# The Tech.

VOLUME 91, NUMBER 38 | FRIDAY, OCTOBER 8, 1971 | MIT, CAMBRIDGE, MASSACHUSETTS | FIVE CENTS


# INAUGURAL PROGRAM CLIMAXES TWO WEEKS OF INTROSPECTION

By Lee Giguere

In a ceremony that left the new president visibly moved, Corporation Chairman Howard Johnson formally installed Dr. Jerome B. Wiesner as the thirteenth president of MIT.

The change of office was symbolized by the presentation of the MIT charter to Wiesner by Johnson. Overshadowing this moment, however, was Wiesner's inaugural address and Archibald MacLeish's reading of his poem composed in honor of Wiesner's election.

Wiesner's speech was in large measure a synthesis of the ideas that rose to prominence at MIT in the last few years, for in his own words: "the inaugural occasion offers an opportunity for affirmation – for a re-dedication of the community to the values and ideas we all share." Rather than presenting a startling new program, he chose to focus MIT's attention on its recent self-examination (in which he has played so great a part).

On opening the program, Johnson remarked that "we meet today to celebrate the Institute and all who are a part of it," and termed the inauguration "a new beginning and a new dedication." He then gave a brief sketch of Wiesner's career, followed by the introduction of Honorary Chairman of the Corporation James Killian, who commented on the post of president. Johnson then introduced poet Archibald MacLeish, for a "unique message." This was followed by the presentation of the charter and Wiesner's address.

In his speech, Wiesner thrust the importance of learning to the fore, saying, "Our [MIT's] first responsibility . . . is to learning itself. Our second responsibility, since ours is the world's foremost institute of technology, is to understand what our learning and discoveries may do to man and society, and to transmit that knowledge to new generations . . ." And later, to make it clear that he did not mean for MIT to abandon social issues, Wiesner added, "As an institution within a larger community, we must respond to national needs."


**Text of the inaugural address begins on page 5.**


After re-stating some of the criticism that has been leveled against MIT, in particular the cries that technology's "onslaught must be stopped," Wiesner argued that "without scientific knowledge and wise technological investments now and in the future, the problems of mankind will only increase." Now, he said, "it is our obligation to intervene on the side of man."

Today's students, Wiesner continued, "want to develop broadly in all spheres – moral, social, intellectual and political and they do not want their lives compartmentalized." "We have begun to break the academic lockstep here at MIT," he stated, with new programs. In addition, he posited the development of "a deep and sustained interest on the part of students and faculty in the educational process itself as a discipline worthy of investigation and study . . ."

"This is a unique moment . . . to pause and re-examine our educational policies . . ." he pointed out. "We can recast the concept of a liberal education in a contemporary mold by integrating science and technology with the study of man and his culture." He offered a warning to MIT however, by recounting that "the integrated education we dreamed of [when the School of Humanities and Social Sciences was founded] did not emerge."

Corporation Chairman Howard Johnson presents newly-inaugurated president Jerome B. Wiesner with a copy of the charter of MIT, symbolizing the authority and responsibility vested in the office. The charter was originally granted to William Barton Rogers by the Commonwealth of Massachusetts in 1861. *Photo by Sheldon Lowenthal*

# *Kresge panels execute self-examination task*

## Researchers look to future

By Paul Schindler

Research plays a very large role at MIT – $60 million in funds distributed among some 1,000 research entities.

"Directions in Research in the '70's," a panel including top MIT researchers, held in Kresge Auditorium yesterday morning, examined this major segment of MIT's program.

Provost Walter Rosenblith, moderator, opened the discussion by acknowledging the futility of trying to describe in detail the many research projects in progress. He mentioned that during the five years of Howard Johnson's presidency, their number increased 50%. In dollar terms, Rosenblith gave two fig-


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## Educational changes due

By Alex Makowski

The final panel discussion of the Inauguration Week program, yesterday afternoon, offered a variety of views for the directions MIT might take with its educational policies over the next decade.

Chancellor Paul Gray moderated the remarks by the five faculty members and one undergraduate gathered on the Kresge stage. He insisted that the panel consider possibilities for the future–"the Institute is at a new threshold of internal development."

The participants were from diverse disciplinary backgrounds; the program was not set up to reach some sort of consensus. The subjects covered ranged from the relations between MIT and the outside world to such purely internal concerns as improving the contact between faculty and students.

A major topic of discussion concerned the value of MIT's


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## BSU leaves IM football after protest

The Black Student Union has withdrawn its "A" team from intramural football, following rejection by the IM Executive Committee of their protest lodged during their game with Lambda Chi Alpha September 26.

The BSU had complained that an official's error in the first period had given LCA an undeserved touchdown. The final score of that game was 19-9.

The withdrawal drops the "A" League to five teams, with each team effectively gaining a forfeit for their match with the BSU. The team had been scheduled to play Sigma Alpha Epsilon last Sunday.

At the same Executive Committee meeting, BSU member Larry Dean was suspended from IM sports through the end of the winter season for striking referee Joel Bergman after the BSU-LCA game.


*For commentary, see pages 10 and 11.*


# Draft ceiling set at 125 during current year

The Selective Service System announced Tuesday that 125 would be the highest lottery number reached this year.

As a result, all men born before 1952 who are classified 1-A as of December 31 and hold numbers higher than 125 are safe from being drafted unless there is a major national mobilization.

The agency also declared that all men who had numbers 125 and below would definitely be drafted, unless they had received exemptions or deferments.

The announcement does not affect men born in 1952, who were assigned lottery numbers this summer. They are not eligible for the draft until next year.

Under Selective Service regulations, students and others with deferments who hold lottery numbers above 125 may cancel their deferments and thus eliminate virtually any possibility of ever being drafted.

To do this, a man with a deferment must write his local draft board by December 31 asking that his deferment be rescinded. The board is required to comply with his request. Men in this situation are urged to send a registered letter with return receipt, since it gives the sender proof of delivery.

A man with a number below the ceiling who holds a deferment may keep his deferment and avoid the draft this year. When his deferment lapses in a future year, he will be liable for the draft only if his number is below that year's ceiling.

Technically, those with lottery numbers above 125 are placed in a low priority group that is subject to conscription only if all those in positions of higher priority are drafted.

Selective Service officials state that the low priority pool would not be tapped unless annual draft calls exceeded 400,000 men. There has been no year since World War II when calls have been this high.

By the end of the year, 98,000 men will have been


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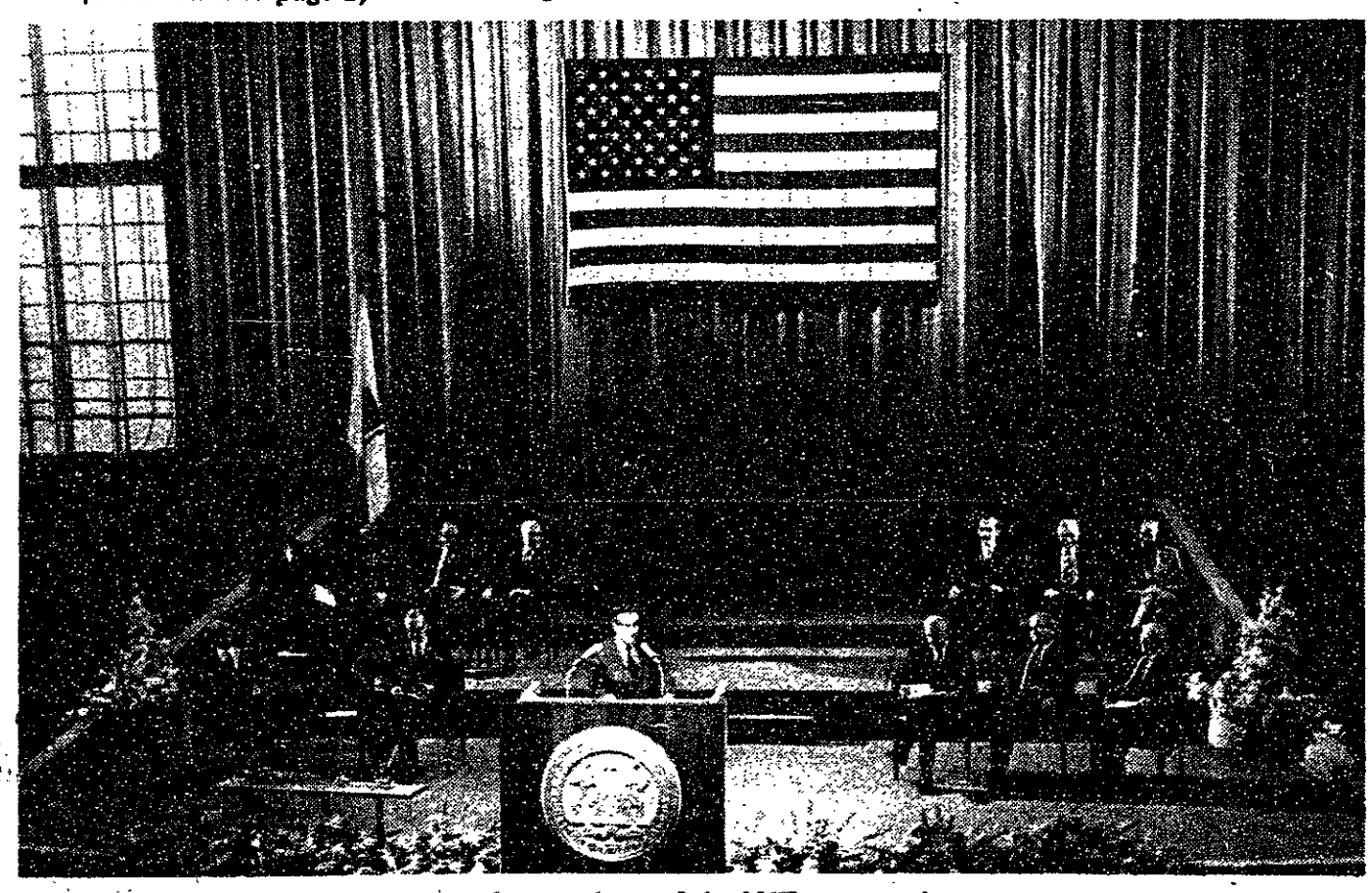

President Jerome Wiesner addresses the members of the MIT community. *Photo by Dave Tennenbaum*

# MIT researchers view future prospects

*(Continued from page 1)*

ures for comparison: in 1951, MIT received $12 million from research; last year it earned $60 million.

The first faculty speaker on the panel was Professor Frank Press of Earth and Planetary Sciences. Having served on the National Science Advisory Board, he addressed himself to "the word from Washington." press noted that the executive branch has accepted the existence of a national requirement for basic scienctific research to maintain the country's economic growth. However, there is some question of funding, and Press noted that the total funding level for research will go down, even though (for example) the NSF budget may go up to a billion dollars per year within the next few years.

Turning to his own field, Press noted several areas for future research in the earth sciences. Knowledge may well exist at this time for the prediction and control of earthquakes, he declared, citing Colorado experiments in which man now controls earthquakes, and an upcoming Soviet experiment in prediction of major earthquakes as much as a week in advance.

The next speaker was Victor Weisskopf, head of the physics department. He spoke of the 20th century as a unique period in all of human existence. As an example, he outlined the history of physics in this century, dividing it into 20 year periods: by 1910, the basic structure was determined, by 1930 the details were cleared up, by 1950 we had learned to make power the way nature does, and by 1970 we had explored the nucleus. Weisskopf stressed the fact that nature had been doing everything we had years and eons before. Fusion, fission, and detection of mesons in the laboratory are exciting facts today. Quoting a Danish scientist, he noted that "Prediction is a difficult art, especially when it concerns the future." He concluded by noting that MIT is involved in all areas of physics research ongoing at this time.

Prof. Salvador Luria, well-known member of the Biology department, noted the juxtaposition of overwhelming success and disappointing failure in his field. But, citing a rise in the status of biology at MIT, he declared "there is either something wrong with MIT or else there is something right with biology." He went on to note that many biological research priorities for the 70's are urgent in nature.

His concluding remarks concerned both ecology and the overpopulation problem, as well as their interconnection. Luria felt these problem areas were fair game for research by persons concerned with biology, and that they are probably among the most important problems facing mankind in the years to come.

Prof. James Young of the physics department talked of bio-medical engineering. He pointed out that Harvard and MIT have begun several joint efforts aimed towards advancing the state of the art, keeping in mind the problems of miniaturization and low cost per unit which are central to the success of new instruments in the field of medicine. Young also pointed out that there is much work yet to be done to achieve a truly efficient use of electronic data processing in the field of medicine: "The optimistic forecasts made in the late 50's were made by medical people who did not know computers and computer people who did not know medicine. Thus, they have not come true."

The other area of greatest prospect for future research in bio-medical engineering, Young stated, is organ replacement, both by the more spectacular and publicized route of transplant, and the less spectacular but more promising route of artificial replacement.

Young was followed by Prof. Frank Jones of Civil Engineering, who spoke of MIT's current and future activities in the urban problem area, which he defined as the problem of "urban blight and poverty."

The most vital future challenge facing people concerned with the urban area, according to Jones, is the study of social accounting, and the sources of power. In particular, all social scientists, he noted, should concern themselves with the transfer and transformation of power from one form to another.

Prof. Carroll L. Wilson of the Sloan School then noted ongoing research into the costs of environmental programs. His major role was a poser of questions for the other panelists to consider, although he offered some answers of his own.

He asked what research at MIT had been rewarded by MIT and society in the past, noting that it was mainly defense and was rewarded both by awards and financial compensation as well as recognition.

He also asked if other research was expected by society now, and whether it would support such research. Wilson felt that the answer was yes (he was disputed during later discussion) and that society had already begun serious support of new research areas.

Wilson then asked if MIT was ready to change its course: he felt that large parts of the Institute, including narrow specialists and many highly competitive grad students and junior faculty, were not.

Prof. Robert Solow of economics made the last prepared statement, noting that the major problem facing the economist of the future is the ability to understand the workings of the price, money, and wage levels in the economy.

Solow stated that there has been progress in economics in the last 25 years: "If the president asked a computer for an answer to economic problems today, he would get an answer, which is more than he would have gotten 25 years ago. It wouldn't be the exact right answer, but it might be someday."

# Educational changes due

*(Continued from page 1)*

drive over the past decade to greater educational flexibility for the undergraduate and what policies might be appropriate for the future. Gray himself had touched on the topic in his opening remarks when he suggested that the only generalization to make about educational practice was that no single educational style is appropriate for every student.

Humanities professor Travis Merritt raised the possibility that too much variety might isolate students intellectually by eliminating their common background. "The critical question," he insists, "is how man develops relationships that work toward the community rather than fragmentation."

Margaret MacVicar, physics professor, touched on the subject by advocating the inclusion in the curriculum of programs that erased the standard student and teacher labels. Student Committee on Educational Policy chairman Peter Messeri approached the topic from another angle, commenting that many students are not aware enough of their goals to make meaningful decisions about their education. Reminding the faculty of their obligation to provide guidance, particularly for their first-year students, he urged that they "confront" students with their education, forcing them to consider the appropriate issues.

A review of the job market for graduates of such a technological school as MIT sparked an argument between Messeri and economics professor Franco Modigliani. Modigliani provided the audience with the assurance that the current bleak economic picture for scientists and engineers was only temporary, with improvement due within a year or two. Over a longer term, though, American universities can be expected to produce more highly trained specialists than the economy will be able to absorb with jobs appropriate to their education (and consequently salary expectations).

Messeri responded by mentioning the tension between market demands and traditional university ideals. James Young, also a physics professor, agreed that it was "chilling" to suppose that educational choices might be dictated by the market. To these objections Modigliano replied that he was trying to draw attention to the pattern for employment over the next few years, saying that students should be aware of outside conditions when they make their career choices. Another of the panelists seemed to resolve the argument by pointing out that there is a difference between the educational decisions students make at the undergraduate and graduate school level.

# Rogers summarizes education proposals

By Lee Giguere

Proposals for closer faculty-student interaction through a seminar-research program, for a new academic officer to serve as the focus of faculty responsibility for undergraduate education, and for the establishment of an education research division will form the main thrust of the final recommendations of the Special Task Force on Education.

Professor of Mathematics Hartley Rogers, chairman of the Task Force, revealed the general outline of the group's still-unfinished report at an open panel discussion Wednesday afternoon.

After opening the session with a few historical remarks concerning the formation of the Task Force, Professor of Mathematics William Martin, who directed the discussion, introduced the Task Force members: Professor of Physics Anthony French, Professor of Electrical Engineering Robert Gallagher, Professor of Earth and Planetary Sciences Frank Press, Professor Rogers, Dean for Institute Relations Benson Snyder, Assistant Professor of Aeronautics Sheila Widnall, and Professor of Aeronautics Robert Halfman, who, though not a member of the group, worked closely with it.

After brief addresses by Snyder and Press, both giving some background to the Task Force's work, Rogers began by explaining that the recommendations, while generally formulated, were still open to change and noted that the panel planned to meet with faculty and student advisory groups before finalizing its report.

The first recommendation, Rogers stated, is that "MIT should, in its undergraduate program, give a more central emphasis to contact between faculty and students -- individually and in small groups." Secondly, the Task Force called on the Institute "to establish an Office of the Undergraduate Academic

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*The following is a transcript of the poem written by Archibald MacLeish in honor of President Wiesner on his inauguration. The poem, as delivered, differed in several respects from the printed copy distributed after the inauguration; Mr. MacLeish's changes are incorporated in this, our attempt at literal transcription, although further changes are possible before publication.*

POEM FOR AN OCCASION
for Jerome Wiesner

*Rinsing our mouths with praise . . .*

Tin cup,
with limestone spring in the cool of the mintbed.

Earlier generations knew this place,
made their way here, thronging. We have forgotten it:
we have kept to the streets too long, tongues
stale, hearts thirsty.
O! to praise
God's will in the world if we could learn it,
test it on our lips, would taste of praise.
Why else should the world be beautiful? Why should the leaves look as they do, the light, the water?

*Rinsing our mouths with praise of a good man . . .*

I say what I mean. I do not say
a good man in a bad time.
All times are bad when the man fails them.
I say a good man in a time when men are
scarce, when the intelligent foregather,
follow each other around in the fog, like sheep,
bleat in the rain, complain
because Godot never comes; because
all life is a tragic absurdity -- Sisyphus
sweating away at his stone and the rock
won't; because freedom and dignity . . .

O! weep, they say, for freedom and dignity.
You're not free: it's your grandfather's itch you're scratching.
You have no dignity: you're not a man.
You're a rat in a vat of rewards and punishments.
You think you've chosen the rewards: you haven't.
The rewards have chosen you.
I weep.

*Rinsing our mouths with praise of a good man*
*in a time when men are scarce, when the Word*
*chirps like a cricket on the cellar floor,*
*on the stone and the mind maunders . . .*

A good man! Look at him there in the fog! Look!
He saunters along to his place in the world's weather,
lights his pipe, hitches his pants,
talks back to accepted opinions.

Congressional Committees hear him say:
"Not what you think: what you haven't thought of."

He addresses Presidents. He says:
"Governments even now still have to govern:
no one is going to invent a self-governing holocaust."

The Pentagon receives his views:
"Science," he says, "is no substitute for thought.
Miracle drugs perhaps: not miracle wars."

Advisor to Presidents, the papers call him.
Advisor, I say, to the young.
It's the young who need competent friends, bold companions,
honest men who won't run out,
won't write off mankind, sell up the country,
quit the venture, jibe the ship.

*I love this man.*
*I rinse my mouth with his praise in a frightened time.*
*The taste in the cup is of mint,*
*of spring water.*

Archibald MacLeish

# Revelation – science tool?

By Alex Makowski

A British industrialist opened MIT's new Technology and Culture Seminar series Tuesday with a proposal that a new fundamental science be developed to supplement existing empirical methods.

Dr. John Wren-Lewis, of the Imperial Chemical Company in London, urged a sympathetic approach to the study of nature, where knowledge would come from a combination of interaction and revelation. From this approach could come, he suggested, a new appreciation and improvement of man's interaction with both nature and other men.

Wren-Lewis was joined on the Kresge Little Theatre stage by MIT Professors Philip Morrison (Physics) and Jerome Lettvin (Biology). Remarks from both took strong exception to his suggestion of a new form for science.

The seminar presentation was the first of what will be a weekly series of programs exploring the connections between technology and culture. The series' organizers hope the project will develop enough interest within the MIT community to stimulate some program during the January Independent Activities Period.

Wren-Lewis intends his new method to be both a complement to and an extension of present experimental techniques. The current rising tide of anti-scientific and anti-technological sentiment prompted him to examine the background of scientific doctrine, to search for a clue that might explain whether the current negative attitude merely a misplaced reaction to such modern ills as pollution and the arms race, or whether the cause might be some inherent feature of science itself. *The Making of a Counterculture* by Theodore Roszak suggested a direction. Roszak wrote that science fostered two intrinsic evils: the technocracy that made possible the manipulation of masses by experts, and the dedication of society to unlimited economic expansion. The scientific outlook, he continued, is an alienated one – man stands apart from nature, in opposition to it. As an alternative he offered the more religious approach of participation with nature.

The standard defense to such an attack, explained Wren-Lewis, is to point out that the evils of technology are not the results of the scientific revolution but rather the result of flaws in societal structures amplified by the adoption of scientific techniques. Before the scientific revolution, man was expected to study nature to determine the

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# Draft limit set at number 125

*(Continued from page 1)*

drafted. In 1966, at the peak of the build-up for the Vietnam war, 382,000 men were drafted.

The Government is now committed to calling reserves to active duty before there is a substantial increase in draft calls.

Last year, the first year in which the lottery system of selection was in effect, the cut-off number for those drafted was 195.

Dr. Curtis W. Tarr, director of Selective Service, said that draft boards would now give 30 days' notice before a man was inducted. Up to now, regulations required only 10-day notice.

Dr. Tarr also directed draft boards to defer all decisions on classifications, appeals and personal appearances until new regulations were announced in the next few weeks.

According to today's announcement, 6,500 of the 10,000 men to be drafted during the rest of this year will be inducted between November 1 and November 18. The remaining 3,500 men will be inducted between November 29 and December 9.

Men with lottery numbers below 125 who are 1-A and who are not inducted this year will be drafted in the first three months of next year. They will be inducted before any of the men in next year's pool are called.



TECHNOLOGY AND CULTURE SEMINAR

# The Antiquity of Technological Society

Were Ni! An extraordinary documentary on ways of treating the mentally ill in western Nigeria, filmed by Frank Speed of Ibabin University.

Professor Philip Morrison (M.I.T. Physics Department) will comment on the film.

Moderator: Frank S. Jones (Ford Professor of Urban Affairs)

Respondents: Carl Oglesby (Lecturer at M.I.T., spring 1971), Merton J. Kahne (Psychiatrist in Chief, M.I.T.)

**TUESDAY, OCTOBER 12**

**5:15 PM - Lecture Hall 9-150**

THE TECH
Vol. XCI, No. 38 October 8, 1971

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Second-class postage paid at Boston, Massachusetts. *The Tech* is published twice a week during the college year, except during college vacations, and once during the first week in August, by *The Tech*, Room W20-483, MIT Student Center, 84 Massachusetts Avenue, Cambridge, Massachusetts 02139. Telephone: (617) 864-6900 ext. 2731 or 1541.

# NOTES

* Application deadline for Fulbright scholarships for study overseas is today. Applications and further information are available from Dean Harold Hazen, Room 10-303, x5243.

* UGLIES: There is currently a heumongous search for truly UGLY people by teevee, movies, stage, screen & barrel – and you can get in on the first floor! (You can also get in on the second floor, but that's another story!) This year's Ugliest Man On Campus will be displayed atop the highest summit in Massachusetts, to all perceiving personages. "Great!" you say. "But, whizzes: I'd never stand a chance," you say. This is the wrong attitude. You *are* ugly, you are uglier than any of your friends, you are uglier than anybody you can even *think* of! You're certainly uglier than anybody *I* can think of! So do not delay! Hurry down to your neighborhood Alpha Phi Omega dealer (W20-415, x3788), enter the UMOC contest, and achieve FAME!

* If you can marshal at this afternoon's voter registration rally call 227-1218.

* MIT Community Bowling League now forming – if interested, leave name and phone with Herb Newborn, x3161. Tentatively, the bowling will occur on Tuesday nights.

* The CP (Citizen Participation) component of the Cambridge Model Cities Program is looking for new quarters, preferably in the center of the model neighborhood. If you know of any place – an old house, a factory, or store, not being used at present – in the Model Cities Neighborhood, please contact Model Cities CP at 868-8740 immediately.

* FREE PLAY: "The Sunrise," Kresge Little Theater, October 8, 9, 10, 7:30 pm.

* There will be a CJAC meeting today at 3:30 in the Shell Room, E52-461. Open to the MIT Community.

* The MIT Environmental Laboratory is holding a seminar to discuss its projects and goals in Room 9-150 today from 10 to 11 am. All interested members of the MIT community are encouraged to attend.

* MIT Rugby Club practices are Tuesday and Thursday, 5 pm, on Briggs Field. Everyone invited. For information call Wayne Book, x5095, or Ron Prinn, x2452.

* If you were thinking of making a film to go along with your project, but lacked the facilities and/or the knowhow, your time has finally come. There are a few students at MIT who might be able to help you. Contact Alan Lawee at the Film Department, E21-010 (by mail please).

* MIT Peace Coalition presents Daniel Elisberg, "Lying for the State," followed by meetings on what we can do. Wednesday, October 13, 8 pm, Kresge Auditorium.

# UROP

Environmental Medical Service, Medical Department, MIT. Pilot study of heavy metal content of water. Laboratory and field experience for one student, preferably an underclassperson. Contact: Dr. F. D. Aldrich, 20B-238, x5360.

# VOTE

To register to vote:

*Cambridge:* register at Election Commission, 3rd floor, 362 Green St. (police headquarters bldg., Central Sq.) from 8:30 to 4:30 Monday through Friday, and noon to 5 Saturday, October 2; or at City Hall, 795 Mass. Ave., tonight and every night from Thursday, Sept. 30 through the October 13 deadline. Bring proof of residence since May 2, 1971 (lease, listing in old phone book, letter from landlord, utilities bill). You may also be asked to demonstrate self-support (bring a paycheck), and intent to remain in the city after your studies are completed. If rejected, you may immediately request an appeal. For further information or advice call Cambridge Committee for Voter Registration, 661-8661.

*Boston:* register at City Hall (Gov't. Center). Proof of residence (details same as Cambridge) and statement of intent to remain in the city indefinitely are only requirements.

# Second-guessing our 13th presiden

**By Bruce Schwartz Marten**

President Jerome Bert-Wiesner, in his Inaugural Address to the MIT community, said nothing concrete. That's to be expected; ceremonial events are rarely the occasion for anything more substantial than reiteration of the cliches we all live by. The President alluded to this when he said, ". . . the inaugural occasion offers an opportunity for affirmation – for a rededication of the community to the values and ideals we all share."

That sentence is remarkable, not for what it says, but for the assumptions that underlie it. Two years ago, optimism, even of Wiesner's cautious variety, would have been greeted with skepticism by many people on this campus. No one hooted or laughed yesterday. Even more interesting is the idea that there are values and ideals we all share. Two years ago it seemed hard to agree on the shape of the table.

Presidential speeches, then, are best examined not for any expressed message but for what they indicate about the community to which they're addressed. Bear this in mind; and though it may be true "The times are no longer conducive to speculation," let us speculate.

*

MIT has survived the upheaval of the last three years. Student activism is at its lowest point in half a decade – for a number of possible reasons, too complex to explore here – and seems likely to remain that way for the immediate future.

The administration, for the moment, is complacent. The indications of this are subtle but clear. Jerry Wiesner is so sure of his office door he's had it glazed. More significant is the near-total lack of students on the touted Inaugural Events panels. Until recently it was customary for at least a few co-opted students to be invited to participate in such functions; now, with the radical challenge all but gone, even that aura of legitimacy is unnecessary.

The students aren't complaining. One perplexed administrator was wondering last week why attendance at the panels was so poor. He was told it was because classes hadn't been cancelled. In April 1969, when pressure on MIT's research policies was still building in the wake of the March 4 research stoppage, the Institute tried to stave off the impending confrontation with Agenda Days – two days of discussions and panels, which were considered sufficiently important to warrant cancelling classes. The handling of the Inaugural Events panels clearly demonstrates the real educational priorities of the Institute, and gives some idea of the inertia and conservatism at work against "the integrated education we dreamed of . . ." Despite everything, despite the Commission, pass-fail and frosh-soph "alternative programs," the Institute at its core has remained unchanged. Passing courses and attaining professional competence are still paramount, rhetoric aside.

In Wiesner's speech one almost detects a sigh of relief that it is so. Reaffirmation is the key; MIT will continue to build upon its base in science and engineering, expanding, diversifying – getting better all the time – sobered, and yes, even humanized a little by its brush with discontent, but always moving along the paths laid out under twelve previous presidents, from Rogers to Johnson. Such is the inertia of a great institution.

Yesterday the president, invoking the great names of scientific mythology, trotted out the cavalcade of progress to reassure us that we are correct in our basic commitments to research and learning, their dissemination, and application. In emphasizing the social commitment of the Institute, he did not depart from tradition. The concept dates back to William Barton Rogers. Only the interpretation of social commitment has changed, at it has for the most part reflected the demands of American society. (For those who prefer a more rigorous analysis, substitute "the demands of those who set American priorities.") Until the 1960's these demands were mostly technical and heavily military-oriented. (That MIT has been unable to divest itself of its war-oriented functions reflects the impasse of the larger society, as well as MIT's possibly fatal flaw – its economic dependence on government funds.)

Under the last three presidents "the social and behavioral sciences, management, humanities and the creative arts have taken their place alongside the original activities . . ."; now, "Our commitment must be to progress in significant and inspiring steps toward solving our local and global problems." Dr. Wiesner is no fool; when he invoked the memory of the New Frontier's "words of ten years ago which conjured visions of great new worlds," he tempered his remarks by reminding us of "our burden . . . we *know enough* today to make dire, and specific, predictions about the future – and most of us here this afternoon will live to see some of them come true."

But in the Wiesner view, cautiously hopeful, things just might work out all right. It may be just that ol' liberal rhetoric, but it's a lovely vision. Technology is not the source of trouble, "our central problem is man himself." Once Howard Johnson could crassly say, "The answer to the problems of technology is more technology." No merely technical solutions for Wiesner; rather, technology and the managerial techniques, as social tools in the hands of humanized technocrats, can clear up the multi-crisis. In support of his optimism, Wiesner said: "The social feedback systems are working," and cited the change in ecological attitudes since 1961, the change in cold-war nuclear testing, and the rise of educational experiments.

Every institution, even one polarized around science, requires a faity. Dr. Wiesner may regard anti-intellectualism, mysticism and primitivism as synonymous; they are not. If we at MIT share common beliefs, then a mythos guides our way; if our purpose is learning, from which no orthodoxy shall divert us, our purpose is an orthodoxy. Wiesner was invoking the MIT image for the 1970's when he said, "The university has become the essence of the enigma that is the future; in it are fused the hopes and disappointments that power the continuing revolution of the times." MIT is thus seen in its traditional spearhead role: At the Edge of History.

Indeed, Wiesner's speech kept drawing me back to the words of the expatriate humanist from MIT, William Irwin Thompson, describing the humanized "Millenium Under New Management": "In their mod clothes and sensitivity trained style, the new managers will understand the needs of a complex, post-industrial culture: the last vestige of puritanical America will be swept away and in the new empire they will have psychedelic TV and legal pot."

*

Will it? Is MIT destined to have its cake and eat it too – crumbling interdisciplinary barriers, general as well as specialized education, dozens of alternate modes, sensitive engineering? Can we expect to see in our lifetime the prospect of an MIT education encompassing 20 years or more, while a man passes in and out of the walls of the institution proper, gaining living experience while patiently building up a stock of skills?

There are indications to the contrary. Dr. Wiesner said "We have begun to break the academic lockstep . . . the project laboratory, the seminars, the undergraduate research involvement, the Experimental Studies Group, the Unified Science Studies Program all add new dimensions to undergraduate educational opportunities." The lockstep, however, takes over at the end of one or two years – and may be the reason why some of these options, introduced with such fanfare, are now quietly faltering. Enrollment in USSP, ESG and Concourse is running far below expectations, perhaps for good reasons: indications are that USSP and ESG do not prepare students to cope with the standard academic format. What student wants to risk crippling himself?

The dropoff in USSP, ESG and Concourse applications may indicate an omnious trend in the kind of student MIT is attracting: at the very moment when Jerry Wiesner is praising the qualities of MIT students, they are demonstrating a decline in those qualities of adventurousness and imagination that inspired the praise. It is not difficult to imagine this campus returning to the apathy and toolishness of the fifties, as adventurous potential students continue to self-sel out.

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Perhaps I should be more charitab The absence of activism, even in edu tional affairs, may only indicate that t thrusts of the past few years have improved the formal governance mec nisms that students no longer feel t need to complain. Students now sit most faculty committees, for exam and commons is now voluntary. There many formal outlets for those interest in ecology, urban affairs, even mystici

What could possibly be left to distra us from our studies?

*

Speaking on an occasion usua characterized by rhetoric as bloated drowned man, Dr. Wiesner at le deserves credit for presenting a balanc and low-key appraisal. One can make few carping criticisms; for example: "A the only loyalty test we shall impose that of loyalty to learning." Anyo familiar with tenure scrapes knows th loyalty to research is requisite for faculty member; as students we all kn that loyalty to Institute requirements w win the degree whether we learn anythi or not.

But it's a catchy sentence, and yo have to tolerate such things in publ addresses. Only two more sentences – neither very catchy – merit speci consideration.

First: "And to those who see uncon trolled technology as the major source our social dislocations, MIT is the speci symbol of their concerns and frequent the object of their anger." Their anger misplaced, yet justified. Dr. Wiesn believes that we must learn to control th technology we unleash, but this "we" larger than the Institute. As MIRV, AB Vietnam and the environment demon strate, once the technology leaves ou labs, it is in the hands of other men. Th control that Dr. Wiesner talks abou implies a greater concentration of pow in the hands of a scientific-humanist elite, who can make humane decision *with* some knowledge of what thes judgements entail.

This contradicts a later phrase (an this one is rather a glib piece of liber rhetoric) – "We hope to educate men an women here . . . who will work, not a elite specialists, but as individuals amon

*(Continued on opposite page)*

*STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION*

1. Title of publication: The Tech
2. Date of filing: 9/30/71
3. Frequency of issue: twice weekly during college year, except vacations; & once first week of August
4. Location of known office of publication: MIT, 84 Massachusetts Avenue, Cambridge, MA 02139
5. Location of the headquarters of general business offices of the publishers: MIT, 84 Massachusetts Avenue, Cambridge, MA 02139
6. Names and addresses of publisher, editor, and managing editor:
Publisher: Bruce Weinberg, 400 Memorial Drive, Cambridge, MA 02139
Editor: Robert Fourer, 13 Perry Street, Cambridge, MA 02139
Manager Editor: William Roberts, 3 Ames Street, Cambridge, MA 02139
7. Owner: MIT, 84 Massachusetts Avenue, Cambridge, MA 02139
8. Known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages or other securities: NONE

I hereby request permission to mail the publication named in Item 1 at the reduced postage rates presently authorized by 39 U.S.C. 3626: (signature of Bruce M. Weinberg, publisher)

10. The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes have not changed during preceding 12 months.

11. Extent and nature of circulation – average no. copies each issue during preceding 12 months, and actual number of copies of single issue published nearest to filing date, respectively:
A. Total no. copies printed: 5000/6000
B. Paid circulation:
1. Sales through dealers and carriers, street vendors and counter sales: 3000/3250
2. Mail subscriptions (2nd class + MIT Interdepartmental mail): 600/494
C. Total paid circulation: 3600/3744
D. Free distribution by mail, carrier or other means:
1. Samples, complimentary, and other free copies: 750/1300
2. Copies distributed to news agents, but not sold: 0/0
E. Total distribution: 4350/5044
F. Office use, left-over, unaccounted, spoiled after printing: 650/956
G. Total: 5000/6000

I certify that the statements made by me above are correct and complete: (signature of Bruce M. Weinberg)

# Wiesner on technology and the quality of life

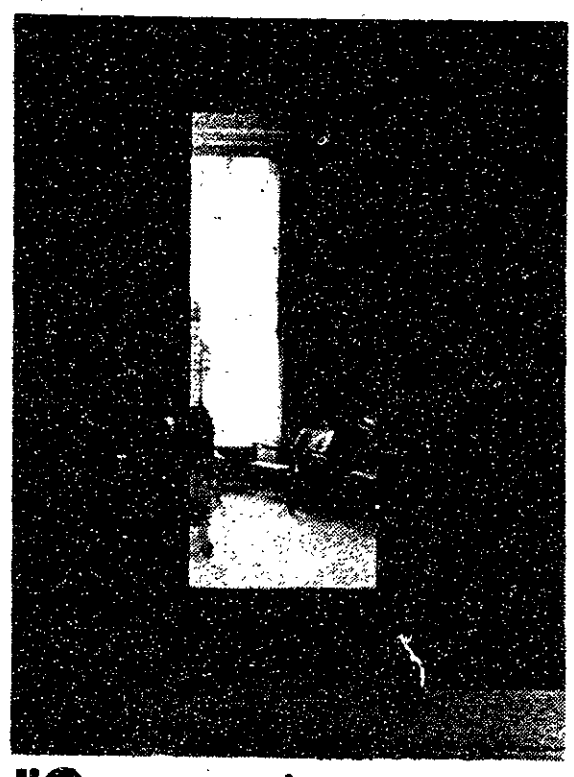
*Following is the text of Dr. Wiesner's address delivered to the Inaugural Convocation yesterday.)*

There is a decided preference among newly designated university presidents to eschew the traditional pomp and ceremony of an inaugural occasion. Frequently, in recent times, new presidents have taken up their duties almost clandestinely, with essentially no formal recognition of their arrival, and faculties only learn of their presence through a cut in the budget. My own predilection was to propose that we, too, forego the traditional observances. There are many reasons, I suspect, for this almost universally instinctive impulse. One is a strong urge to save money; another factor, I am sure, is the recognition that pomp and circumstance are not seemly at a moment when the society is so seriously troubled.

But, in fact, during these past weeks I have become aware of a deeper intuitive wisdom that counsels that the inaugural occasion offers an opportunity for affirmation – for a rededication of the community to the values and ideals we all share. The uncharacteristic shyness of new presidents is a reflection, no doubt, of a general unwillingness to rehash cliches, a refusal to repeat the tired promides that are yielding such meager rewards to the current crop of political aspirants.

The times are no longer conducive to speculation. Our burden is that we *know enough* today to make dire, and specific, predictions about the future – and most of us here this afternoon will live to see some of them come true. Nor do the times call for purely expedient commitments to action. We all have memorized the words of ten years ago which conjured up visions of great new worlds; our need now is to move practically and painstakingly toward their fulfillment. Our commitment must be to progress in significant and inspiring steps toward solving our local and global problems. In pursuit of these tasks we cannot afford cliches, and a failure to examine and re-examine ideas will amount to a betrayal of the human race.

In this context I wish to reiterate what I see as the basic purpose of any university and ours in particular: it is the quest for learning, the nurture of learning, the transmission of learning, the use of learning. We are all gathered here, teachers and students, to expand man's knowledge of his universe. No doctrine, no orthodoxy, no conventional discipline or gust of political passion can be allowed to divert us from this purpose. When this university was founded a century ago, the atom was an irreducible unit, radiation was not understood, the great equations that frame the physical universe were undreamed of; Pasteur was just beginning his work. Einstein was unborn, the moon was more than a lifetime away. As much as any institute of learning in the entire



***"Our country presently is full of public mourners, of dour analysts of the future. I do not count myself among them."***

world, we have helped roll back the frontiers of darkness. And we shall continue. Here we shall offer shelter for the search for knowledge to all those who come, at any age, to join in that search. And the only loyalty test we shall impose is that of loyalty to learning.

In this spirit and under the leadership of the three distinguished presidents who are with us here today, our pride of presidents, the faculty and alumni of MIT have earned us an honored place among the world's great universities. Through the guidance of Drs. Killian, Stratton and Johnson, the social and behavioral sciences, management, humanities, and the creative arts have taken their place alongside the original activities in science and the "useful" arts (as founder Rogers called them), adding substantially to MIT's intellectual breadth and distinction, and to its record in public service.

The seminars of this inaugural week have reflected the uncertain mood of the times in which we live and have highlighted the necessity for re-emphasizing the essential value of research. They also reflect a deep awareness of threats to the quality of life in our society and the need for increased sensitivity to the dangers arising from the careless exploitation of new technology.

I have been impressed, since being appointed President, by the great concern and affection of people I meet everywhere for the welfare of MIT and for universities in general. The hidden message I decode is that a lot of people, including many with no ties to the academic world, do care about the universities, do look to them for leadership and, consequently, are very upset when they find their performance disappointing. But I also hear much criticism of MIT specifically, as well as of other universities. The criticism comes from everywhere, old and young, rich and poor, radical and conservative, from all ethnic and minority groups.

For each group the university is the symbol of its frustrations and fears. The reactionary elements in the society are prone to view the university as a subversive force and belive that its administrators have been too tolerant of student and faculty challenges – some say threats – to the established order. Large numbers of young people and those adults who want more rapid social reform are critical because they consider the university a conservative force whose primary function is to "socialize" – in their words, "co-opt" – students for a role in society which they see as exploitative, unsatisfying, and, to varying degrees, obsolete and designed to support existing institutions and social relationships. We have achieved the dubious distinction of being regarded, at one and the same time, as the hothouse of revolution and the propagator of the status quo. To the poor and the blacks, the university is the locked gateway to opportunity. And others see the university as an untrustworthy ally whose staffs use knowledge sought at public expense to frustrate government purpose. In other words, to many citizens of our society, the university has become the essence of the enigma that is the future: in it are fused the hopes and disappointments that power the continuing revolution of our times. Academia, with its conflicting constituencies, is at once the intellectual front line and the only neutral meeting ground of that revolution.

The many individual objections to the performance of universities are given coherence and are amplified by a growing wave of anti-intellectualism, mysticism, and primitivism. This new evangelism is fostered by those who feel that the structure and goals of a society which stresses the achievement of material progress through science and technology, cannot provide a life of dignity for the individual. For these critics, including many students and faculty, the university is in league with the enemy; for some it is the enemy. And to those who see uncontrolled technology as the major source of our social dislocations, MIT is the special symbol of their concerns and frequently the object of their anger. They are persuaded that the social and economic forces which propel technological innovation cannot be directed toward the general welfare; that, in fact, technology represents a malignancy which will dominate our civilization and ultimately condemn all men to be slaves of a vast impersonal and all-powerful organization. Their cry is that its onslaught must be stopped.

If this vision is correct, we are already doomed, for it is clear to me that we cannot escape technology in some form. In fact, I am convinced that without new scientific knowledge and wise technological investments now and in the future, the problems of mankind will only increase. At the same time the increasing complexity of society and its capability for control of the individual pose very real hazards and these matters require our continuous vigilance.

I view the present multi-crisis differently – and hopefully. I see it as a perilous but positive phase in man's continuing evolution – a process now determined largely by his own actions, which he is still learning to manage. At this juncture, it is our obligation to intervene on the side of man. Ironically, the problems we face stem from our success – from efforts to achieve equality and a decent life for all citizens.

Science and technology have helped create our present predicament by extending to most of us options in modes of living and working that were previously reserved for a privileged few. For too long we have been totally hypnotized by what we could do. Until recently, people in the "advanced countries," as we like to call ourselves, have assumed that any application of technology that expanded mastery over nature was desirable, and we have ignored the implications of this power. Rarely before this decade was the relationship between technological change and man's social, biological, and physical environment examined; only obvious benefits were considered and only immediate costs. Little consideration was given to the "ecological" dimensions of innovations – physical, social, or psychological. It is precisely the chasm between our tremendous power to change and our apparent inability to guide these changes for the good of mankind that has led to the feeling of desperation and the loss of confidence in the scientific approach.

But, if we look at recent events with some detachment, we can see some positive responses to these problems. The social feedback systems are working.

Not long ago the environmental hazards were recognized by only a few experts whose warnings were completely disregarded. I remember how violently Rachel Carson was attacked in 1961 for her statements about the deadly consequences of the indiscriminate use of pesticides, and a panel established merely to look into her allegations was strongly criticized. The use of many of the chemicals she warned against is now prohibited. Likewise a decade ago man-made radioactive poison fell from the sky with every rain, doing incalculable damage to living beings everywhere on the planet and jeopardizing hundreds of future generations. The nuclear test-ban

*(Continued on next page)*

# Second-guessing

*(Continued from preceding page)*

the other 200 million Americans to bring about the necessary improvements in our society." The idea of a non-elitist MIT is laughable. Not only does it contradict every value of the Institution ("You are the most intelligent freshman class in history. Your mean SAT scores . . . "), it runs counter to the trend of history in which the increasing complexity of society renders the average citizen increasingly less able to comprehend and control his fate. A fully technologized future dictates a technological power elite; the final irony is the one Herrnstein postulates: the less racist and more meritocratic the society becomes, the more social class will depend on intelligence . . . and willingness to cooperate with the big scheme of things.

The big scheme, of course, may be devoid of pollution, war, and poverty, and still be alienating. At this point, however, I refer you to Aldous Huxley and return to the subject of Jerome Wiesner.

*

What can we expect of the Wiesner administration? The answer seems clear, from his statements and actions since taking office July 1: The same, only more so. We will see more educational experiments, perhaps a further loosening of requirements, a thrust into ecological activities, some implementation of Commission recommendations, brought in line with reality by the Rogers Task Force. The latter indicates that some effort will be made to wrest control of undergraduate education (at least in the first two years) from the departments, and to create an "undergraduate college." This, however, involves a long pull through the faculty, which is notoriously conservative about departmental prerogatives. The outcome is uncertain.

The major difference between this administration and HoJo's will probably be one of style. Wiesner's new door is symbolic – he is a more public person than Johnson, preferring to work in the open where HoJo stayed in the shadows, pulling strings. As Provost he attempted to remain accessible to students and faculty, and where HoJo always seemed aloof and devious, Wiesner seems to be genuinely concerned with the people who bring problems to him. In personal terms, he is a much more affable man.

If he has an outstanding flaw, it is probably his composure under fire. The November Actions period placed him under tremendous stress, and it showed in his nerves. Backed into a corner by an aggressive (often obnoxious) questioner, he was likely to blow his cool and take angry offense; in the spring of 1970 he became so incensed at radical posters he personally ripped them from the walls; Since then he has regained his former aplomb, but should a similar situation arise it is unclear whether he could be the crisis-manager HoJo (or rather, the HoJo *team*) was.

One thing Wiesner has in common with Johnson: he will fight any attempt to weaken the institution. Since the fundamental structure is resistant to change, this will prolong the liberal dilemma he expressed two years ago when, pressed by this reporter on the ABM question (he opposed it vigorously, but objected to radical efforts to force it out of the Draper Labs), he replied, "I don't think I have the right to sabotage a policy of the United States government." This means he will continue to be in the position of administering some projects he may find personally distasteful.

Nor is it likely that he would tolerate any actions like the president's office occupation. Though he often expresses sympathy with radical aims, he is not partial to methods involving force or violence, and would probably react much as HoJo did – though with considerably more anguish.

*

Finally, a brief comment on Jerry Wiesner's poem. Invading Archibald MacLeish's craft, he concluded his speech yesterday thus:

*No equation can divine the quality of life*
*no instrument record,*
*no computer conceive it.*
*Only bit by bit can feeling men*
*lovingly retrieve it.*

Jerry is an electrical engineer, so we must assume he was aware of the pun in the last two lines.

Moooann.

But what does it mean? Lovingly retrieving bit by bit implies the quality of life may exist somewhere in core storage of the 370/155. Perhaps one day we can call up the comp center via dataphone, hook into the stainless steel electrodes implanted in our skulls, and experience 18.01, the odor of tear gas, or an orgasm.

As though life were something to be retrieved rather than created.

# Wiesner address

*(Continued from preceding page)*

treaty of 1963 almost completely stopped that poisoning of the atmosphere. Today, protecting and improving the quality of the environment is a major national goal which almost everyone accepts, and is prepared to pay for, and the human, social, scientific and political issues involved are receiving concerted academic study.

Another major response to current dissatisfactions with the status quo was that mounted by the country's educational system. As I think of it, it has been the most massive reaction in my memory to a social crisis. At all levels and in every kind of school we see new programs, experimentation, a reaching upward in a continuing search for a "better," more engaging and significant education. However, it's obvious that, to date, the good intentions outrun accomplishments.

No where, I believe, is the fervor for educational innovation and for undertaking inquiries into society's many needs greater than right here at MIT. And, an important reason for this educational ferment has been the students themselves. They are knowledgeable and mature. They insist upon a chance to think about who they are and why they are doing what they are doing and where they are going. They want to develop broadly in all spheres – moral, social, intellectual and political and they do not want their lives compartmentalized. They are eager to work hard and anxious to learn, but only in connection with a faculty and an institution they can respect for its values, its commitment to society, and its attention to the individual. To a far greater degree than his counterpart of a decade ago today's student contemplates a career in some part of the public sector of in an industry that is oriented to social responsibility. (This is indeed a heartening sign.)

We have begun to break the academic lockstep – to make it possible for a student to learn in a style that suits him, at a pace that he chooses, with the freedom to tailor his own academic program. The project laboratory, the seminars, the undergraduate research involvement, the Experimental Studies Group, the Unified Sciences Studies Program all add new dimensions to undergraduate educational opportunities. These accomplishments have been accompanied by the development of a deep sustaining interest on the part of students and faculty in the educational process itself as a discipline worthy of investigation and study, in which a regard for subject matter, a broad knowledge of human beings and an appreciation of the possibilities of technology are joined.

There is still much to learn. How can MIT more fully engage the outstanding young people it attracts? How can it help them discover themselves? How can it organize its programs and utilize the promising new technologies to permit faculty members to spend more of their time and efforts in direct relationships with students? How can MIT make effective use of the educational potential in industry and government? How can it respond to the hopes of many alumni for a more intimate and productive association with the Institute through periodically renewed contacts for learning? And how would such continuing educational programs alter the time and substance of the formal university experience?

This is a unique moment to pause and re-examine our educational policies, for the walls of the professional departments are breaking down to make room for the evolution of new unities. Professional faculties and their students are reaching out to society – the neighboring community, government and industry – order to make a conscious contribution, through understanding and action, in the fields of environment, health, urban studies, architecture, educational innovation, international understanding, and in the management of science and technology. This movement can stimulate a renaissance among the professions in which man will replace machine at the center of the stage. New cooperative ventures involving the social sciences and humanities should draw disparate disciplines closely together and in so doing provide opportunities to create exciting new forms of professional education. Thus we can recast the concept of a liberal education in a contemporary mold by integrating science and technology with the study of man and his culture. Perhaps then the history and philosophy of science and technology will become a significant aspect of humanistic studies.

Last year William Arrowsmith, the classics scholar turned educational innovator, surveyed the spreading dissatisfaction within liberal arts institutions and responded with a not dissimilar vision of a new educational synthesis flowing from the impact of current social turmoil on the professions.

He said: "We have integrated problems and disintegrated skills. And the alienation of knowledge and the liberal arts from the crisis of the professions is no longer a tolerable luxury. If the liberal arts attempt to maintain their traditional aloofness, their devotion to pure research and contemplation, their subject matters will simply be appropriated. The professionals have no alternative; they are too close to society, to the convulsive chaos around us, to escape responsibility for change, for rational and humane action." And he went on to say: "The professions, I am suggesting, have encountered the 'other;' a new humanism is already taking shape among younger professionals in response to the desperation of those who depend upon the professions. And because the professions cannot do without the arts of knowledge and the liberal arts, their encounter will eventually spread to education, too.

Twenty-two years ago a faculty committee of which Dr. Stratton and I were members concluded its recommendations with the hope that "the Institute may become known as a place where the professional training and the general education necessary for professional leadership are integrated." To assist in achieving this goal, the committee recommended the establishment of the School of Humanities and Social Sciences. Though the School has become a distinguished and vital component of MIT, the integrated education we dreamed of did not emerge. Partly it was because the goals were not clearly articulated, certainly not generally understood, and perhaps not even quite believed in. Perhaps we didn't appreciate the difficulty of the task – it is easier to teach facts and problem-solving skills than to teach the expressive and appreciative skills. Despite the fact that some of these objectives have eluded our grasp, we know we have great strengths in the School to support our new initiatives.

What I have explored here today is in the nature of midcourse guidance for our academic flying machine. As I close, I would remind us of our immediate opportunities to enhance the quality of life close to home – on the campus and in the neighboring community.

First, to make careers in science and engineering more attractive and accessible for members of minority groups and women, through opportunities as students, faculty and as staff employees at MIT.

Second, to contribute through our actions and support to the well being of the community in which we live.

Third, to seek new ways of collaboration with our sister institutions of the area. Our joint programs with Harvard University, Wellesley College and the Woods Hole Oceanographic Institute already play a major role in the lives of many students and faculty, both through collaboration and the sharing of resources. The interchange of students and faculty enriches far beyond the scholarly opportunities thus provided.

Lastly, charity, they say, begins at home, and we must remain committed, in spite of severe fiscal constraints, to continue the recent efforts to improve the quality of the campus environment.

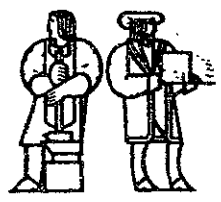
Now, let me recapitulate the thread of my thoughts. Our first responsibility, as I have said, is to learning itself. Our second responsibility, since ours is the world's foremost institute of technology, is to understand what our learning and discoveries may do to man and society, and to transmit that knowledge to new generations, to men and leaders who may be wiser than we in applying it, or wiser in judging how slowly or rapidly these technologies may be absorbed.

I conclude with a humility forced on me by the contemplation of my own experience and the experience of our country in these times, with the realization that our central problem is man himself. If, through our quest for learning, we can develop wise men; if, by our research and study, we can deliver leaders trained in the study of nature's evidence and nature's promise; if we can shape young people who are fully aware of their own powers of mind, who have the courage to stand alone; who are committed to justice and to humanity, people modest enough to know that men trained in other disciplines may understand America as well as they – if we can do all this, then MIT may face a future as glowing as its past. As an institution within a larger community, we must respond to national needs. We hope to educate men and women here who will help, when they leave and as they mature, to define what those national needs are – who will work, not as elitist specialists but as individuals among the other 200 million Americans to bring about the necessary improvements in our society.

Our country presently is full of public mourners, of dour analysts of the future. I do not count myself among them. The times are hard today; no one would see this as a moment ripe with the full flowering of the American spirit. Yet the times have always been hard for men who seek to change, whose occupation and calling is the forecasting and the fostering of change. For those of us who see problems as challenges, these times may be one of the rare opportunities in history when men of our kind may contribute their most. I am thankful to have, at my side, one of those men, Paul Gray, my long-time colleague, as Chancellor. I take pride in this new opportunity; I am hopeful for what lies before this community; I rejoice in the adventure which, all together, we can look forward to sharing.

Many years ago Mr. MacLeish suggested that civilization would not be healed until people could see and know feelingly. His words should ring in our memories as we go about our tasks, and if he will excuse may presuing this once to invade his craft I will conclude thus:

No equation can divine the quality of life
no instrument record,
no computer conceive it.
Only bit by bit can feeling men,
lovingly retrieve it.



inaugu-ration **ARTS**

# Concert proves diverse

By Robert Fourer

A concert is a public gathering at which musicians perform.

An Inaugural Concert is just like a concert, except the public consists of quite a few more celebrities than usual, and the musicians include a symphony orchestra, various soloists, a few speakers, a folksinger, a huge choral group, and two loudspeakers.

Such is the conclusion one must reach, at least, on the basis of last Wednesday night's festivities at Kresge Auditorium in honor of MIT's thirteenth president.

The occasion reminded one not so much of a modern concert as of the "academies" of Mozart's day, which sported a great variety of performers aimed to keep everyone in the audience happy. From all indications, the formula still works – the Kresge crowd was more than pleased, and the guest of honor was duly honored. There was even some Mozart . . .

To start at the beginning, though: the concert commenced with an Inaugural Fanfare for Digital Computer by Assistant Professor of Music Barry Vercoe. Appropriately enough, the piece's twelve-tone theme was made to derive by a clever algorithm from the letters j-e-r-r-y-w-i-e-s-n-e-r; its statement by a trumpet-like sound was expanded to a pleasantry of several minutes' duration which sounded like nothing so much as a spaced-out wind ensemble. The "performers," two rectangular speakers at either end of the stage, were not in the best of form at extremes of bass and treble, but the overall effect – with the orchestra and half the chorus sitting mute on stage – was intriguing.

Fanfare was followed by overture – Brahms' Academic Festival, performed by the MIT Symphony, Robert Freeman conducting. Commissioned for a similar festive occasion, it is hardly one of its composer's greatest works nor is it susceptible to great performances. However, its medley of crescendos and schoolboy songs seldom fails to set a festive occasion off in the right direction.

Concluding the program's first section was a major orchestral work – Mozart's Clarinet Concerto, K. 622, with soloist Ray Jackendoff (Sc.D., MIT '69). The rationale behind the selection is obscure, since this piece is notably immune to displays of technical proficiency (for which MIT is supposed to be reputed). One must not only do it right, but well: one has heard this said of science and technology, too, so maybe the performance was a portent of the policy to come.

In any case, the performers acquitted themselves well, within reason. The program notes made much of certain changes to the solo part effected by Messrs. Freeman and Jackendoff; more accurately, they devised substitutions for changes originally made over a century ago when the primordial clarinet of Mozart's time gave way to the standard modern instrument, whose low range is a third higher. The differences were of note only to those very familiar with the piece.

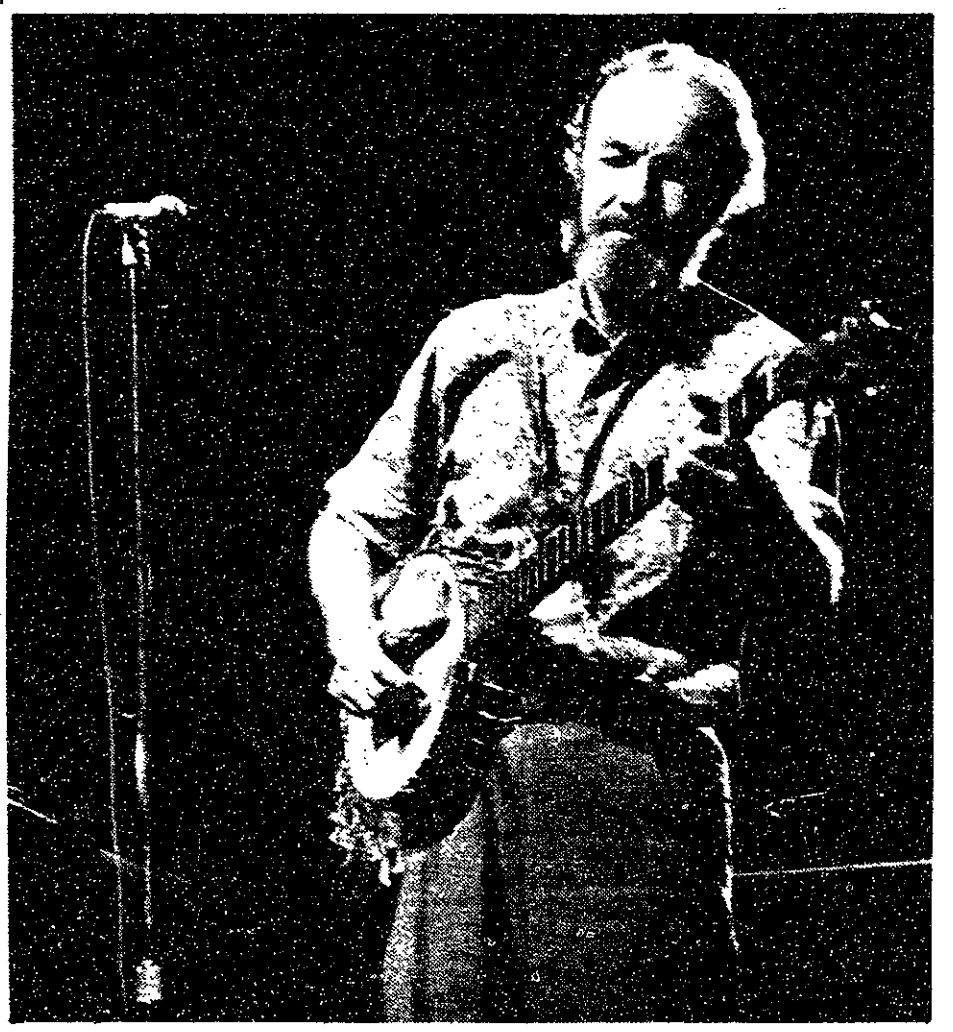
After intermission came an even greater variety. First off were Merwan Songs for Alto Flute and Piano by the late Prof. Gregory Tucker. His untimely death last summer had prevented his composition of an orchestral piece for the occasion, and so this recent chamber piece was offered in his memory. It was performed by Karl Kraber, flute, and Frederic Rzewski, piano.

Music then ceased for a short while as the flute was replaced by a lectern for playwright Lillian Hellman, an old friend of President Wiesner's. She called for a brotherhood of science and art, to oppose their real enemies: governments which misuse science. Science can create or destroy, she stated, while artists express the creation or warn against the destruction.

Ms. Hellman then introduced Pete Seeger, who arrived along with the ubiquitous stagehands who had already received several rounds of applause for their manipulation of the podium.

For two hours now, the Glee Club and Choral Society had sat largely unoccupied at the back of the stage; it was a relief when Klaus Liepmann finally appeared to conduct them. Their part of the program, the concluding section, continued Seeger's theme of the American heritage: four Pilgrim Psalms arranged by Ross Lee Finney, and the 67th Psalm by Charles Ives. They were brief, but provided a satisfying and not anticlimatic conclusion.

The festive aura of the occasion recalled other affairs two and three years ago, when concerts and other large gatherings were commonplace. It is to be hoped that excitement will not now be limited to inaugurations.



Pete Seeger on stage at the Inaugural Concert Wednesday evening.
*Photo by Sheldon Lowenthal*

# Pete Seeger: Quiet Radical

By Neal Vitale

"This machine surrounds hate and forces it to surrender."

*—motto on Pete Seeger's banjo*

Pete Seeger opened his part of Jerome Wiesner's Coronation Concert on that very banjo with one of the most famous of American folk songs, "John Henry." He then talked a bit about the song he was going to sing, Woody Guthrie's "Ain't Got No Home In This World Anymore." It was written for the workingman of the early-mid 1900's, who was uprooted, homeless, mortgaged 'till his death, slave to The Man. It was very appropriate then, but of course, now everybody has a home – and he proceeded into "Little Boxes." The song is a scathingly subtle attack on the middle-class, living in a suburban world of little boxes made of "ticky-tacky," a people put into little boxes and into the universities ("all the chemists and the engineers . . . ").

Seeger changed over to his twelve-string guitar and decided to show everyone what he's been doing. He held up a couple of "pie" graphs showing how much of the "very gross national product" of a trillion dollars is spent on what (we spend as much on food as China's whole gross national product) and showing us how much the government spends on what (he didn't have to explain what the biggest piece – about 50% – was for). He talked about how people were so worried about how much it would cost to clean up the water, despite the incredible wealth we possess, and about how the government is reluctant to increase the "all-out war on pollution" (already less than ½% of all the government spending) because it would be taken out of housing (2%).

Seeger's analogy was well taken as he described how he felt at times, like one of the deckhands on a ship heading down a river straight towards some falls. The captain would take orders only from the ship's owner, who didn't know what he was doing, and the other deckhands were afraid of what would happen no matter what course of action they pursued. His only hope was that the boat wouldn't get hung up on a reef twenty feet from the falls and hang there for years. So then he launched into a tune about how if the revolution comes, we'll all have to learn to survive, and especially, learn to *share*. But if we learned to *share* now, there'd be no need for a revolt.

Seeger then lightened up the festivities a bit, dropping the heavily political content of his talk and doing an old Leadbelly song, "Rock Island Line," with the audience, Choral Society and Glee Club singing the chorus. He then switched back to banjo and, after saying that a combination of Woody Guthrie and Jerry Wiesner is what the country needs, went into a Guthrie number to finish his bit. He sang "This Land Is Your Land" with a set of verses that included a couple of Guthrie's that wouldn't be found in many school song books and an original one by Seeger, bringing in comments on welfare, universities building missiles, and fear of people deciding that burning is the best way of change. Ending with a rousing sing-along on the chorus, Pete Seeger exited to a standing ovation.

Afterwards I talked with Seeger briefly. Most of his time currently is tied up with the anti-pollution campaign on the Hudson River. He lives on the houseboat *Clearwater*, anchored in the river. Along with about two thousand others, he's succeeded in getting about a quarter of the plants along the Hudson to comply with various pollution controls. Yet there are still many offenders, mainly the big municipal corporations, and they are not going along with the anti-pollution measures. The clean-up forces just aren't big or powerful enough to do much more. Seeger expressed hope concerning a young biologist, Domenic J. Pirone, who is taking over command of the operation, and was more optimistic for the future.

Seeger also mentioned a few things in regard to people changing the system. He's bothered by the fact that students aren't getting out and working for change, and not with bombs, but with votes and politics in Washington. He also raised concern over the control exerted over the television medium. In actuality, it is probably the most censored of the media. There is virtually no way any anti-war, anti-defense, anti-pollution, any controversial matter can be aired in prime time without the consent of the networks (and with their vested interests, they don't). Television is one of the most crucial of all means of communications, yet it is almost dictatorially handled.

Seeger seemed a little withdrawn as I spoke with him, most likely due to the milling mob around him. He noted how his music was suffering at the expense of his various activities and causes, but said he was enjoying it all and learning an awful lot. A sampling of opinions from others in that room, including Wiesner and Paul Gray, found many enjoying it all and learning a bit each in his or her own way.

# Brass enlivens Bldg. 7

By P. E. Schindler, Jr.

At its peak it stopped almost 350 lunch hour passersby in the lobby of Building 7. In terms of the number of people directly affected, it might have been the most spectacular Inaugural Event to date.

The Cambridge Brass Ensemble performed a noon hour concert in the main lobby last Tuesday afternoon, to the delight of almost all who came into contact with it. In particular, their first selection fascinated the crowd, as they played a piece written for 30 positions and 7 instruments, during which they took full advantage of the new superstructures in the lobby with each musician wandering from place to place to play his line of the melody. No one kept count, but they may well have used 30 positions.

This first piece brought a lengthy round of applause, during which the musicians seated themselves for a more normal attack of sound during the remainder of the concert. Although there were occasional lapses, the performance was generally very good – at least the audience which had gathered during the half hour of the concert thought so. They gave the group a rousing 2 minute standing ovation, which resulted in another 5 minutes or so of encores.

Even those who did not stop, or who only paused, were visibly affected by the concert. Almost no one passed through the lobby without turning their head to look at the musicians and smile before scurrying on into the bowels of the Institute. The atmosphere was festive and the happiness at seeing such a thing in the normally staid lobby seemed contagious.

Robert Hazen and Peter Conant, trumpets, David Ludwig and Robert Keener, trombones, and Dan Witschey, tuba, perform for a noontime crowd in honor of Dr. Wiesner. *Photo by David Searls*

# Computer use examined

By Lee Giguere

A discussion of the topic "Can People and Computers Co-exist?" produced a plethora of views about the capabilities of computers and their role in society, but came to no solid conclusions about the question posed in the title.

Professor of Electrical Engineering Robert Fano, moderating the discussion, suggested at the outset that while the title of the panel was "selected to be challenging," he was "afraid we overdid it."

Fano laid before the panelists, who included Professors of Management George Gorry and William Martin, and Professors of Electrical Engineering Jerome Saltzer, Joseph Weizenbaum, Terry Winograd, and Patrick Winston, some ideas about computers. First, he advanced that "computers will be used more and more in the operation of society," because of the extreme complexity involved. Secondly, he argued that "whenever computers are used, a social decision is made, and that the state of technology controls the class of social decisions that are implementable."

The succeeding discussion then focused on two questions raised by Professor Fano: Will computers inject more conformity and rigidity into society or will they allow more flexibility? and, What is the effect of computers on personal privacy?

Martin opened the discussion on the first question by comparing the situation to that in the early years of the auto industry. Orginally, only one kind of car was made, while today, with an increased consumer demand for variety, more options have been made available. Weizenbaum followed to make the point that modern computers were so complex that "no one person knows how they work," and that since man has such a relatively shorter lifetime than the information base of a computer, he foresaw the spectre of "an ancient machine which can no longer change its mind." In any event, however, he argued that such long-lived machines could alter man's view of himself.

Fano, attempting to return the discussion to a more personal level, interjected that "people feel they are being pushed around by computers they don't understand." He then broached the possibility that "computers might provide more *real* freedom of choice."

**Flexibility vs. rigidity**

Saltzer commented that "computers were making the price of flexibility more apparent." "With mechanization, one sees more options, among them rigidity, and flexibility seems too expensive." Gorry addressed himself to communications problems. By improving communications, it has eliminated the need for buffers within an organization, and made centralized rigidity more inexpensive. Decentralization options, he said, are "definitely open."

Winston proffered the opinion that "technology does allow a higher-order kind of decision." People, he stated, "must make decisions on what kind of decision to make." In addition, he pointed out that "the flexibility should be there but the marginal cost of adding it should be small."

Winston then noted that systems must have "some understanding of who they are designed to work with." In explanation he added that he hoped "to incorporate some model of people" and ways of dealing with them. Fano paraphrased him to say that "people and computers should be able to get together and settle things." Winograd argued that there was not just a language problem, "but also a need to have a basis of common knowledge." Building on this, Weizenbaum noted that "when we agree that we have successful communication, what we are saying is that we trust each others' models."

Weizenbaum was later to point out that the discussion had entirely skipped over the issue of social flexibility: "coexist on what terms?" he asked.

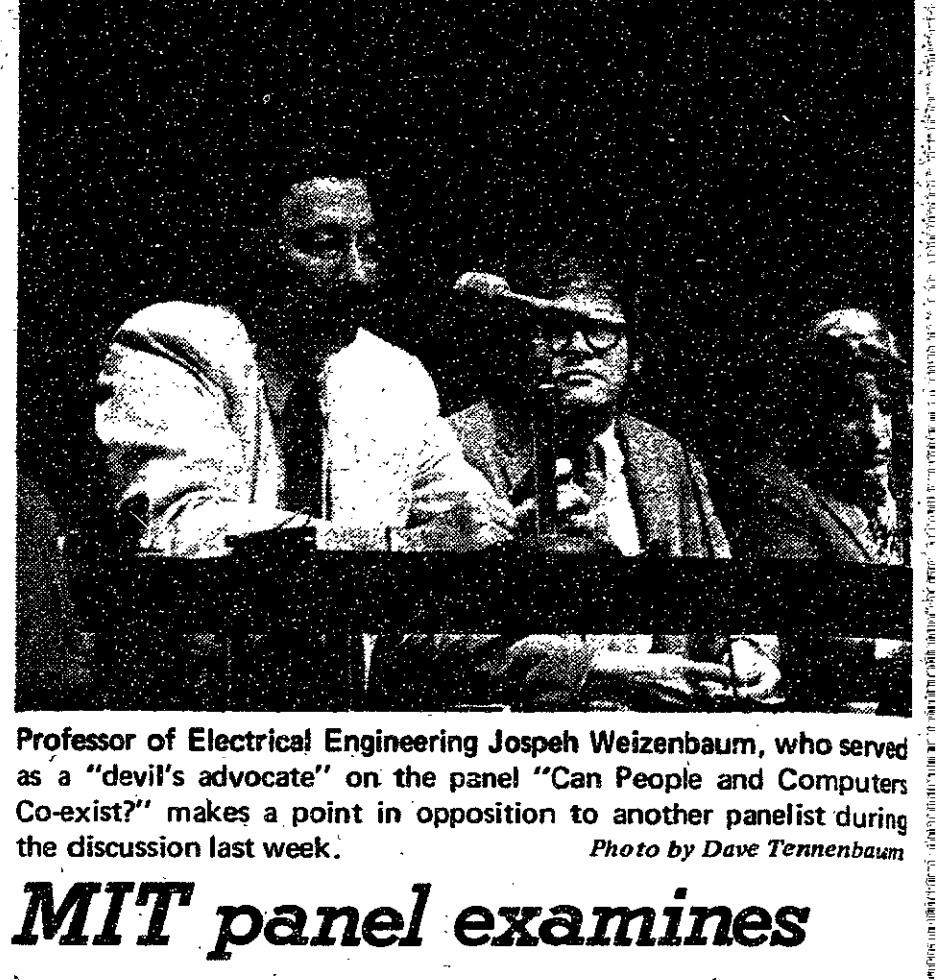
**Privacy**

Fano then directed the discussion to the second major topic, computers and privacy, by quoting Saltzer as saying that "large-scale data banks would never exist". (Saltzer later explained that he felt such a system impossible to build because it would be too complex.) Saltzer opened the new topic by pointing out that as he sees it, the biggest problem with privavy systems is that they are "so complicated that they can't be verified." Gorry attributed the problems that this new technology is causing to the climate in the society into which it is being introduced.

Fano again moved to a more personal view by asking "How are you going to implement people's right to examine and correct all the information held about them?" Speaking in more graphic terms, he noted that if someone were to pile on his desk all the data available on him, he would probably be too overwhelmed to check it all. Later he simply stated "people get hurt."

Weizenbaum reiterated Gorry's concern for the role of society in choosing to develop such systems. Martin commented that "what is information depends on what people know," while Winograd argued in favor of the need "for people to have a better idea of what these systems are and what they can do."

At the close of the discussion, Fano advanced the concept that "knowledge is power" and that computers are "knowledge machines," concentrating power in the hands of those who already hold it. Weizenbaum countered by suggesting that knowledge, especially at the levels which a computer provides, may be immobilizing.



Professor of Electrical Engineering Jospeh Weizenbaum, who served as a "devil's advocate" on the panel "Can People and Computers Co-exist?" makes a point in opposition to another panelist during the discussion last week. *Photo by Dave Tennenbaum*

# MIT panel examines urban transportation

By Bert Halstead

A panel discussion entitled "Future Modes of Transportation" investigated what MIT's role might be in developing future transportation systems and solving associated social problems.

Professor of Civil Engineering Charles Miller, chairing the meeting, indicated that the purpose of the discussion was to assess and discuss where MIT is and where it's going in its efforts to solve urban transportation problems.

Miller said that the panelists, who included Professor of Political Science Alan Altshuler, Professor of Mechanical Engineering Herbert Richardson, Mr. Melvin King, Associate Director of the MIT Community Fellows Program, and Professor of Civil Engineering Scheffer Lang, were chosen on the basis of their work on transportation problems while at MIT, and the significance of their work as viewed from outside MIT.

Miller pointed out that there were two approaches to the problem: the "scholarly" approach, consisting of individual research and specialized study of a small portion of the problem, and the "action" approach, which he defined as attempting to bring about change in the field by designing large systems and taking on extra institutional responsibilities for carrying out the plan.

Altshuler felt that it was important for universities to have sources of funding less dependent on the current political situation with which to carry out basic research of no immediate political interest. In addition, he stated that it is not the role of a university to work for clients or to have to meet deadlines.

Richardson raised a number of questions about the future of universities in transportation. Pointing out that 20% of the country's GNP goes into transportation, he stated that serious problems still exist, and that our leadership position in the field is being threatened. Richardson suggested that the universities' contributions to the field could include interesting the best young minds in solving transportation problems, integrating the "soft" and "hard" sciences to provide more effective solutions, supplying innovative ideas, and stimulating industrial research and development participation.

Mr. King advocated a transfer of power to the people in the affected communities. He saw government pressure as a way to force universities to make an institutional commitment to the problem, and help by giving large numbers of traineeships to non-white people from urban areas, and otherwise providing training for members of the community.

# MIT continues work in international arena

By Ken Vaca

The second panel discussion on "International Programs at MIT" dealt with future prospects for international studies.

Making up the Friday afternoon panel were Professor of Civil Engineering Peter Eagleson, Professor of Political Science Ithiel de Sola Pool, Dean William F. Pounds of the Sloan School of Management, and Professor of Economics and Political Science Everett E. Hagen, who moderated the discussion.

Professor Eagleson gave the details of a $900,000 grant from the Agency for International Development (AID) which will be used to fund international research at MIT over a five year period. The stated purpose of the grant is to facilitate the study of adaptation of industrial and related technologies for emerging countries. It was emphasized that technology should not only be transferred but adapted to different cultures. No one intimated how that might be done.

Eagleson went on to explain that income increases in developing countries only with the coming of technology. He did not mention whether the quality of living also went up. In substantive terms, the objectives of the grant are curriculum development, workshops and conferences, fellowships for students, collection of library resources, establishment of a central office to coordinate activities, travel funds, general research and faculty development.

Professor Pool said there was great interest in international communications because of the large number of foreign students here and their particular interests in electrical engineering and telecommunications. He spoke of trying to break down international barriers. New developments are constantly being made in communications satellites, cable television, and visual educational materials. Pool envisioned village community TV sets in underdeveloped areas, repulsive though the idea may seem.

Dean Pounds looked forward to studying and applying new theories of management which could be valid across international boundaries. He mentioned the possibility of gross multi-national corporations.

The theme of social scientists and engineers "sitting comfortably together" was Professor Hagen's message. He spoke of integrating soft disciplines with hard science in international matters. An International Policy Programs Office is being created to deal with certain of these problems.

MIT's involvement in international affairs is presently changing. Professor Pool summed it up when he said that for MIT to prescribe solutions to developing countries would be "an act of supreme arrogance."

# VI pursues eclectic path

By Norman Sandler

Power generation, transportation, and the environment are currently on the list of priorities of the research in MIT's Electrical Engineering department.

During a two-part panel discussion last Thursday and Friday entitled "New Directions in Electrical Engineering Research," eight of the department's researchers explained current and future problems their research is dealing with.

Perhaps the most notable feature of the event, which saw sparse attendance, was an underlying interest in environmental problems. This concern was apparent in discussions of projects ranging from "energy systems dynamics" to "modes of ground transportation."

In the area of systems dynamics, Professors F. C. Schweppe and G.L.Wilson are both currently engaged in research on improving power generation and distribution to meet the "increased consumption of industry." Schweppe's research group has undertaken a crash project for the President's Office of Science and Technology. The purpose of the study will be "to determine where the US should put its money for R & D [research and development] in the field of power generation."

Wilson is working on a joint effort of the Mechanical Engineering and Electrical Engineering departments "to try to improve power generators." Work is now centered on "the application of cryogenics to produce superconductor generators, using liquid helium" with hopes of "reducing weight and cost while increasing efficiency."

One of the most interesting research projects discussed was "a new concept in transportation," developed at MIT by Professors Richard D. Thornton and Henry H. Kolm.

Thornton explained that the high speed ground transportation system they developed is a magnetic suspension "magnetplane," propelled by a force between "induced current in the rail (aluminum)" and "three magnetic fields established by the use of cryogenic superconductors."

Thornton noted that the vehicle would probably attain speeds of 250 mph, and even greater if it travels through a partial vacuum. According to Thornton, the requirements for construction of the system would "not be as great as a six lane highway," and it would "probably be more economical in use than a jet plane along the same route."

He said that there is little being done in the United States with the idea of magnetic suspension but that in Japan, the new Tokyo-Osaka high-speed run will be a form of magnetic suspension. Thornton estimated that a "Boston to New York run will probably be the first employment of the system in this country." He added that they hoped to have a 1/25th scale model of the "magnetrain" on display at Dulles International Airport in Washington, D. C. next May.

Other research cited by staff members as currently going on at MIT in the area of electrical engineering include application of pattern recognition and image processing to computerized blood tests, the increased need for bio-medical engineering in cardiology, and a voluminous computer program developed in the Department dealing with symbolic computation and algebraic manipulation.

# Manpower situation bleak – for now

By Carol McGuire

Labor and education specialists urged a greater flexibility in technical and scientific training to prevent a repetition of the current engineering and scientific unemployment, in an inauguration panel Monday.

Entitled "Manpower and Womanpower," the panel was chaired by Dean Robert Alberty of the School of Science, who opened the discussion with a presentation of figures on population and technical training.

The panelists were Dr. J. Herbert Hollomon, Consultant to the Provost and the President; Professor Charles Myers, Management; Dr. Raymond Bisplinghoff of the National Science Foundation and Aeronautics and Astronautics; and Dean William Porter, Architecture and Urban Planning. Each of these presented his views of the trained-manpower situation at length.

Dr. Hollomon views the scientist as moving in a cyclic "corn and hogs" pattern, according to the economic laws of supply and demand. He also stated that to employ all the scientists in the labor market now or soon there will take a major increase in research and development, both by federal government and private industry.

Professor Myers was the only panelist to mention the manpower/womanpower aspect of the topic, was this was only to note that women are filling increasingly larger percentages of "professional, technical and kindred workers," which is the fastest growing section of the labor market. Unemployment is also on the rise in this segment, with two groups in particular greatly affected: young, inexperienced scientists or engineers, and older men who have not kept up with their education, particularly engineers without college degrees who had been upgraded from technicians in the manpower crunch of fifteen or twenty years ago.

Right now, there is a decline in the number of students choosing physical science and engineering (except, for some reason, chemical engineering), and a great increase in those studying the life and social sciences. The current over-supply of physical scientists, the National Science Foundation claims, is mainly due to the great decreases in technically-oriented space and defense expenditures, which cannot be made up by private industry.

# Revelation suggested as method for science

(Continued from page 3)

pattern for the universe, and to conform to the pattern. A hierarchical structure for society developed naturally, and many of the tools of scientific progress were adopted by the old power structure.

So attacking science and technology not only is a misdirection of effort, it could damage one of the few tools available for breaking away from harmful societal patterns. Wren-Lewis pointed out that a fundamental facet of the scientific attitude is the affirmation of the creativity of man's relation to nature. Knowledge gained about nature enables man to do something new, rather than just conform to pre-existing patterns.

The germ of a new scientific attitude came to Wren-Lewis in a revelation, a mystical experience on the shores of a lake in Switzerland. The depth of his anger with Roszak had already convinced him the author must have had something worthwhile to say. The golden color of blinding sunlight reflecting off the water provided a key. The motive behind the search for wealth or power is a desire among men to increase their stature with respect to the rest of the world. Traditional scientific method has a fundamental appeal to this innate drive, for science attempts to offer domination over the natural world. So fundamental a part of human nature cannot be suppressed or ignored, so Roszak's attempts to direct man away from science and technology must But a different approach to science and technology might be valuable. Wren-Lewis raised the possibility of applying the cardinal scientific principle of avoiding self-deception to the study of the interactions between man and nature, and man and man, rather than to the manipulation of one by the other. This would involve a sympathetic process of sorts, a combination of revelation from the outside world and self-disclosure from within. He rejected the current social sciences – they demonstrate the diseases of science at their worst, being quite manipulative – holding out instead the possibilities of a world transfigured by the knowledge gained from the creative study of interactions.

Both Morrison and Lettvin had fundamental disagreements with Wren-Lewis' suggestion. Describing himself as a hard-boiled type of scientist, Morrison joked at the Englishman's subjectivity and insisted that what merited examination was not the content of science but its form. Lettvin took a much more direct exception to the featured speaker's remarks, reminding him that the displacement of thought by a concern for ethics around the sixth century BC caused the loss of many important intellectual triumphs. And he questioned the value of relying on the "encounter group" method of gaining knowledge.

The Technology and Culture Seminar series was originally conceived as a way of raising on the MIT campus various issues involved in the interaction of these two fields of human knowledge. Though there was no direct cause-and-effect relationship between the series' inception and the MIT Commission's discussion of the value of such a program, the discussion generated by the Commission provided an important boost for the Seminar group.

## SOFTBALL

If all has gone as scheduled, ZBT fraternity chapters from MIT and Northeastern are in the midst of a continuous three-day softball game for the benefit of the United Fund.

# Two views on the BSU and IM sports:

By Walter Middlebrook

As a direct result of actions taken by the IM Executive Council last week, the Black Student Union is withdrawing its football teams from the IM leagues.

The major reason for dropping out of the leagues, according to the players, was the decision made by the Council declaring LCA the winner in the contest. Although LCA led the game with respect to points, 19-9, no official winner had been announced because the game was protested by both teams; the BSU lodging its protest in the early minutes of the first quarter.

The BSU filed its protest because of the unfair and incompetent officiating which took place and the feelings of prejudice and racism which prevailed on and off the field. It was based on incidents where coaches of the BSU team had to take the referees to the IM Rules Book to show them, on at least three occasions in the first quarter, illegal calls made thus far in the game. The protest was based on the fact that three BSU touchdowns were called back, two of which because tags were made by diving tacklers. The game was protested because of LCA's first touchdown in which the running back was tagged on the field, right in front of the referee; realizing this the runner stopped. All the other players stopped, but when informed by his teammates that no whistle had sounded the back glided in for an easy touchdown. When confronted by members of the team, the referee admitted seeing the tag and not blowing his whistle, but he would be unable to do anything because he could not call the play back. These are just a few of the reasons for which the BSU team and game observers feel their protest is justified.

Yet when it was presented to the IM Executive Council, the protest was totally ignored. The only explanation given, thus far, is that one member of the BSU team struck one of the referees at the end of the game. Although not in the best interest of the game, most observers feel the referee got what he deserved, but one question remains unanswered: "Should a team be so unjustly reprimanded for the actions of one player?" Never before has any action of this sort taken place anywhere before. When a professional athlete breaks a league regulation, that player is fined, suspended, or thrown out of the league; the same thing happens in intercollegiate athletics.

What hurts most of all is that an incident of the same nature took place last year involving the BSU team. Last year's decision declared the game "no contest" with neither team gaining the victory. Has football changed that much in one year?

For the past two weeks, representatives of the BSU football team have been meeting with the IM Executive Council, representatives from the SAE football team, deans from the Office of Student Affairs and heads of the Athletic Department in hopes of forming some type of fruitful relationship before the next scheduled BSU game, which was to be against SAE. Although there were no ill feelings between members of the two teams the tension was there.

Members of the BSU team had been accused of coming onto the field in hopes of starting fights, or in a lust for blood, but in actuality other teams in the league had actually drawn blood. The SAE-PGD game which was played the same weekend as the BSU-LCA game, for example, was described as "friendly competition" and ended with five players being sent to the hospital, while during the BSU-LCA game there were no hospitalizations or serious injuries. The only incidents were a punched referee and bystander, whose nose was broken. Both incidents occurred after the completion of the game. Other players were wishing to have the BSU thrown out of the IM league, and other teams were seriously considering not showing up for games against the BSU. What else could a situation like this do but create tension?

The BSU came on the field "teed" up in a sense, because of the attitude which had been projected to them from reading and hearing of the 'A' league. Members of the team wanted to win like all other teams and came prepared to play football, but they didn't know they would have to play the officials as well. It's bad enough playing eight guys, but when there are ten against you . . .

What really should be done is something about the officials. More care should be taken in the training and choosing of officials especially for the 'A' league, where, although taken in fun, the game is a very serious business. They should be able to stand up to all and justly do their jobs. It is quite evident that some of the officials this year lack these qualities.

In efforts to ease this situation, many people have been suggesting that at all games, BSU in particular, at least one of the officials be black. Most members of the BSU team, however, feel that it doesn't matter whether the officials are black or white just as long as they do their job.

Nevertheless, the BSU teams have made their move. The time has come now for the IM Council, the other intramural teams, MIT and you, in general to let it be known how you feel about this matter, because it is you who determine whether any type of harmonious activity is to be carried on in, on, or around MIT's campus.

# Rogers outlines proposals

(Continued from page 2)

Program" to be headed by a new dean. This dean, who would "work with an executive committee of faculty members," is to "embody the responsibility of the faculty as a whole for general education," especially in the first two years. Finally, Rogers reported that the Task Force recommended the establishment of "a division for education research" which would "support, draw together and coordinate MIT's abilities in this area."

Rogers then noted that these proposals are meant to be "initial steps that will help us see more about further steps."

Enlarging upon his brief presentation, Rogers explained that what he termed the "seminar-research experience" was to be an optional feature in the undergraduate curriculum, that if chosen would occupy some 25% of a student's time. Essentially, it would mean "working with a faculty member in the context other than that of the classroom," in a field related to what both the student and faculty member thought was real and important. Rogers advanced this concept as "a way to couple advising and teaching," and added that it might also be "a vehicle for writing off certain requirements." On personal contact in a working situation, the program, as Rogers saw it, would be "a very variable and heterogeneous kind of thing."

The proposed "Dean for the Academic Program," Rogers related, is to embody the faculty's "responsibility for general education," and additionally is to "provide a continuing intellectual focus and forum" for undergraduate education. He followed this with an enumeration of the office's "operational areas of responsibility" which would be shared with a number of standing committees of the faculty. The Dean would coordinate and communicate innovation in "large, basic subjects," where the Task Force felt there was "room for improvement." He would also fill the need for "administrative and intellectual attention to experimental programs." The new dean, Rogers continued, would be assigned to administer the seminar-research program, matching students and faculty, providing support, and "writing-off" requirements. He would "maintain a continuing overview of general Institute requirements," and would also maintain an overview of the academic program. Finally, Rogers noted that the proposed dean would "provide input to the promotion and tenure process," providing recognition of the contribution of staff members to the educational program.

Turning to the proposal for an education research division, Rogers termed it a "novel structure," which would have its own faculty, staff and students. Its structure would be different from that of the departments and the schools, and Rogers suggested that it would have "a strong, action-oriented mission." Included in its activities would be the research and development of curricula (similar to current work in the Education Research Center), learning research, cognitive studies and continuing education.

# are there accomodations possible?

By Alex Makowski

There is much that could be said about the ill-starred participation by the BSU in "A" League football this year. Although there is a very real danger of reading too much into the situation, it is still worth considering carefully to see what can be learned about both IM sports and the relationship between the black undergraduates and the rest of the campus.

It is natural to begin by considering the football game two weeks ago between the BSU and Lambda Chi Alpha. I arrived late in the first quarter, but witnessed all of the rest of the game as well as the tension and violence afterwards. The refereeing was poor – no worse, perhaps, than the officiating at any other of that first weekend's games, but still poor. The BSU objected vehemently on a play in the first quarter when their secondary seemingly tagged a pass receiver (the receiver just about stopped on the sidelines), only to see him tear off and score a touchdown when there was no whistle. In the second quarter a fine touchdown run by their quarterback was called back by an official well behind the play who claimed the ball carrier had been tagged short of the goal line. Everyone on the sidelines agreed that it was a call, but that was undoubtedly small comfort to the BSU when they failed to score.

But such stories as these were common to every football game that weekend. Were these poor calls the result of bias or prejudice by the referees? It seems unlikely. There is, for example, no love lost between Joel Bergman, head ref for the BSU game, and the Lambda Chi's. (Twice this past weekend, Bergman penalized LCA ten yards for unsportsmanlike conduct when the team objected to his calls during the game with Delta Tau Delta.) I know another of the refs personally, and over the past year I have never seen him demonstrate racial prejudice.

Going back to the game, there is no doubt that it was unusually rough. The BSU tackles (if that is the appropriate word for a game of two-hand touch) were unnecessarily violent, and the brutality seemed to increase as the game wore to a finish, climaxing when the LCA quarterback was punched after being felled along the BSU sideline.

When asked about the BSU play after the game, coach Ben Moultry defended his players' conduct. After that first quarter play, he called his team back to the sidelines and told them to make certain the refs didn't miss any more tags. He pointed out that his players were naturally psyched up for the game, and were understandably frustrated when their daily practice and novel defensive formation were frustrated by clumsy officiating. And there certainly was no universal team attitude of hostility. Several Lambda Chi's commented along the sidelines that there were BSU players out for nothing more than a good game of football.

**'the discouraging spectre of a gradual black withdrawal'**

Why did the BSU decide to withdraw from "A" league competition? An important factor seems to be the frustration with the refereeing Moultry spoke of. Once their protest of the game was rejected, the blacks had to ask themselves whether it was worth their effort to play with the kind of officiating they were likely to get through the season. Whether they attributed the officiating to incompetence or racial prejudice, the frustration was still more than they were willing to bear. Deciding that they couldn't get even-handed treatment that befitted the time and work they were putting into the game, the BSU players left IM football.

The decision obviously touched the core of the IM sports program. As IM Council Chairman Ken Weisshaar pointed out, there are limitations to what the IM program can provide for officiating. It would be foolish and financially impossible to hire outside refereeing for touch football games. Other teams besides the BSU have been frustrated by the officiating they received. They usually decide that the participation, with the rewards of athletic competition, provides enough satisfaction. There can be no denying, however, the legitimacy of the BSU objection. If the IM program here seems ill-suited to their brand of devotion to football, perhaps they would be better off in some other league.

This raises the discouraging spectre of a gradual withdrawal of blacks from the IM program. It would indeed be unfortunate for the BSU to decline to field IM teams, but both sides are at something of an impasse. There is very little the IM directors can do if the BSU insists that their attitude toward sport, however justifiable, be matched by the IM facilities and officiating. There may well be no possible accommodation.

Beyond the IM sports program, what happened that Sunday afternoon revealed something fundamental about the relationship between blacks and whites on this campus. At few other times since 1969, when blacks began forming a sizeable part of the incoming freshman class, has it been so apparent that students from the two races are not communicating with each other. For example, many whites were probably surprised to learn about the serious way the BSU team took participation in the football program. They weren't the only team to go to exceptional lengths to prepare for the fall schedule (Phi Gamma Delta also surprised quite a few football fans), but it is unlikely that students from the other houses would leave the sports program because the refereeing was inadequate. Certainly more communication might have eased the tensions around that football game.

Increasingly blacks and whites have been drawing off to their own sections of the campus. Most of the few blacks who lived in fraternities have either graduated or moved out, and every fall the BSU discourages black freshmen from joining a fraternity. As one professor noted, rarely do you see blacks and whites walking together in groups on campus. And there was a particularly disturbing incident following the BSU-LCA game. The blows to Weisshaar and Bergman from one of the BSU players could perhaps be dismissed as the result of overheating during the football game, but the belligerence and hostility of the black spectators to the whites on the field after the game was a bit more unsettling. If the blacks here have a legitimate reason for believing themselves the victims at MIT, perhaps both blacks and whites here had better get together to try and work the problem out. If not, students have to realize that unjustified bellicosity is hardly worth the temporary personal satisfaction it may bring.

This may strike some as the same liberal hand-wringing that has been going on in this country for decades. But it is frustrating to see that on a college campus, within a community of some of this country's most intelligent young adults, such problems seem to defy solution. Is it too much to ask for black and white students to somehow come together to thrash out their disagreements? Perhaps it is too much to expect that such problems can be worked out in the competitive, emotionally charged atmosphere of athletic competition.

And looking at the practicalities of the situation, it may be up to the blacks to make the first move. It would be difficult for a white to go up to a black and politely ask him what was troubling him – the expected and natural result would be hostility. The blacks must bring out for discussion what they see as the flaws in this campus and school.

# SPORTS

# Oarsmen row on US team

By Brad Billetdeaux

MIT's lightweight crew squad now includes some world class oarsmen. Slayton Tuggle '72, Pete Billings '73, Mike Rowny '72 and John Sheetz '74 represented the United States at the Championnats D'Europe a L'Aviron, 1971's top worldwide rowing event.

Their European odyssey began at the National Association of Amateur Oarsmen's Championship Regatta held on the Orchard Beach Lagoon course in New York on August 5-8. There, along with Joe Clift '72, Roger Doxsey '69, two members of Harvard's and one of Yale's lightweight varsity squads, and Chuck Roth, a former MIT graduate student, they rowed under the auspices of the Cambridge Boat Club in the Senior Lightweight Eight-oared event. Their second place finish was best of any US crew, earning them silver medals and NAAO sanction to row in the European Championships on the US team. (St. Catherine's Rowing Club of Canada won the race, but of course was ineligible for a berth on the US team.) The athletes were issued blue sweat clothes, blazer patches and official NAAO racing jerseys.

Upon their return to practice on the Charles, the crew, coached by MIT lightweight varsity coach Jack Frailey, conducted seat races in a quest to find an even faster combination. Both Doxsey and Clift lost their seats in the shell to oarsmen from Princeton and Syracuse.

The European Championships were held on Lake Bagsvaerd near Copenhagen, Denmark, as an official FISA (International Rowing Federation) regatta. That's why it was necessary to gain national team status, as independent entries are not allowed. Seat-wise in the shell, Tuggle was the coxswain with Sheetz at bow, Roth at 2, Billings rowing 5 and Rowny was a spare. A second in their heat and a fourth in the repechage put the former-Cambridgers-now-USA's into the Lightweight Eight-oared final on August 21. Unfortunately the crew got off to a poor start and never did get together. This was probably due to the short practice time that they had together and the fact that they were rowing in a women's shell.

With world class talent aboard, MIT's lightweight crews should do well in the spring intercollegiate competition. Hopefully they will regain "the winning way" of the '69 crew, which went to the Henley Royal Regatta in England. In the meantime the lights are looking forward to the Head of the Charles Regatta in two weeks. John Sheetz, winner last year in the Junior Single Sculls, will attempt an even greater triumph this year in the Elite Lightweight Singles.

Members of the US team at the European Rowing Championships held last August in Copenhagen, Denmark, are from left to right John Sheetz '74, Pete Billings '73, Mike Rowny '72 and Slayton Tuggle '72.

*Photo by Brad Billetdeaux*

## BENCHWARMER

By John Kavazanjian

Over the last few years, we have seen a large change in the character of athletics here at MIT. This has been noticeable on an intercollegiate, intramural, and on a recreational basis. For the serious athlete, however, the changes have been very noticeable.

The athlete at MIT is caught in the dilemma of athletics versus studies. Going back pretty far, the athlete at MIT was a student first, a gentleman second, and a sportsman rather than an athlete. His saving grace (as a jock, that is) was in his love for athletic competition and there was an actual "ra ra go Tech" type of spirit. As students (some at least) seemed to have more free time to devote to sports, the intercollegiate program grew and throughout the fifties, MIT always seemed to have good sports teams.

As we moved into the sixties things started to change, students found themselves with an excess of leisure time, more time to think if you will, and they started to question. Among the things that they questioned were the sacred words of a coach and the merits of spending 2-4 hours a day getting battered around on a lacrosse field and spending two more hours nursing your sores. The old ethics of character building, winning for old Tech, or winning and getting the girl, no longer worked as motivators. Some coaches eased up on the mental and physical pressure on teams, and self, not group motivation was stressed.

There were of course notable exceptions, for instance the crew squad that worked hard to go to the Henley Regatta. But that had to come from within themselves, there was no publicity, academic credit, or athletic scholarships to push them into working towards that goal.

In the last three years, we have seen the conflict develop. It was many-faceted, involving many players just plain dropping off of teams out of disinterest or disheartening. Coaches were especially vulnerable, for if they tried to be strict disciplinarians they lost needed players and if they were lax and disorganized they just plain lost. It was a challenge to a coach, in some circumstances to get enough players out for a squad to practice.

But from all indications, for some reason, this year is different. More people are going out and staying out for intercollegiate sports than ever before. The question seems now to be just how to adjust to this reversal.

We are finding that teams this year in intercollegiate as well as intramural sports are just screaming for a team type of identity. People out for sports want to work, want to be treated as athletes, and want to participate on whatever level possible.

As the seriousness of the participants increases though, the demands on the system do also. In intramural football for instance a large number of the injuries that occur are as a result of one person or another just plain overtrying at times and pushing himself too far. The increased seriousness also puts demands on the systems of officiating in intramural sports. It has emerged from the controversy over the LCA-BSU football game of a few weeks ago that the BSU, a new team, expected good officiating, and LCA having been around awhile, knew that there were going to be a large number of mistakes – in fact expected them.

Currently, demands for field time outstrip available space. Space on Briggs Field, Alumni pool, tennis courts, and the ice rink is utilized to the utmost, to the point of making less than equitable time for recreational usage because of the demands of team usage. For instance, try to schedule varsity, freshman, and 32 intramural teams on one ice hockey rink.

As athletics become more and more an integral part of the students' life, we must work to keep up with the demands on the system lest the spirit be frustrated and we go back through a cycle of disinterest.

*(John Kavazanjian is a former sports editor and is currently president of the Athletic Association.)*

# Kavazanjian scores thrice

By Brad Billetdeaux

The hat trick – three goals in one game *by one person* – is an extreme rarity in soccer, a sport where three goals per game is a very respectable *team* effort. Thus there was good cause for jubilation evident Tuesday afternoon on Briggs Field when John Kavazanjian '72 completed a hat trick which carried the MIT soccer team to its first victory of the season. That it was a comeback victory by the score of 4-3 and that the opponent was last year's NCAA qualifier Worcester Polytechnic only added to the sweetness of the win, especially for a team which has lacked spirit and not played up to expectations in its first three games.

The story on Tuesday against WPI was completely different. Both the offense and defense shone in what was definitely the team's best effort this fall. The booters came out in a 4-2-4 setup playing with four linemen, only two halfbacks and four fullbacks. There is a lot of pressure on the two halfbacks to control the ball in the middle of the field, and it is to their individual credit that they came through with all of the scoring also. Besides Kavazanjian's three-some, Rick Eskin '72 scored a goal and had an assist.

After a scoreless first quarter, the Techmen connected first with co-captain Eskin hooking in a corner kick. MIT went ahead 2-0 when Kavazanjian picked up a loose ball and lined a shot from the right corner of the penalty area. The WPI goalie caught the ball against the crossbar but couldn't handle it and fell into the goal.

WPI got on the board for the first time in the third quarter but Tech kept their two-point margin when Kavazanjian put a direct free kick right past the WPI goalie from 20 yards out. Then the exhausted Tech defense started to flag. WPI gained momentum and scored two quick goals, tying the score at 3-3. It appeared at this point that the rising tide of the visitor's offense was going to carry them past the Engineers.

Then at the 15-minute mark in the fourth quarter, Eskin carried the ball to the right sideline, about 30 yards from the endline and fired a cross-field pass to the left side of the penalty area. Kavazanjian took it at a full run and, displaying perfect timing and finesse, placed a magnificent head-shot into the net for the winning goal.

Kavazanjian's hat trick is a record for recent-memory MIT soccer. Interestingly enough, it was the first time in four years of soccer at the Institute that he has ever scored!

The booters face Middlebury at Middlebury this weekend.

Former goalie Rich Straff '74 shows his competence at center forward by outrunning two WPI men. Techmen won the game, 4-3.

*Photo by Brad Billetdeaux*

## IM Football

**A league:**

| | |
|---|---|
| LCA 'A' 8 | DTD 6 |
| BTP 21 | PGD 'A' 12 |

**B1 league:**

| | |
|---|---|
| DU 12 | LCA 'B' 6 |
| PDT 'A' 24 | PLP 13 |
| Sr Hse 'A' 6 | SAE 'B' 6 (OT) |

**B2 league:**

| | |
|---|---|
| Chem Eng 13 | EC 'A' 13 (OT) |
| TC 'A' 36 | SPE 0 |
| Westgate 19 | SAM 13 |

**B3 league:**

| | |
|---|---|
| Ashdown 14 | Bexley 0 |
| TDC 20 | SC 14 |
| Raiders 40 | CE Quakers 19 |
| Burton 'A' 7 | Baker 'A' 6 |

**C1 league:**

| | |
|---|---|
| SAE 'C' 31 | KS 12 |
| AEPi 12 | Stud Hse 6 |
| PKS 27 | Burton '3' 18 |

**C2 league:**

| | |
|---|---|
| TX 21 | Burton '2' 13 |
| MacGregor 'A' 32 | PSK 6 |
| PBE 34 | ATO 14 |

**C3 league:**

| | |
|---|---|
| CE Hydros 19 | Conner '3' 6 |
| DKE 18 | Sr Hse 'B' 0 |
| PGD 'B' 25 | Economics 6 |

**D1 league:**

| | |
|---|---|
| PDT 'B' 8 | EC 'B' 0 |
| PMD 12 | Baker 'B' 6 |
| CP 25 | TC 'B' 6 |

**D2 league:**

| | |
|---|---|
| EC 'J' 20 | SN 0 |
| SCDS 7 | MacGregor 'B' 4 |
| PKA 14 | PKT 2 |

Second class postage paid at Boston, Massachusetts. *The Tech* is published twice a week during the college year, except during college vacations, and once during the first week in August, by *The Tech*, Room W20-483, MIT Student Center, 84 Massachusetts Avenue, Cambridge, Massachusetts 02139. Telephone: Area Code 617 864-6900, extension 2731 or 1541. United States Mail subscription rates: $4.50 for one year, $8.00 for two years.

*Friday, October 8, 1971*