

Dan O'Day

Is MIT mistreating its lab animals?

List of dorm sites narrows

By Salman Akhtar

MIT is considering renovating one of two industrial sites near campus into a new graduate dormitory, announced Senior Vice President William R. Dickson '56 at a Graduate Student Council meeting held Sept. 18.

The Housing Office has begun a detailed study of the two sites, and MIT will reach a decision on the location in November, Dickson said. The proposed dormitory would house around 200-300 students.

The document naming the sites under consideration is likely to remain an internal document, Dickson told *The Tech*. In the interview ["Dorm site to be announced," Sept. 12] he declined to name the sites because it might influence MIT's chances of obtaining them.

The Housing Office is also studying the possibility of housing more graduate students in the basement of Ashdown House, Dickson continued. A report

from an MIT-commissioned architect showed that Ashdown's basement could house about 30 students, he said. If major construction proceeds over next summer, the basement will be ready for occupation by Jan. 1988, Dickson anticipated.

Dickson estimated that MIT should be able to house approximately 300 more graduate students within the next five years.

The conversion of Ashdown is only the most immediate solution to the Institute's shortage of graduate student housing, Dickson said. MIT's goal is to house half of all graduate students in 15 years, he said. In addition to the conversion of Ashdown and the building of a new dormitory in the next five years, MIT is considering the construction of at least one more dormitory in the next decade.

Dickson still waiting for long-term study results

The idea for renovating exist-

City debates animal law

MIT scientists opposed to Cambridge proposal

By Mary Condello

The Cambridge City Council is examining a proposed ordinance to regulate animal research in Cambridge. A number of MIT researchers are opposed to the proposal.

The ordinance would create a Cambridge Animal Experimentation Review Board (CAERB) which would:

- Determine and delineate the community's ethical standards for the use of animals in research.
- Review all proposals for animal experimentation to ensure compliance with federal and state regulations.
- Conduct unannounced research site visits.
- Review the exact procedures

the animals will undergo such as expected pain, surgery time, and use of anesthesia.

"We're questioning whether all the research going on is necessary, without passing a final judgement on it," explained Gul A. Agha, president of the Cambridge Committee for Responsible Research, the group which proposed the ordinance. Agha, who is also a research scientist at the Artificial Intelligence Lab, added, "We want to shift the burden of weighing the costs of animal suffering against the potential benefits of the research from scientists to the general public."

University scientists may feel pressured to publish papers, while scientists in the private sector may be pressured to produce profitable results, he continued. Either case can result in the researchers' disregard for the welfare of their laboratory animals. As a result of these pressures, he explained, "Self-policing hasn't worked."

Dr. William F. Busby Jr., a research scientist in the department of applied biological sciences, countered that Cambridge doesn't need such an ordinance.

"I've never met a single person who works with animals who didn't care about the animals," Busby said. The veterinarians at

MIT who are responsible for overseeing all animal experiments "go to extreme lengths to insure the health of the animals," he added.

Professor David Baltimore, director of the Whitehead Institute, feared that some proponents of the ordinance want to end all animal research. Baltimore pointed out that it is not possible to do most biomedical research without using animals. Hundreds of thousands of dollars have been spent to keep Whitehead animals as healthy as possible, Baltimore continued.

Institutions that receive National Institute of Health funding, such as MIT, must comply with the NIH's regulations on the use of laboratory animals, according to Dr. Christian E. Newcomer, a veterinarian and associate director of the MIT's Division of Comparative Medicine. Newcomer is responsible for "overseeing the health, veterinary care, and policy matters relating to the care and use of animals in research at MIT."

Institutions that do not receive NIH funds are governed by the US Department of Agriculture's Animal Welfare Act or Food and Drug Administration regulations, Newcomer said. Because stringent animal research laws already

(Please turn to page 12)

ing buildings as a short-term solution arose from the Housing Office's study of possible sites for the construction of a new graduate dormitory. The Housing Office, which began the study last spring, has not yet completed the study.

Dickson said that the study is focusing on 11 off-campus and five on-campus sites to build the new dormitory. MIT controls or owns all the potential sites.

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Sororities will use NRSA building

By Desmond Davis

Alpha Phi and Alpha Chi Omega, MIT's two non-residential sororities, will soon use 311 Memorial Drive, formerly occupied by the Non-Resident Student Association, for lounge and office space.

The NRSA served as a lounge and living area for commuting students. Mark Ertel, advisor to

fraternities and independent living groups in the Office of the Dean for Student Affairs, explained that very few commuting students used the NRSA building. Last spring, the ODSA closed the NRSA and its building.

Situated between McCormick and Ashdown Hall, 311-312 Memorial Drive is a three-story building which was once a duplex apartment. MIT's religious counselor offices occupy 312 Memorial, the other half of the duplex. The sororities will use the first and second floors of 311 Memorial, Ertel said.

The basement has no useful purpose because it does not meet local fire codes, according to Ertel. Ertel said he is waiting for the City of Cambridge to declare

an official occupancy rating for the building.

The age and condition of the building will probably limit the occupancy to approximately fifty persons per floor, he estimated. Consequently, the sororities could only use the facilities for lounge purposes and small meetings.

"Even though we can't hold chapter meetings it's better than nothing," said Patti Obermaier '87, president of Alpha Chi Omega. The facilities, undergoing simple renovations, will include a lounge, two offices, and a conference room.

"All facilities will be equally shared," Ertel said. "Now they [sororities] have a place where they can invest and say 'Yes, this is ours.'"

Panel debates military technology

By David B. Plass

The United States and the Soviet Union already have cruise missiles which can overcome technology currently researched under the Strategic Defense Initiative, claimed former MIT President Jerome B. Wiesner.

Wiesner's observation arose at a Sept. 18 colloquium entitled "Technology and World Peace" at Ashdown House. Wiesner, as well as Jack Ruina, professor of electrical engineering, and Kosta Tsipis, principal research scientist in Science, Technology and Society, served as panelists during the discussion, which was sponsored by the Office of the Dean for Student Affairs. Over 75 students attended the colloquium.

Another dangerous part of SDI is that it is a tremendous stimulus to the arms race, Ruina said. SDI is costly and diverts money and time resources from other civilian

resources, he explained.

Ruina believed, however, that the United States should maintain or even increase technological investment in general military research. The United States should understand the technologies that could be used for military applications in order to avoid being surprised by Soviet developments.

Weisner countered that the present level of military research spending is driving the civilian research sector into obsolescence. Tsipis agreed by commenting that the main problem with military research and development is that it draws talent from the civilian sector.

He continued to say that if less money was spent in military technology, more people would benefit from other technologies. Three quarters of the \$49 billion of research and development

money provided by the federal government goes to military research and development.

Panelists discuss role of technology in arms control

The best way to prevent war, according to Tsipis, is to establish and maintain a symmetric state of vulnerability with common security efforts. Unilateral efforts which attempt to deter the enemy, such as threats and build-ups, simply result in further escalation of the arms race.

A modest security force would sufficiently deter political leaders from starting a nuclear war, Wiesner said.

Deterrence is in the mind of the opponent, and "the fact that deterrence is unilateral causes the arms race." If both sides work together to reach the same level of technology by agreement, there will be no arms race, Tsipis argued.

Ruina said technology is neither the savior nor the cause of the arms race. The Reagan administration would continue the arms buildup, with or without advances in nuclear weapons technology, he explained. However, military technology may be needed to help stop the arms race.

Wiesner later countered, "Technology does not offer the

(Please turn to 2)



Sidhu Banerjee

Former president Jerome B. Wiesner addresses the Technology and World Peace colloquium Thursday in Ashdown.

inside

Rhinoceros take over city through Oct. 4. Page 9.

"Blue Velvet" displays disturbing overtones. Page 9.

Prudential ribbons demonstrate mathematics. Page 9.

Fall sports photo essay. Page 15.

City may oppose housing site

(Continued from page 1)

MIT is resigned to the fact that it will have to finance more housing for graduate students, Dickson said, which is why housing was one of the highest priorities in MIT's most recent capital funding program.

Dickson was asked if the Housing Office's plan to house 50 percent of the graduate students accounts for the steady rise in the number of MIT graduate students over the past 15 years.

He replied that MIT set a 50 percent goal in the 1960's and would have achieved that goal by now if not for the phenomenal increase in the number of graduate students since that time.

"Unless the number of students stops increasing, MIT can never reach its goal of housing half the graduate students on campus," Dickson said. "At this rate the 300 spaces we plan over three to four years would be absorbed in the increase in the number of students."

Simha anticipates problems with Cambridge

Director of Planning Ovadia R. Simha '57, also at the GSC meeting, warned that MIT may encounter conflicts with the City of Cambridge in constructing a new dormitory.

The greatest problem, Simha explained, was in the vacillating position of the City Council on the issue of housing. It is difficult, he said, to anticipate how the council will react to any new construction.

A possible problem is that "the city has put out a study to look into the utilization of industrial districts which include many of the possible sites for housing for general community housing," Simha said. Since MIT is partly within these districts, the Planning Office will need to be aware

Tsipis denies technology is to blame for arms race

(Continued from page 1)

solution but perpetuates the race." He claimed that "good and patriotic reasons" are driving forces of the arms race but the impact of secrecy also drives it.

Tsipis, however, contended that technology is not to blame for the arms race because technology is essentially neutral; how we use technology makes the difference. He claimed that fear and perception — not technology — advance the arms race.

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of any changes in zoning policy and their potential effects on MIT.

A GSC member asked Dickson whether MIT has looked into the possibility of housing students in Somerville or Arlington in the face of potential problems from the Cambridge City Council. Dickson replied that the Housing

Office has examined some sites near MBTA stops, but had not been very successful.

The overriding concern in selecting such a site, Dickson explained, is the necessity of the campus being accessible by public transport. Finding such a site, he said, had turned out to be extremely difficult.



Mike Niles

Senior Vice-President William R. Dickson '56 (left) and GSC President Norman Waverly G discuss potential new graduate student housing at Friday's GSC meeting.

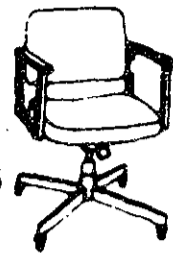
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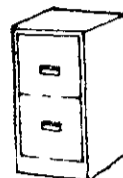


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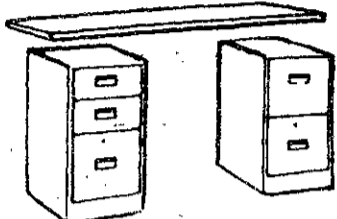
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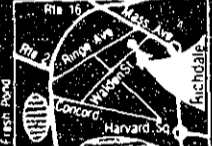


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news roundup

from the associated press wire

World

Reagan praises arms reductions, attacks Soviets for Daniloff affair

President Reagan promised the UN General Assembly that the Geneva arms talks may soon show signs of progress. The Soviets are going along with a US proposal to make major reductions in the number of offensive nuclear missiles, he said.

In the same speech, Reagan attacked the Soviet Union for detaining Nicholas Daniloff, an American reporter accused of espionage. Reagan cited the Daniloff case as one of the Kremlin's typical human rights violations. He did not say that it would interfere with arms negotiations. (AP)

OPEC shows signs of disunity

OPEC has succeeded so far in staying within the limits of its overall production target. There are indications, however, that this monopolistic agreement is being violated by certain OPEC nations. According to industry journals, Venezuela, Libya, and the United Arab Emirates are dissatisfied with the collective agreement. (AP)

Israel increases presence in Lebanon

Hundreds of Israeli troops have been sent to the Lebanese border to support an Israeli-backed militia being attacked by Shiite Moslem guerrillas. Residents of the border town say that this is the largest number of troops stationed there since Israel pulled out of Lebanon last year. (AP)

Nation

Rudman proposes military overhaul

Sen. Warren Rudman said that a senate subcommittee has approved his proposal to restructure special military forces. His amendment would create a unified command over special forces of the Air Force, Navy, and Army. According to Rudman, these special forces are currently controlled by their respective services. The lack of centralized command was responsible for problems in the attempt to rescue the American hostages in Iran and in the invasion of Grenada, he claimed. The Pentagon should devote more attention and resources to special forces, Rudman continued. (AP)

Sports

Seattle capitalizes on Patriot miscues

The Seattle Seahawks scored 17 unanswered points in 1:39 with less than three minutes to play in Sunday's game, beating the New England Patriots 38-31. Both teams had been undefeated going into the game. Seahawk wide receiver Steve Largent needs only one more game to tie Harold Carmichael's NFL record 127 consecutive games in which he had one or more receptions. The Seahawks blocked two punts, one for a touchdown and one to set up a touchdown. Before this game, Patriot punter Rich Camirillo had never had a punt blocked in his NFL career. (The Boston Globe)

Jets win in OT; Raiders drop to 0-3

The Jets triumphed over Miami in a come-from-behind overtime win at New Jersey, 51-45. The Jets took the weekend's honors for total offensive yards, with 581. New York's other team also won, dropping the Los Angeles Raiders 14-9. In a see-saw battle of undefeated teams, Atlanta beat Dallas on a field goal in the closing minutes, 37-35.

Seattle, Atlanta, Washington, Chicago, Denver, and the LA Rams remain unbeaten. Philadelphia, St. Louis, Indianapolis, Pittsburgh, Green Bay, and the LA Raiders are all looking for their first win. (The Boston Globe)

Settlement reached in W. R. Grace suit

A settlement has been reached in the suit brought by six Woburn families against the W. R. Grace company. One of the claimants, Katharyn Gamache, said she is glad the case has been settled, but was disappointed that the firm "didn't get nailed to the wall." The lawsuit alleged that the company poisoned the local drinking water, causing several leukemia deaths. (AP)

Weather

Gloomy weather ahead

An extended frontal disturbance will hover around our region as it moves eastward over the next 2-3 days. As a result, our weather will be on the gloomy side for the next couple days. On a positive note, our temperatures will be somewhat warmer.

Tuesday: It will be mostly cloudy with a chance of showers. High temperatures will approach 70° (21°C) and winds will be from the southwest at 10-15 mph (16-24 kph).

Tuesday night: We will see evening showers and possibly a thundershower. Then partial clearing with lows 55-60° (13-16°C). Winds shifting to the northwest.

Wednesday: We can expect a mixture of clouds and sun. High temperatures will be 70-75° (21-24°C).

Thursday: The return of clouds and showers with high temperatures near 70° (21°C).

Forecast by Robert X. Black G

Compiled by Robert Adams
Michael J. Garrison

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opinion

Column/Simson L. Garfinkel

MIT load taxes frosh

When I was in sixth grade my school sent home a report card with three A's and one A-minus. Rather than congratulating me, my father wanted to know what I was going to do the following semester to raise the A-minus to an A-plus. My father's words hurt me a lot.

The following semester I brought home a report card with three A-plusses and an F. Rather than face my father again, I ran away from home. That hurt my father a lot.

Probably every MIT student has shared a similar experience: that's why we are here. At some point in the past, most of us learned that it isn't acceptable to aim for second best. While such attitudes get one into MIT, they cause much pain along the way.

There are many ways for students to get hurt at MIT. Poor grades, failed romances, bad roommates, and harassment are just the beginning. Problems in adjusting to the academic pace are complemented by problems of adapting to the new social environment. Most incoming students don't realize that a different set of rules for evaluating performance must apply at a school where nearly everybody graduated first in their high school class. It's a dangerous trap to believe otherwise.

One particularly nasty characteristic about college is that freshmen are the most susceptible to being hurt; most of the rest of us have grown cautious and calloused in our years. Without knowing what to expect, freshmen often leave themselves vulnerable and compound their problems before solving them.

Three weeks into the term,

many freshmen are beginning to have problems keeping up with their courses. Some are finding that problem sets take many more hours than they had anticipated, while others are copying answers, only to discover on quizzes that the material has not been learned. Freshmen tend to compound these problems by blaming themselves for their difficulties with the material.

"I'm too dumb!" one freshman says. "I don't know why they let me in here," is a common lament of others. Too common.

The real problem is not with the freshmen or MIT but with the high schools these people have come from. Few students who measure up to MIT's rigid entrance requirements were challenged in high school; many entering freshmen never needed to work for a good grade.

Many speeches during Residence/Orientation Week stress that half of the freshmen must be in the lower half of the class. Speakers at the convocations seem to feel that some students will become suicidal if they are not top of their class. Contrary to this opinion, it is not the prospect of being an average student but the realization that long hours of studying are required merely to pass a course which so many freshmen find paralyzing. These experiences, together with the illusion that their classmates are handling the work load without strain, hurts many freshmen even more. Sadly, some freshmen feel that the only solution is to give up and withdraw from the Institute.

For many students, the first year at MIT is the hardest of all

the years to follow. Beyond the stresses of adjusting to the new environment, the breakneck work pace and the plethora of diversions which we all know and love, freshmen subjects are subjectively the hardest ones at the Institute.

Many freshmen are poorly prepared for their courses, while upperclassmen have a better background for their subjects. Many high schools simply don't prepare their seniors for subjects such as Physics I (8.01), Principles of Chemical Science (5.11) and Calculus I (18.01). On the other hand, a senior in mechanical engineering has been studying mechanics, engineering and design for over three years.

Additionally, while upperclassmen specialize in fields which they are interested in, freshman are forced to be generalists. The freshman year is the only year in which computer hackers are forced to take subjects in chemistry and prospective political scientists struggle with elementary calculus. It is much to expect out of a disoriented student.

Freshmen haven't built up defence mechanisms for dealing with these new found hurts. Fortunately we have the Institute-imposed defense mechanism — pass/fail — to keep down the suicide rate.

Beyond easing the transition into the Institute, freshman pass/fail masks the differences in preparation between students. The Institute should keep in mind the importance of pass/fail to the sanity of freshmen. Without it, the hurdle of the first year might be insurmountable to many students.

Guest Column/Rich Cowan

Religion of science blinds us

(Editor's note: The following is adapted from a speech delivered at the UCAM rally on Sept. 13.)

Some of you may have had the experience of handing out political flyers. If you haven't, you can probably imagine the experience. Some people say "no thank you" because they think you're selling something. A second group reluctantly accepts what you have to give them, and an inquisitive few actually reach for it.

At MIT there's a fourth group: students who act normally until they realize what you are distributing is political. At that point, their faces tie up in uncomfortable knots. They keep walking in the same direction, but they pretend not to look at you.

I didn't understand what was happening to me the other day, until I remembered that 11 percent of the MIT student body have security clearances. I asked the next student who was afraid of my leaflet if he had a security clearance, and he said, "Yes." I told him that didn't mean he couldn't take a leaflet, and he was cautiously receptive to my suggestion.

Those who have the greatest need to understand the social and political effects of military technology — the engineers who will build the next generation of weapons systems — are hesitant to consider anything beyond the technical details they receive in engineering courses. Some are afraid of what they might see if they broaden their vision; others feel that doing anything "political" endangers their careers — working on Star Wars.

It is sad that MIT, supposedly

a politically independent educational institution, a "sanctuary for the constructive criticism of the technological enterprise," in the words of President Paul E. Gray '54, inhibits broad thinking. Dormitory discussions shy away from difficult questions that need to be asked.

MIT's current effort to reform the curriculum to foster the consideration of social and political implications is doomed as long as professors are even more strongly tied to research contracts and weapons consulting than their students. Faculty will continue to teach means and ignore ends; students will absorb material without understanding what it's for. The repressive character of the MIT educational experience will be preserved.

You may wonder what all this has to do with Salt II. The point is that the arms race is not caused solely by politicians in Washington, but also by attitudes fostered at universities. This is an opportunity for activism. An opportunity to point out the contradiction between the positive goals stated by the institutions of which we are a part and the tacit,

contrary messages we often hear.

The Brazilian educator Paulo Friere sheds some light on how to affect people in *The Pedagogy of the Oppressed*. "In order for the oppressed to be able to wage the struggle for their liberation, they must perceive the reality of oppression not as a closed world from which there is no exit, but as a limiting situation which they can transform." My suggestion for students is to break down the barriers of this "closed world" by educating fellow students and faculty members, always remembering to show them an exit.

The barriers I am talking about are not physical; they are ideas that people on both ends of the political spectrum have come to accept. Perhaps it is best to call them religions.

The religion of mainstream economics says that all economic growth is good without questioning what that growth is for or whom it benefits. The "liberal" *Boston Globe* never suggests we are growing by producing waste.

The religion of science says that whatever is good for science is inevitably good for the country. But science since World War

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Columns and editorial cartoons are written by individuals and represent the opinion of the author, not necessarily that of the newspaper.

Letters to the Editor are welcome. They should be typed and addressed to The Tech, PO Box 29, MIT Branch, Cambridge MA 02139, or by interdepartmental mail to Room W20-483.

Letters and cartoons must bear the authors' signatures, addresses, and phone numbers. Unsigned letters will not be accepted. No letter or cartoon will be printed anonymously without express prior approval of The Tech. The Tech reserves the right to edit or condense letters. We regret we cannot publish all of the letters we receive.

The Worlds of Philip Morrison

Friday & Saturday, September 26-27, 1986

Friday, September 26, 1986

Symposium

John Quincy Adams Ballroom
Hyatt Regency Hotel

Welcome 9:00 am

Dr. Gene M. Brown
Dean of Science, MIT

Astrophysics

Chairman: Professor Bruno Rossi, MIT

Professor James Peebles 9:10 am
Princeton University
The Universe at Modest Red Shifts

Professor Walter Lewin 9:50 am
Massachusetts Institute of Technology
Some Recent Developments in x-ray Astronomy

Coffee Break 10:30 am

Professor Kenneth Brecher 11:00 am
Boston University
Origin of Cosmic Rays

Professor Alan Guth 11:40 am
Massachusetts Institute of Technology
The Inflationary Universe

Lunch (on your own) 12:15 pm

Disarmament

Chairman: Professor Francis Low, MIT

Dr. Jerome Wiesner 2:00 pm
Massachusetts Institute of Technology
Phil Morrison and the Spirit of Our Times

Ms. Randall Forsberg 2:40 pm
Institute for Defense and Disarmament Studies
Defense in a Democracy

Coffee Break 3:20 pm

Education

Chairman: Professor Anthony P. French

Professor Lillian Weber 3:50 pm
City College of New York
Noticings, Inquiry, and Joining With

Professor Owen Gingerich 4:30 pm
Harvard University
Galileo and Kepler

Banquet

Walker Memorial Dining Hall
Massachusetts Institute of Technology

Cocktails 6:30 pm

Dinner 7:30 pm

Speaker Professor Tom Gold

Magic By Max Maven

Saturday, September 27, 1986

Symposium

Kresge Auditorium
Massachusetts Institute of Technology

Chairman: Professor Victor Weisskopf

Welcome 9:00 am

Professor Carl Sagan 9:15 am
Cornell University
Joining the Universe

Professor Hans Bethe 10:00 am
Cornell University
Solar Neutrinos

Coffee Break 10:50 am

Professor Philip Morrison 11:30 am
Massachusetts Institute of Technology
Remarks of an Equinox

Picnic and Kite Contest 12:45 pm
Kresge Oval
Massachusetts Institute of Technology

After the Symposium. . . .

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opinion

feedback

Senior House had to turn some upperclassmen away

To The Editor:

Many of us at Senior House are upset by the apparent negative reaction of many members of the Class of 1990 towards ourselves and our house. We fear that *The Tech* has been perpetuating this reaction by printing articles that reflect an insensitivity to the people at Senior House. As residents, we would like to offer a few observations of our own.

In the past, Senior House has had problems attracting a large number of first choice freshmen, with the exception of last year when we filled the house with first choices first round. However, few people transfer out after their first year. In fact, many more people transfer in. This summer there were so many people from other dorms trying to transfer in for the fall that the Office of the Dean for Student Affairs was forced to turn some away in order to leave room for incoming freshmen.

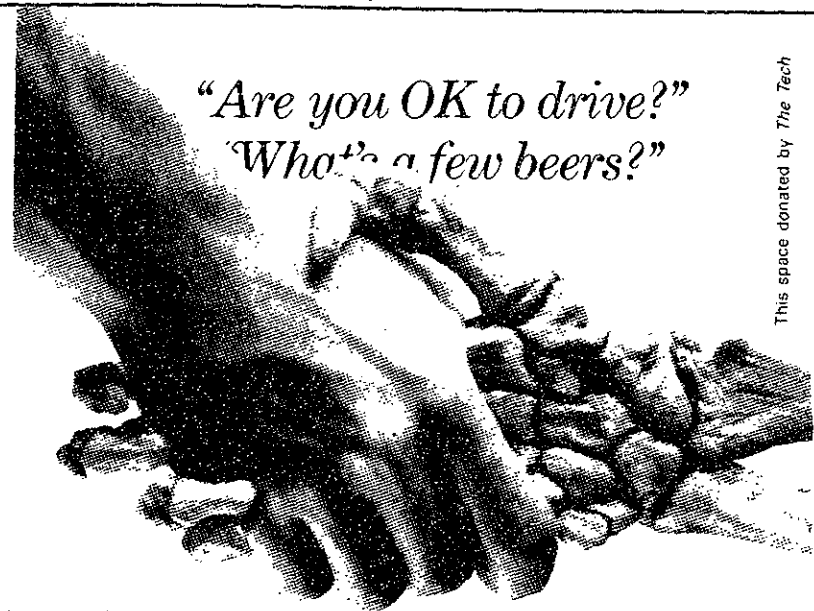
Almost all of our first choice freshmen were temporarily

housed in Senior House. They at least spent a little time meeting some Senior House residents. They did not simply walk into the courtyard and then leave without learning anything about the dorm besides how the people dress and how they wear their hair. If some freshmen were so concerned with superficial appearances, perhaps it is better that they did not choose to live at Senior House. At Senior House, the individual is important, not race, religion, sexual preference or the color of one's Reeboks.

We hope that no negative attitudes towards Senior House have been expressed by residents of other dormitories or fraternities. We at Senior House have always been extremely careful to avoid such rush violations.

Hopefully, most freshmen are happy with their final living group assignments. We are quite happy with the freshmen that are now part of our home.

Deirdre M. Hall '89
Chris Thorman '88



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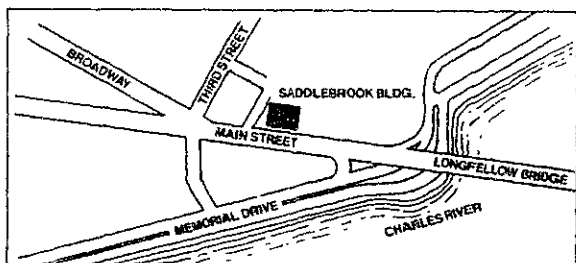
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opinion

Debate must include people inside the system

(Continued from page 4)

It has had such a strong history of military funding that DOD support is regarded as what is good for science. As a result, real reductions in the military budget, would be a disaster for what we now consider to be electrical engineering and computer science. The arms race continues.

The religion of space exploration says that we should be excited about the new Space Station project and the Trans-Atmospheric Vehicle, called TAV. The public is told that TAV will enable us to fly to Tokyo in two hours. But scientists report that the project has recently been shrouded in a veil of secrecy, due to its military potential.

Ironically, MIT's main lobby now contains a large, suspended metal structure placed there by Space Structures International, which is working with MIT's architecture department seeking to attract students to work on the space station project. This when David Warsh of *The Boston Globe* stated on Jan. 30, "Most proponents of SDI argue that a manned space station is a key to the successful deployment of a space-based missile defense."

The real purpose of the space station is now clear. SSI may be a commercial company, but its main customer will probably be the Pentagon. *MIT has converted its main entrance into a monument for Star Wars.*

The worship of these dogma is a barrier to political change. Making these barriers visible is an avenue for change. Getting the candidate elected who believes that nuclear weapons are bad may add a voice to the anti-nuclear contingent in Congress, but it will have little effect on the views of the heads of Raytheon, General Electric or IBM.

For students, universities often serve to reinforce the religions of science, economics and blind faith in technology. For example, MIT's libraries contain little information on the Defense Science Board, the Institute for Defense Analysis, and the Council on Foreign Relations — three organizations which set the tone for national policy decisions. However, there are shelves full of literature on how corporations can minimize their taxes. Universities are set up to reinforce the system, not to allow people to oppose it.

Students can change the climate for debate, simply by raising questions that are rarely asked. For example, MIT's 1985 *Long-Range Plan* says that MIT, as "a national and world resource . . . should be contributing to the solution of the overriding problems of our time: the danger of nuclear war, the protection of our environment, the depletion of resources, especially energy, the need to open the opportunities and benefits of this society to all of our citizens, and the need to improve productivity and to alleviate poverty." The question "is MIT doing all these things?" can sustain an army of activists.

Students can ask why MIT's arms control professor Jack Ruina is on the boards of directors of two Star Wars contractors; why MIT disregards the concerns of the neighboring community while developing "University Park" on the old Simplex site; why underseas robotics is the focus of a huge Sea Grant conference here next month.

Activism of this sort can be easily organized. It doesn't need the support of a large campus group, only a few committed friends. It will not have an immediate effect on Washington, but it does something more important.

It politicizes people.

This even includes the large number of students with security clearances who are bound to a career within the military-industrial complex. From within such people will not really be able to change things, but they can influence the political role of institutions. The inhibition on political discussion imposed within institutions must be challenged.

There are even corporate heads and university presidents who support disarmament that might speak out if pressured to do so by employees or students. If they do speak out, it sends a signal that "the establishment" is changing course, and the mainstream press will be more inclined to investigate the issue.

Don't get me wrong; activists who maintain their independence by remaining totally outside the system are necessary. But the political debate must also include people within the system. Otherwise, potential solutions such as disarmament or economic conversion will always appear radical and be immediately dismissed before they reach the public eye.

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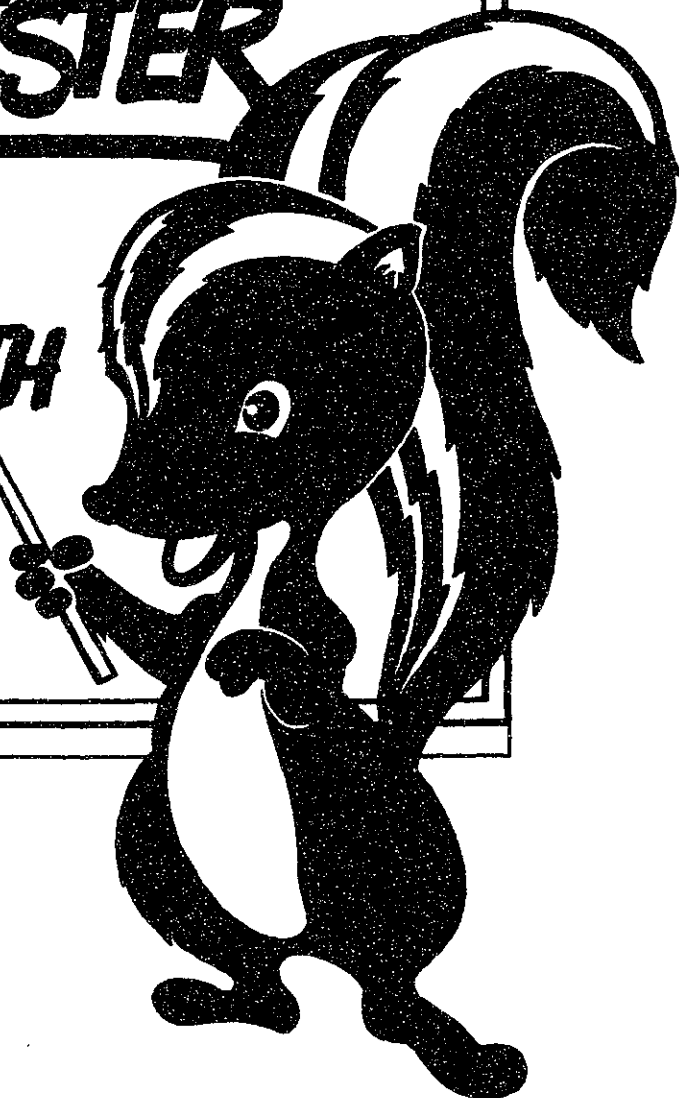
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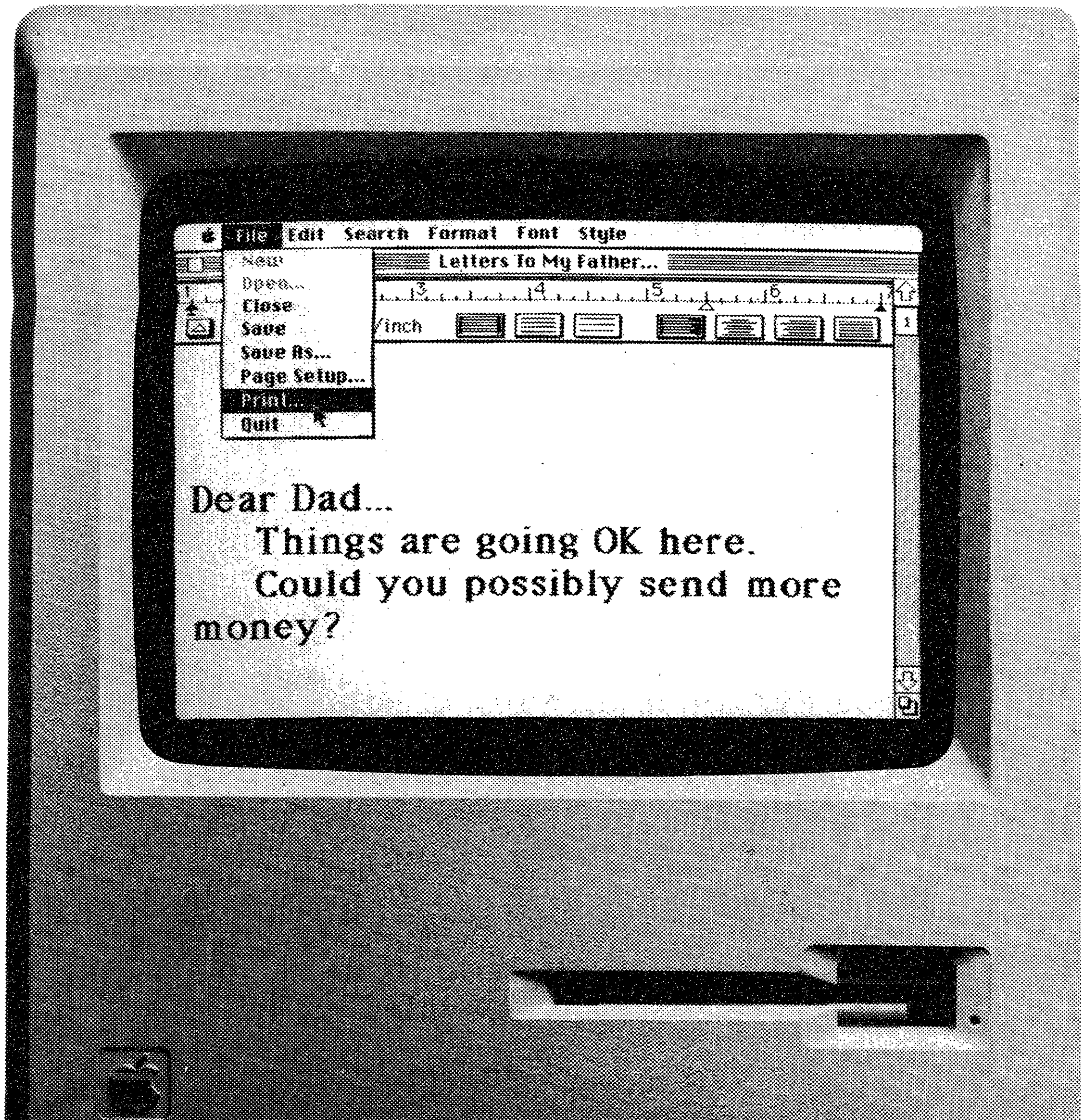
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ARTS

"Blue Velvet" shows a disturbing slice of life

RHINOCEROS

By Eugene Ionesco.
Directed by Libby Marcus.
At the New Ehrlich Theatre,
539 Tremont St., Boston, through Oct. 4.

By JULIAN WEST

THE DILAPIDATED ELEGANCE of the seats in this little studio theater stand in contrast in to the neat simplicity of the set: Two shop fronts in bright primary colors, some obviously off-the-shelf cafe chairs, and a notice pillar readily conjure up Ionesco's specific "small provincial town."

So why do the program notes insist that this production is set in "a city very much like Boston?" Why does director Libby Marcus say that her production "will address current issues of our time," although the only textual changes are references to Rupert Murdoch, the rhinification of Cardinal Law, Julia Child, "some of the Kennedy's," and a plug for *The Knee Plays*?

The answer, of course, is that the play itself addresses current issues of our time. The text, which in fact dates from the 1950s, is strikingly contemporary, addressing issues such as feminism and the nature of the media. There are closer parallels between Ionesco's decade and our own than most people are ready to admit. The Me Generation has come and gone, and we are returned to a world in which the herd instinct is primally important. One sometimes has the impression that one's neighbors are all turning into brutes, and that one is the only holdout who refuses to become a rhinoceros.

The first scene introduces us to two friends, the thin, rather soused Norman



Jean (Phillip Bowman) being transformed in Ionesco's *Rhinoceros*.

(played by New Ehrlich regular Michael Goodson), and the more robust Jean (Phillip Bowman). The conversation is full of wit, Irish bulls, and non-sequiturs, such as "Today is the same as any other day. O no, not quite as much." In fact, the dialogue and situation are more reminiscent of a playwright such as Stoppard than the absurdist Ionesco.

That changes when the first rhinoceros appears, running full tilt down the street and across a housewife's cat. Soon there is an epidemic of rhinoceroses, with humans metamorphosing into pachyderms without warning or explanation. But this is more than just absurdist farce about thick-skinned, plant-eating animals; all of humanity is under the rhinoscope.

The second act belongs to Bowman,

who transforms into a rhinoceros before our eyes. Bowman was brought in from outside for this production, and has two qualities which recommend him for the job: an extraordinary energy and acting ability, and an (Orson) Welles-ish physical presence. He is what might ordinarily be described as a bear of a man, but can only be depicted in this instance as resembling, well, a rhinoceros.

Jean's instantaneous transformations between an upright Frenchman to a stooped and roaring rhiniform animal is a tour de force which must be seen. The physical change is manifest not so much by a little primitive rhinoplasty as by the actions and gestures of Bowman himself. His spontaneous rhinoceros sound effects are as amusing as the recorded ones which

bellow from the speakers at the back of the theatre (although a little more sound engineering might have been desirable). One may be so captivated by the spectacle that one forgets that a fairly deep psychological study is being made on the same stage.

As amusing as the transformation from primate to pachyderm is the transformation of the set from Act II to Act III, which is entirely executed by actors making grunting rhinocerial noises.

Norman comes into his own in the final act, when he is confronted by the reality of having watched his best friend become a rhino, and the realization that he is being left behind by a trend of explosive popularity. He begins to worry whether he, too, has caught the rhino virus. Goodson rises to the occasion with a performance as touching as it is funny.

Another fine performance is turned in by Terry Stoecker as Norman's love, Daisy. Their disagreement over the future of humans on the planet of the rhinos, and the nature of the rhinocerial phenomenon, allow her to exude everything from sexuality through love to anger and resentment. Her performance is supplemented by allowing her to run through the early stages of the now familiar rhino transform.

After seeing Daisy's progress from woman to rhino, we realized that every metamorphosis in the production had its own individuality. Each actor had adopted her or his own way of devolving, and this made the loss of humanity and individuality the more poignant. Perhaps it also suggests that individuality is a characteristic which can also be preserved in the herd animals, and perhaps that is a cause for hope.

"Rhinoceros" addresses issues of our times

BLUE VELVET

Written and directed by David Lynch
Starring Kyle MacLachlan, Isabella Rossellini, Dennis Hopper,
and Laura Dern
At the Nickelodeon, Harvard Square,
and Circle Theatres

By PETER DUNN

IF EVER there were movies making you feel uneasy about that ideal, easygoing way of life best portrayed in Norman Rockwell paintings, then "Blue Velvet" tops them all.

"Blue Velvet" begins innocently enough: lyrical slow motion shots of a fireman waving from his truck and a man watering his lawn are interspersed with visions of red and yellow flowers. Typical shots of a small American town, right? Not quite.

Even as these images establish the locale, uneasiness is already being hinted at. The slow motion gives the impression of travelling in some warped reality and the long shadows appearing behind the characters suggest a dark cloud gradually creeping overhead. The shots of the flowers are taken from a low angle with blue sky and white picket fence completing a stark, surreal image.

The disturbed reality alluded to is suddenly made explicit as the gardener falls to the ground grabbing at his back and a yapping dog jumps onto his chest trying to drink from the spray of water still emanating from the hose in his clutches. The camera then zooms down to the undergrowth to give an ant's eye view of the bugs which labor and war in a world we are hardly ever aware of. This unsettling image of insects toiling beneath our gaze remains with us as the layers covering the seedy undergrowth of this Small Town, USA are slowly peeled away.

Jeffrey (Kyle MacLachlan), the son of the man hosing the lawn, must return from college to take care of the hardware store while his father is in the hospital. While walking back from his first visit to his father, he finds a severed human ear lying in the grass. When he reports this to the police they tell him to forget the matter and let them handle it; but he cannot sit still and decides to do some investigating of his own.

Aiding Jeffrey is the daughter of one of the investigating detectives, Sandy (Laura Dern). She leads him to a nightclub singer, Dorothy (Isabella Rossellini), who is some-

how involved with the severed ear. While spying on this singer, Jeffrey witnesses a frighteningly disturbing scene as Frank (Dennis Hopper), the madman torturing Dorothy's hostage family, plays out a weird sexual fantasy with Dorothy.

From this point the film becomes more and more unsettling as Jeffrey delves further into Frank's seedy world and also becomes intimately involved with both Sandy and Dorothy.

The unsettling atmosphere in the film is reminiscent of Hitchcock, to whom the concept of a dark world laying just below the surface of our calm, normal lives is not unfamiliar. David Lynch, who wrote and directed the film, goes so far as to use camera techniques and plot devices clearly echoing those used by Hitchcock.

But though "Blue Velvet" may in some ways be an ode to Hitchcock, Lynch does not let this preoccupation control the en-

tire film. Lynch's vision of the darker side of life is far more demented than Hitchcock's: all his villains are seriously disturbed whereas Hitchcock's could, for the most part, be classified either as simply evil or as solitary cases of mental derangement. Also, Lynch is far more explicit than Hitchcock: the intentions of the film are made quite obvious in the early shot of the insects in the undergrowth whereas such a shot would never have appeared in a Hitchcock film. Finally, Lynch tries not only to expose the scum beneath the surface but also to poke fun at the relaxed, laid-back way of life. For example, Sandy, who is meant to embody the innocence of this easygoing lifestyle, is often given ludicrous, campy lines which it is hard not to laugh at.

In these differences actually lie the major failings of "Blue Velvet." One is not so readily upset by the actions of a mad-

man since these actions are easily explained by his insanity; by comparison, although in Hitchcock's "Psycho" Norman Bates was quite mad, this was not revealed until the very end of the movie, which kept the audience on the edge of their seats throughout the entire film. And the images Lynch uses to explicitly state the intentions of his film leave little to the viewer's imagination.

Lastly, whereas Hitchcock gave the option of covering up the sleaze which he exposed, Lynch, in making fun of a better way of life, leaves no such option. One could argue that this simply makes Lynch's world darker than Hitchcock's but it is hard to take such a world seriously when we are laughing so hard at it. Perhaps if "Blue Velvet" had been less funny and had stuck with presenting its dark vision, it would have been a better film.

The art of mathematics

RIBBONS IN AGREEMENT

Art and Mathematics
Paintings by Juan Cardenas
At the Prudential Center Art Studio,
through September 26

By JULIAN WEST

A FIRST GLANCE at one of Juan Carlos Cardenas' acrylic paintings titled *Ribbons in Agreement* shows a pair of brightly colored ribbons floating in space. They follow roughly sinusoidal curves and intersect periodically. A closer look reveals that the structure is impossible; taken to the limit, the curves would become straight lines, pursuing different courses but intersecting everywhere along their length.

For Cardenas, mathematics and art are two ribbons in agreement. They are lines of inquiry which pursue different courses but are everywhere identifiable. It is as though mathematics is both the same as and different from art — an observation which may violate the law of the excluded middle but which is artistically sound.

Cardenas, a native of Bogota, Colombia, is currently at Northeastern University studying, of all things, biology. He has no formal training in higher mathematics, but confesses a long standing obsession with the subject. "For me," he

says, "mathematics is the most important thing in the world. The universe is mathematics."

Certainly a mathematician would find himself on familiar ground in viewing Cardenas' work. Spheres continually crop up as symbols of perfection; backgrounds are filled with tessellating designs which escape to infinity. When Cardenas talks, he sounds like a logician, discussing symmetry and expressing ideas such as "simplicity tends to perfection." He talks about Möbius bands, centers of gravity, exponential functions.

But an artist would find much familiar as well. Cardenas displays a work in progress, an acrylic of a waterfall which is compositionally reminiscent of an Escher print. Landscapes, and a pastel painting of crucifixion, immediately recall Dali, to whom the artist, though a self-confessed existentialist, points as an influence.

The Prudential Center Art Studio is a studio, not simply a gallery, and a visitor any day this week will find the artist in, and ready to discuss his work. A glance through Cardenas' sketchbook is like a perusal of a topology text; pages are filled with magic marker sketches of closed curves, "just a line, no need for color or anything else."

At first, I identify one region of the paper as the curve's interior, but it is a

false assumption. The 'exterior' intrudes and becomes a solid object. "I am using the paper not as a surface but as an element," he explains.

"The number three for me is something very special," he says suddenly. I ask why, and he points to one of the tripod easels. "It is so stable."

All of the works are recent, most dated 1986, but the ideas have been in Cardenas' mind a long time. "I have so many designs," he says, "they tend to infinity, and never repeat." He shows me some of his works in progress, one a sphere, the other two twisted ribbons. They are much larger canvases, reminding me of Vasarely's giant mathematically inspired works.

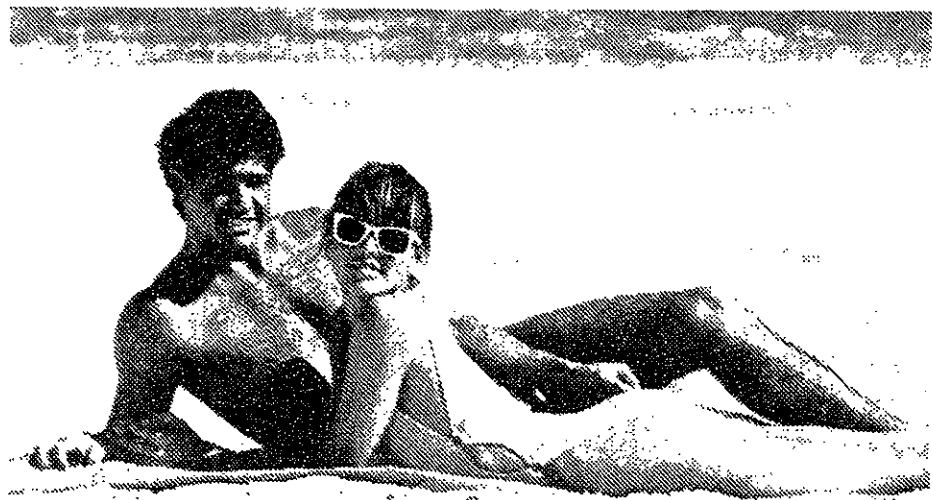
The studio is littered with little metal sculptures which might have come from a geometer's pocket, and rock back and forth with pleasing variations on the theme of simple harmonic motion. Cardenas seems to be seeking perpetual motion.

Most of his work is abstract, pure, but there are a few which are representational. Cardenas begins to explain his imagery, birds for freedom, human faces for peace. But my eye keeps drifting back to the row of ribbons floating in space. As he put it, "the most simple things are the most beautiful, and sometimes the most complex."

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Text of lab animal law proposal

Section 11-30. Guidelines for the regulation of the care and use of laboratory animals.

I. Definitions

In the context of this ordinance the following definitions are adopted:

(a) An animal is any nonhuman sentient being.

(b) An experiment is any procedure constructed by a research institution on a live animal.

II. Guidelines for Animal Experimentation

(a) All experiments on animals in the City of Cambridge shall be undertaken only in strict conformity with the "Guide for the Care and Use of Animals" (hereinafter referred to as the "Guide") of the National Institute of Health (hereinafter referred to as "NIH") as set forth in the Federal Register dated May 9, 1985 and in conformity also with applicable statutes and regulations of the Commonwealth of Massachusetts and ordinances and regulations of the City of Cambridge and such specific regulations as are established by the Cambridge Animal Experimentation Review Board created by this Ordinance (hereinafter referred to as "CAERB") to ensure compliance with the provisions of this Ordinance.

(1) All research institutions where experiments on animals are performed shall register with the City of Cambridge and agree to comply with the provisions of this ordinance.

(2) All research institutions shall file a semi-annual report with the City of Cambridge outlining the type, number, and source of animals used within the previous six months.

(3) Each research institution proposing to experiment on animals shall contact a training program for personnel involved in the care and use of animals. Such training shall be consistent with the Federal Improved Standards for Laboratory Animals Act. In connection with such training a manual or manuals shall outline all procedures and techniques relevant to providing for the psychological and physical health of the animals. Said manual or manuals shall be submitted to the CAERB for review and approval.

(4) All research institutions shall have an Institutional Animal Care and Use Committee (hereinafter referred to as the "IACUC") as mandated by the Guide. The IACUC should be broad-based in its composition; it should include members from a variety of disciplines, representation from animal care staff, and at least one member unaffiliated with the research institution. The members of IACUC shall have unrestricted access to all areas in which animals

are housed or used as subjects in experiments, subject only to such limitations as are deemed necessary by the research institution and are approved in writing by the CAERB. At least one member of the IACUC should serve as a representative of community interests in the welfare of animals. Such a member must be selected by the research institution from a list of individuals provided by the Animal Commission of the City of Cambridge (hereinafter referred to as the "Animal Commission"). Said list will be composed of individuals deemed to have the greatest capacity to provide effective advocacy on behalf of the animals.

(5) When any member of the IACUC is uncertain that the care and use of animals in a research institution is consistent with applicable laws, regulations, or guidelines, or community ethical standards, and such concerns are not resolved within the deliberations and activities of the IACUC, such member shall notify the CAERB.

(6) All animals in research institutions shall receive at least the protections afforded the Animal Welfare Act (hereinafter referred to as the "AWA"), Guide, State Law and City ordinances and regulations.

(7) Research institutions undertaking animal experimentation shall perform adequate screening to ensure that the animals do not suffer from bacterial or viral diseases or injuries not described in the proposal for such experiments as an intent of the experiment. Any animals found to be suffering from such diseases or injuries shall receive prompt and appropriate veterinary treatment. Complete records of such cases shall be maintained and made available to the CAERB for its review.

(8) As part of the research institution's responsibilities, it shall continuously monitor the physical pain or psychological distress of animal subjects. Furthermore, the research institution shall take every step possible to mitigate pain or psychological distress except to the extent that such pain and psychological distress is described in the proposal for the experiment as an intent of the experiment.

(9) All cases of unusual illness in the animals or the workers associated with the experiments being conducted shall be fully investigated and reported to both the Director of the Animal Commission and the Commissioner of Health and Hospitals of the City of Cambridge.

(10) Animal experiments involving physical pain where such pain is not mitigated at all times by the use of adequate anaesthesia and post-operative

pain-killers must be reviewed and approved by the CAERB.

Section 11-31. Cambridge Animal Experimentation Review Board (CAERB)

I. Creation

(a) The CAERB shall be established for the purpose of overseeing all animal experimentation that is conducted in the City of Cambridge.

(b) The CAERB shall be composed of the Chair of the subcommittee of the City Council on Human Services, the Director of the Animal Commission, and a minimum of three other members to be appointed by the City Manager. The City Manager is authorized to provide for the adequate staffing of the CAERB.

II. Responsibilities

Specific responsibilities of the CAERB shall include:

(a) Determining and delineating the community's ethical standards for the purpose of this Ordinance and being available for consultation with each research institution to insure that each research institution's care and use of animals meets those standards.

(b) Maintaining a relationship with the IACUCs.

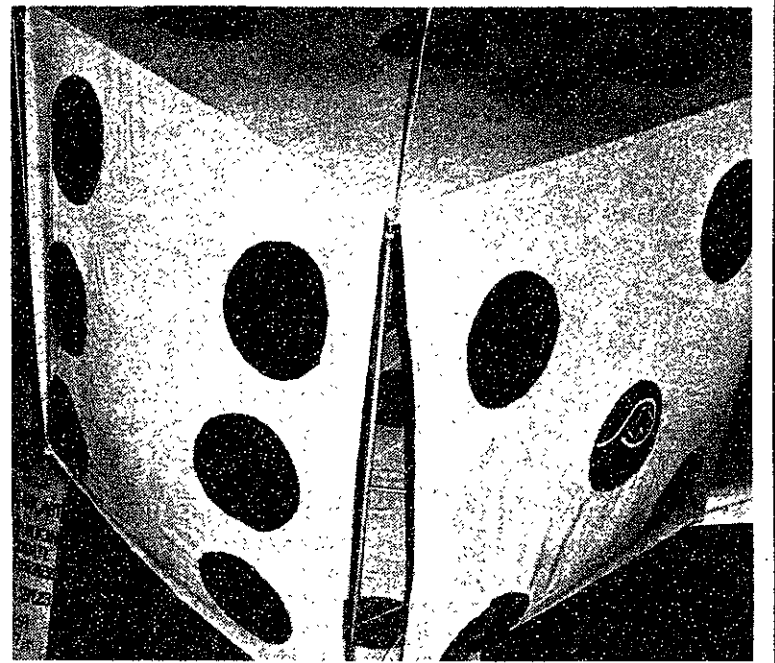
(c) Reviewing all proposals for animal experimentation to be conducted in the City of Cambridge in order to establish the compliance of said proposal with the Guide, any amendment thereof, or other regulations or guidelines as may be established by the NIH, the USDA, or any other federal agency, or by Act of Congress; and in conformity also with all applicable statutes and regulations of the Commonwealth of Massachusetts and ordinances of the City of Cambridge, and such statutes or regulations as may be established by the Commonwealth or the City.

(d) Developing a procedure by which members of research institutions where animal experimentation is conducted may report violations either in technique or established policy to the CAERB.

(e) Conducting unannounced site visits to research institutions or designating agent(s) to conduct such visits.

(f) Reviewing protocols for experiments on animals that are conducted in the City of Cambridge for compliance with the provisions of this Ordinance.

(g) Investigating alleged violations of the Guide, applicable laws, regulations, and community ethical standards. Upon completion of such investigation, the CAERB shall promptly report its recommendations for any further action deemed necessary, if any, to ensure compliance with applicable laws, regulations, and community ethical standards, to the City Council.



Yesterday's hack in Lobby seven.

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Undergraduate Association News

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All students are welcome. Take this chance to provide input. The UA Student Affairs Group is beginning a semester-long study on R/O. If you are interested in providing further input or in helping with this study, contact Jeff Liebman at the UA Office, x3-2696.

Everyone welcome, refreshments served.

STS S08 Student Perspectives in Educational Policy and Reform
Mondays, 3-5 pm, E51-125 6 units credit

Enroll in this seminar offered by Prof. Carl Kaysen, Dr. Ben Snyder, and Bryan Moser to discuss past and current educational reform at MIT. Students will take part in the current discussions by preparing individual or team studies in educational reform. For more information, contact Peggy Richardson at x3-3561.

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- Bryan Moser 267-1801
- Becky Thomas 225-8528
- Christine Chu 225-8648

The Undergraduate Association → UA office W20-401 (4th floor of the student center) x3-2696.
student government for students at MIT

Law would strengthen regulations

(Continued from page 1)

exist, Newcomer said he did not see the need for regulation on a local level.

Proponents of law cite research violations at Penn

Over 80 scientists and animal rights activists attended a Sept. 18 public hearing on the proposal.

Agha mentioned that scientists at the University of Pennsylvania who had been receiving NIH funding for many years were found in 1984 to be carrying out gross acts of animal abuse.

Agha cited the above case, in which federal regulations were not adhered to, as cause for further regulations on the local level.

Newcomer pointed out that the UPenn incident occurred prior to the NIH's updating of its animal research regulations. There are over 1500 other institutions with NIH funding which have not been found guilty of any injustices, he added.

Other proponents of the proposal criticized federal legislation such as the Animal Welfare Act, which does not explicitly provide for the rights of mice and rats. Approximately 90 percent of animal research is being conducted on mice and rats. The ordinance, which is aimed at protecting all animals, defines an animal as "any nonhuman sentient being."

Opponents of the ordinance found fault with this definition of an animal. Such a definition would encompass too wide a range of creatures. One person attending the hearing suggested that even microscopic organisms would be included in the definition.

Dr. Carolyn Compton, a physician and medical researcher at Massachusetts General Hospital, said "[Using animals] is the sacrifice we must make if we want to save human lives." Sixty percent of the animals undergo painless procedures, 30 percent experience pain mitigated by anesthesia, and less than ten percent experience pain without receiving pain killers or anesthesia, she said.

"It is very important that medical research continue without more bureaucratic controls," said one member of the audience.

Law would change membership of animal research committees

The NIH requires all research institutions to establish an Institutional Animal Care and Use Committee; each committee must contain at least one member from outside the institution. The proposed law would arrange for the Animal Commission of the City of Cambridge to compile a list of animal rights advocates to serve as non-institution members on each IACUC. The law would stipulate that each institution's IACUC could only choose its outside member from this list of animal rights advocates.

Newcomer said he is opposed to this change in committee membership. Having an IACUC member who has little knowledge of biology or medicine could be disastrous for an institution, he explained.

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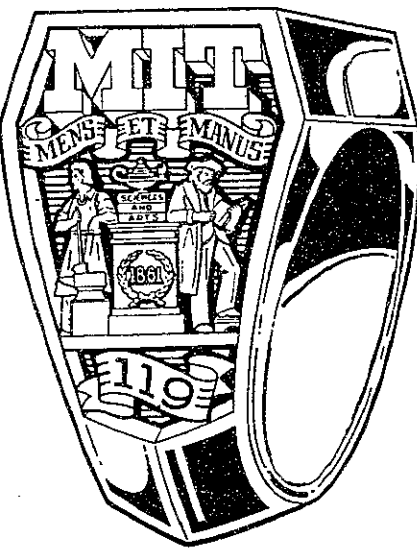

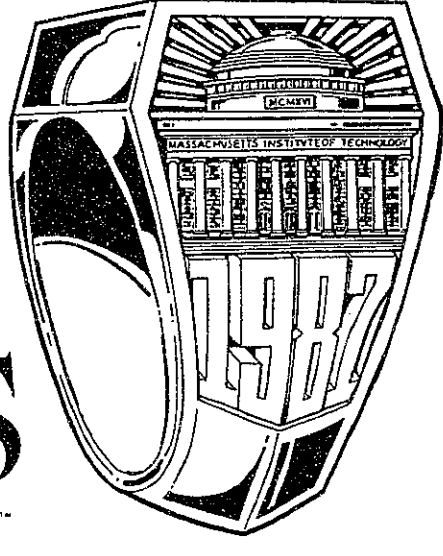
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sports

Defensive pressure disrupts Friars' game plan



Sidhu Banerjee

Providence offensive lineman resorts to grabbing Chris Moreno '88 in an attempt to slow the MIT pass rush.

(Continued from page 16) passing prevented the Friars from keying on the run, and the offensive line began to dominate the line of scrimmage, opening up holes for the Beaver backs. Hugh Ekberg '88 drove for several first downs in a drive that culminated with a 22-yard pass to Corles just 4:15 into the second half.

The MIT defense did its part, as the secondary tightened up on the receivers, giving the pass rush ample opportunity to pressure the QB. Dana Pirkets '88 almost intercepted one pass, while Arnold and Hong Mo Yang '87 broke up several others.

The Beaver offense continued to roll deep into PC territory. On fourth down and two, the blocking of center John Ryan '89 enabled Gasparini to pick up the first down at the PC 16. A lead block from Ekberg sprung Chris Adams for a 14-yard pickup, and on the next play, Ekberg carried the ball into the end zone.

With barely over two minutes left in the game, and facing a

fourth and 11 on the MIT 37-yard line, Delane dropped back to pass. Buellesbach intercepted the errant pass, but fumbled it away after carrying it into PC territory.

The MIT defense held strong — Poulin, Moreno, Gregory, and Rice all had a hand in dropping Delane on third and fourth down. All Gasparini had to do was sit on the ball, as the crowd called out the closing seconds.

With a 21-14 victory over the Friars, the Beavers showed in this, the first home game of the season, that they have what it takes to produce a winning season.

Adams sets rushing record

Adams entered the game in second place on the modern MIT career rushing list, needing but 21 yards to break Dan Curren's total of 1195 yards, set over the 1981-84 seasons. Needing only four carries to establish a new mark, Adams went on to gain 113 yards on the day.

MIT 21, Providence 14

| | | | | | | |
|-----|---|---|---|---|---|----|
| PC | 7 | 7 | 0 | 0 | - | 14 |
| MIT | 0 | 7 | 7 | 7 | - | 21 |

PC — Nolan 2 yard run (Giblin kick)
PC — Ofgant 30 yard pass from Delane (Giblin kick)

MIT — Gasparini 4 yard run (Reyes kick)
MIT — Corless 23 yard pass from Gasparini (Reyes kick)

MIT — Ekberg 1 yard run (Reyes kick)
Attendance — 250

| | MIT | PC |
|-----------------|--------|---------|
| First downs | 16 | 6 |
| Rushes-yards | 48-218 | 33-99 |
| Passing yards | 100 | 96 |
| Passes | 4-10-0 | 16-32-1 |
| Return yards | 47 | 57 |
| Punts | 4-143 | 4-163 |
| Fumbles-lost | 2-1 | 3-0 |
| Penalties-yards | 6-35 | 4-50 |

MIT Individual Leaders
Rushing — Adams 21-113, Ekberg 15-53, Gasparini 10-49, Maeda 2-3.
Passing — Gasparini 4-10-0-104.
Receiving — Corless 3-88, Naugle 1-16, Adams 0-1.
Sacks — Rice 4, Moreno 3.
Tackles — Yang 11, Moreno 10, Rice 9, Anderson 9, Dawley 8, Martin 8, Poulin 7.

FIGHT CANCER



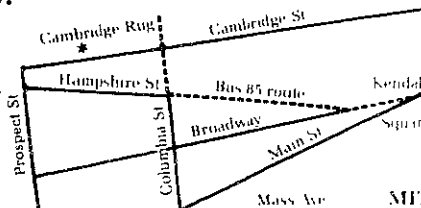
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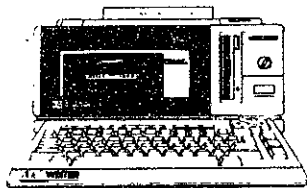
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Live musical entertainment • Dancing, celebrating, and refreshments

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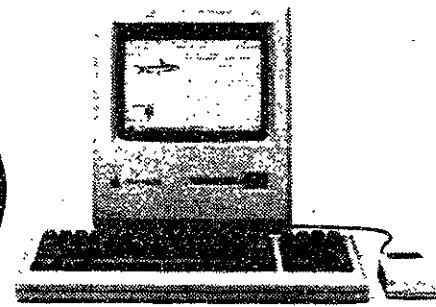
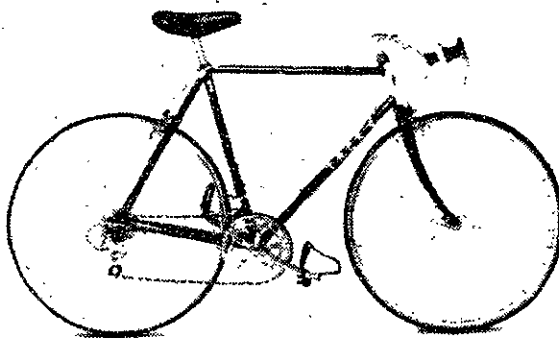
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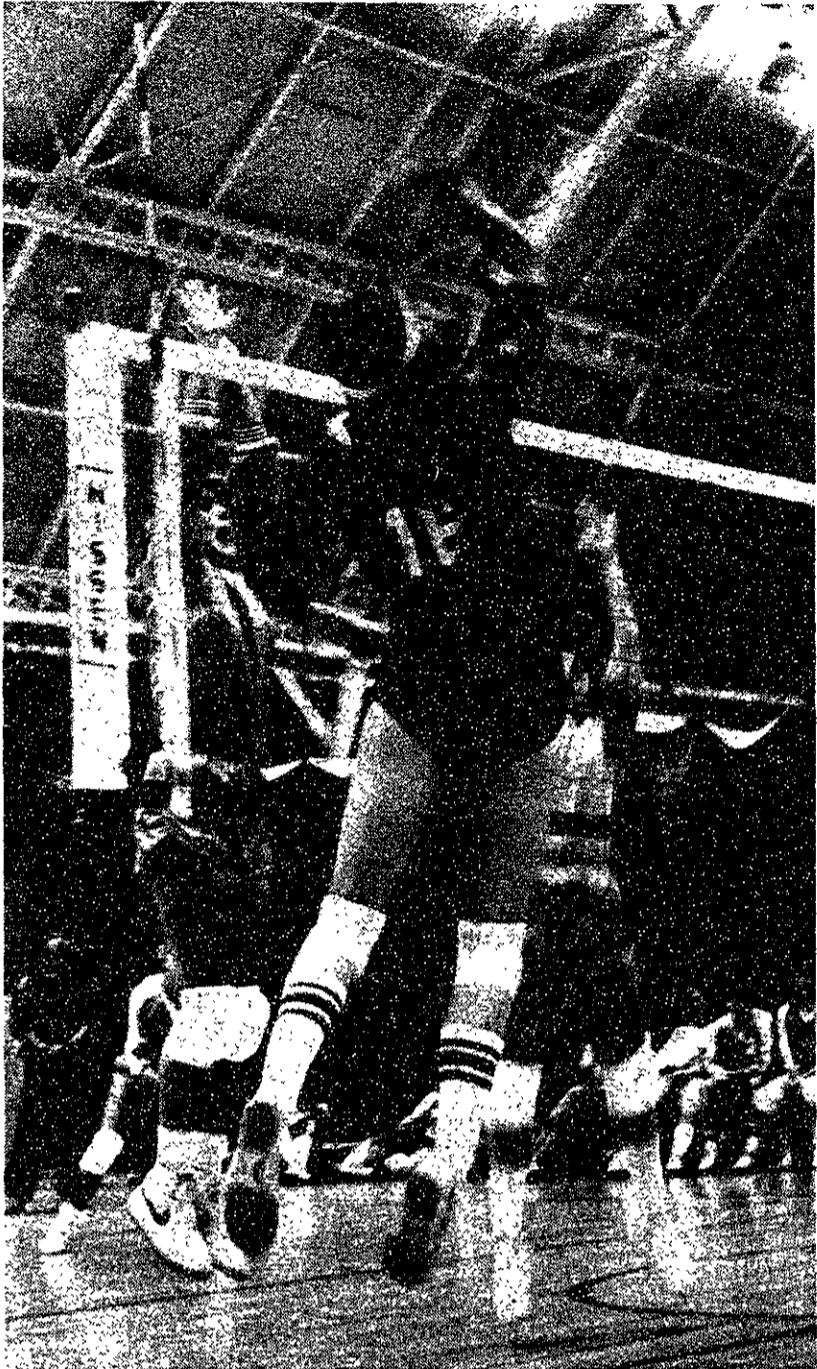


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sports

Photo essay



◀ Judy Mourant '87 spikes the ball during Wednesday's volleyball game against Salem State. MIT won the match, 15-4, 15-5, 15-2, bringing their season record to 2-0. MIT plays again this weekend in the Salem Invitational.

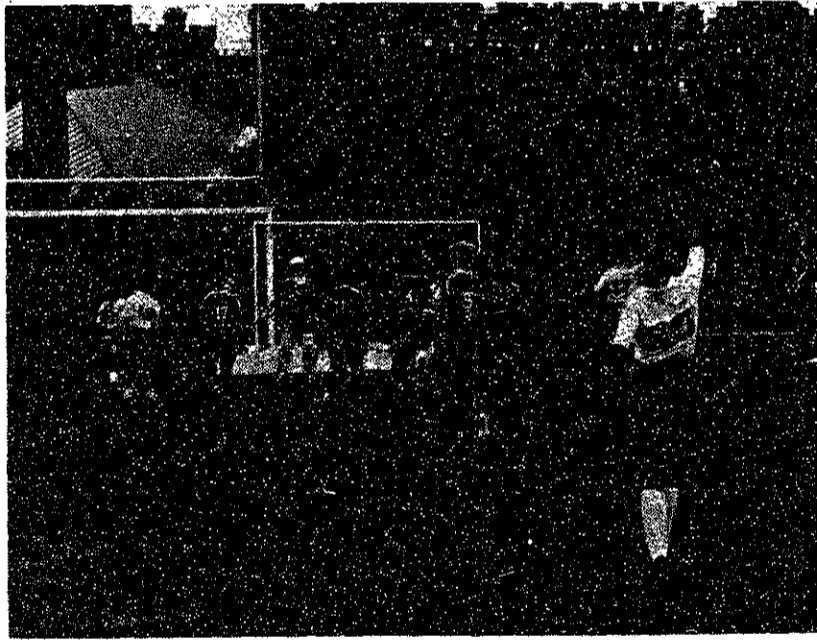
Mark Virtue



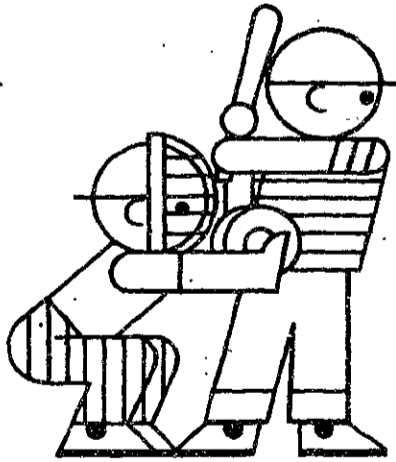
▶ Women's Rugby Captain Rachel Berman '88 supervising practice last Tuesday. The team played Tufts Saturday, losing 2-0. The women's rugby team is composed of undergraduates, graduates, and staff from MIT and Wellesley.

Mark Virtue

▶ Martha Beverage '87 of the women's field hockey team scores the winning goal in Thursday's 1-0 victory over Nichols, for their first win of the season. Their record is now 1-2. This Thursday they take on Gordon College at 3:30 pm on Briggs field.

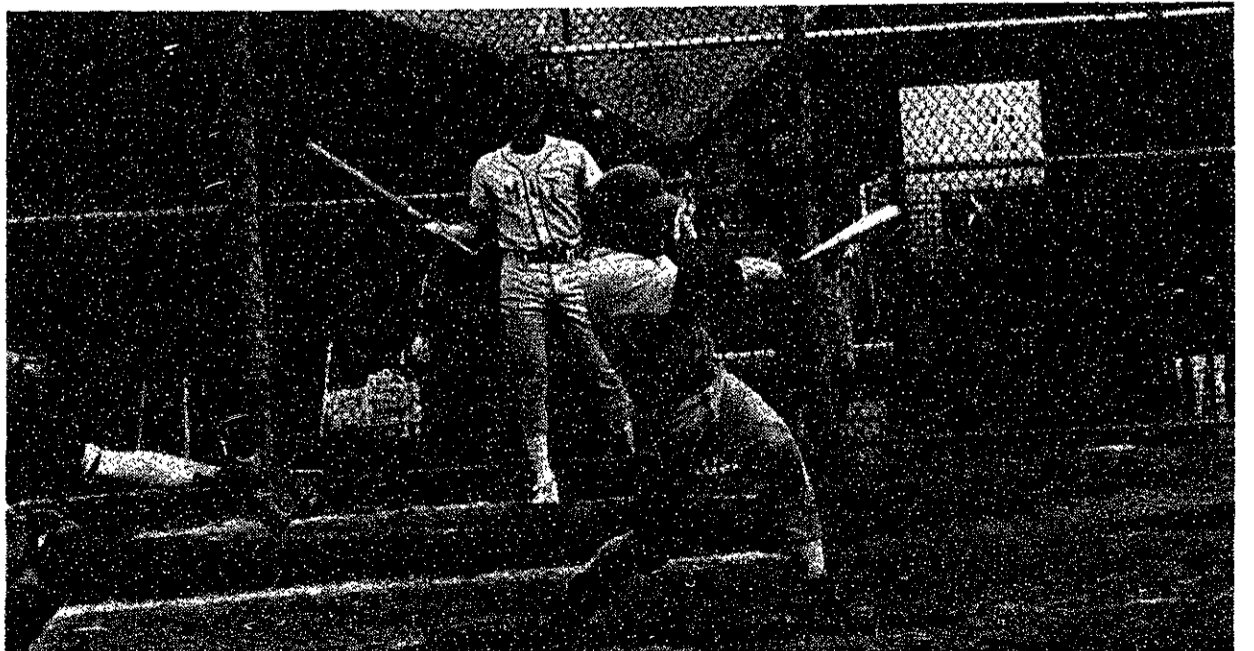


Dan O'day



▶ The men's baseball team played a double-header against UMass-Boston Saturday afternoon on Briggs Field. They lost 1-4, 2-5, bringing their record to 5-3. They play again next weekend in the Fall Baseball Classic, against Stonehill, Brandeis, and Bentley.

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Sports**



Sidhu Banerjee

By Stephen Berczuk

sports

Beavers surprise Providence, 21-14

Balanced offensive attack, dominating defense spark comeback victory

By Charles D. Robinson Jr. and Harold A. Stern

In a come-from-behind victory, MIT's football team defeated the Providence Friars Saturday by a score of 21-14.

The Beavers were in trouble early in the game — Kevin Delane's passing led Providence downfield. A diving catch by Jeff Ofgant brought the ball to the one, and Kevin Nolan ran the ball into the end zone.

MIT had several opportunities to score on their first drive, but came up short. Shane Arnold '88 broke past several defenders, returning the kickoff to the MIT 41-yard line. Three plays later, a spearing call on Providence brought the ball to the PC 25. With a first down on the 15, Peter Gasparini '88 threw two passes that would have been good for touchdowns if they had not been dropped.

The Beaver defense did better on the next series, disrupting the Friars' aerial attack with some excellent penetration. Richard Rice '87 recorded a sack, and pressured the quarterback into several incomplete passes. On fourth down, the Friars attempted a fake punt — Paul Anderson '90 stopped the ball carrier short of the first down.

The first half was marked by a number of penalties against the Beavers which were perhaps the key impeding factors in their unsuccessful drives against Providence. A quarterback sneak for a 26-yard gain was called back on penalties — the clip was the third penalty on as many plays assessed against MIT.

After Providence got the ball back, the Friars quarterback frequently found receivers open despite pressure from Rice, Chris Moreno '88 and Kevin Poulin '88. A desperation pass, thrown while Rice had a hand on Delane's

MODERN CAREER RUSHING LEADERS

| Player | '79 | '80 | '81 | '82 | '83 | '84 | '85 | '86 | Total |
|---------|-----|-----|-----|-----|-----|-----|------|------|-------|
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| CURREN | — | — | 178 | 248 | 309 | 460 | — | — | 1195 |
| EKBERG | — | — | — | — | — | 463 | 600 | 53† | 1116 |
| OLSEN | 226 | 375 | — | — | — | — | — | — | 601 |
| ALLEN | — | — | — | — | 588 | — | — | — | 588 |
| PEAKS | — | — | — | 279 | — | — | — | — | 279 |
| STENGER | — | — | 254 | — | — | — | — | — | 254 |

† — incomplete season
* — modern record

jersey, connected with Ofgant in the end zone, giving PC a 14-0 lead.

The Beavers' running game was successfully stifled and the passing game had little success until late in the first quarter. Then two key passes put them within touchdown range.

Starting at the MIT 23, Gasparini dropped back on first down and found Ken Corless '87

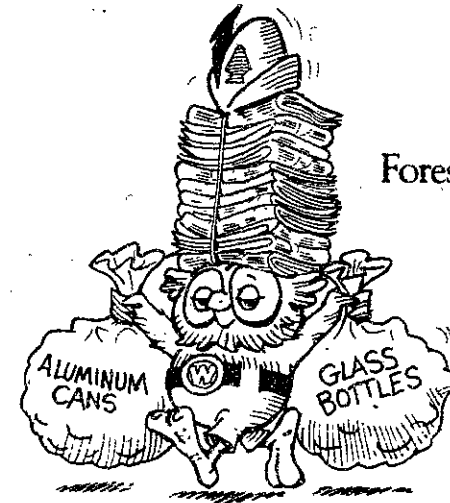
open down the middle. Corless broke one tackle, and was finally dragged down at the PC 42. On fourth down and five to go, MIT went for it. Gasparini again found Corless free, and connected for a 37-yard pickup, giving the Beavers a first and goal on the six. Gasparini carried the ball into the end zone, and a new place kicker for the Beavers — Herman Reyes '87 — converted

the extra point.

Providence managed to mount one more attack before halftime, as they drove down the the MIT 9-yard line. Excellent pass coverage by Rick Buellesbach '90 and John Dawley '87 broke up one attempt at a score, and sacks

from Poulin and Rice on successive plays shut the door, as time ran out before the Friars could set up for a field-goal attempt.

Two factors enabled the MIT rushing game to pick up speed in the second half — Gasparini's ease turn to page 13)



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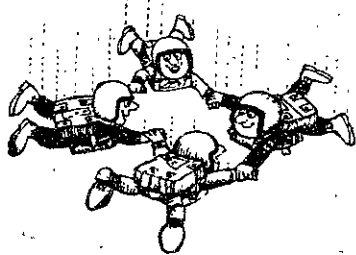
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