force on Campus Security is Formed

Janet Snover

The Task Force on Campus Security that President Charles M. Vest appointed on October 1 began to meet the following day and has formed working groups to address specific issues. The charge to the 23-member Task Force is to assist MIT in setting policy and planning for heightened campus security and safety for the immediate and the longer-term future.

As Dr. Vest wrote in his October 9 e-mail message to MIT students, faculty, and staff, "During these difficult times, all of us are concerned about the safety and security of our campus. I want you to know that we have enhanced security on campus generally and are in the process of reviewing all of our security arrangements." The message went on to provide details of the many steps that already have been taken and others that are being planned.

Issues that the Task Force will review include protection of campus people, facilities, and environment as well as protection against dangerous or inappropriate release of information and materials.

Chaired by Executive Vice President John R. Curry, the Task Force has been asked to present initial recommendations in November. Specific areas to be addressed by the Task Force's working groups include biological, nuclear, and chemical hazards; access and openness of the campus; and information policies and privacy issues.

In addition to administrators and student representatives, eight faculty members are serving on the Task Force. They include Vice President for Information Systems James D. Bruce; Chancellor Phillip L. Clay; Chair of the Faculty Stephen C. Graves; Vice President and Dean for Research David J. Litster; Dean for Undergraduate Education Robert P. Redwine; Professor Richard J. Samuels; Institute Professor Sheila E. Widnall; and Professor Patrick H. Winston.

If you hear of concerns that you believe the Task Force should consider, please send them in an e-mail message to *securecampus@mit.edu* and they will be forwarded to the appropriate working group, office, or individual for follow up.✥

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TEACH TALK

The Ecology of Learning
Several Streams of Research Take a
Broad Approach to Understanding the Learning Process

Lori Breslow

This is the third in a series of articles begun last spring on the contributions of educational research to the improvement of teaching and learning. Each article has attempted to tie the findings of scholarship to specific actions that can be taken within the classroom and the lab, as well as the more informal settings in which teaching and learning take place.

The first article described research into the differences between expert and novice learners, and offered recommendations for how those findings could be used to help student novices acquire the habits of mind and work that characterize professional expertise. The second article looked at a theory of learning known as constructivism, so-called because its fundamental assumption is that learners construct their own knowledge through a process of "meaning making" that entails acquiring and using the concepts of a discipline. One of constructivism's most fruitful findings is that a student's prior knowledge plays a pivotal role in how he/she learns, a realization that has important implications for the presentation of new ideas in the classroom.

In this final article, I want to describe two streams of research that have become particularly prominent over the last 10 to 20 years. One of these perspectives, championed primarily by developmental psychologists, examines how the elements of the environment can support – or impede – learning. (The environment being defined as something as contained as an instructor working with one or two

students, up to and including the culture to which that instructor and his/her students belong.) A second school of thought, coined "situated learning," holds that to learn means not only to master the facts and concepts of a given field – its explicit knowledge – but also to master the ways of seeing, interpreting, and knowing that are practiced by professionals in that field.

What is common to both these views, first of all, is the premise that the context in which learning takes place exerts an enormous influence on learners and their educational development. Second, these scholars see learning as a social phenomenon – a process firmly rooted in the way human beings interact with one another – rather than simply something that goes on in the head of an individual learner. Finally, they define learning as ecological, by which they mean it can only be done by and within adaptive, open, complex systems. Individuals are complex, open systems; so are classrooms and universities. At every level of analysis (individuals, classrooms, universities) one must look at how the elements comprising the system operate both individually and interdependently, and work towards structuring those elements so that the system can function optimally.

Let me describe in more detail what each of these schools of thought can teach us about teaching.

Development in Context

Development in Context is the title of an influential book in the field of psychology that appeared in 1993. Composed of chapters written by some

of the leading scholars in the field, *Development in Context* described a major shift in the way development and learning was being studied and conceptualized. Specifically, the researchers working within this paradigm see human development as the result of transactions between individuals and their physical and socio/cultural environments. In their introduction to the book, editors Robert H. Wozniak and Kurt W. Fischer argue that, "how we perceive the world, act on objects, interact with people, and generate symbols . . . must be understood as the joint product of the physical and social situations that individuals find themselves in and the personal characteristics that individuals bring with them to these situations." (p. xii).

This perspective, which has its roots in the scholarship of such seminal thinkers as John Dewey, Jean Piaget, Lev Semenovich Vgotsky, and Kurt Lewin, has powerful implications for how teaching is conducted and learning achieved. In an earlier *Teach Talk,* I described one stream of research that can be seen as rooted within this theoretical framework: Educational researchers who have studied the difference between what they call "deep" and "superficial" learning maintain that deep learning – generally thought of as learning that goes beyond rote memorization to a fuller understanding of concepts and ideas – results from fundamental decisions instructors make about how their courses will operate (for example, the kind of assignments and

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exams given). (Please see "When Students Learn," *Teach Talk,* Oct./Nov. 1996, <http://web.mit.edu/tll/published/teach_talk.htm>.)

At the risk of becoming overly theoretical, I would like to focus on one piece of research reported in a chapter in *Development in Context* entitled "The Dynamics of Competence: How Context Contributes Directly to Skill" by Fischer, Elaine Rotenberg, Daniel Bullock, and Pamela Rya (pp. 93-117). As the title indicates, Fischer and his colleagues set out to tackle an understanding of the role of context in competency: that is, how an individual acquires and perfects his/her ability to do something – whether that something is writing an essay, carrying out a scientific experiment, or playing the guitar. (Competence is defined "most simply as the upper limit on the developmental level of behavior" (p. 97). I believe the findings of this study have direct applicability to what university-level instructors do (or don't do) in their classroom and in their interactions with students outside of class.

To reveal the bottom line: The experiments led Fischer and his colleagues to conclude that competence is not simply an internal capability of a particular individual, but "arises from the collaboration between person and context, with competence changing as the context changes." They go on to write:

"People are especially important in this collaboration, molding the context to support particular kinds of actions and thoughts in those they interact with. The effects of this sort of social support are dramatic, producing sharp shifts in competence levels in individual children. *Competence rises abruptly with the provision of support and drops dramatically when the support is removed*."[italics mine] (p. 93).

The authors performed a series of experiments in which they asked children, adolescents, and, in one experiment, adults to undertake some action. One experiment asked children to act out and tell stories. Another asked them to sort blocks into boxes. A third required adolescents and adults to explain how they made decisions about a complex problem. Within each experiment, the researchers varied the degree and type of social support the experimenter provided for the task. For example, in the experiment in which children told stories, if support was low, the child was simply asked to tell the story. If more support was made available, the experimenter might model the behavior he/she was asking the child to do. (While the experimenters provided prompts, they never actually intervened in the subject's demonstration of the skill.) The subject's capability was then assessed using a pretested, statistically analyzed scale that described in detail the various levels of ability for that particular skill. In experiments involving hundreds of subjects, the research showed that in contexts where there was relatively little support, subjects demonstrated what the researchers call "functional-level competence" (i.e., relatively low); however, in situations where support was stronger, the subjects produced "optimal-level competence."

Functional and optimal levels of competence provide the end points for what the authors call "the developmental range," and they maintain that it is within this range that short-term growth in skills occurs with instruction, practice, and contextual variation each affecting the process. Reporting on experiments with 14- through 28-year-olds, they state the developmental range does not end with childhood but extends at least until the late twenties as young adults are faced

with the challenge of learning to employ high-level abstract reasoning. Finally, the authors hypothesize there are advantages to delaying the complete mastery of a skill, and that the existence of a developmental range in which the learner moves back and forth through functional and optimal levels is beneficial to the learning process. At the lower level, for example, the learner can search for and experiment with a variety of ways to structure adaptive behaviors, rather than settling on one too soon. On the other hand, functioning at the optimal level gives him/her the opportunity to practice higher-level capabilities that have proven to be successful. "The developmental-range phenomenon provides a way of having both advantages at the same time by separating the two levels," the authors write (pp. 112-113).

There are several obvious lessons that can be extrapolated from these studies. First, they complement a slew of educational research that shows students do better in a highly supportive environment. (Please note that "highly supportive" is not synonymous with "easy.") In the Fischer studies, methods of support included modeling desired outcomes (as, for example, when an adult acted out and explained the kind of story he/she wanted the child to create), or providing key elements of the desired outcome. These same techniques can easily be adapted to a university-level classroom.

Second, the idea of working within the students' developmental range and not rushing optimal-level competence has interesting implications. For example, I once observed a highly effective 18.02 recitation instructor pose a question to the class, and then bypass students whom, he later confided in me, he sensed had the correct answer. Rather, he called on students in whom he was less confident.

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"If the right answer comes out too quickly," he explained, "students often don't see why the wrong answer won't work."

"Besides," he continued, "sometimes I'm surprised, and a totally new way of approaching the problem, which never occurred to me before, comes to the surface if we don't go to the 'correct' answer immediately."

I imagine Fisher and his colleagues would applaud this instructor's approach. Their investigation into how skills are developed and competency reached has yielded some interesting insights into what we are trying to accomplish.

Situated Learning

The idea behind the concept of "situated learning" is, in some ways, so simple and commonsensical that I wonder why it took so long to be articulated. The person who coined the term, John Seely Brown, Xerox's chief scientist and director of its Palo Alto Research Center, begins this explanation of it by citing an insight by the psychologist Jerome Bruner.

Bruner realized that when we talk of teaching a discipline, we are usually referring to the facts, concepts, laws, equations, etc., that have been commonly recognized as belonging to that discipline. Bruner called this material the "explicit knowledge" of the field. But being recognized as a practitioner in a given field, Brown writes, "involves a lot more than getting all the answers right at the end of each chapter." ("Growing Up Digital: How the Web Changes Work, Education, and the Ways People Learn," *Change*, March/April 2000, p. 15.)

Learning to be a physicist or chemical engineer or university professor, Bruner maintained, means thinking, working, seeing, interacting as a member of that profession. It means approaching a problem as a physicist or engineer or academic does; it means, in fact, being able to discern an interesting problem from an uninteresting one. It entails recognizing what counts as "evidence" to solve the problem, and who or what is considered authoritative in the field. It means understanding what skills are valued by the profession, how hierarchy and dominance are defined, and what catapults practitioners to the top of the field. All these things Bruner defined as the "tacit knowledge [of a professional] community" (Brown, p. 15).

The key word for Brown and others working within this frame of reference is *community,* for situated learning posits that learning not only refers to gaining command of explicit knowledge, but also means being socialized and enculturated into a particular "community of practice." Communities of practice emerge as people develop and share ways of doing things, including approaching and solving problems, interpreting information, etc., so that there are both social and historical aspects to the notion of communities of practice. Members of a community of practice have learned ways of operating that have been created by many people interacting over a period of time, and, in doing so, their own individual identities have been forged.

The term "community of practice" itself was first used in a book called *Situated Learning* (1991) written by Etienne Wenger and Jean Lave. Wenger went on to write *Communities of Practice: Learning, Meaning and Identity* (1997). In an excerpt from that book, he writes, "Communities of practice are an integral part of our daily lives. They are so informal and so pervasive that they rarely come into explicit focus, but for the same reasons, they are also quite familiar." (quoted in "Communities of Practice," *Training,* February 1997, p. 38). What I would like to put forth here, is as teachers we need to bring the elements of the communities of practice in which we work into "explicit focus," so that we can mobilize all necessary resources to help our students become outstanding members of the professional communities they will soon enter.

For example, in the first of these articles on educational research, I argued one way to make our students better problem solvers is to explicitly lay out the process by which problems are solved. Similarly, although I am not an advocate of relying solely on lectures in the classroom, one of their advantages is they allow students to see how a professional in the field approaches, organizes, and connects ideas related to a particular concept in the discipline. As another example, when I am talking to a group about oral presentation skills, I will often step out of my role as teacher/presenter to comment directly on what I just did ("so notice how I used an anecdote to recapture your attention"), becoming, in effect, my own Greek chorus. All these techniques can help students uncover the mysteries of how professionals engage in their work and make the implicit explicit.

Similarly, Wenger writes that communities of practice include "what is said and what is left unsaid; what is represented and what is assumed" (*Training,* p. 38). In observing teaching at MIT, a common error I see is that the instructor assumes the students already know some concept he/she defines as basic to the field. Eric Mazur, the Harvard physics professor who has developed a novel teaching technique he calls "peer instruction," explains this phenomenon well. "I keep being surprised," Mazur admits, "by how difficult certain fundamental concepts can be. In fact, I noticed that for us teachers some of

these very fundamental concepts are second nature. They're so second nature that we can not explain them very well any more. They're obvious; they're clear without any words." (*Thinking Together: Collaborative Learning in Science*, videotape produced by Harvard University, 1992). What Mazur is articulating, is the frustration of one who has long been socialized into a particular field trying to put himself back into the position of the novice. This is not an easy proposition, but it is necessary for successful teaching.

I am not suggesting that every student who takes 8.01 or 8.02, for example, should be trained to become a professional physicist. What I am saying is that along with the "knowing what," there are certain kinds of "knowing how" we need to teach, and we should think carefully about how we can bring that kind of knowledge into the classroom. (I don't wish to give the wrong impression: I have observed many MIT faculty doing this already and doing it exceptionally well.) I am also suggesting that the ways in which we engage with students, both intellectually and interpersonally, teaches subtle lessons that we need to be aware of lest we pass on attributes that will be less than useful in their future professional lives.

This finally brings me back to the premise with which I started this piece: That teaching is fundamentally a complex social process that encompasses more than information transfer. Knowing what some of the research has uncovered about that perspective on teaching will, hopefully, allow us to harness strategies and techniques in order to further our educational goals.✣

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Quality of Life Survey Underway

A major survey is underway on quality of life issues for MIT faculty and staff, being conducted under the auspices of the MIT Council on Family and Work. Launched in mid-October, the survey is available online at <http://web.mit.edu/surveys/qualityoflife> and all faculty members are urged to respond before the deadline of November 2nd.

The MIT Council on Family and Work has developed the survey as part of a broad assessment of the MIT community's needs and issues with regard to integrating a fulfilling and productive professional life with a fulfilling personal and/or family life.

In his letter encouraging full participation from the faculty, President Vest wrote:

"Two years ago, I reestablished the MIT Council on Family and Work and requested advice on how to make MIT a better place to work and study. Our goal is to provide an environment that promotes personal and professional growth for everyone. . . .The Council on Family and Work is about to begin an assessment of the quality of life at MIT, and I urge you to participate. This survey will give us an understanding of the factors affecting the well-being of faculty and staff and will help the Council to formulate its recommendations."

The survey project is being guided by the Council's Quality of Life Task Force, co-chaired by Roy Welsch, professor, Statistics and Management Science, Sloan School of Management, and Vicky Diadiuk, assistant director, Operations, Microsystems Technology Labs, in collaboration with the consulting firm WFD, Inc.

The survey takes approximately 20 - 30 minutes to complete. Participation is completely voluntary, and the information provided will be strictly confidential. No one from MIT will see individual survey results; WFD, Inc. will analyze the data and provide results in summary form. Following a period of data gathering and analysis, results and recommendations will be presented to the Council by WFD, Inc. in early 2002.

Anyone having difficulty with any aspect of the survey or seeking further information can send an e-mail to *qualityoflife@mit.edu* or call the survey help line at 617-452-4971 from off-campus, 2-4971 from on-campus.

Co-chairs of the Council on Family and Work are Claude Canizares, associate provost, and Rae Simpson, co-administrator, Family Resource Center. Other members of the Council's Quality of Life Task Force are: Prof. R. John Hansman, Jr., (Aeronautics and Astronautics); Assoc. Prof. Terry W. Knight, (Architecture); Elizabeth A. Reed, director, Office of Career Services and Preprofessional Advising; Prof. Lotte Bailyn, (Sloan School of Management); Noramay J. Cadena, Mechanical Engineering, Class of 2003; Regina Caines, director, Affirmative Action/EEOC & Diversity Programs; Christopher D. Coldren, postdoctoral fellow, (Biology); Ellen Williams, executive director, Gender Equity Project; and Joyce D. Yaffee, director, Human Resources, (Lincoln Laboratory).✣

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law enforcement agencies. It is their responsibility to protect Americans and American national interests from attack. The September 11ᵗʰ murder of more than 6,000 innocent people and the destruction of very visible symbols of American influence that day can not and will not go unpunished. Our forces have enormous resources and great ingenuity, nearly all of which will now be devoted to this cause.

I worry also about the mis-understandings of America's likely response to the Trade Center and Pentagon attacks that are becoming part of the discussion on this campus and others. We all should appreciate other cultures. We all should be tolerant of the ethnic and religious differences that exist among us. And as we seek to understand and appreciate group cultures we must avoid the trap of dismissing some cultures as not worthy of our consideration. I speak here specifically of those in the U.S. military, a group that too often has been denied fair appraisal in the academic community. Now, more than ever, we would do well to achieve a fuller understanding of our country's contemporary military culture, the character of the senior leadership, and the requirements of military operations. We should know about life in other lands, but we should also know about the institutions that guard our own.

For example, I find it incredible that some believe that the American military is about to "carpet bomb" any country. I also find it incredible that some think that, because America was directly attacked, concerns about "collateral damage" will disappear from the thinking of our military planners. American forces fight by the rules of war that do not allow the

intentional targeting of civilians or conduct of indiscriminate and disproportional attacks. Our forces are professionally led and highly disciplined. They will not be using their vast capabilities for destruction to lay waste to villages, to kill the innocent, or to destroy another culture.

Many in the universities have had

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their views of the military shaped by the Vietnam War. In the charged rhetoric of the antiwar movement of the time American forces were often portrayed as baby killers enjoying the destruction of Vietnam. No doubt there were atrocities conducted by our forces. Evil, ignorant, and untrained people are found in every military. Wars give them opportunities to do terrible things under the cover of patriotism. In truth there was probably less criminal behavior on the part of American forces in Vietnam than in the Second World War or the Korean War. But it can not be denied that there was some.

According to the military, the central problem of the Vietnam War was its conception and management by our national leadership, civilian and military. These officials involved the

military in a civil war, tried to hide the costs from the American people, and allowed the enemy to have sanctuaries from which to fight the war. The war took a toll on the military, affecting greatly its morale, public standing, and faith in its own leaders. Much of the military's reflection back on Vietnam has focused on the need to retain public support during any future war.

Political leaders sought to reduce dissent about the use of force by eliminating the draft. Since 1972, the U.S. has relied on volunteers for military personnel. Only those who choose to serve, serve. But before agreeing to the end of the draft the military, concerned that politicians freed from the potential wrath of draft-age youth and their parents would bog the nation down in long, costly wars, insisted that the future military be structured so that reserves would have to be called to active service in any significant conflict. This meant that politicians could not just commit the regular forces, the professionals, to a fight. Instead, they would have to call

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up at least some National Guard and the Reserve units to active duty to join in the war, an action that was avoided in the Vietnam War. Future wars would require the pressing into national service of married, career-oriented 35-year-old reservists as well as the recruitment of unmarried 18-year-old volunteers eager for foreign adventure. Wars would have to have and maintain public support in order for the reserves to be called.

The military also wanted to be given only missions with clear goals and explicit exit strategies. There was no desire to face again an involvement in decade-long wars that our national leaders could not decide whether to win or lose. Of course, ambiguity is part of international relations. Leaders often act to deal with immediate problems without wanting to reveal fully their plans or knowing fully where events will take them. Promises about quick, focused missions with happy outcomes are easier to make than to keep. Moreover, in our political system, civilians will always win the debates with the military about where and when force will be used. But we should keep in mind that our military is usually quite cautious about advocating the use of force internationally, knowing that it is more difficult to contain and terminate wars than to start them.

The concern for avoiding casualties so visible in recent American military deployments is the result of several factors. First, the United States has long husbanded its soldiers. The richer and more democratic it became the more intensive the nation's desire to substitute capital (technology) for labor (soldiers) in fighting wars. We are getting better and better at protecting

our personnel. Note the development of precision guided and stand off weapons and the growing interest in unmanned aerial vehicles. Second, the reliance on volunteers and reservists makes finding replacements for casualties especially difficult. Think about the problems of recruiting

volunteers or of reinstituting conscription as casualities mount. Third, most of our troop commitments over the last decade involved some type of humanitarian intervention, not the testing of vital national interests. When the mission is charitable it is hard to explain back home the resistance of locals or the orders that result in deaths of our soldiers.

The concern for casualties, however, extends beyond saving our soldiers. The American public expects the technologies that limit our casualties to be used in ways that also avoid injury or death among innocent civilians. It does not enhance the popularity of our use of force to be brutal and uncaring in its application. This belief now even extends to some extent to opposing soldiers, who are

often described as unwilling victims of cruel leaders. Because of the public attitudes, body counts have disappeared as the military's reported measure of operational success. Instead the spokespeople talk only about the number of weapons and vehicles destroyed.

> **Leaders often act to deal with immediate problems without wanting to reveal fully their plans or knowing fully where events will take them. Promises about quick, focused missions with happy outcomes are easier to make than to keep. Moreover, in our political system, civilians will always win the debates with the military about where and when force will be used. But we should keep in mind that our military is usually quite cautious about advocating the use of force internationally, knowing that it is more difficult to contain and terminate wars than to start them.**

No one knows how this war will unfold. The enemy is elusive and is likely to hide amid a larger civilian population with which we have no quarrel. Wars have a way of increasing passions and dulling the senses. Much of the dynamics may depend on the actions of our opponents. With further attacks on our civilians and our national symbols, restraints may fall. But when we are sending the American military to fight a war, we should have a better understanding of the American military than some among us seem to possess. We should know our enemies and the many perfectly law-abiding groups that share our land, but we should also make the effort to know our protectors as well.✣

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Responsibility, Muddle, and Blame
Hildebidle, from Page 1

weddings, visits from children, all are events. Then perhaps *disaster* – surely a firm step away from the positive. But somehow on a wrong path. "Disasters" are tornadoes, hurricanes, earthquakes, not produced by human agency (do insurance companies still refer to "acts of God?"). As the photographs began to haunt newspaper front pages, the immediate agents were all too evidently human. And as the face of Osama bin Laden became the new press-demon (supplanting Ho Chi Minh, Muhimar Khaddafi, Saddam Hussein, the Ayatollah Khomeini, Timothy McVeigh, each of whom had his turn), agency was once more the issue.

Catastrophe? Too broad perhaps. *Attack*? Yes, but it led us too readily down the analogy trail to Pearl Harbor, a sad and incorrect and probably baneful route. In the end, the date itself came to serve.

It may seem trivial, to anguish thus over terminologies. But words are close cousins of metaphors, and metaphor is perilously close to a necessity of (psychic) health. A contemporary essayist, Chris Arthur, asserts that "Metaphors are the bones of language which give it the strength to carry so much flesh of meaning. . . . Without the ability to compare that they afford, how could we withstand the endless hurricane of things, of happenings, which time ceaselessly bombards us with?"

A scholarly friend, Andrew Delbanco of Columbia University, has written an entire book about the inability of our contemporary world to come up with a fully agreed-upon image of evil. He called his book *The Death of Satan*. We have, the book argues, abandoned all of the "archaic" and not-wholly religious images of the

source of evil, but (tragically, even fatally perhaps) not the desire to demonize.

To put aside questions of verbiage threw us directly into a harder puzzlement. On the night of September 11, as I put her to bed, my daughter asked the anguished question, "How could anyone *do* this?" A few days later her history class was divided, at random, into three groups. One group – hers, as it turned out – had to write an explanation of the action from the perspective of a terrorist. One group had to take the position of non-terrorist Muslims. And the third had to speak in the mind and voice of the families of victims. "Was that hard?" I wondered. "Not really. The group that had the hardest time were the kids who had to be Muslims. They just didn't know enough." I daresay that was one of the major purposes of the exercise. We have begun to use – or, in all probability, misuse – words that are new to us, like *jihad.*

And our leaders promise to track down and punish those responsible. But who in the end *was* responsible? Was it, at least to some degree, the CIA (as sometime trainers of the Taliban) or the State Department (as the promoters of what is perceived as a biased pro-Israeli, anti-Arab policy)

> It may seem trivial, to anguish thus over terminologies. But words are close cousins of metaphors, and metaphor is perilously close to a necessity of (psychic) health. . . . To put aside questions of verbiage threw us directly into a harder puzzlement. On the night of September 11, as I put her to bed, my daughter asked the anguished question, "How could anyone *do* this?" A few days later her history class was divided, at random, into three groups. One group – hers, as it turned out – had to write an explanation of the action from the perspective of a terrorist. One group had to take the position of non-terrorist Muslims. And the third had to speak in the mind and voice of the families of victims.

or the military (who so proudly launched those scud missiles on Iraq) or George Bush, Sr., who ordered the launch, or the security guards at Logan who failed to screen out the hijackers, or the state government which seems not to have put any particular thought or energy into Logan security, or the whole Security Infrastructure, which surely ought to have caught wind of such a long-standing and complex plot in time to forestall it? Or even the designers of jet-liners which were, we were shocked to realize, so easily conceived as flying bombs? Or the citizenry at large, which had allowed so much to be done in its name?

**Responsibility,
Muddle, and Blame**
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The train of possibilities seemed endless, and seemed so often to lead back to our own doorstep. I even proposed to a cyberpal of mine, who teaches at a "polytechnical institute," that there had to be something amiss with the engineering of the towers, to allow them to collapse. "The towers were engineering marvels. It's the human soul that needs work," he replied. Did I mention he was schooled by the Jesuits?

All our understandings baffled, our powerlessness is deepened. And we long to lash out – many of us are doing so, mindlessly, misdirectedly, at Hispanics and Sikhs and anyone who is perceived to "look Arab." In good John Wayne fashion, we call up the reserves, send out the fleet, plan an "appropriate response" (which somehow *must* translate into *military*:

yet one more linguistic problem). No matter, really, if we mix in pb & j with the bombs; our "strike against our enemy" places us in a position of equality, in psychic and in moral terms, with those whom we would prefer to think of as sinister enemies. Bombs and guns, gelignite and guerilla attacks, are the favored tactics of the disempowered everywhere. And are Scud missiles that much preferable, on the ethical plane? Ah, but the sad truth is that, even now, after millennia of carnage, war sells. Consider "Saving Private Ryan" or "Band of Brothers." Or "Pearl Harbor." Culturally, we haven't much outgrown "Sands of Iwo Jima." Why are we so surprised that the dispossessed living in desperate poverty in the wilds of Afghanistan aren't any more level-headed?

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Osama bin Laden, as opponent, has the advantage of being almost invisible (Tony Blair and NATO aver the proof is persuasive; but it is not just Missouri that is, or ought to be, a "show me" place). Are we in fact the villains, for having a life that is so enticing and yet seems so unfair to the disempowered and dispossessed of the world? Did we as a nation grow fat and complacent, and forget that the old Dylan song, "With God on Our Side" was bitterly ironic? I apologize if my Calvinist, self-lacerating upbringing comes to the fore. But I have this eerie feeling that it is, in fact, a problem of language. Even of *pronouns*. There is so much "us/them" thinking going on. Perhaps there is the fundamental engineering problem – how to rebuild an overarching "we." ✢
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M.I.T. Numbers

**Research Expenditures
FY2001**
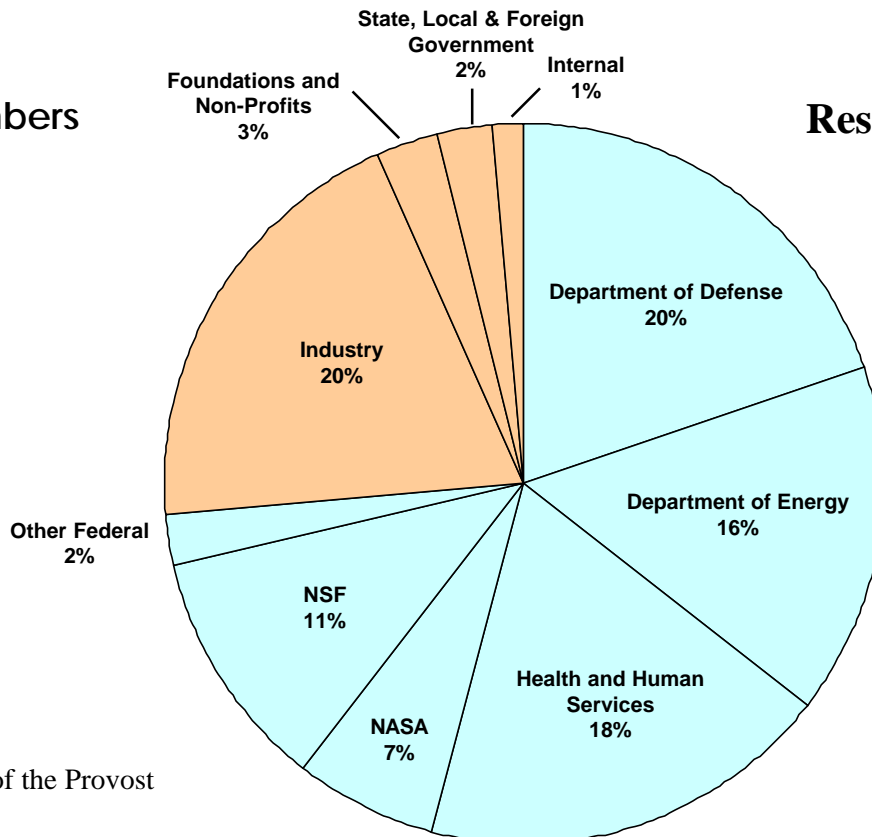
Source: Office of the Provost

An Update on MIT OpenCourseWare
Lerman, from Page 1

modern curriculum in all the areas in which MIT excels. Users of this site may include other academics around the world and individual learners who may not have access to high quality educational materials. As faculty members, our participation in OCW is entirely voluntary, and we will have the final say on what goes into OCW for the courses we teach.

Following the announcement of OCW last April, the Provost appointed the MIT OCW Implementation Task Force. Chaired by Professor Dick Yue and drawing on the assistance of Booz-Allen & Hamilton Consultants, this group studied the organization and implementation of MIT OCW. This team interviewed administrators and faculty across the Institute to understand what we collectively wanted from OCW, and more importantly, what we didn't want.

The Task Force also designed preliminary processes of how OCW might operate. These processes for the production of Websites for our courses drew upon benchmarks from other academic institutions and production organizations.

Among the many recommendations this study group made is the idea that OCW should not be a monolithic, centralized organization. Instead, based on what we heard from the faculty, OCW should be a hybrid organization, with a substantial portion of its staff located in the academic departments. The faculty appeared comfortable with the idea that functions such as management of the overall initiative, computer systems operations, and individuals with specialized skills such as graphic design, should be centralized. *However, the day-to-day people in the OCW organization who help the faculty create Websites for their respective courses should reside within the departments they serve.* The

OCW organization now being created will be developed from this guiding principle.

The Implementation Task Force recommended that OCW be managed by a full-time Executive Director to be recruited through a national search. This individual will report to the Office of the Provost and would have a Faculty Advisory Board appointed by the Provost.

A group of us also worked with the MIT senior administration and the Development Office on securing funding

> **Among the many recommendations this study group made is the idea that OCW should not be a monolithic, centralized organization. Instead, based on what we heard from the faculty, OCW should be a hybrid organization, with a substantial portion of its staff located in the academic departments. . . . The OCW organization now being created will be developed from this guiding principle.**

for the first phase of OCW. In late June, MIT announced that we received approval for grants of $11 million for the first 27 months of the OCW initiative (see <http://web.mit.edu/newsoffice/nr/2001/ocw.html>). The grants come equally from the Andrew W. Mellon Foundation and the William and Flora Hewlett Foundation. In addition, MIT has committed $1 million over the next two years for the support of OCW. These funds should be sufficient for the ramp-up of the program to the point at which the OCW organization can create new Websites for 500 courses per year, the steady state production level for MIT.

Concurrent with the successful funding of the first part of OCW, in July the

Provost appointed an MIT OCW Interim Management Board (IMB), which I chair. The IMB is charged with the mission of searching for a permanent Executive Director for OCW and of setting the OCW program in motion. The Board includes Marc Kastner (head of Physics), Vijay Kumar (assistant provost and head of Academic Computing), Ann Wolpert (director of Libraries) and Dick Yue (associate dean of Engineering). This group selected an outside recruiting firm, Isaacson-Miller, to assist it in the search for the Executive

Director. As of the writing of this article in early October 2001, we are beginning the round of initial interviews with selected candidates.

Now that a national search for an Executive Director is under way, we are beginning the second task. The Interim Management Board decided to create a Transition Project Team to launch a preliminary pilot phase of OCW. The goal of this early phase is to investigate the processes that will be required for the successful production of the final OCW Website. The team, co-lead by Kyung Han (a former Booz-Allen consultant who worked with the Implementation Task Force) and Laura

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Koller (a research staff member at the Center for Educational Computing Initiatives) will design a set of draft templates for OCW course materials that will accommodate the diverse range of pedagogical styles in use at MIT. They will also develop a preliminary set of production processes for converting source materials provided by faculty members to OCW compatible formats. These processes will be designed to maximize the usefulness of the converted materials in the regular teaching of MIT courses so that professors see direct benefits from participating in OCW.

The Transition Project Team will initially work intensively with a few MIT academic departments to begin the process of converting a portion of those departments' course materials to the preliminary OCW format and placing those materials on an interim OCW Web server. The team will include individuals assigned specifically to these pilot departments, as well as departmental personnel already in place who might be available to assist the Team under OCW funding. At the end of this phase, we hope to have materials from roughly 30 courses on the pilot OCW Web server. The majority of the course materials will be the result of working with one or two academic departments and a selection of diverse courses from around the Institute.

Over the next semester, OCW will transition from its current, temporary staff and oversight structure to a permanent part of MIT. This will involve a substantial effort to recruit the best people we can find to the initiative and to develop a service-oriented approach to working with the faculty. The task of creating a highly visible Website that draws together the materials with virtually all of MIT's course offerings is a considerable one. However, the sense among the vast majority of the faculty with whom I have spoken is that it is entirely consistent with MIT's long-standing approach to using the contributions of the faculty and new technology for broad, societal benefit. We have every reason to be proud of MIT for committing itself to this "high road" approach to educational technology.✣

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Benefits Open Enrollment for 2002
Janet Snover

Benefits-eligible members of the MIT community who want to make changes to their Benefits selections for 2002 can do so during the Open Enrollment period, which runs from November 1-15, 2001. Information about this year's Benefits choices, as well as the methods for requesting changes, will be provided in the Personal Enrollment Guide, which will be distributed by interdepartmental mail between October 29 and October 31. The Guide also will contain the schedule for the Benefits fairs.

Faculty members who don't want to make any changes to their Benefits choices don't have to do anything. However, those who wish to change their health, dental, or other coverages can do so either by using the employee self-service option on the Web or by phoning an interactive voice response system, both of which are linked to MIT's SAP system. (As noted in the last issue of the *Faculty Newsletter*, a personal Web certificate is needed in order to use the self-service option on the Web.) [To acquire or update your Web certificate, see <http://web.mit.edu/is/help/cert>.]

Based on the experience of clients during last year's Benefits Open Enrollment period, the Human Resources department has made some service changes for this year. For example, more HR staff will be available to answer questions, and the Benefits Office hours will be extended (to 8 am to 6 pm) during the expected peak days of Open Enrollment. (Those are November 1, 2, 14, and 15.) In addition, there will be a dedicated help line for people who use the phone enrollment system. (Last year, phone system calls came into the same phone line as regular Benefits Office business.)

Other improvements are that the new interactive voice response system, called TALX, can accept employee and dependent names, and that the system generates a confirmation number.✣

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Hidden Treasures Come to Light
Through Museum Loan Network

Newsletter Staff

Vibrant compositions of Latin America art will be brought together in Lawrence, Kansas this coming year. The Spencer Museum of Art at the University of Kansas (KU) awaits the arrival of an excellent selection of nineteenth- and twentieth-century Latin American works of art from museums as far away as Los Angeles, Brooklyn, Denver, and Austin. These loaned pieces will significantly augment the Spencer's permanent collection and enhance the University's Latin American Studies program. One might be surprised to discover that MIT had its hand in bringing these works, which include a painting by famous Mexican artist Jose Clemente Orozco, to America's heartland.

Based at the Institute since 1995, the Museum Loan Network (MLN) is the first comprehensive national collection-sharing program in the country. Through the Network's facilitation, "treasures" hidden in one museum's basement come to light in another. These underutilized objects are exposed to communities that might not otherwise have the opportunity to experience them. "Since its inception," states MLN Director Lori Gross, "the MLN has dedicated its energies to helping institutions share the great wealth of art and objects of cultural heritage with audiences nationwide." The MLN indeed serves as a network, connecting museums to museums, and museums to communities.

Works borrowed from one museum fill gaps in another's collection. The Spencer, for instance, had no previous tradition of collecting Latin American art despite a strong Latin American Studies program at KU. With the loaned sculpture and painting, Spencer's director, Andrea Norris, related that "not

only will students in Latin American art have original material for research, all KU students and the Spencer's general audience will be able to experience the history of art with this added Latin American dimension."

To help realize collaborations among institutions, the MLN has established a series of grant programs that support every step of the lending process, including planning, research, programming, publications, shipping, and installation. In addition to funding the actual lending of art and historical objects, the MLN awards grants to museums who wish to survey their own collections and add them to the MLN's online directory of objects. This searchable database serves, in effect, as a shared permanent collection for museums nationwide.

Over the years, the MLN has awarded numerous grants to university museums and galleries. These loans provide significant didactic opportunities for academic communities. Professors and students alike often take active roles in these projects. In 1998, the Herbert F. Johnson Museum of Art of Cornell University was awarded a travel grant to investigate works of art at the Yale University Art Gallery, which holds a world-renowned collection of Italian Renaissance painting. Cornell art history professor Claudia Lazzaro accompanied the assistant curator on this research
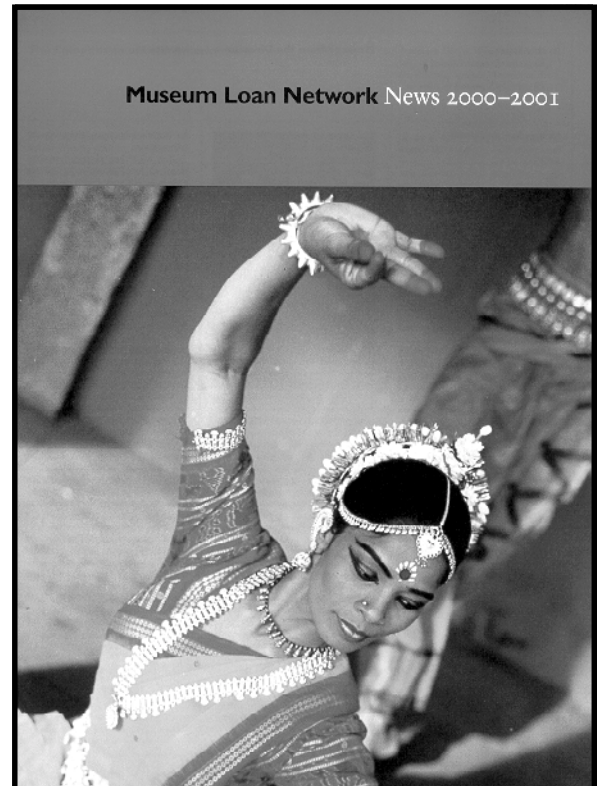
Cover of the MLN's Newsletter
Museum Loan Network News: 2000-2001

trip. Their successful excursion resulted in an MLN implementation grant, and four fourteenth- and fifteenth-century Italian paintings were loaned to the Johnson for long-term exhibition. These works, integrated into the museum's permanent collection, are utilized in Cornell's art history curriculum. Lazarro said that having these four pieces "will create an interaction with the works in the existing collection" and enable students to make important comparisons.

So how did the Museum Loan Network find its home at MIT? Launched in 1995, the MLN is administered by MIT's Office of the Arts and funded by the John S. and James L. Knight Foundation and The Pew Charitable Trusts. Because

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**Channing Gilson, *Computer Joy Stick Controller*, United States,
1984, California State Polytechnic University, Pomona**

simply a vehicle of exchange of collections." Indeed the Network's interest in cooperation is wide-ranging. "We believe interdisciplinary collaboration can yield new ideas and make them accessible to many more people, promoting community dialogue," Lori Gross explains. "Both museums and the objects they hold can be catalysts for this collaborative process."

of its strong commitment to the arts and excellence in science and technology, MIT was chosen as the MLN's administrative site. "This innovative national project fits naturally and well in our environment, which nurtures and draws strength from both technology and the arts," said President Vest at the program's inception.

Because of the Institute's exceptional computer consulting resources at the Educational Media Creation Center (EMCC), the online components of the MLN program have developed swiftly and with much sophistication. The MLN Directory currently lists over 6,000 objects available for loan and continues to grow each day. Any U.S. museum may access this illustrated database, located on the MLN Website, free of charge. On the publicly-accessible part of the MLN site, time and space put no restraints on viewers who wish to experience an exhibition from a distance or after it has been dismantled. To date, the MLN has presented nine online

virtual 3-D exhibitions based on collaborations and installations funded by the MLN, ranging from tours of Buddhist sculpture to explorations of African art.

Tremendous encouragement and support have been given to the MLN from members of MIT's thriving arts community. Alan Brody, associate provost for the Arts, remarks, "the Network has pioneered and nurtured new methods of collaboration among museums across the country, widening the public's access to rarely-seen works of art and facilitating exchanges not only of objects but of ideas. It is the embodiment of an idea about what great museums, large and small, can be; of mutual respect; and of service to all communities. In this way, the arts can once again serve as a model for enterprises in science and technology."

In 1999, *The Chronicle of Higher Education* deemed the MLN "matchmaker to the art world." But as Brody notes the MLN "is more than

Graduate students played an integral role in the Williams College Museum of Art's (WMCA) exhibition of African art in 1998. With works borrowed from the outstanding collection of African art at the Brooklyn Museum of Art, *Tradition and Transition* showcased pieces from both museums' holdings. The exhibition explored the notion of another culture's fixed "tradition," which has often failed to acknowledge the fluid nature of an object's meaning. From the research and advice of students in the Williams College Graduate Program in the History of Art and their professors, the WMCA generated labels and gallery guides that addressed these issues and significantly, as Associate Curator Vivian Patterson reported, "provoked thought relevant to the display and interpretation of objects from a non-Western culture."

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Through Museum Loan Network
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To explore and expand upon this idea, the MLN organized a series of three "think tanks" entitled *Museum as Catalyst for Interdisciplinary Collaboration*, two of which convened at MIT over the past year. Participants included educators, visual and performance artists, scientists, actors, dancers, museum professionals, librarians, philanthropists, historians, and composers. This extraordinary assemblage of leaders honing in on such a pertinent topic was bound to yield dynamic results. "In these think tanks we've been able to push the edges a bit and hopefully go back into the real world and create models that work," says Gross.

MIT was the ideal host environment for such a gathering. At the second session last October, participants attended *MIT's 50th Anniversary Celebration of the School of Humanities and Social Science*. The colloquium *Asking the Right Questions* served as a thought-provoking springboard for dialogue at that meeting. The ground-breaking conversations begun at these three convenings will be published in a document later this fall.

But the outcomes of these sessions weren't just talk. One very concrete result was a pilot collaboration forged between the MLN and the American Composers Forum, called *Museums, Composers, and Communities*. This project looks to composers to help change the ways in which museums interact with their communities and the ways in which patrons relate to exhibits. On MLN travel grants, composers lend their unique perspective as they journey alongside museum staff visiting potential lending institutions. MLN implementation grantees can apply for funds to support a composer-in-residence who creates an original piece of music reflecting the spirit of the exhibition and the museum's local community.

So sounds, not only sights, of Latin America will be coming to the Spencer Museum of Art this year. The museum has selected composer and pianist Gabriela Lena Frank to collaborate with the KU music, history, and art departments to create educational programming for the exhibit and prepare

Pablo Curatella Manes, *El Guitarrista*, Argentinean, 1921, Jack S. Blanton Museum, The University of Texas at Austin, Archer M. Huntington Museum Fund, 1982

new musical works for presentation to the university and surrounding community. Director Andrea Norris says, "We are still envisioning and exploring possibilities and wondering about the complexities of writing an original work and then getting it performed. As the composer project thrusts us into new territory, we find the stretch invigorating."

To date, the MLN has awarded $3.3 million to 168 museums in 48 states and territories across the country. It is indeed a comprehensive resource, which on MIT's behalf is making a significant impact on the museum world and communities well beyond.

> **Loans facilitated through the MLN provide new opportunities for research and study. In one particularly innovative match, the Memorial Art Gallery (MAG) of the University of Rochester borrowed 31 objects from five New England museums for an exhibition focused on a singular painting from its own collection – John Singleton Copley's unfinished portrait of Colonial silversmith John Hurd. Using artifacts from Hurd's life and times, the MAG created an interdisciplinary exhibition that presents a historical and cultural context for the painting. With the MLN funds, the museum published a scholarly catalogue and organized a corresponding symposium that explored the genius of both men, as well as the impact of the American Revolution on daily life in Colonial America.**

Hidden Treasures Come to Light
Through Museum Loan Network
Continued from preceding page

Know of a museum looking to borrow a 1950s power lawnmower? Or how about a computer joy stick controller from 1984? Museums across the country need search no further than the MLN Directory to find excellent examples of twentieth-century industrial design. In 1999, the California State Polytechnic University Pomona was awarded a survey grant to identify objects available for loan from the university's Channing Gilson Collection of industrial design. The selected works cover a wide-range of appliances, furniture, and other objects created by many of the twentieth century's foremost designers. These include, among others, a Harry Bertoia lounge chair, a 1942 Henry Dreyfuss Hoover vacuum cleaner, and a 1950s Toastmaster toaster by Jean Reinecke. Ben Davis, former instructor at MIT's Media Lab and research associate at CECI, points out that the MLN directory functions as a digital broker – making a myriad of things, like the accessibility of these excellently-designed utensils, possible. He says, " The MLN from its inception has been a digital brokerage that triples as a digital thinking tool and a digital collaborative tool."

A view of *Tradition and Transition: African Art from the Brooklyn Museum of Art*

If you would like to find out more about the MLN, see a complete list of MLN-funded projects, or take a virtual tour of an exhibition, please visit their Website at <http://loanet.mit.edu>. If you would like to request a copy of their yearly newsletter, *MLN News*, which highlights grantee projects, or the forthcoming *Museum as Catalyst for Interdisciplinary Collaboration: Beginning a Conversation*, please call 252-1888 or e-mail *loanet@mit.edu.*✤

From The Libraries

Ad Hoc Committee on the Humanities Library Calls for World-Class Library for the Twenty-First Century
Ruth K. Seidman

An Ad Hoc Committee on the Humanities Library has been meeting since November 2000 to consider the broad condition of the Humanities Library at MIT. The committee was convened by Philip Khoury, dean of the School of Humanities, Arts, and Social Sciences, after consultation with Chancellor Larry Bacow and Director of Libraries Ann Wolpert. Despite its rather focused-sounding name, the Humanities Library supports the intellectual life of the Institute beyond the specific needs of Humanities faculty and students. The composition of the Ad Hoc Committee was thus designed to provide faculty representation from a variety of the disciplines represented within the School of Humanities, Arts, and Social Sciences.

The committee's mission was to consider the broad condition of the Humanities Library and specifically, the virtues and limitations of its location in Building 14. Members of the committee were: Elizabeth Wood, Committee Chair (History), Sally Haslanger (Linguistics and Philosophy), Margery Resnick, Liaison to Faculty Committee on the Library System (Foreign Languages and Literatures), David Thornburn (Literature), Theresa A. Tobin (Head of the Humanities Library), and Ann Wolpert (Director of Libraries).

In August 2001 the committee issued its report, a copy of which is now available on the Web at <http://libraries.mit.edu/humlib/>. The methodology developed by the committee for its work focused on wide and inclusive consultation with interested constituencies. The committee held discussions with colleagues and with both undergraduate and graduate students in the School of Humanities, Arts, and Social Sciences (SHASS). In addition to these extensive informal contacts, the committee also administered a Web-based online survey of SHASS faculty and graduate students. The survey instrument and results are appended to the report.

Findings and Recommendations

The committee found that the libraries at MIT have a central place in the intellectual life of the Institute. Nearly all the respondents who participated in interviews and surveys expressed a belief that MIT's standing as a world-class institution depends on the quality of the Institute's libraries.

Four principle recommendations are made by the committee in its report. The recommendations focus on guaranteeing that resources be made available to ensure a world-class liberal arts library for MIT for the twenty-first century, that the space in Building 14 be renovated, that Humanities and Social Science disciplines be granted full parity with the other schools in the development of library resources, and that decision-making on all library changes be accomplished in a way that is both open and inclusive.

The report points out that the Humanities Library is a basic resource for the entire MIT community, and that strengthening the role of the Humanities Library in serendipitous as well as structured learning is important to all of MIT. The committee notes that the Institute competes for students with other universities that clearly have world-class libraries. In the words of the committee, "MIT should have a humanities library appropriate to the minds and ambitions of MIT students."

The report goes on to say that the curriculum at MIT is rich in humanities, arts, and social sciences, and that a background in these fields is essential for a first-rate education. It asserts that the Humanities Library must be of a quality to support this principle. In addition, in taking SHASS courses, students share "opportunities for intellectual growth, serendipitous learning, and enriched student life. Facilities in or near the Humanities Library should be made available to enhance the social context of learning."

The report reminds the Institute that the Hayden library building is now over 50 years old. "Financial resources must be found to reverse the deterioration of this building." Basic needs identified by the committee include increasing in-library shelf capacity to reduce the need for off-campus storage of books and periodicals, and creating small group study areas, teaching spaces, carrels, lockers, consultation areas, and service spaces. The report points out that "the transformation of the Music Library serves as a model for creative renovation" to bring the library into the twenty-first century.

In calling for equal priority for the School of Humanities, Arts, and Social Sciences in planning and fund-raising with Science, Architecture, Engineering, and Management, the report notes that MIT supports graduate programs in Comparative Media Studies; Economics; Linguistics; Philosophy; Political Science; and Science, Technology, and Society. While acknowledging that MIT's Humanities collections need not fully serve the research aims of Humanities faculty, the committee does

Ad Hoc Committee Calls for
World-Class Library
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suggest that the Humanities Library should provide the necessary study space and collections to support the graduate programs of SHASS. The report makes the point that graduate students in science and engineering have both library and laboratory space and that SHASS students should be given comparable support. A master plan for the future of all the libraries at MIT should include recognition of the centrality of the Humanities Library in the life of the Institute.

the collections are assessed for teaching and for research needs; what changes would assist teaching; and what are preferences for the physical configuration of the libraries. There was ample opportunity for additional comments.

Of the 156 full-time SHASS faculty, 47 responded. One interesting finding is that 60% of respondents say that they frequently come to the library to browse the collection. This speaks to the

Respondents differed significantly on the importance of Building 14 remaining the location for the Humanities Library. Some felt it very important and others not at all. However, being in a central location on the campus, as is Building 14, was seen by many as important.

Future Directions

The report will be valuable as the Libraries and the Institute move forward in developing plans for space changes, whether they be renovations or new construction. Ann Wolpert, director of Libraries, said: "We welcome the support of the faculty and we take the report seriously. We look forward to working with the faculty in implementing these recommendations."

Humanities Library staff members are also using the results of the survey for more immediate planning. Although the survey emphasized the use of library space rather than an evaluation of library services, some useful information was obtained that will be helpful in setting priorities and making plans. In addition, from a communications point of view, library staff noted that some survey responses indicated the desire for "new" services that in fact are already available. This points out the need for the Libraries to do a better job of letting the community know about existing services, such as term loans and techniques for accessing electronic material from off campus.

> **Basic needs identified by the committee include increasing in-library shelf capacity to reduce the need for off-campus storage of books and periodicals, and creating small group study areas, teaching spaces, carrels, lockers, consultation areas and service spaces.**

Finally, the report calls for an open and inclusive decision-making process with faculty involvement in decisions on the location of libraries and any major library changes that are under consideration, and observes that the findings and recommendations of the committee are in substantial accord with recommendations about MIT libraries offered by the Undergraduate Association, the Graduate Student Council, and the Faculty Committee on the Library System.

Highlights of the Web Survey

Questions included in the Web survey were intended to elicit broad information about the SHASS community's use of libraries. Respondents were asked such questions as: what on-campus library locations the respondents use, and for what purpose; what characteristics are important in the current Humanities Library, and in any future library; how

importance of having enough room in the library to house materials on site, rather than in a storage facility. Ninety-seven percent of respondents viewed open stacks for books as essential or very important in the current library, and 73% considered this essential or very important in any new or renovated Humanities Library. Respondents expressed support for developing the electronic collections in addition to, not instead of print collections.

Appreciation was expressed for certain aesthetic features of the current Humanities Library. Natural lighting, high ceilings, and the river view are highly valued. For a new library, "comfortable reading areas" received the highest rating. Respondents also mentioned the symbolism of a fine Humanities Library and its important role in building a sense of community.

The Ad Hoc Committee on the Humanities Library has taken a thoughtful and thorough look at the space requirements for MIT's libraries in support of humanities, arts, and social sciences in the twenty-first century. Addressing these and other urgent facilities needs is a high priority for the MIT Libraries.✣

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Student Leaders Report

Undergraduate Association

Community@mit.edu
Jaime Devereaux

When I sat down to write this, I looked at the past Student Leader Reports to prevent myself from being redundant. I soon realized that I couldn't not be redundant. There is certainly a theme that is raised in almost every one – the MIT community. I thought for a while about what that statement even means. Why is everyone always saying it? People around campus – students, alumni, faculty, administrators – are constantly stressing the importance of "community at MIT" and sometimes the lack of it. It is important for all of us to take a step back and think about what we, as a whole, are trying to achieve. MIT is already a community, though maybe not the one everyone wants. Every person who comes to campus (and even some who don't) play an integral part in making MIT what it is. There are also many subcommunities within the whole. From the student perspective we have living groups, sports teams, extracurricular activities, departments, and classes. Many of these communities are very strong and this is what students so often try to protect.

It seems that many of us – myself included – think that there needs to be a sense of broader community at MIT. While this is not news, I think it is worthwhile to take a moment and think about what that implies. MIT as a whole has to embrace the idea. To make a functional community at MIT there needs to be a sense that we are all moving in the same direction. At this point, I believe, we face a large disconnection between what occurs on campus and what we are trying to achieve.

I don't mean to imply that there is no sense of community as a whole. In fact, in response to the tragic events of September 11th, I saw one of the most impressive displays of community at MIT since I have been here. Seeing so many faculty and staff reach out to help students in their classes, at the Killian Court event and afterward, really made me realize what MIT can do when it faces a clearly defined challenge. Looking out over Killian Court I truly felt like a part of a greater whole. I would like to take this opportunity to thank all of you for helping with the events and for being there for students to talk to – students really took notice of the efforts that were made. But things are more difficult with broader, less defined challenges.

In difficult times communities seem to be able to come together to strengthen themselves. As hard as it is to look

Graduate Student Council

Cost of Living: Still an Issue for Graduate Students
Dilan Seneviratne

The past two months have been full of ups and downs. It started off brightly with new students arriving on campus. The normally high interest level for recruiting MIT graduates was markedly low this year as evidenced by the rather subdued Career Fair; economic downturn and events of September 11th contributing largely to this. Then, recently, there was the official opening of the 125-bed NW30 "Warehouse" building for graduate housing. This was not an easy time for anyone. I would, nonetheless, like to commend the leadership of Chancellor Phil Clay, Executive Vice-President John Curry, and Secretary of the Corporation Kathryn Wilmore. Their efforts in bringing together the whole MIT community at a highly emotional time and making everyone feel safe at MIT were exceptional.

As we look forward and move on there are a number of pressing graduate student issues which we need to address. Key of them all is stipends. High cost of living continues to be of paramount importance.

Cost of living for MIT students in the Cambridge, Boston, and Somerville areas have skyrocketed over the past five years. Rents alone have increased between 10% and 35% (depending on type of housing unit: 1-bedroom, 2-bedroom, etc.) every year for the past three years. In addition, general costs have increased much faster than the national rate of inflation (3%), and cost of MIT medical insurance has been increasing at 10%.

In comparison, however, stipends, have only increased by 6.8% last year and between 7% and 15% (in the School of Science, bringing it to the same level across the Institute) this year. Graduate students are in a situation where they acquire loans in order to get through graduate school. After paying for rent there is less than half the stipend left for feeding, medical, book supplies, and transportation (for off campus, where nearly 70% of the students currently reside) which is hardly sufficient.

MIT's Financial Aid Office estimates that the cost of living for an MIT graduate student to be about $2000/month. The average stipend at MIT is $1336/month after taxes (for first year RAs) and $1440 /month after taxes (senior students and Ph.D. candidates).

Community@mit.edu

positively at the results that stemmed from such tragic events, I found myself thinking how lucky the freshmen were for getting a chance to experience such a large sense of MIT community at such an early point in their MIT careers. I hope that it instilled in them the sense that they can go to administrators and faculty for help or to talk about something that they care about, even when there is not the sense of urgency that was prompted earlier this month.

After a few weeks, another much smaller issue occurred for the undergraduate students of this campus. Several meal plan proposals came to students for feedback. Each of the proposals had two main characteristics – they were expensive and they were mandatory (at least to a degree). I think all of us realize how important food is at MIT. I know that one of my main motivations to get to my early morning Friday class was the snacks and orange juice. While a mandatory meal plan might sound like a great idea to some – people eating together in dining halls, no worries if someone forgot to put money on their card – it did not take into account the many other effects on existing student life that a meal plan could have. People who work extra hours to pay for their living expenses, those with restricted dietary needs, the cooking communities throughout campus, the FSILGs and people who would just rather eat out than on campus, felt that their communities and practices were being threatened. Others couldn't comprehend how a set level of income would motivate a vendor to provide good food and service. The decision that "mandatory" was an unchangeable part of the plan was not made with student input, nor were students aware that this was coming. After many

meetings, a campus-wide petition and lost sleep, it was announced that the process would be revisited with more students and they could entertain other options besides mandatory meal plans. While no decisions have yet been made, at least student *input* – rather than *feedback* – is being taken into account.

The freshman class has now lived through their first example of the division between students and the nebulous mass known as "the administration" that they have been hearing about since they got here. Each time decisions are made and students are left out of the process until time for feedback, a larger and larger level of mistrust grows. I am not trying to point fingers in this column. I know much of what happens is misunderstood and part of a general lack of communication throughout MIT. While I understand how these problems arise, it is imperative that we work to make the process better. It is important that whether it is a change in student life or a change in education, when decisions affect students there should be ample input as well as feedback. Students recognize these effects early because they can relate any change to their daily lives. This is also true in the case of faculty. When decisions are made regarding teaching or advising, it is the faculty who best know how it will affect their lives and work. If "community building" decisions continue to be made without the input of key players, the distrust will continue to mount from all sides and this will place a further divide in what we are really trying to achieve.

A community needs to be aware of and engaged in issues and decisions that affect its members. In general, I don't think students are well informed about issues that affect the faculty at MIT.

While some of you may find it difficult to understand why students feel so strongly about certain ideas, we often find it difficult to see where your opinions and ideas stem from. We are not fully aware of the pressures of research, writing, teaching, and tenure. We may not know about the other obligations you have to industry, your families, or other organizations. In order for a broader sense of community to form, we each need a little bit of knowledge about the various groups involved.

Overall, MIT has committed itself to creating a greater sense of community. The Task Force on Student Life and Learning established that MIT is working towards an educational triad of research, academics, and community. If this is truly the direction that MIT is moving in, it has to be developed by members of all of the groups at MIT. Students will not partake in valuable research without the help of the faculty. Academics is also a two-way street. Community cannot be imposed, but rather it has to be developed. This is hard to grasp when so many changes are being made to the current community in an attempt to create a different one.

Please take the time to talk to students to find out what they are concerned about and to listen to their perspectives. Even if you don't agree, you can offer your ideas with an explanation as to why you might not agree. At the very least, both sets of ideas will be out on the table for discussion. I think many people would agree that when you put specialists in a room together they can often hash out a product that is better than any one that was developed by an individual.❖

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Cost of Living: Still an Issue for Graduate Students

Seneviratne, from Page 23

The senior administration is aware of the housing problems. The recent opening of NW30 is a welcome addition to the MIT graduate housing option. Even though the rent at this new residence is no more affordable than the off-campus market, being part of the MIT graduate housing system will hopefully not lead to skyrocketing rents as witnessed in the off-campus market. The anticipated opening next August of the Sydney-Pacific residence will add a further 650 graduate beds to the MIT housing system, making it nearly 42% of graduate students who will be housed on-campus (including GRTs). While this will relieve some of the pressure on the tight Cambridge and Somerville housing markets, this is by no means sufficient.

The financial loss of the MIT housing system is a burden that the administration is no longer ready to carry. Last year, Executive Vice-President Curry and former Chancellor Bacow introduced a plan geared towards achieving self-sustainability of the housing system. The plan (which is already in effect) involves increasing on-campus rents by as much as 5% a year for the next five years. Compounding this increase over the five years will constitute a significant chunk of the graduate students' stipend.

Then, there is the cost of feeding. The price of meals in the MIT dining system (Lobdell, Networks, and Walker) have reached levels higher than neighboring cafes and restaurants (Au Bon Pain, Rebecca's, Thailand Cafe). Given that graduate students spend a large part of their time on campus, and dine in the nearest available facilities (i.e., the Lobdells and the Rebeccas), another significant part of the stipend is spent feeding on campus. Deducting the rent and the cost of meals leaves a deficit in terms of pocket money for purchasing study items (text books, stationery, etc.) and for entertainment. Other institutions similar to MIT, like Stanford and Northwestern, for example, offer significantly higher stipends not only to adequately cover rent and feeding, but also to leave behind more pocket money for students. Just this year, Stanford adopted a special stipend to supplement the cost of rent for students living outside their campus accommodation.

An analysis of the cost of living and stipends at other institutions competing with MIT was carried out by the GSC (Graduate Student Council) last academic year. Details are available at <http://gsc.mit.edu/cost_of_living.html>. In that comparison, MIT comes one-before-last, trailing the likes of Berkeley, Stanford, Cornell, Penn State, University of Michigan/Ann Arbor, and others. Even with MIT's increased stipend this year, MIT is still at the bottom of the table compared with unadjusted stipends of the other schools from two years ago. Every other institution has since increased their own stipend levels. We are in the process of updating these figures to reflect the changes at the other institutions since this analysis was conducted. Another consideration that was not factored into the above analysis is the subsidy of health insurance, which many of the other institutions provide. These institutions relieve their students of the costs of health insurance by offering free (or in many other cases subsidized) health and dental insurance as a benefit to their graduate students. This puts MIT further down the cost-of-living analysis ladder.
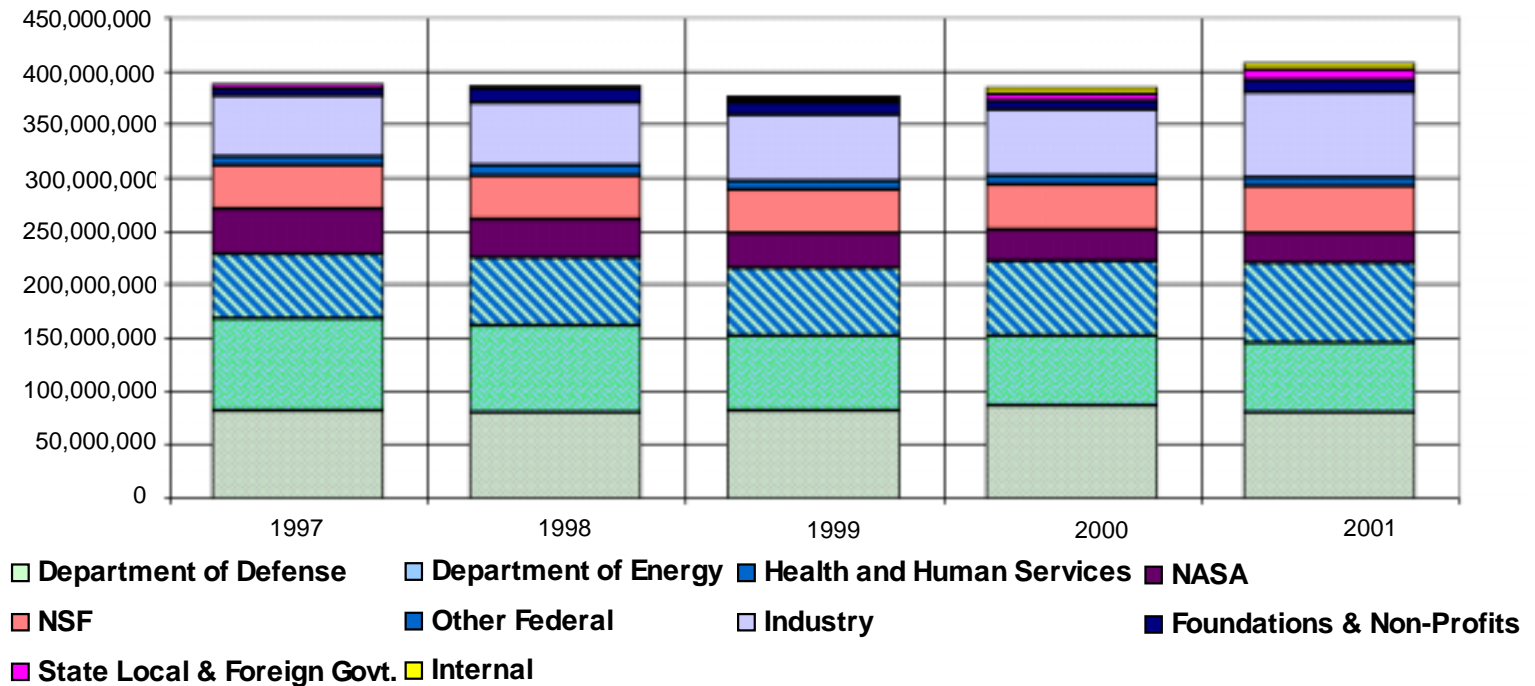
Occupying a spot close to the bottom of this ladder translates to a lower quality of life for graduate students at MIT compared with other institutions. This makes it harder for MIT to attract the best and brightest graduate students. The GSC is advocating for increases in stipend rates and subsidized MIT health and dental insurance for graduate students, which will bring MIT to levels comparable with other institutions. Medical insurance coverage and stipend increases are actively endorsed by Dr. Isaac M. Colbert, dean for Graduate Students, and Dr. Larry Benedict, dean for Student Life. In addition, the GSC is working closely with the outgoing and incoming VP and Dean for Research David Litster and Alice Gast, respectively.

The current situation is critical and requires firm action. A lot of courage is required on the part of the senior administration and you, the faculty, in moving forward with these issues. We also look forward to your comments, criticisms, and suggestions. Your active participation on this matter will be crucial. This will prove your genuine concern about the quality of life of your graduate students. It will also ease the problems of recruiting enough talented students. It's the best and the brightest that help MIT maintain its competitive edge. Let's make sure that quality of life is not an obstacle towards maintaining that edge!❖

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M.I.T. Numbers

Research
Expenditures
1997-2001

Legend:
- Department of Defense
- Department of Energy
- Health and Human Services
- NASA
- NSF
- Other Federal
- Industry
- Foundations & Non-Profits
- State Local & Foreign Govt.
- Internal

MAJOR SPONSOR	1997	1998	1999	2000	2001
Department of Defense	$82,256,830	$80,000,418	$80,805,979	$86,744,020	$80,494,203
Department of Energy	$85,278,459	$82,045,839	$71,613,204	$64,157,549	$64,402,560
Health and Human Services	$60,353,472	$62,596,036	$62,145,921	$70,614,062	$75,234,197
NASA	$43,383,539	$35,706,931	$33,331,682	$29,050,187	$26,970,230
NSF	$40,889,479	$41,364,798	$40,546,248	$42,185,465	$44,036,858
Other Federal	$8,123,282	$9,987,713	$8,347,357	$8,872,099	$8,642,670
Total Federal	$320,285,061	$311,701,735	$296,790,389	$301,623,383	$299,780,717
Industry	$55,790,372	$58,688,571	$61,623,382	$61,510,438	$80,310,841
Foundations and non Profiits	$7,724,289	$12,746,186	$11,444,435	$8,849,853	$11,727,774
State Local & Foreign government	$3,732,112	$2,686,121	$3,412,712	$6,985,532	$9,653,225
Internal	$347,722	$532,005	$2,776,393	$5,018,499	$5,950,659
Grand Total	$387,879,557	$386,354,618	$376,047,311	$383,987,703	$407,423,216
In constant (2001) dollars	$427,381,476	$418,243,953	$400,158,523	$397,143,275	$407,423,216

Source: Office of the Provost