The MIT Faculty Newsletter

Vol. III No. 5 **March 1991**

Faculty Newsletter Finally On Firm Ground

Editorial Committee

On March 10, 1988, Professor Vera Kistiakowsky distributed a four page xeroxed note entitled "Does MIT Need a Faculty Newsletter?" The second paragraph of that memo is quoted below. Subsequent sections went on to ask for volunteers for the Editorial Board, and for sponsors who would contribute money for reproduction and distribution.

"A group of faculty members which has been discussing the recent events concerning the Department of Applied Biological Sciences has concluded that difficulty in communication prevents faculty consideration of the problems except in crisis situations. There exists no channel for the exchange of information between faculty members and for the discussion of problems at MIT, since neither Tech Talk nor the faculty meetings serve these purposes. Therefore, we decided to explore the desirability of a newsletter, and one purpose of this zeroth edition is to see whether there is support for such a publication. It is only being sent to approximately 10% of the faculty, so we would be grateful if you would share it with your colleagues."

Professor Kistiakowsky's memo, labelled Volume 0, Number 0, provided the seed. In the summer of '88, thirteen faculty declared themselves editors *pro tem* of *The MIT Faculty Newsletter*, and Volume 1, Number 1 was distributed in October 1988 - a four-page newsprint issue, edited and prepared for publication by Professor Kistiakowsky using borrowed software. Over the next two and a half years the *Newsletter* gradually increased in size, frequency of appearance, and distribution. It now appears 8-10 times a year with a circulation of 2200, distributed to all MIT faculty, professors emeriti, and Corporation

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Bringing Biology to the Undergraduate Curriculum

J. Kim Vandiver

At the April 19, 1989 meeting of the faculty, a motion was approved endorsing "the general spirit of the recommendations of the Science-Engineering Working Group:

"...In particular, it is the sense of the Faculty that biology should be included in the Science Component of the General Institute Requirements.

"To enable this inclusion while retaining the present total number of subjects in the Science Component...the Faculty endorses:

a) consideration of a reduction in the number of Science Distribution subjects from three to two, and

A Letter from the CSR; Statement from the Biology Department; Other Commentary Beginning Page 6

b) development of pilot programs to enable satisfaction of core requirements in chemistry (molecular and/or solid state) and biology within two semesters.

"Further, the Faculty concurs that a Committee on the Science Component of the General Institute Requirements should be established to:

1)assess the pilot programs and develop recommendations to the Faculty for the inclusion of biology in the Science Component of the General Institute Requirements, and

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Editorial

Memorandum

TO: The MIT Faculty

FROM: *The MIT Faculty Newsletter* Editorial Board

RE: *Faculty Newsletter* Operation

Mission

The mission of *The MIT Faculty Newsletter* is to serve as a vehicle for the exchange of views among faculty, for publication of information of interest to members of the faculty, and as a forum for debate on issues of concern to the faculty. We recognize the particular needs of junior faculty and underrepresented minorities, as well as the concerns of related groups including postdoctoral fellows and technical staff.

Governance

The *Faculty Newsletter* shall be governed by an Editorial Board of not less than 9 members. Efforts will be made to represent the different schools and departments of the Institute.

The Board attempts to optimally carry out its mission through a maximum of interaction and cooperation, and a minimum of bureaucracy. Decisions with respect to the content, format, frequency, style, or tone of the *Newsletter* reside in the Editorial Board, according to their wisdom. Current practice is to have a revolving subcommittee of the Board responsible for each issue, with each subcommittee chaired by a previous subcommittee member.

The editorials reflect the views of the Board.

The Board welcomes participation by faculty in all aspects of the *Newsletter* operation. Board members usually serve for 2-3 years, with terms staggered so that experience can be shared and transmitted. Each spring the Editorial Board will actively solicit nominations for new members through the pages of the *Newsletter*. Criteria for election to the Editorial Board from these nominations will include maintaining a balanced representation of the faculty on the Board, demonstrated interest in the tasks of the *Newsletter*, and commitment to the integrity of the faculty and its responsibilities.

The Board will appoint a representative who will oversee/manage the *Newsletter* budget and serve as liaison with the Chair of the Faculty.

Operations

To ensure the publication of a newsletter fulfilling the mission requires adequate staff and budget: a half-time managing editor and sufficient additional funds for printing and circulation of the *Newsletter*. The position of managing editor, who will report directly to the Editorial Board, requires a person skilled in copy editing, page layout and desktop publishing procedures, printing and newsletter production, plus the ability to work closely and effectively with the Editorial Board members.

The annual budget for the *Newsletter* will be submitted by the Editorial Board to the Institute on a year-to-year basis, contingent on continued faculty commitment. This budget is part of the operating funds of the faculty.

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members. The average issue now consists of 16-20 pages.

Although several very generous contributions were made to the *Newsletter*, it soon became clear that it would be impossible to finance it on a purely contributory basis. A subscription-only newsletter would entail substantial, probably unsupportable overhead burden in maintaining qualified subscriber lists. The current distribution uses the standard mailing groups of the MIT Information Center and MIT's internal mail through Graphic Arts for the bulk of the distribution. Following customary MIT practice, the money for production and distribution (approximately $2000/issue) was scrounged from a variety of sources. Associate Provost Jay Keyser was particularly sympathetic to the idea of a faculty communications channel and provided substantial support for the *Newsletter*. Kathryn Lombardi, executive assistant to the President, also played a major role in helping the *Newsletter* Board to find funding sources.

The MIT Faculty Newsletter is overseen by an Editorial Board composed of faculty members. Membership on the Board is entirely voluntary, but the Board members try to ensure that all schools within the Institute are represented. Each issue of the *Newsletter* is organized by a subset of the Editorial Board, an "Editorial Committee", and it is their job to select a focus for the current issue (main theme, particular topics), solicit articles, review solicited and unsolicited material, and determine basic layout for the issue. The Editorial Committee is solely responsible for the Editorial in their issue. Each Editorial Committee works with the Managing Editor, and meets between four and five times before the *Newsletter* is ready for printing. The *Newsletter* is then printed, shipped to Graphic Arts for mailing, and the process repeats with the next Editorial Committee. The full Editorial Board meets approximately twice a semester, when questions of policy and politics are discussed.

The *Newsletter* Editorial Board is responsible for the content of the *Newsletter*, but the physical production of the *Newsletter* is the responsibility of the Managing Editor. This task was originally handled on a freelance basis at fixed cost per issue, but with the increasing frequency and size of the *Newsletter*, it became apparent that a half-time, dedicated staff position would be required. The *Newsletter* Board has taken the position that *The MIT Faculty Newsletter* serves an important and necessary faculty function and that the *Newsletter* should be supported by the administration, as it supports other faculty support functions. The administration has been receptive to that argument. We have been in the process since the beginning of the academic year of negotiating a memorandum of understanding that maintains the freedom of action of the faculty, provides accountability for the serious responsibility of representing the faculty, provides oversight for the budget, and does not create an administrative slot that will endure if the *Faculty Newsletter* ceases operation. Both the administration and the Editorial Board were particularly concerned with the possibility that a non-faculty staff would assume editorial responsibility for the *Newsletter* because of the tendency of a busy faculty to deed responsibility whenever possible.

The memorandum of understanding, co-signed by the *Newsletter* Editorial Board and Professor Henry Jacoby (in his position as faculty chair) is reproduced as this issue's Editorial. The key sentence is the penultimate one, pointing out that the annual budget for the *Newsletter* will be submitted by the Editorial Board to the Institute on a year-to-year basis contingent on continued faculty commitment. This commitment will be measured by the willingness of at least nine faculty members to assume responsibility for governance of the *Faculty Newsletter* in any given year.

In many ways the *Faculty Newsletter* has begun to function as the hard copy equivalent of an electronic bulletin board. The Editorial Board's task is to maintain the openness and integrity of this channel of communication.

Next Issue

In the next issue of *The MIT Faculty Newsletter*, we plan to continue discussion of the proposed addition of biology to the Science Component of the General Institute Requirements.

We will also present more information on the Institute structure, as well as taking a look at the new administration, as the presidential inauguration approaches.

If you would like to address one of these topics, or any subject of interest or concern to the MIT faculty and the Institute, please send material to: ***The MIT Faculty Newsletter*, 38-160,** or to any member of the Editorial Board. Or you can reach us at our E-Mail address: **FNL@ZEISS.MIT.EDU.**

Bringing Biology to the Undergraduate Curriculum

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2) review the objectives of the Science Distribution and examine the list of individual subjects to insure that the Science Distribution fulfills its purpose, and

3) review on an ongoing basis the content and appropriateness of the Science Component of the General Institute Requirements."

The CUP hopes that faculty and students will consider and debate the merits of the CSR proposal and those of the proposed alternatives and attend the April 17 faculty meeting, well prepared to consider the motions which are presented.

After two years of review, the Committee on the Science Requirements (CSR) has made its recommendations to the CUP; its findings are summarized in this *Newsletter* and will be the subject of the April faculty meeting. The Department of Biology has also put considerable effort into defining the content appropriate to a first subject in biology at MIT, and has also begun planning for the implementation of such a subject.

While there is clearly much enthusiasm at the prospect of adding biology to the Science Core, recent discussions have uncovered some unease about the decision as it affects the delicate balance among some departmental programs, the Institute requirements, and students' free elective time. Some of the articles included in this issue of the *Faculty Newsletter* address this uneasiness, and in two instances offer alternative proposals.

In the course of the current discussions it is quite natural that numerous questions arise from faculty who have not been parties in the CSR's or the CUP's discussions. These questions include: What is the right balance between general education and professional preparation? Are some departments trying to do too much in too short a span of time? Is the current set of core science requirements the right mix? All of these issues have, in fact, been discussed by the Committee on the Science Requirements. Their conclusion is that for the present the best course of action is, stated simply, to add biology to the Science Core and reduce the number of science distribution subjects from three to two to make room for it.

It may be that we need to have further discussion of such questions as, "Are the science requirements the right mix for the 1990's and beyond?" But we must recognize that to put together a new subject, and staff the instruction of one thousand students a year, is a task which requires the significant diversion of resources and one to two years of lead time. The current opportunity to capitalize on the Biology Department's enthusiasm and commitment to this formidable task should not be squandered.

We should move quickly to endorse biology as an essential element in the general education of every MIT graduate. We can also commit ourselves to pursuing answers to these other more complex issues. Much can be done to address them in the time it will take to put together a set of biology offerings appropriate as a requirement nearly two years from now.

Why has CUP then encouraged discussion of alternative proposals? Because we feel that it is better to encourage faculty-wide debate prior to the faculty meeting at which the motions are first introduced than to have a myriad of new proposals spontaneously introduced from the floor of the meeting. The faculty meeting does not provide adequate opportunity to examine on the spot new solutions to complex issues.

The CUP hopes that faculty and students will consider and debate the merits of the CSR proposal and those of the proposed alternatives and attend the April 17 faculty meeting, well prepared to consider the motions which are presented. In the interim the members of the Committee on the Science Requirements, the Biology Department, the members of the CUP, and the authors of the alternative proposals desire and welcome your input.

The members of the Committee on the Science Requirements, the Biology Department, the members of the CUP, and the authors of the alternative proposals desire and welcome your input.

Committee on the Science Requirements

Letter To The Faculty

Thomas J. Greytak

In the spring of 1989 the faculty passed a motion endorsing the addition of biology to the Science Requirements. It also endorsed retaining eight subjects in the Requirement by reducing the number of Science Distribution subjects from three to two.

The Committee on the Science Requirements was formed to examine how the new Biology Requirement might be implemented and how the Science Requirement should be modified to accommodate it. The Biology Department has proposed offering a single subject in modern molecular biology, 7.01, which would be part of the Science Core, and we fully endorse this plan. After studying a wide variety of options for the Science Distribution we have concluded that the original suggestion of the faculty was best. The Distribution should consist of two subjects to be chosen from an updated version of the current list.

There are several reasons why biology should be part of the Science Requirement. The rapid development of biology in the last few decades requires that every scientifically literate person have an understanding of the intellectual base of modern biology. Moreover, biologists approach problems differently than physicists and chemists. A biology course will expose MIT students to these different styles of inquiry. Finally, from the practical point of view, these new developments have already affected medicine and agriculture, and have spawned new industries. Biology is certain to play an increasing role in our society.

The above reasons for adding biology to the Science Requirement can also be used to argue that it belongs in the Core. The Biology Department believes that this can be done as a single subject, perhaps with several different flavors. It is prepared to put in the substantial amount of effort that will be required to handle the large enrollment. The department's status as one of the world's leading centers in molecular biology instills confidence that placing the course in the Core would be intellectually as well as academically sound. Developing a Core Requirement in modern biology will allow MIT to take a leadership role in an educational development which we feel to be inevitable.

Our Committee has reevaluated the separate goals of the Core and the Distribution, including a clear definition of subjects that should be on the Distribution list, and we will report our recommendations at a later date. Operationally, the Distribution list is a set of electives in science and technology that carry a special endorsement by MIT. These subjects cover broad and important areas, they are carefully reviewed on an ongoing basis, and they

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The Challenge of an Institute Biology Requirement

Richard Hynes

Two years ago the MIT faculty voted to adopt in principle a new Institute requirement in biology. We in the Biology Department welcomed this initiative.

Revolutionary advances in biology over the past forty years have fundamentally changed our views of life and of the ways in which it can be analyzed and understood. These advances are already having a major impact on medicine and have spawned the biotechnology industry. The future impact will be even greater. A basic understanding of the intellectual base of this revolution will be an essential part of scientific literacy in the 21st century. It is appropriate that all students graduating from the leading technological university in the country should have this as part of their education.

The study of the fundamentals of life is intellectually exciting. Molecular and cellular biology are providing ever more profound insights into the nature of living organisms and, increasingly, this deeper understanding offers many opportunities for applications to specific problems. In the coming decades we will face major issues with a large component of biology. The world population is rising at an ever increasing rate; how can we increase food production to feed the increased population, how can we deal with major diseases such as malaria and AIDS, how can we combat increased incidence of cancer and heart disease in an aging populace, what are the effects of environmental pollution on our health? Modern biological research, based on molecular and cellular biology, offers the promise of answers and solutions to these questions and others.

Increased understanding of living organisms also offers the promise of novel technological advances; living organisms have had billions of years of evolution and natural selection to come up with elegant, efficient, and frequently miniaturized solutions to problems. Plants convert the energy of light into chemical energy with extraordinary efficiency, bacteria have rotary molecular motors driven by ion fluxes, single nerve cells integrate multiple electrochemical inputs and, in the brain, are assembled into computing units smaller and much more sophisticated than the best electronic computers. Understanding these processes is a fascinating challenge. Surely we can also put some of this understanding to use.

Currently, a significant fraction of MIT's outside research funding is in the area of various life sciences (Health & Human Services alone accounts for approximately 20% of the campus research volume), and this seems very likely to increase. Furthermore, it is certain that many of the students we train in the next ten years will, during their careers (which will last into the middle of the next century), have many reasons to deal with biological problems in their professional lives. We will all have to tackle the issues of increased genetic

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Some Thoughts on Implementing the Biology Requirement

William M. Siebert

It is hard to argue with the belief that every scientifically literate individual should have some understanding of the extraordinary recent developments in genetics, molecular biology, biochemistry, cell biology, etc. It was this belief which induced the MIT faculty in April 1989 to assert that "it is the sense of the faculty that biology should be included in the Science Component of the General Institute Requirements."

After considering a variety of alternatives, the Committee on the Science Requirements (CSR) has proposed to insert the new required biology subject in place of the "3rd" Science Distribution (SD) subject. The CSR proposal has the great advantage of being both simple and politically agreeable. But it has at least two weaknesses:

1. Because it replaces a relatively *free* choice (selected from a list of 70 subjects) by a specific *required* subject, it reduces flexibility. This is particularly critical for engineering students in highly structured professional or pre-professional programs who already have quite limited freedom and many diverse and important objectives to be realized.

2. For most science and engineering students, biology is probably more remote from the central focus of their studies than the subjects they are currently electing as their "3rd"Science Distribution subject. It is unlikely that such an enforced trade of breadth for depth is a good idea for all students.

One alternative to the CSR proposal is simply to reject it, reversing completely the faculty vote of April 1989. Another possibility, also a reversal of the April 1989 vote, is to return to the situation which prevailed as recently as 1985 when the Chemistry Requirement was a Chemistry/ Biology Requirement. A consequence of adopting either of these alternatives would probably be to destroy the enthusiasm of the Biology Department for developing a new introductory subject - which would be a sad loss.

Another alternative that has been proposed to moderate the weaknesses of the CSR proposal is to *combine* the CSR proposal with an overall *reduction* in the number of General Institute Requirements (GIR). Currently, the GIR total 17 subjects - a little over half of a 4-year SB program. (This appears, incidentally, to be a substantially larger fraction of the SB programs for engineering and science majors than is controlled at the university level by our principal academic competitors. Usually the fraction seems to be less than a third.) The 17 subjects include the

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An Alternative Proposal for the Addition of Biology to the General Institute Requirement

Leon B. Groisser

The addition of biology as a General Institute Requirement (GIR) would have the effect of adding a subject to nearly all our undergraduates' programs, since so few now take a basic biology subject. (This is in contrast, for instance, to requiring a subject in computation.) I agree and advocate that biology should indeed be added as a GIR My proposal includes options for accomplishing this, given our present already highly constrained curriculum.

I recognize that, at the present time, the curriculum pressures on our departments vary. These pressures are most severe in the School of Engineering. Thus, instead of presenting one solution to fit all departments, I present five options to try to fit the varying pressures. On the other hand, I believe that there should be one undergraduate curriculum at MIT. Thus, I present a single set of undergraduate requirements from which exceptions which lead to these options can be made. I understand that, beside the problem of adding biology, there are much larger and more complicated and profound issues of the curricula for the engineering departments which address professional engineering education and accreditation. I trust that their resolution will result in the inclusion of biology within a new or revised framework of GIR's. Thus this proposal is seen as a stopgap until the School of Engineering curricula and, hence, the Institute curricula are reformulated.

In a somewhat abbreviated form (and without including all the details), the present undergraduate curriculum consists of:

17.0 GIR 5 Science subjects: 3.091/5.11, 8.01, 8.02, 18.01, 18.02; 3 Science Distributions; 1 Laboratory; 8 Humanity Arts and Social Science (HASS) subjects: 3 Distribution, 3 or 4 Concentration, and Electives to make 8 in all;

plus from 180 to 198 units beyond the GIR'sof which at least 48 units must be Unrestricted Electives of which each department may specify up to 12 1/2 subjects and may capture (specify) up to 3 GIR's in its department program of which no more than 2 can be Science Distributions. (In fact, most department programs consist of 17.0 GIR plus 180 units.)

The proposal here is that there be one basic undergraduate curriculum (with all the relevant existing rules) consisting of:

18.0 GIR (as above with biology as the sixth Science subject);

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To The Faculty Newsletter

Justifying Student Representation on Institute Committees

Recently, in the discussion of dean selection, the idea of student representation has come up. There is no student representation on many MIT committees, including selection committees and tenure committees. We think this is a serious error of judgement, and we would like to present some arguments in favor of putting students on all committees at MIT.

The Argument From Effectiveness

The decisions made by committees will be better if students are involved.

There are two senses in which the decisions will be "better." The first is the usual sense: students have many good ideas which can contribute to decision-making. Students, in general, are in a different generation than the faculty and staff. This means that they may have a different perspective on the issues that the committee is considering. This will give breadth to the committee. Furthermore, students are currently living through the "student experience." They know first hand the problems that face students and they have ideas for solving them. Even on a committee that does not directly address student issues, students will be able to assess the impact that committee recommendations will have on the student population.

The second sense in which the decisions will be better is by the respect they will get from the students: students are much more likely to be happy with changes in the institute if they are recommended by a committee that includes students. Dean Tewhey has recognized this regarding the alcohol policy. He knows that an alcohol policy must be written with real student input to be effective. Students will simply disregard anything else. This is fairly obvious for an alcohol policy, but we think that it is true for all decisions. A dean selected without students will be seen as yet another imposition by the uncaring institute. He or she will enter the position with an assumption by students that the best decision was not made, and that a better candidate might have been selected if students had been sitting on the committee.

The Argument From Democracy

The only way to make decisions amenable to students is to include them on the committees.

Most faculty members do agree that student input should be included in committee decisions, or at least that the student point of view should be considered. After all, education is one of the primary concerns of the institute, and students are important. However, the only way to ensure this is to actually put students on the committees. Representatives of any group should come from within that group. Furthermore, faculty and staff may have some illusions about what it is that students want.

Sometimes committees attempt to get student input simply by having student forums or student presentations. However this is not sufficient if real student input is desired. Without sitting on the committee, students may not fully understand the problems that are being addressed, and they do not always know what is practical and what is not. It is only within committee meetings that the subtleties of the problems become apparent and the difficulties of implementing various plans of action come out. When students are kept outside of the committee, they are not usually able to make relevant or considered suggestions. Therefore, the suggestions will often be useless. If, on the other hand, there are students actually on the committees, they will have a full understanding of the problems and they will be able to help find practical solutions that are acceptable to both the committee and the student body. Student forums might be useful in addition to student members, but no form of representation is as effective as the presence of students on the committees.

The Argument From Education

Including students on committees is an ideal way to foster leadership and responsible decision-making.

MIT has always seen itself as a school for leaders in the sciences and engineering. When students serve on committees, they get some real experience in investigating a problem, discussing solutions and making practical recommendations. These students learn how to make responsible and fair decisions. What better way can there be to encourage and develop leadership skills than to involve students in the decision-making processes that affect them?

We hope that these arguments will be considered when the next committee is being formed, and that students are included. It is the right thing to do, and it will make the committees and the institute much more effective.

David Hogg
with the GSC/UA
Governance Committee

Dilemmas, Colonialism, and Protest

James H. Williams, Jr.

"One ever feels his two-ness, - an American, a Negro; two souls, two thoughts, two unreconciled strivings; two warring ideals in one dark body, whose dogged strength alone keeps it from being torn asunder."

W.E.B. Du Bois

"So it is that now I denounce and defend,... I denounce because though implicated and partially responsible, I have been hurt to the point of abysmal pain, hurt to the point of invisibility. And I defend because in spite of all I find that I love. In order to get some of it down I have to love....So I approach it through division. So I denounce and I defend and I hate and I love."

Ralph Ellison

I have spent more of my life on this campus than in any other place, including my parents' home where I was reared, more of my life in my office than in any other room. At MIT my twoness, a professor and a black professor, has been honed into antagonistic strivings rather than complementary ideals; each appearing at odds with the other, each imposing major risks of invisibility upon the other. It didn't *have* to be so. Thus, MIT is a principal source of poignancy for me when I ponder the dilemmas of Du Bois and Ellison.

I reside in an engineering department which is superior in every way, including its efforts to become even better. If you have ever seen a survey which ranks this Mechanical Engineering Department other than the best in the world, then you have seen a survey which I have not seen. I have colleagues, some of whom taught me and some of whom I taught, who do their thing and do not infringe upon my right to do mine. If some of the senior ones were politicians, we might compare them with the likes of Jefferson, Lincoln, and Roosevelt; if some of the junior ones were athletes, we might think of them in a class with Magic, Michael, and Larry.

Their treatment of me is not always ideal; but it's pretty much the same as they treat each other, and as I treat them. We deliberate, debate and do battle, and somehow it all flows within a stream of mutual respect and collegiality in which the goal expressed through ideas, the best ones generally winning, is to maintain our collective pre-eminence. When the times have come to distribute accolades, my colleagues have acknowledged me broadly and fairly. The antenna of most blacks is likely to be well tuned on such matters. It's a part of our Darwinian gift.

So what's my grumble?

On the down side of my dilemma, I observe this young generation of blacks being sieved through a neo-colonialist educational system. Neo-colonialism is a nice way of describing a basket of sins, sometimes including brazen bigotry. My own institution MIT is a major offender; more specifically, my conflicts have been largely with the MIT administration although it would be erroneous and too convenient to limit condemnation to the bosses.

Briefly, let's explore. Almost without exception, paradigms of colonialism share the following features:

1. Colonized peoples are defined by the colonizers as not intellectually capable of contributing to their own governance.

2. Irrespective of the achievements of their own culture, colonized peoples are instructed in the colonizers' history and culture because they are taught that they have no history worth learning.

3. The colonized community relinquishes some of its assets to the relative benefit of the colonizing community.

First, during my MIT faculty career, I have written far in excess of a hundred thousand words relating to the intellectual, sociological and emotional support of minority students. Considering the inelasticity of time, those words have been in lieu of professional pursuits such as proposals, papers or textbooks, not to mention personal interests. The fact that much of that effort has been accompanied by a cultural, racial and ethnic tension between the MIT administration and me has intensified the cost. The response of the administration during much of this period has been more diffident than my most cynical predictions, as it has produced a patchwork collection of half-baked efforts to address the educational needs of minority students.

Knowing the MIT proclivity for statistical data, I have decided to include a bit of statistical data of my own. This article is written by 100% of the full-time native born black American faculty in the combined Schools of Engineering and Science at the Massachusetts Institute of Technology.

Consider the following example not only as indicative of the long-standing problem but also as suggestive of the source of the intransigence which confronts minority faculty. There are ingrained societal structures which our minority students will engage in the pursuits of their future careers. A potentially important role for minority faculty, who must currently confront these same professional and social impediments, is to assist minority students in their preparation for this engagement. Unfortunately, those same structures - sometimes racist and sometimes not - operate within the close environs of MIT where the personal opinions and shortcomings in creativity of one administration are bequeathed to succeeding administrations, often preventing minority faculty from fulfilling this mentoring role for generations of students.

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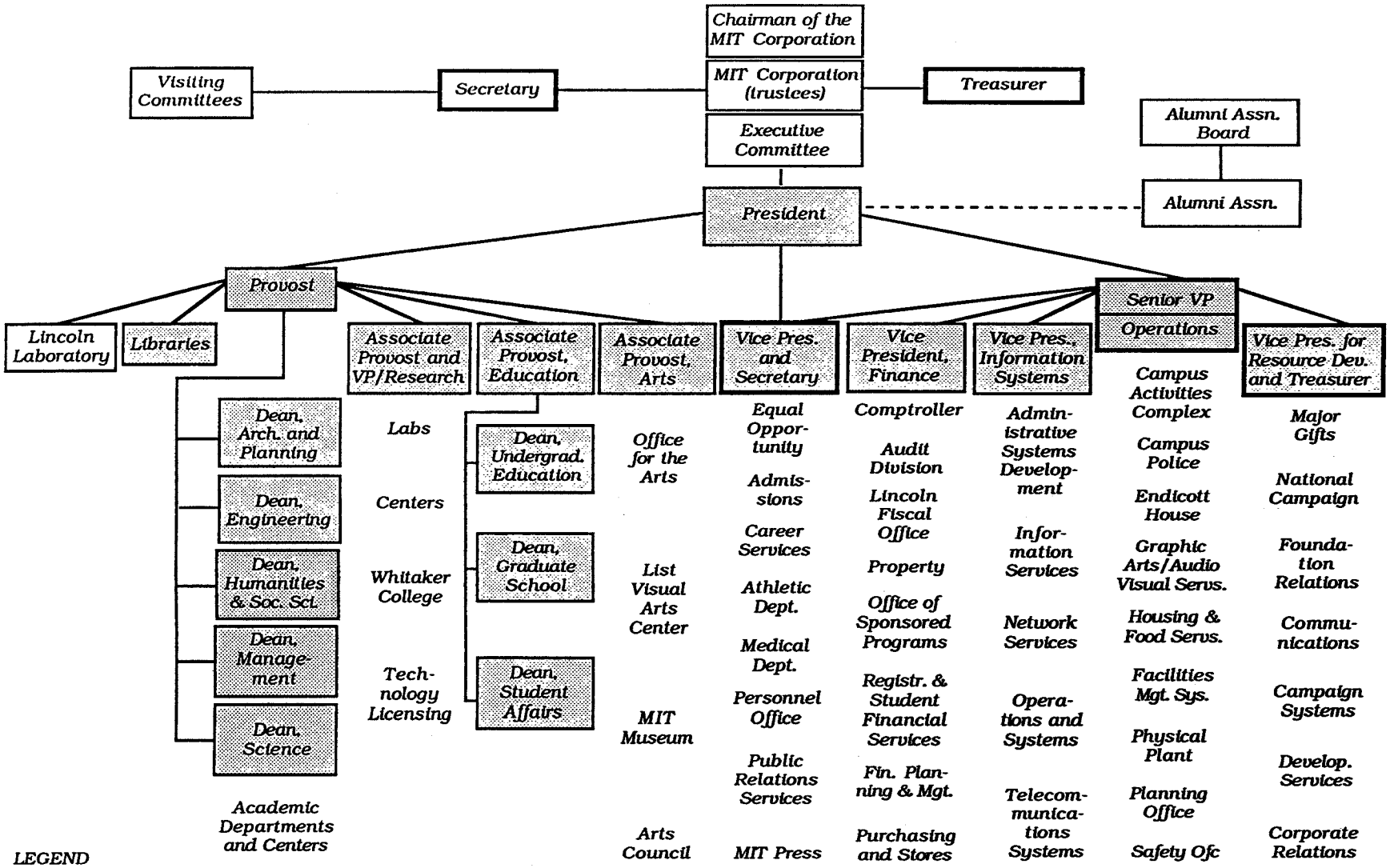
Administrative Organization of MIT



Rev. 1/91

Not to scale.

Gulf War Teach-In Stresses Origin and Impact

Elizabeth Garrels

In a piece in the last *Newsletter* entitled "Stresses of the Persian Gulf War," Henry Jacoby noted that the air war was a week old and a ground war seemed unavoidable. By March 4, the day of the Teach-In at MIT on the War in the Persian Gulf, the air and ground wars were both over, but, according to Prof. Irene Gendzier of BU, first speaker at the event, this armed conflict had intensified the "existing crises in the [Gulf] region in ways difficult to exaggerate."

Originally planned to consider a war most likely still in progress, the March 4 Teach-In, commemorating the one held at MIT on the same day in 1968, was faced with the challenge of providing an early post-mortem. It proved to be much more than this, especially considering that from the beginning the news media (and television in particular) had given us such spectacularly superficial, partial, and generally unilluminating information about the conflict and its background. The participants in the Teach-In, who repeatedly stressed the theme of how we were told so little and consequently made to feel the war could not be understood, sought to illuminate both the origins and the impact of the war, in the belief that the war can indeed be understood and must be, for only if we understand it can we make reasoned choices about how to work for peace and democracy in the Gulf and here at home.

The first session, on "The Origins of the War," featured four speakers: Profs. Irene Gendzier, Noam Chomsky (MIT), Laith Kubba (U. of Wales), and Chris Tilly (U. of Lowell; visiting at MIT). Gendzier, speaking on "The History of Diplomatic Relations in the Gulf," said that while the cause of the political crisis in the Middle East could not be reduced to U.S. policy, none of the multiple causes could be understood without considering the U.S. policy for that region, formulated in the 1950's and still in place today, of not allowing change to occur, including democratic change, that could be seen to threaten U.S. interests.

Kubba, secretary general of the Socialist Democratic Reform Party, an Iraqui party active in exile, spoke of how the war was a testimony of failure for both the Middle East and the U.S. The fundamental problem in Iraq, he claimed, is the incongruity between the state, artificially established by the British, and a multi-cultured society (loosely divisible into four regions), whose diversity and needs are not reflected by the state. He called for a more representative government in Iraq and for a reduction in the power of the military.

After Kubba, Chomsky spoke on "The Rule of Force." He summarized three lessons that the U.S. had wished to teach the world with the recent Gulf war: 1) that the world is to be ruled by force, 2) that Third World societies should not dare raise their heads, and 3) that the U.S. could "kick the Vietnam syndrome." He concluded his comments by quoting a radical pacificist of this century to the effect that the greatest problem after the war is the victor. Chomsky asked, "Who will teach the victor a lesson?" The session ended with Chris Tilly adressing what he called widely held "incomplete perceptions" about the war. These included the idea that Bush needed to was to get us out of a recession. Tilly responded to this by pointing out that the recession may last for two years, while the people who planned the war were thinking in much broader terms of the next twenty years. He also noted that other kinds of investment would have been more successful in stimulating the economy than armaments. Another incomplete perception he addressed was that the cost of the war equalled the tens of billions of dollars spent on the military operation. His correction or reformulation of this was that the economic significance of the war will be long term and global; the maintenance of the projected U.S. military presence in the region, alone, will cost some ten billion dollars a year.

Ozonoff's message was no less alarming; he stated, for example, that children in Baghdad may now be drinking the most poisonous water in the world, and that air pollution in the area is the worst in human history.

The second session also had four speakers: Profs. Mel King (MIT), Joni Seager (MIT), David Ozonoff

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Gulf War Teach-In Stresses Origin and Impact

(Continued From Page 11)

(BU School of Public Health), and Herman Feshbach (MIT), speaking on "The Impact of the War" on research at MIT (Feshbach), on democracy and the state in the U.S. (King), on the environment (Seager) and public health (Ozonoff) in the Gulf region. Seager maintained that it would take years for the area to recover from the environmental damage caused by the war, and in fact some things are beyond recovery. Ozonoff's message was no less alarming; he stated, for example, that children in Baghdad may now be drinking the most poisonous water in the world, and that air pollution in the area is the worst in human history.

There are video tapes of these first two sessions, which will be shown on MIT cable in the near future and will also be available for viewing in the Language Resources Center in Bldg. 20. In addition, audio tapes for the entire conference will eventually be made available. The conference consisted of five sessions, which ran from 12:00 into the evening. The last three, which I was unable to attend, were entitled "Truth and Media," Culture and History: The Human Face of the Middle East," and "A Really 'New" World Order." Participants in these sessions were Chris Appy (Harvard), Karen Mitzner and Students from The Peace Initiative (MIT), Henry Jenkins (MIT), Arthur Steinberg (MIT), Sherifa Zuhur (MIT), Elaine Hagopian (Simmons), Gordon Fellman (Brandeis), Stephen Tapscott (MIT), Souad Dajani (Harvard), Ikomi Ngongi (Harvard), Jonathan King (MIT), and Ruth Hubbard (Harvard).

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Love That Voice Mail

Are you tired of listening to the "Voice Mail Woman" drone on when you want to **quickly** leave amessage? Just hit the (#) key. It cuts right to the *beep*!

What's An Administrator?

The last issue of *The MIT Faculty Newsletter* contained statistical information on Institute personnel (**M.I.T. Numbers**, pp. 14-15). Several readers have asked for further clarification of the "Adminstrative" category.

According to the MIT Planning Office (from whose **Factbook** the data was acquired) administrative staff now includes: Administrative Assistants, Administrative Officers, Accountants, Library Staff, Planners, Directors, Purchasing Agents, Buyers, non-service Supervisors in Physical Plant, as well as the more commonly defined "MIT Administration" (President, Vice Presidents, etc.)

We hope this clears up any confusion.

Wrong Address

Is your issue of the *Faculty Newsletter* sent to the wrong address? It's because the Institute mailing list needs to be corrected. Contact the Information Office, 7-121, x3-4795.

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Some Thoughts on Implementing the Biology Requirement

(Continued From Page 7)

Institute Laboratory Requirement and 16 subjects divided equally between the sciences and the humanities, arts, and social sciences (HASS). The 8 science subjects are further divided into a Science Core of 5 subjects and 3 SD subjects (2 of which may be constrained by the student's department); the HASS subjects are also divided into Concentration and Distribution components.

Specifically, the proposal is to reduce the GIR to 15 subjects - the Laboratory and 14 subjects equally divided between the sciences and HASS. In addition, one free elective would be added to the current 4 required in every approved degree program, for a total of 5. With the exception that a specified subject in biology would become part of the Science Core, the alternative proposal does not seem to be sensitive to the ways in which the 7 science and 7 HASS subjects may be further subdivided into Core, Concentration, Distribution, etc. (Presumably, this is a matter best left to the appropriate Science and HASS committees.) The simplest suggestion for the Science Requirement is to increase the Core to 6 subjects (2 math, 2 physics, 1 chemistry, 1 biology) and to reduce the Distribution requirement to 1 SD subject.

The principal overall effect of the alternative proposal for most engineering and science students would be to trade a required subject in biology, a subject under potential departmental control, and a free elective in the new program for a two SD subjects and a HASS subject in the current program. Arguably, this is a better balanced trade, both in terms of freedom of choice and in terms of breadth-vs-depth, than simply trading a required subject in biology for an SD subject. For students in the three smaller schools, the principal effect would be to reduce the required emphasis in the sciences from 8 subjects to 7, but (again arguably) the inclusion of a required subject in biology would lead to a better balanced and perhaps more rigorous scientific education.

It is certainly true that for engineering and science students, the overall effect of my proposal *may* be to replace one HASS subject (out of 8) by biology. Whether this is the overall effect depends on what students do with their new 5th free elective. If they desire further broadening or need additional change of pace from technical subjects, they are free to elect an 8th HASS subject in this slot. But even if we as faculty believe most students would be well-advised to choose additional HASS subjects beyond 7, it is not clear we should *require* 8 subjects for everyone. Requirements, I believe, should describe a *minimum*, not the ideal. Currently, MIT students are required to devote roughly 25% of their 4-year undergraduate program to HASS subjects. For comparison, the table below lists the HASS percentages required in engineering programs at some other schools (more or less randomly selected).

RPI	19%
Princeton	19
Georgia Tech	18
U. Penn.	18
UC Berkeley	15
Purdue	15
U. Illinois	14

It seems to me my proposal installs modern biology as a requirement for all MIT students without either a significant reduction in flexibility or a significant distortion in the overall balance of their programs. Perhaps a better idea will appear. Let's talk about it.

Currently, MIT students are required to devote roughly 25% of their 4-year undergraduate program to HASS subjects. For comparison, the table below lists the HASS percentages required in engineering programs at some other schools (more or less randomly selected).

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Letter To The Faculty

(Continued From Page 6)

have in their number some of the Institute's most popular offerings. A student outside of the Schools of Engineering and Science can be assured that a listed subject will be a worthwhile introduction to an area of analytic endeavor. Students in the School of Science look to the list for guidance in broadening their outlook. The Distribution has a lesser impact on students in the School of Engineering. Currently all departments in that School specify two of the three subjects as part of their departmental requirements. It is the third Distribution subject, the one which the departments are not allowed to specify, that would be eliminated to make room for biology.

In the original faculty proposal, which we support, a restricted elective in science and technology, over which the departments have no control, is replaced by an excellent subject in modern biology. How will this affect the students? Many students will use biology as they used the elective it replaces, for exploration or breadth, and make no other changes in their program. Other students may currently use the third Science Distribution slot for a professional subject they wish to retain. That professional subject would have to take the place of one of the student's free electives. Departmental programs in engineering include 4 free electives, the minimum number allowed by the Rules and Regulations. Outside the School of Engineering, all departments except one allow 5 or more free electives.

It has been suggested that the current proposal will make it more difficult for our engineering departments to gain the approval of the Accreditation Board for Engineering and Technology. This is not the case. The Board's decisions are based on the programs the students are required to take. The replacement of a science and technology elective that the departments can not specify by another science subject should have no effect on the accreditation.

An alternative proposal that is being circulated would have the effect of adding biology at the expense of one of the eight HASS subjects. At the same time it would reduce the number of subjects in the Science Requirement to seven. We have discussed the size of the Science Requirement at length. It is clear that we are facing a future where science and technology will have an increasing influence on society in general and public policy in particular. We do not think that MIT should respond to this situation with an educational reform that requires both less humanities and less science. We should instead reaffirm our belief in the advantages of a broadly based scientific and humanistic education as preparation for life long contributions, rather than a narrowly based professional education focused primarily on the near term.

The Challenge of an Institute Biology Requirement

(Continued From Page 6)

counselling, genetic engineering, *in vitro* fertilization, contraception, and so on in our personal lives. An informed opinion on such subjects will benefit greatly from an understanding of the intellectual framework of modern biology, composed of genetics, cell and molecular biology, and biochemistry. Last, but by no means least, biologists approach scientific problems in ways which differ from those of physical scientists and an appreciation of these different styles of inquiry will also contribute to a well rounded, liberal, scientific education.

Those are some of the arguments for a biology requirement, but there remain the questions of how to implement it and of how to accommodate another Institute requirement into the already full program of the average MIT student. One simple and straightforward suggestion, that of the Committee on the Science Requirement, is for the core biology requirement to take the place of one of the current science distribution requirements. A more radical solution suggested by one of our colleagues in the School of Engineering would reduce the overall general Institute requirements. The means of accommodating a biology core requirement, however desirable, is obviously a complex issue for the faculty as a whole to decide.

We in biology have been actively discussing how to present an Institute biology requirement which will serve the diverse needs and desires of all MIT students. The solution we have devised is based on the firm belief that the molecular genetic approach and the concepts of cell structure and function are central to the understanding of all biological processes. This common intellectual core can then be applied to various more specific problems. In order to accommodate differing interests, while ensuring that all students are schooled in the fundamentals of modern biology, we have developed the following plan.

Several different versions of the Institute Biology requirement would be offered (at least three and possibly four). Two thirds of each version would cover the essential core material - genetics, molecular biology, biochemistry, and cell biology - and would treat briefly the issues of development of multicellular organisms, cooperation of cells in systems such as the nervous system, natural selection, and evolution. These basic concepts can be presented in a variety of ways over the course of about two-thirds of a semester, not necessarily the first two-thirds, since elective material can be interwoven. The aim of the elective material would be to apply in some depth the concepts and analytical approaches presented in the Core Material to one or two areas of biology. Each course would have a different emphasis but all would demonstrate the power and application of the concepts of molecular and cellular biology to complex issues such as medical genetics, human physiology, biotechnology, neurobiology, and environmental biology.

There has been some discussion as to whether the biology core should have a chemistry prerequisite (5.11 or 3.091). While such a prerequisite would allow some material to be presented

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The Challenge of an Institute Biology Requirement

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in a more chemical way, it is also possible to present the material based on a solid high school chemistry background. Our present plan is to offer versions both with and without a chemistry prerequisite. If there were four versions, each semester could contain one version with and one version without a chemistry prerequisite.

We feel that this plan - several different versions with a common core - would allow students with differing backgrounds and goals to choose a biology course best suited to them while retaining the common intellectual base which students can then apply in the future to consideration of diverse problems.

7.01 has been taught for many years to around 200 students per year, many of them non-majors. During this and the next two academic years we will continue the development of different versions of 7.01, catering to different constituencies and backgrounds (e.g. with and without a chemistry requirement). In 1991/92 two versions of 7.01 will be taught. The fall version will have a medical genetics flavor whereas the spring version will have a physiology/developmental biology flavor. We are currently working on developing one or two other flavors for possible introduction in 1992/93.

For the reasons outlined at the beginning of this article, we in the Biology Department believe that a biology requirement would be very beneficial to all MIT students. If the faculty decides that there should be one, we are ready to implement it and will do our best to respond to the needs and desires of the various constituencies at the Institute. If the faculty decides that this is just one requirement too many or is less crucial for certain students than some other perceived need, then we will continue to offer courses in modern biology which will be of value to all MIT students.

We are convinced that modern biology will produce major changes in our society and we are willing to prepare any or all MIT students for the future impact of biological sciences in their personal and professional lives.

An Alternative Proposal for the Addition of Biology to the General Institute Requirement

(Continued From Page 7)

plus from 168 to 186 units beyond the GIR's of which at least 48 units must be Unrestricted Electives of which each department may specify up to 11-1/2 subjects and may capture up to 4 GIR's in its department program of which no more than 2 can be Science Distributions.

Within (or as an exception to) the proposed basic undergraduate curriculum, there are five options presented here which incorporate biology. If this proposal were to be accepted in full, I hope that most departments would chose to adopt the first option, and fewer the second, down to the fewest adopting the fifth option.

First: A department could decrease its present department program by one 12 unit subject. It is expected that, for many departments this would not be as difficult or wrenching an experience as they would assume it to be before they looked at their requirements with this in mind. For instance, some may find that a subject is required which is no longer as vital as it once was; others may be able to reduce "four of the following five subjects" to "three of the following five subjects."

Second: Many departments now allow 60 units or more of Unrestricted Electives. These departments could simply reduce their number of Unrestricted Electives by 12 units.

Third: Most departments now require 180 (to 186) units beyond the GIR's. This is changed to 168 (to 174) under the basic curriculum proposed here. These departments could add biology by increasing the total units beyond GIR's from 168 (to 174) to 180 (to 186) units without any other change in their curriculum.

Fourth: By special petition, a department could request the Committee on Curricula (COC) to be allowed to eliminate one HASS subject from the GIR's thus requiring no change in its department requirements. It is realized that this option is politically unpopular in many quarters. It is presented because I consider that the fifth option below is even less desirable.

Fifth: By special petition, a department could request the COC to be allowed to capture the third Science Distribution thus requiring no change in its department requirements. This is the single proposal of the Committee on the Science Requirement. It has the political advantage of not affecting any faculty constituency. However, it is my belief that the majority of our engineering and science students would continue to take the subject which now counts as their third Science Distribution (and would be directly replaced, under this option, by biology).

Under the fifth option, students would have to use up 12 of their 48 units of Unrestricted Electives for this purpose. In fact, a responsible faculty advisor should list, to an inquiring student, one or more subjects which are properly on the list of Science Distributions and which would add breadth to the student's major. I am afraid that this option would have the domino effect of students' ultimately not taking their lowest priority Unrestricted Elective. I am concerned that the subject they eliminated would be the one most likely to be out of their major and the one which would add the most breadth, or even fun, to their overall education. Or put another way, the effective reduction of one of only four Unrestricted Elective subjects from an already tightly constrained undergraduate program seems to me to be the least desirable alternative.

Dilemmas, Colonialism, and Protest

(Continued From Page 9)

The MIT administration may say it wants black faculty members here; yet its response to novel initiatives by black faculty suggests that someone is telling tales. In the education of minority students at MIT, there appears to be no acceptable innovation except that which is highly filtered through the mind of the master. Such presumption is characteristic of the colonialist mentality.

Second, despite what too many black students are led to think, the civil struggles of the 1960's, the desegregation arguments of the 1950's, and the anti-discrimination successes particularly in the military and *professional sports* of the 1940's are not ancient and irrelevant history. It is not coincidental that the sit-ins began in Nashville where Fisk is and in Greensboro where North Carolina A&T is. Nor is it coincidental that serious discussions about increasing the black enrollment at MIT began during this period. This recent history of black leadership swells with legions of lessons and incentives for both action and fulfillment.

The number of individual acts of courage and sacrifice during the civil struggles of the 1960's is absolutely astounding. For young blacks today, the potential sources of strength and models for leadership residing in that history are far deeper than anything they may have gleaned from all their studies of the Revolutionary and Civil Wars combined. The history of the 1960's and the preceding decades is important because it has shaped the current U.S. landscape so very much. And the absence of such knowledge about that history makes young blacks hydroponic Negroes. Furthermore, the view held by many - blacks and whites - that such history is, at best if at all, only for blacks, not whites also, is both ignorant and racist, and is likely to lead to academic black ghettos. Clearly, this history abounds with numerous examples of heroism by both blacks and whites which should irrevocably alter the perspective of all who believe that the Struggle is (or has ever been) a black versus white issue.

Third, what asset(s) does the black community to its detriment relinquish to the larger community? As always, the primary one is human labor. But now that includes the best minds of our young people. The college training that they receive not only separates our most academically gifted young people physically but also psychologically, socially, and economically from their remaining culture, a culture teeming with problems and stereotyped by all the ugly statistics of degeneration which the media pump through our senses daily.

The residual community, from which young blacks have been taught to *escape*, is diminished since it has lost some of its intellectual resources for devising models and strategies for its mobilization and development, and our young people are diminished because they ultimately find themselves in a foreign environment without a spiritual foundation. (After all, if young gifted blacks do not return to the grassroots to assist in value and goal clarification, they buy into the mentality of the colonized, ignoring or exhibiting apathy about their native community, accepting the status quo, and sitting around waiting for whites to do something for them.) Many of those suffering within our culture are the children of the people who marched, who were beaten and burned, and who died in the 1960's. They are our sons and daughters, our sisters and brothers. As a community, they can ill afford to lose such a precious resource as the best minds among them.

Am I advocating that MIT black graduates physically move into one neighborhood versus another? No. Everyone should live wherever he or she chooses. The issue is not physical geography but psychological geography. What I am advocating is that whatever they do and wherever they live, MIT black graduates become a part of the solution and not a part of the problem; that they never secede from the Struggle. It is not true that, in order to be a successful engineer or scientist, one must check one's conscience and heritage at the door.

So, what is it that I want for students, in general, and minority students, in particular? Students should ensure that their fundamental humanity and personal goals are not subjugated to or conquered by any social structure, economic framework or political order. Students should not undermine their own intellectual gifts, motivations and goals which by their presence here mark them. Students are first of all human, and that is supremely important. Indeed it is that fact which enjoins me to want much more: I want our graduates to develop qualities which reside in their souls irrespective of job title or street address.

Though many college administrators throughout the country focus on jobs for their graduates, at MIT we should have loftier aspirations. While this is true for white students, it is crucial for black students. Here's why. After four or more years at MIT, white students return to white society. After four or more years at MIT, most black students do not return to black society. Most enter a twilight zone: a non-nurturing limbo, hauntingly incapable of accepting them as unmarred people. So, if we as educators do not provide the opportunities for the enhancement of the sociological and emotional ties between black students and the black community, we are promoting the further decay of both the black community and the twilight zone.

Currently, after being extracted, filtered, processed, conditioned and trained, our minority students are given a ticket to a frequently boring job with the promise of professional success. And they are taught that such is the path to happiness. Their knowledge of problems, issues, and cultures (theirs, in particular) is just enough to handicap them with insecurity and indecision, but never enough to enable them to be innovative in developing solutions to the problems confronting their culture and people or to be active in the pursuit of their ideals. They are given enough for survival but never enough for fulfillment. They end up being neither inspired nor inspiring.

I am incensed as I observe MIT playing a major role in converting some of the

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Dilemmas, Colonialism, and Protest

(Continued From Page 16)

best young black minds into a pale imitation of the ugliest caricature of middle-class white society, consuming spectators of life. As I have argued for many years (for example, see *The Tech*, October 22, 1985), MIT is *training* minority students into mediocrity, rather than *educating* them into prospective leadership. Since certain individuals at MIT have now located Morehouse College, it may be worth noting that its former president, Dr. Benjamin E. Mays, observed "Not failure, but low aim is sin."

In letters to and conversations with President Charles M. Vest and Provost Mark S. Wrighton, I have articulated an educational goal similar to that of educators from the pre-Socratic Egyptians to the post-Civil War nineteenth century: that is, the immensely difficult though subtle task of assisting young people to become analytical yet sensitive, highly principled and contributing citizens of the world. Somewhere, as we began to view students as vessels to be filled rather than torches to be lit, this goal got sidetracked. I want especially to encourage minority students to realize that they possess within the Struggle the capacity to discover an unbounded and inexhaustible reservoir of contributive potential, hope and freedom, which even death, where we are all going no matter how we live, cannot extinguish.

President Vest and Provost Wrighton have been lacking in their response to my efforts, though I thought Provost Wrighton understood some of what I was saying. I hope that both understand that the issues I summon cannot be addressed by singing "We Shall Overcome" during one week each January, or by sustaining the patchwork responses of the past decade.

It appears to me that, in maintaining the course of recent MIT administrations, the current administration would rather count Negroes than educate them. My blood pressure spikes each time I hear or read "... [the] entering class [is] 6% Black..." or that a particular individual here at MIT is responsible for the increased enrollment of blacks - statements of the latter type representing amateurish conjurations of revisionist history recited presumably to alter the mindset of ungrateful Negroes. Knowing the MIT proclivity for statistical data, I have decided to include a bit of statistical data of my own.

This article is written by 100% of the full-time native born black American faculty in the combined Schools of Engineering and Science at the Massachusetts Institute of Technology.

There simply isn't as much time as there used to be.

The Vest-Wrighton administration cannot expect the same spirit of patience, tolerance, acquiescence or apathy which the Gray-Low and Gray-Deutch administrations fostered by simply thrusting their proverbial hands into the air in a demonstration of frustration for their pitiful records on the issue of diversity. As a member of a group of minority faculty who (1) met with Drs. Gray and Low several times during 1980-81 to express our concerns regarding minority faculty and student support, (2) applauded that administration's prospective efforts to address the problems, (3) became discouraged with the limited scope and ultimate failure of its actual efforts, and (4) retreated in frustration, I cannot allow that pattern to replicate itself. To do so would render me morally and ethically bankrupt.

As an *initial* act of protest, I shall reside in the corridor outside the offices of the president and the provost from 9:00 am to 5:00 pm each Wednesday during the month of April. Throughout the twenty-four hour period of each Wednesday, except for water, I shall fast.

That's a shameful and curious piece of data which deserves its own editorial. It was brought to my attention during a plea by an academically successful black undergraduate (who had "no place else to turn") for just the type of intellectual, historical and sociological perspectives which I have described above; a plea which, in need of support to address, I related to the deaf ears of our senior administration. Once again, I was confronted with an intellectually low-octane response by those who could have made a significant difference but chose instead to be trite.

Last summer in his early public statements as the incoming president of MIT, Dr. Vest emphatically espoused the goal of diversity. (I hope that by diversity he meant a broad intellectual, sociological, action-oriented and multi-ethnic community, not merely one possessing a comfortably quotable percentage of minority students having only a lame minority professoriate as its role models.) But Dr. Vest's notion of diversity now lingers in my mind as an enigmatic apparition; a transient irritating noise which apparently existed primarily and only briefly inside his head and remained there until it dissipated itself. No action has ensued, yet.

As an *initial* act of protest, I shall reside in the corridor outside the offices of the president and the provost from 9:00 am to 5:00 pm each Wednesday during the month of April. Throughout the twenty-four hour period of each Wednesday, except for water, I shall fast.

This is not a classic model of protest: I want nothing from the MIT administration. There is nothing to be discussed, demanded, initiated, ceased or capitulated. I am simply protesting. I am protesting the fact that in addressing major concerns of black Americans the MIT administration for the past decade has been impotent. At 9:00 am on April 3, 1991, as I enter this protest, I shall declare victory; at 5:00 pm on April 24, 1991 I shall celebrate that victory, a victory tempered only by the continuing miseducation of our students.

The Language Learning and Resource Center is Inaugurated

Isabelle de Courtivron

On February 22nd, Foreign Languages and Literatures celebrated the opening of the new Language Learning and Resource Center (LLRC) in Building 20. This new facility, designed by the Center's director, Ruth Trometer, is equipped with computers and international satellite television reception, and is available to the entire MIT community.

If MIT students are to work as engineers, scientists, or managers in a global economy, the study of language must include an increased sensitivity to foreign cultures. Learning about the literature, history, religion, and politics of a particular country or region may be an expensive and time-consuming proposition, but it is one that we cannot afford to ignore at this crucial time.

The idea of a new LLRC began with the development of innovative foreign language materials by the Athena Language Learning Project (ALLP). The ALLP has been working since 1984 to apply the advanced computational technologies available at MIT--natural language processing, interactive video, and speech processing - to serve the new communicative methodologies of language teaching. The interactive video materials of the project in particular have been received with enthusiasm nation-wide and internationally.

The ALLP, under the leadership of senior research scientist Dr. Janet Murray, has pioneered two new genres of interactive video for language learning: the interactive documentary and the interactive narrative. It has produced two French video discs, **A la rencontre de Philippe** and **Dans le Quartier St. Gervais** designed by Gilberte Furstenberg, Senior Lecturer in FL&L, and one Spanish videodisc **No Recuerdo**, designed by Douglas Morgenstern, Senior Lecturer in FL&L. These discs immerse language learners in a rich authentic language environment, in which they can interact with native speakers in an active, compelling way. **Philippe** has been honored by awards from the Association of Visual Communicators, the International Interactive Communication Society and the Nebraska Videodisc competition.

The Center has two classrooms, fully equipped for satellite reception, videotape and videodisc and computer presentation, and a lounge where students and faculty can watch satellite television, listen to radio programs or to the foreign music collection, or browse through international newspapers and magazines. In addition, there are audio cassette carrels, computer/video carrels, a production area for video editing, and a scanner for transferring visual materials to computer.

The opening of this state-of-the-art facility is timely. It coincides with a resurgence of interest in language study among MIT students, and with the new administration's emphasis on internationalization. Indeed, advisors from whom students previously hid the fact that they were taking such a time-consuming subject as a beginning language class are now expressing concern because over-enrolled language classes are being closed to their advisees. Despite the shorter IAP period, 7 intensive language classes were offered this past January, enabling a large number of students to go on to a more advanced level this semester.

All of these bode well as signs of an increasing commitment, on the part of MIT students, faculty, and administration, to international studies. A word of caution must be sounded, however. The study of language is not a pragmatic "quick fix." Subjects such as "Business German" or "Technical Chinese", which are often devoid of a broader intellectual and cultural context, are worthy of a Berlitz-type school, not of a premier research institution. Our goal, a more serious and difficult one, must be to enable our undergraduate students to acquire the breadth that will allow them to operate successfully in the contemporary world.

If MIT students are to work as engineers, scientists, or managers in a global economy, the study of language must include an increased sensitivity to foreign cultures. Learning about the literature, history, religion, and politics of a particular country or region may be an expensive and time-consuming proposition, but it is one that we cannot afford to ignore at this crucial time.

Letters

To The Faculty Newsletter:

As a member of the MIT Corporation for the past five and one-half years, I have been privileged and pleased to receive the *Newsletter* since its inception. I find it to be an interesting publication, with thoughtful articles on current issues of concern to the faculty, and reflections on local and national public policy matters.

In this instance, I am writing to you in my capacity as president of the Association of MIT Alumni and Alumnae. I would like to compliment you for your editorial ["The President's Vision", December, 1990] in response to President Vest's article in the November, 1990 *Newsletter*, in which he describes the nineties as "a decade of rapid change and of great opportunity - an era in which the intellectual excellence of MIT can and must be maintained and enhanced." Your position in support of our distinguished new president, and your willingness to accept his challenge to help lead MIT to even greater heights of accomplishment, are noteworthy.

I would, however, like to suggest that you not overlook the role that our alumni/ae body of over 90,000 members can play in the "resolution of human problems of broad scope and great urgency..." which you mention in your editorial. I make this comment because alumni and alumnae are noticeably omitted from the MIT community which you define as "students, faculty, and members of the administration - who sincerely aspire to contribute constructively to the sustainable resolution..." of humankind's problems.

There is a tendency, I believe, to forget the alumni/ae when addressing Institute issues, except during major capital campaigns. But, we should not forget that we were all **students** at one time, and therefore may have valuable insights from our past experiences at the Institute, matured and perhaps mellowed by our subsequent professional and/or business experience.

It has been my contention for some time that the alumni/ae body represents a resource that has never been tapped in a meaningful way to address policy issues, whether local or national, and we stand ready to be of service.

Please do not interpret my remarks as being critical, but rather as a reminder that MIT alumni and alumnae have great respect for our alma mater, and a deep sense of gratitude and appreciation for our privileged educational experience. We welcome the opportunity to share in the challenges which lie ahead in concert with the entire MIT community.

Christian John Matthew, President
The Association of MIT Alumni and Alumnae

To The Faculty Newsletter:

I look forward to each issue, and I commend you for the selection of articles.

The article in the last issue, "Stresses of the Persian Gulf War", by the faculty chair, Professor Henry D. Jacoby, impressed me most. He writes, "One of the pillars of academic life is respect for differences of viewpoint and encouragement of free and open discussion. Maintenance of these values requires the most conscious effort when feelings run deepest, and tempers rise."

I feel these words are particularly applicable to the pieces from Noam Chomsky and Stephan Chorover in the previous *Newsletter*. These were strongly held views which made "my temper rise" as (I assume) did others at MIT among the faculty. But they have the right to express their views.

Charles A. Meyers
Professor Emeritus

To The Faculty Newsletter:

I am the Graduate Coordinator in the MIT Physics Department, and a member of the administrative staff. After reading the last two issues of *The MIT Faculty Newsletter*, I would like to know if I can be added to the mailing list. The editorials and articles express opinions and cover issues of interest, not only to faculty, but to other members of the MIT community as well.

Peggy Berkovitz
Graduate Coordinator, Physics Department

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In an attempt to accommodate all members of the MIT community, the *Newsletter* now accepts subscriptions. See the back page of this issue for details.

Erratum

In the last issue of this *Newsletter* (Vol. III, No. 4), a letter from C. Fayette Taylor contained a typographical error. Professor Taylor wrote that he was "particularly **impressed** [not **immersed**] with the recent Chomsky and Chorover articles...." Our spell checker didn't notice, but we should have. Our sincere apologies.

The *Faculty Newsletter* Challenge

The administration has agreed to provide funds for the production and distribution of the *Faculty Newsletter* **provided that a faculty editorial board of not less than nine members agrees to take responsibility for the operation of the *Newsletter*.** This condition is intended to ensure that the *Faculty Newsletter* is truly representative of faculty concerns and interests. We are now soliciting memberships on the *Newsletter* Editorial Board for academic year '91-'92. Ideally, we would like to field an eighteen member board, so as to achieve broad representation of the faculty and to share the (not too onerous) burdens more equitably. If you are ready to do your share to maintain our communications channel, either contact one of the present Board members, send an E-Mail note to us at FNL@ZEISS.MIT, or fill out and mail the coupon below.

I would like to discuss the possibility of joining the Editorial Board for the academic year '91-'92. Please have someone on the Board contact me.

Name_____ Department_____

Address_____ Phone_____

Mail to: *The MIT Faculty Newsletter*, 38-160.

The *Faculty Newsletter* is mailed without charge to faculty members, professors emeriti, and members of the Corporation. The total press run is 2200 copies per issue with nominally eight to ten issues per year. We would be pleased to make the *Newsletter* available to other interested parties at the incremental printing and mailing cost of $15/year (on campus) and $20/year (off-campus). If you would like to subscribe, please fill out the form below and include a check payable to *MIT Faculty Newsletter*.

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