

Continuous
News Service
Since 1881

Volume 96, Number 27

TheTech

MIT
Cambridge
Massachusetts

Friday, July 30, 1976

**in
the
news**

INSIDE

A lot of planning is required for each year's R/O week activities, as R/O chairman Al Mink reveals.

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A computerized R/O? Mark Munkacsy comments.

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The issue of biological research hazards has become a subject of fervent debate among both scientists and the general public. Mark James' news analysis examines the complicated issues involved in one aspect of the problem — recombinant DNA research and Cambridge's moratorium.

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OUTSIDE

The MIT Athletic department has begun a search to fill the newly-created position of Assistant Director of Athletics-Director of Women's Athletics.

Two major earthquakes struck near Peking Wednesday, causing great losses to people's life and property, the Chinese Communist Party announced yesterday morning. The shocks, measured at 8.3 on the Richter scale, the strongest earthquakes since the 1964 Alaskan disaster, hit the cities of Peking, Tsientsin and Tangshan, an area with a population of 15 million. No specific casualty reports have yet been made.

THE TECH

The summer staff of *The Tech* who helped to put out this issue includes: Thomas Athanasas, Deborah August, Glenn Brownstein, Marcia Grabow, Mark James, Thomas Klimowicz, Richard Lamson, Mark Munkacsy, Brian Rehrig, Dave Schaller, John Shelton, Margo Tsakanos, Leonard Tower Jr., Rebecca Waring, Martin Weinstock, Lynn Yamada, Paul Yen.

Cambridge DNA work ban has small effect at MIT

By Mark James

A three-month moratorium on some types of recombinant DNA research declared by the Cambridge City Council on July 7 will have little effect on research at MIT.

This "good faith" moratorium prohibits research that is classified in the P3 or P4 risk categories by the National Institutes of Health (NIH) guidelines for the conduct of recombinant DNA research.

According to Assistant to the Chairman of the MIT Corporation Walter Milne, there is no ongoing research at MIT that falls under the P3 or P4 classification.

Milne said that MIT is "not in a position any different" than it would be in if the city had taken no action. He said that steps to certify compliance with the NIH guidelines for any new research would slow such work more than the moratorium would.

Recombinant DNA research involves the insertion of segments of DNA, the basic hereditary substance of cells, from one organism into the DNA of another organism. The most common recipient organism is the bacterium *E. Coli*, many strains

of which live in the human intestine.

Scientists hope to use this research to better understand the function of the components of heredity, which may further the understanding of genetically-related diseases, especially cancer.

Also, it may be possible to manufacture such substances as the hormone insulin more easily by inserting the genes for its production into bacteria, which can be cultured cheaply in large numbers.

Opponents of such research argue that new and dangerous combinations of genes may be produced, which might cause new types of infections if the bacteria involved "escaped" the laboratory containment.

The NIH guidelines define different levels of containment — the protective measures taken to prevent the escape and survival of experimental microorganisms outside the laboratory. P1 corresponds to normal lab work; each additional level up to P4 adds additional safeguards.

The guidelines also specify that the organism receiving DNA be one that is unlikely to survive outside the laboratory.

Several scientists at MIT have

(Please turn to page 3)

Remodel Writing Program, Sivin committee urges

By Glenn Brownstein

A faculty committee headed by Professor Nathan Sivin appointed to evaluate MIT's Writing Program has recommended that the Program be substantially reorganized and removed from the Humanities Department.

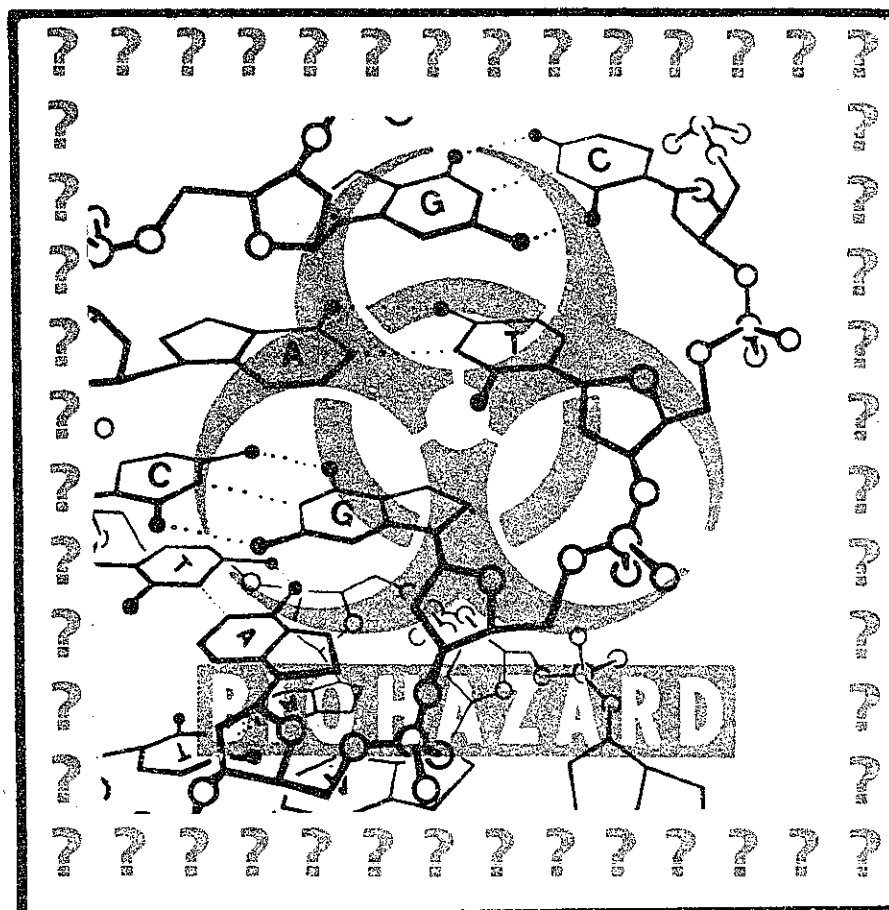
Calling it "unreasonable to expect the Humanities Department, given its present circumstances and priorities, to give strong and enthusiastic support to a program seeking to become an Institute-wide facility", the Committee recommended that the revamped Program be attached directly to the office of the Dean of the School of Humanities and Social

Science, to be supervised by a small Steering Committee of tenured professors from all MIT Schools.

In its report, released last month, the Sivin Committee praised the Writing Program for "sound, well established conceptions of writing instruction, appropriate for MIT," and attributed much of the controversy surrounding the Program's quired and a broad interpretation of guidelines for Distribution subjects.

Another Committee recommendation is to establish a Resource Center to deal with

(Please turn to page 2)



Leonard Tower Jr.

Severe crowding expected in dorms

By Mark James

The class of 1980 faces the highest level of overcrowding in recent history, even though it is 25 students smaller than MIT's target.

Between 100 and 115 freshmen above the normal capacity of the housing system will have to be squeezed in, according to Assistant Dean for Student Affairs Ken Browning '66.

The predicted level of overcrowding has been eased by

two factors: the smaller class size, and the formation of two new living groups — Alpha Delta Phi and the independent women's living group.

Browning said he was relieved by the improvements, but that the crowding was still severe. "It's like hitting your head with a hammer — when you stop doing it, it feels good."

Director of Admissions Peter Richardson '48 told *The Tech* that

(Please turn to page 10)

Taiwan training over; recasting infeasible

By Glenn Brownstein

The controversial Technology Training Program (TTP), aimed at teaching 15 Taiwanese students inertial navigation technology, was terminated on June 30 by agreement between MIT and the National Taiwan University.

According to MIT Vice President for Research Thomas F. Jones, the US State Department's Munitions Control Office

advised the Institute in May that the program's major laboratory project — design and construction of a prototype inertial navigation system — would not agree with national policy and security objectives.

NTU will meet all costs incurred during the program's 18 months. Had it run the full two years, the TTP would have cost \$917,000.

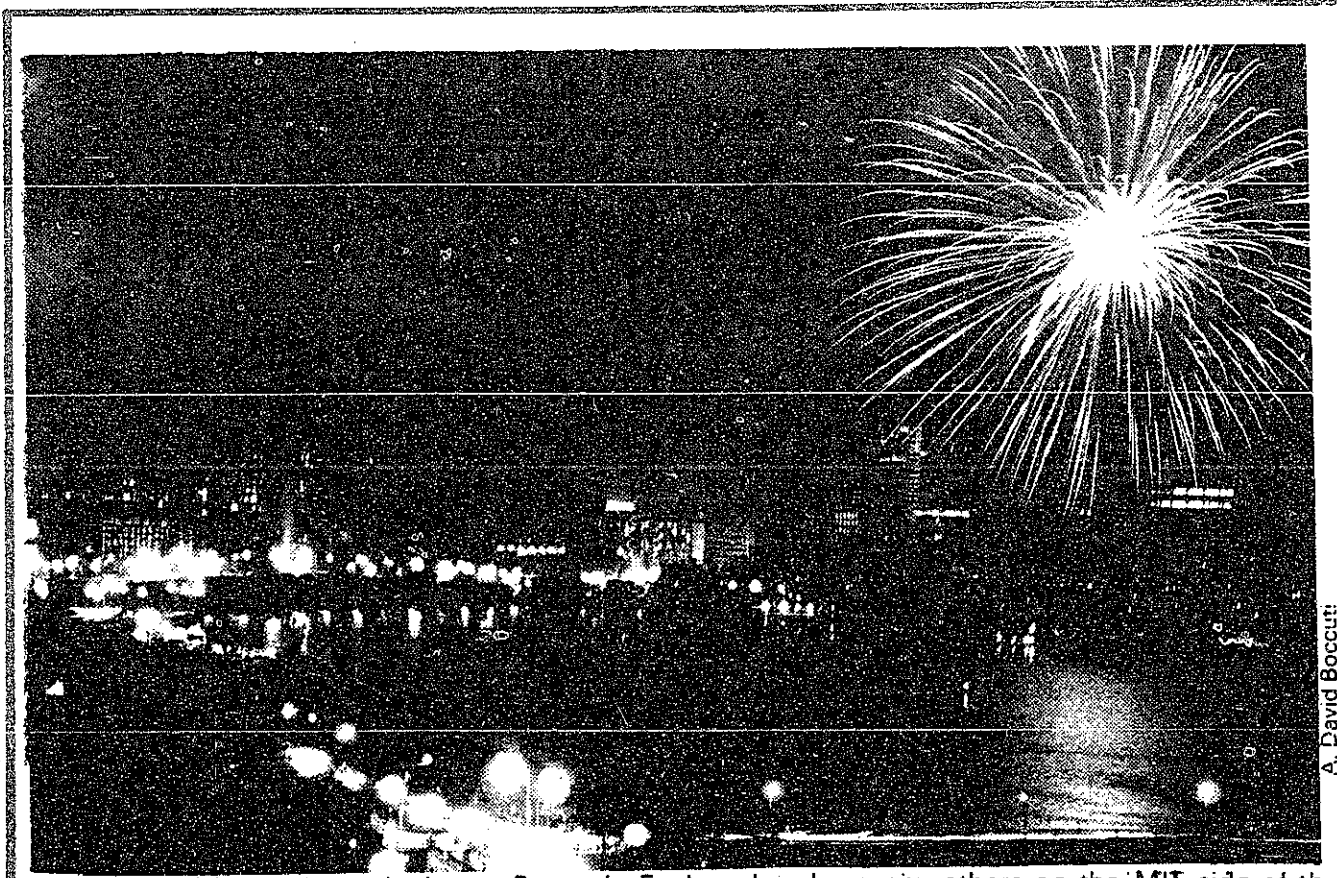
The infeasibility of changing TTP's focus after one year and a half led both contracting parties to end the program, which had been the subject of numerous protests on campus in the past year.

Student opposition to the program stemmed from the fear that the Taiwanese students, rather than using the inertial navigation technology for industrial purposes, would be assigned to build ballistic missiles that would continue the proliferation of nuclear weaponry.

Such protest came to a head this spring when it was revealed that all students involved in the program were connected with the Chung Shan Institute, a military research center.

According to Dr. Wallace VanderVelde, Aero/Astro professor and director of the TTP, "if in fact the Taiwanese intended to learn technology for strategic pur-

(Please turn to page 5)



A. David Boccuti

Over 400,000 people packed onto Boston's Esplanade, plus many others on the MIT side of the Charles River, watched fireworks such as these on the Fourth of July.

Sivin proposals to be discussed next fall

(Continued from page 1)
educational methods to "divergent views of priority in teaching" among different groups of faculty within the department.

According to Dean Harold Hanham of the School of Humanities and Social Sciences, and Associate Dean Donald Blackmer, the School would have serious reservations about running the Writing Program separately from the Humanities Department.

As Blackmer puts it, "The School's not set up to handle another program by itself (aside from the Technology Studies Program) — we'll have to think very hard about making the separation."

Both deans explained that while the report has been "received" by the Humanities administration, no action will be taken on any of the committee proposals until next fall. Blackmer and Hanham did explain that extensive plans have been completed for what is expected to be a "transitional year" for the Writing Program beginning next term.

Specifics of the transitional program were discussed with the Writing Program staff well before the Sivin report came out. David Breakstone, a part-time instructor in the Program last year, has agreed to serve as its acting director during the 1976-77 school year.

After the transitional program is implemented next year, a new, permanent Steering Committee will be appointed for 1977-78. The new administration will work toward integrating the program with more standard MIT curricula, Hanham and Blackmer said.

Despite rumors of severe staff cutbacks, the Program faculty will remain intact next year, with all professors and instructors having been rehired. The only noticeable effect of the budget cutback will be the elimination of the teaching assistant program for at least one term.

Blackmer explained that arrangements could be made in the fall for reinstatement of the TA setup in succeeding terms, but that the Sivin Report raises two policy issues — one related to the program's possible separation from Humanities, and the other with setting up funds for a seminar for TA's.

Blackmer addressed the separation issue by saying that he personally disliked seeing the Program leave the Department, but he added that "I'm not terribly hopeful" as to the eventual outcome. "Background, differences of understanding, and fundamental attitudes among faculty are not likely to change."

The conflicting attitudes of faculty in the Literature Section of the Department and those of other areas, as well as the differing opinions along junior-senior faculty lines, have been the cause

of much of the controversy surrounding the way writing courses are now being taught and the current value of the Program.

Such attitudes range from demands for more rigor and higher standards regarding correction of student work, and a minimum page-requirement for students in Program courses, to total satisfaction with all teaching methods used.

While Hanham believes that status differences between Program and non-Program faculty (tenure and title, for ex-

ample) have "exacerbated" the problem, he still feels that the current conflict of opinion is "good" and a "constant reminder that there's not just one way to do things."

In a development related to the Program, Blackmer noted that although a resubmitted proposal to include a somewhat revamped "Writing and Experience" course on the Humanities Distribution list had been rejected, the Requirement Committee had approved a new course, "The Short

(Please turn to page 4)

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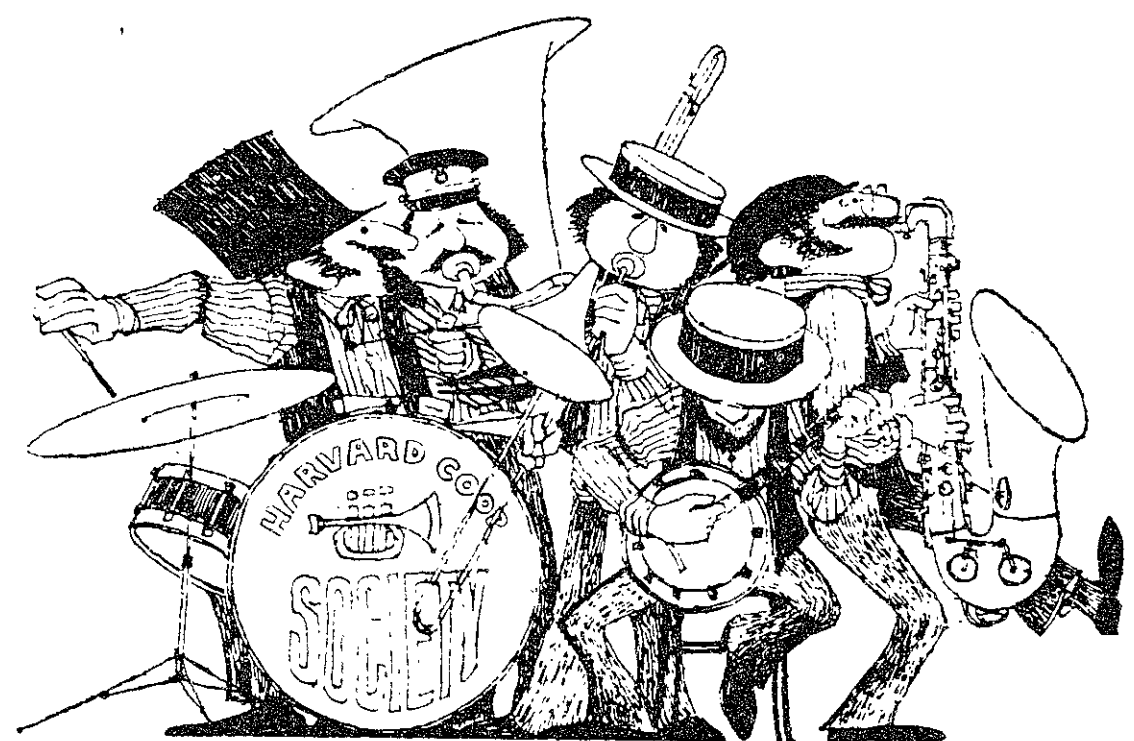
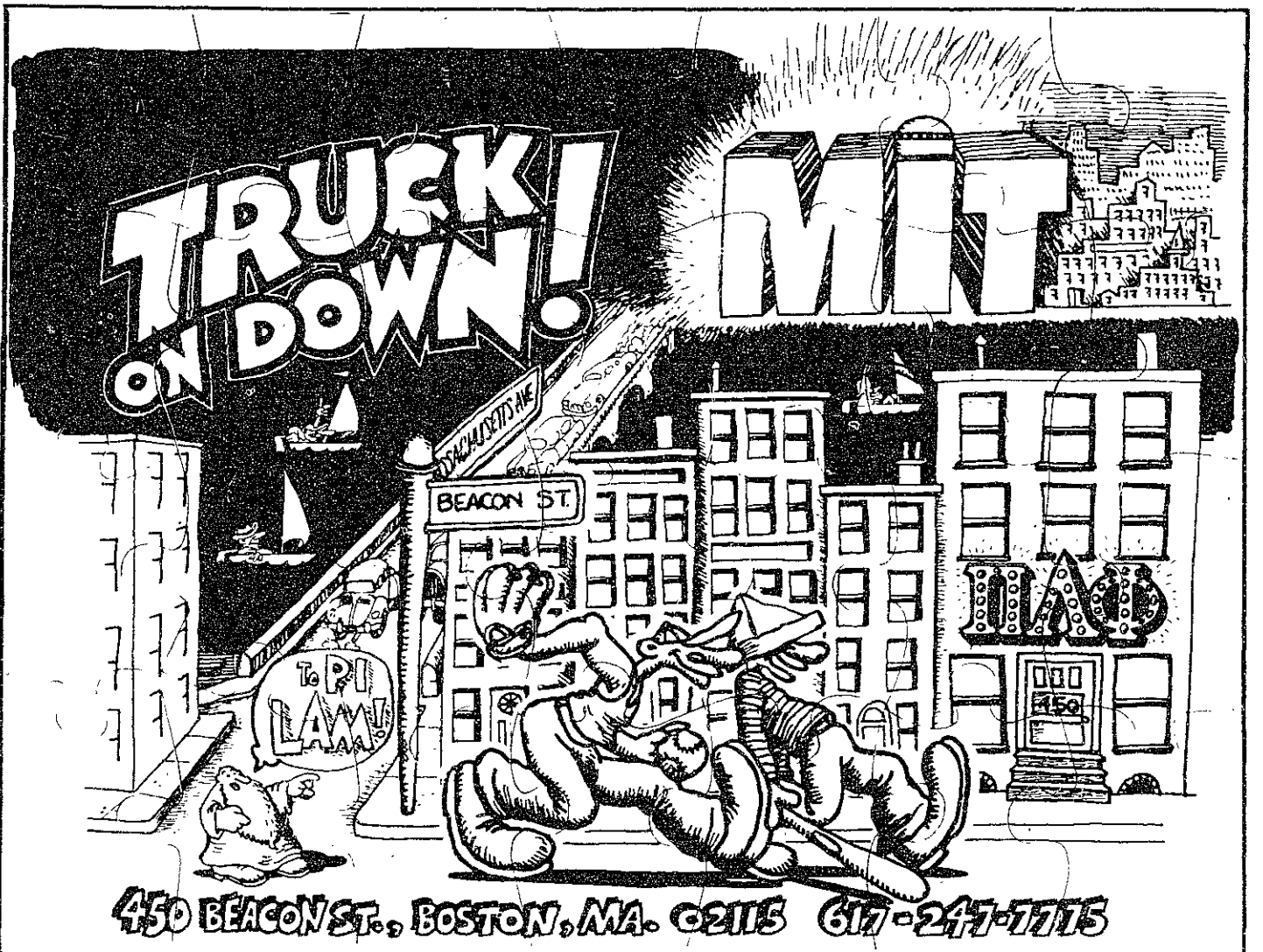
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MIT Student Center

Few DNA projects stalled

(Continued from page 1)
planned work which would fall under the P3 classification, including Associate Professor of Biology Phillip Sharp, American-Cancer Society Professor of Microbiology David Baltimore, and Associate Professor of Biology David Housman.

Housman had planned research on the isolation of particular genes from mammals using recombinant techniques.

He said that this would have been only a small part of his work, however. "None of us has gone on vacation yet" because of the moratorium, he added.

The NIH guidelines, released June 23, require that each university that plans recombinant DNA research set up a Biohazards Committee to oversee compliance with the guidelines. Professor of Biology Maurice Fox was appointed chairman of the MIT Biohazards Committee in January, but several members of the committee were not appointed until this week and two are yet to be appointed, according to Fox.

Fox said "the committee has no interface with the moratorium" since it is only concerned with enforcing the NIH guidelines.

According to an MIT release issued Wednesday, the two remaining members will be a graduate student and an employee or staff member from a lab where biohazards may exist.

In addition to the moratorium, the council approved a resolution calling on the City Manager of Cambridge to set up a Cambridge Laboratory Experimentation Review Board. According to City Manager James L. Sullivan, the

Board would "not be the traditional political committee" composed of proponents and opponents to the research, and not include representatives from the universities.

Sullivan said he was still "becoming totally familiar with the problem" and had not taken any action yet on appointing members to the committee. He said that the membership would be "intelligent, unbiased, and rational" residents of Cambridge.

Associate Professor of Biology Jonathan King, a supporter of the moratorium, said that the main effect of the moratorium on MIT was to open up discussion on biohazards.

"It has forced biohazards to come out of hiding" as an issue, according to King. He called the Biohazards Committee "a front" to cover up the real issues involved.

The discussion in Cambridge

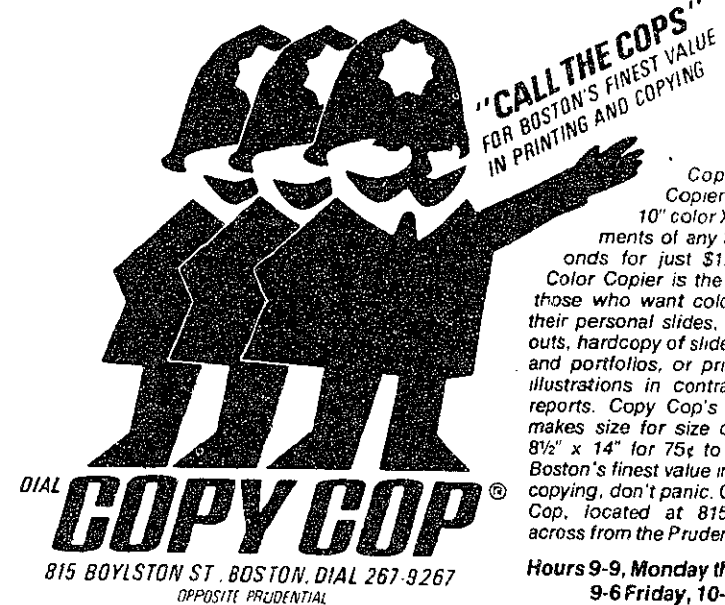
was originally motivated by a decision by Harvard to remodel a section of the Biological Laboratories building so that it could be used for P3 research under the guidelines. Two Cambridge City Council meetings were held in late June and early July on the subject, each of which was attended by more than 300 persons.

Over 30 persons, including scientists, lab workers, and representatives of the Cambridge community spoke at the hearings, expressing viewpoints on both sides of the issue (See the accompanying news analysis, page 13).

At the second of these meetings, the council voted five to four to pass the moratorium.

There have been no official talks between MIT and the Cambridge government concerning the moratorium, although informal discussion has occurred, according to Milne.

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Build resource center for writers, report says

(Continued from page 2)

Story", for Distribution credit, and three or four sections of that subject would be offered next term.

The Sivin Report urged reinstatement of the introductory "Writing and Experience" to the Distribution list based on an increase in the amount of work required and a broad interpretation of guidelines for distribution subjects.

Another Committee recommendation is to establish a resource Center to deal with "many sorts of writing needs that the regular curriculum cannot satisfy", a facility that would incorporate diagnostic services, special workshops and tutorials, study aids, and all types of audiovisual and literary materials to meet student demands.

Unlike centers in other universities, though, MIT's center should be designed to help "faculty in other disciplines to better deal with the writing of their students," a need the Committee considered "urgent."

Other possibilities for the Writing Program include the design of a system to monitor the writing of all undergraduates at MIT, in place of an English composition requirement, which the Committee "did not feel prepared" to recommend.

The Sivin Report also urged that "English for Foreign Students", now part of the Foreign Language Section, be

transferred under the jurisdiction of the Writing Program.

As Hanham puts it, there is a wide spectrum of writing talent among MIT undergraduates, moving from "the foreign student problem, especially Chinese with a very different grammatical structure to master, through dyslexics, through people who got through high school on 'talk and numbers', through people who write very well.

"Studies have shown that colleges with compulsory writing programs don't get a measurable improvement in students' writing. It's one thing to require, and another to motivate," Hanham said.

Hanham and Blackmer both felt that although there are problems to be ironed out, the Program has been successful.

"The Writing Program has engaged large numbers of students and gotten them interested in writing. What we'd like to do now is to continue to encourage them to write, push them somewhat, and make them feel they're making progress," Hanham said.

R/O planned just for frosh

By Allan Mink

(All Mink is 1976 R/O chairman) tens and tens of thousands of dollars, thousands and thousands of man-hours, close to a year's preparation, and it's all for you, at R/O '76.

Each of you is unique, with different lifestyles, outlooks, and expectations. MIT is not your run-of-the-mill school either. No doubt that is why many of you have chosen it. The two goals of R/O are:

1. To help you select your living group and your classes, and
2. To have one of the best times of your life.

Although this article will deal mainly with the first of these, do not forget that R/O '76 was planned for your enjoyment as well as for your introduction to the 'Tute. R/O '76 is the product of about a decade's evolution. In its earliest form, Residence/Orientation resembled the classical orientation. There were few activities; the week was shorter, and a rush from the dormitory system was unheard of. Perhaps the reason why R/O has changed so much stems from its structure. From the person in charge of the entire week to the people stuffing

envelopes, the program is almost entirely run by MIT students. In addition, most of the students helping are Sophomores who have just been through the last R/O and have plenty of ideas and enthusiasm.

All of this preparation is made to help you with your two decisions about the fall term; where to live and what courses to take. R/O week is broken down physically into two parts, with emphasis from Friday (3) through Monday (6) placed upon residence selection. The latter part of the week stresses academic orientation. Parties, shows, and other events are interjected throughout the whole 10 days.

Invariably, there are some new students who write and ask why Freshmen are not allowed to choose their living groups during the summer. After all, who ever heard of deciding upon your future address in just three days. However, there are several good reasons for waiting. First, 3 days are better than none. Although the residence book and the rush materials make it possible to see what a building looks like, it is very difficult to convey the "flavor" of the people living

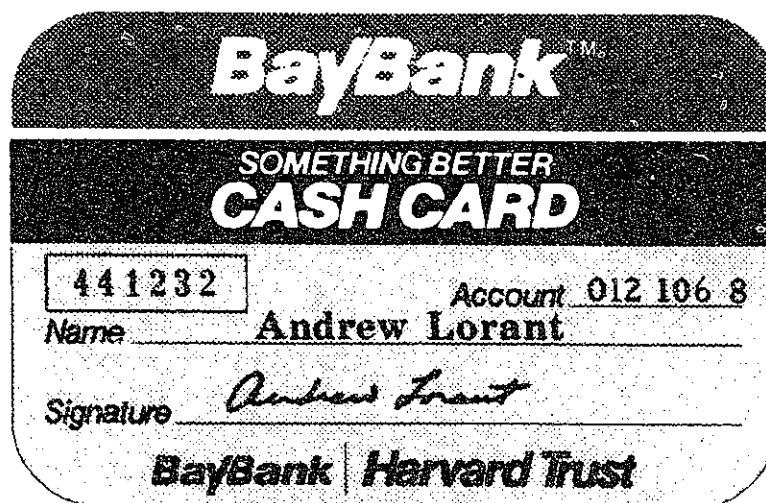
there. Ask some upperclassman who has been through it all and he's sure to agree.

Another reason for waiting is the fraternity rush. Back when MIT was Boston Tech, fraternities were the only living groups available. In all fairness, the fraternities must be given a chance to let you compare the merits of a frat with those of a dorm. Each has a lot to offer.

The second half of R/O week, academic orientation, actually has an event on Friday before the Picnic. For those who choose to (by sending in the reply card from the Handbook), you can meet with an associate advisor and some freshmen in small groups. These meetings will provide you with a chance to ask a few questions about academics and other subjects. The big events, though, happen on Wednesday. First, there is core orientation, comprised mostly of a series of short presentations by faculty representing the different academies of MIT. Some of the core orientation is reserved for answering questions from the audience. Immediately after core orientation is the academic

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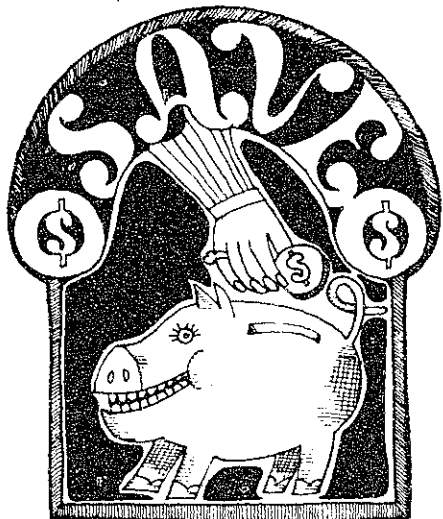
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M.I.T. STUDENT CENTER

Taiwan program stopped

(Continued from page 1)
poses, a program such as the one presently being conducted at MIT would be the best way for them to start." (Thursday, 2/12/76)

In addition, it was learned that the State Department had objected to MIT's original program, to be administered by Draper Labs, on the grounds that it would provide a curriculum too close to "state-of-the-art" work, and had denied Draper the right to conduct laboratory project work there.

The program was then transferred to the MIT Measurement Systems Lab with Draper personnel used as lecturers.

In Mid-March, a faculty-student Committee on Institute

International Commitments (CIIC) was formed to investigate the program and the allegations that its intent could be military.

About one month before the CIIC final report was issued, Committee member Ken Flamm G publicly wrote that "all the evidence the CIIC has so far points to the military nature of the program."

Flamm charged that "MIT is operating a training program for personnel employed by the Taiwanese Ministry of Defense. While State Department intervention stopped the transfer of the most sensitive inertial technology to Taiwan, the Taiwanese are still receiving a specially-designed two-year intensive inertial

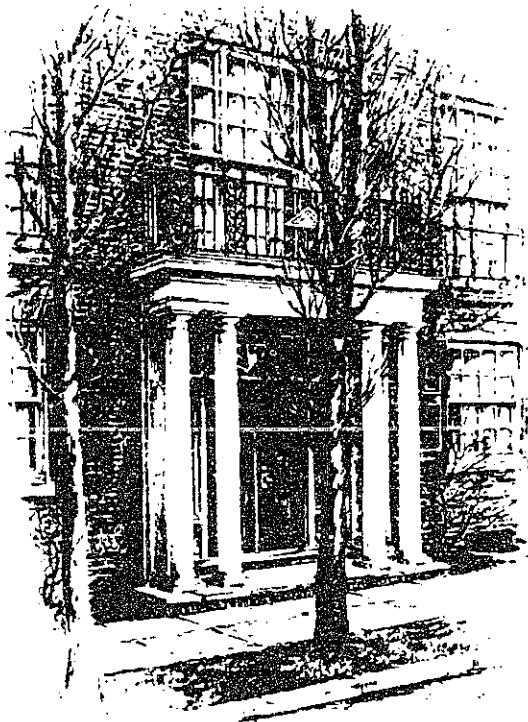
technology program." (The Tech, 4/16/76)

Although MIT President Jerome Wiesner and Chancellor Paul Gray '54 replied to the Committee that they were not personally convinced that the subject matter was as closely related to military applications as the CIIC believed, they authorized a recasting of the program, to be undertaken jointly by Dr. Jones and NTU officials.

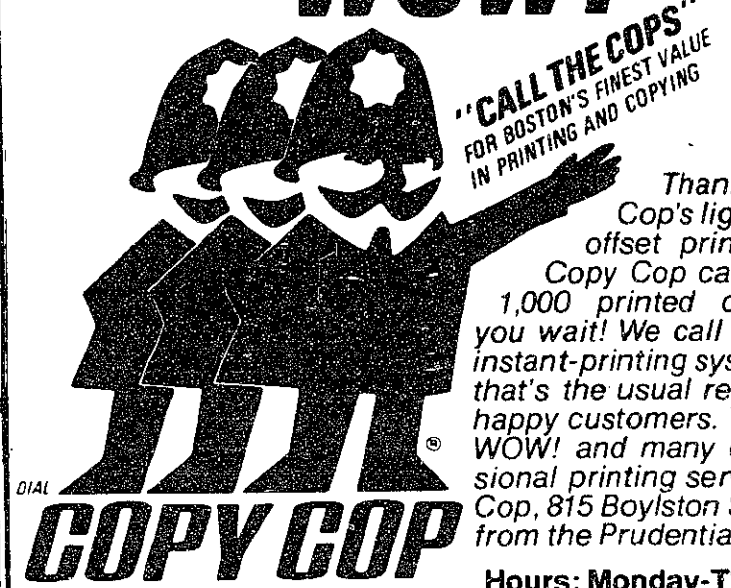
Based on the brief time left on the contract, these negotiations resulted in the program's termination last month rather than a refocusing of its objectives. All of the program's students returned to Taiwan last week after the decision was announced.

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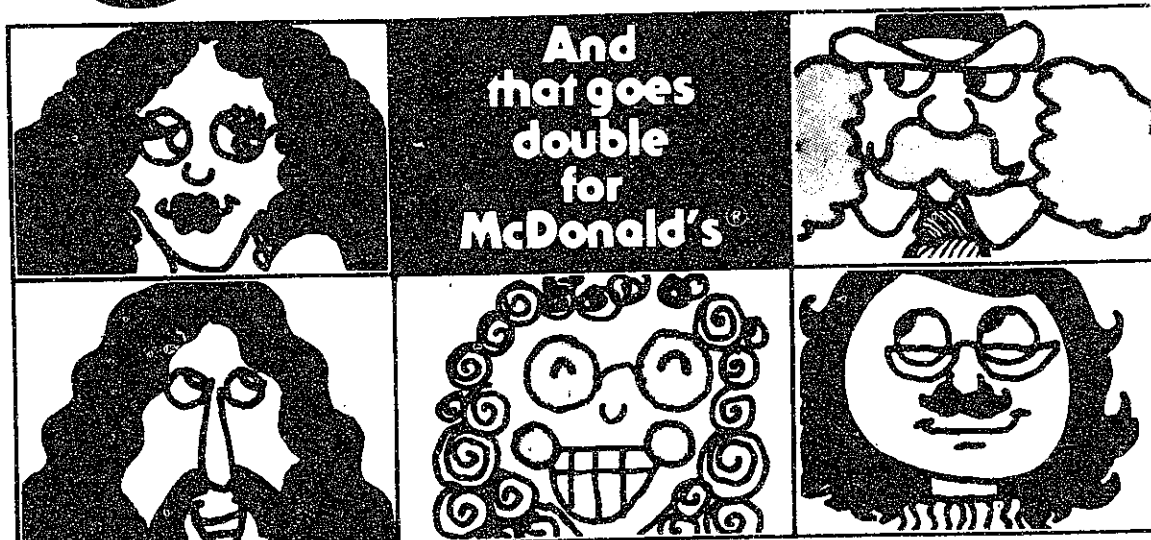
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opinion

Making serious choices: a primer for living at MIT

By Glenn Brownstein

The summer issue of *The Tech* is usually considered to be the Freshman Issue, and it is the traditional responsibility of the current Editor-in-Chief to give a so-called "pep talk" to the incoming class. Most of these efforts tell as little as possible about the important issues on-campus and instead resort to generalities like how exciting the college experience will be and how though MIT is a very strange, atypical example of a university, spending four years here should be very rewarding, and so on.

That, however, besides being somewhat insulting to the intelligence of the 1100 members of the new class, and besides meaning nothing to the other 6000 or so readers of this issue, doesn't give the kind of impression a newcomer should get of MIT — not simply of the diversity of the university experience, which will be foremost in the minds of many of the new students, but also the positive (and negative) aspects of having that experience in a diverse, culturally productive metropolitan area such as Boston, and coping with the kinds of issues and problems you'll no doubt face very quickly.

The Boston that was shown to millions on national TV on July 4 was but one of the views of New England's unofficial capital. The parades, the spirit and patriotic fervor of the crowds gathered in the city, the remarkably uplifting scene of 400,000 people gathered together to listen to one of America's greatest conductors, Arthur Fiedler, lead the Boston Pops in playing the 1812 Overture — this is the ideal Boston, the city that lived again this month after a few years of racial tension and strife, of school bus stonings, of racial intolerance closely approaching that found in any Southern city in the past 20 years.

The other picture, that of the racially-torn city, was hidden from view on July 4, not by any conscious effort of government, but by a desire of many residents to put it aside and enjoy the celebration. Yet the demonstrations by anti-busing groups continue (one inflammatory activist group marred the "Tall Ships" procession with an anti-busing, anti-black sign) with the divisiveness so natural to a city that is in fact about twelve culturally and ethnically distinct towns thrown together by geographic fate.

One of the things an incoming MIT freshman will find is that no two neighborhoods are alike in Boston — one can walk through Southie, the North End, or Back Bay, and feel that one has visited a different city (or country) each time. Such neighborhood differences have only added to the problem of busing in Boston, and it's not likely that a solution will be found soon.

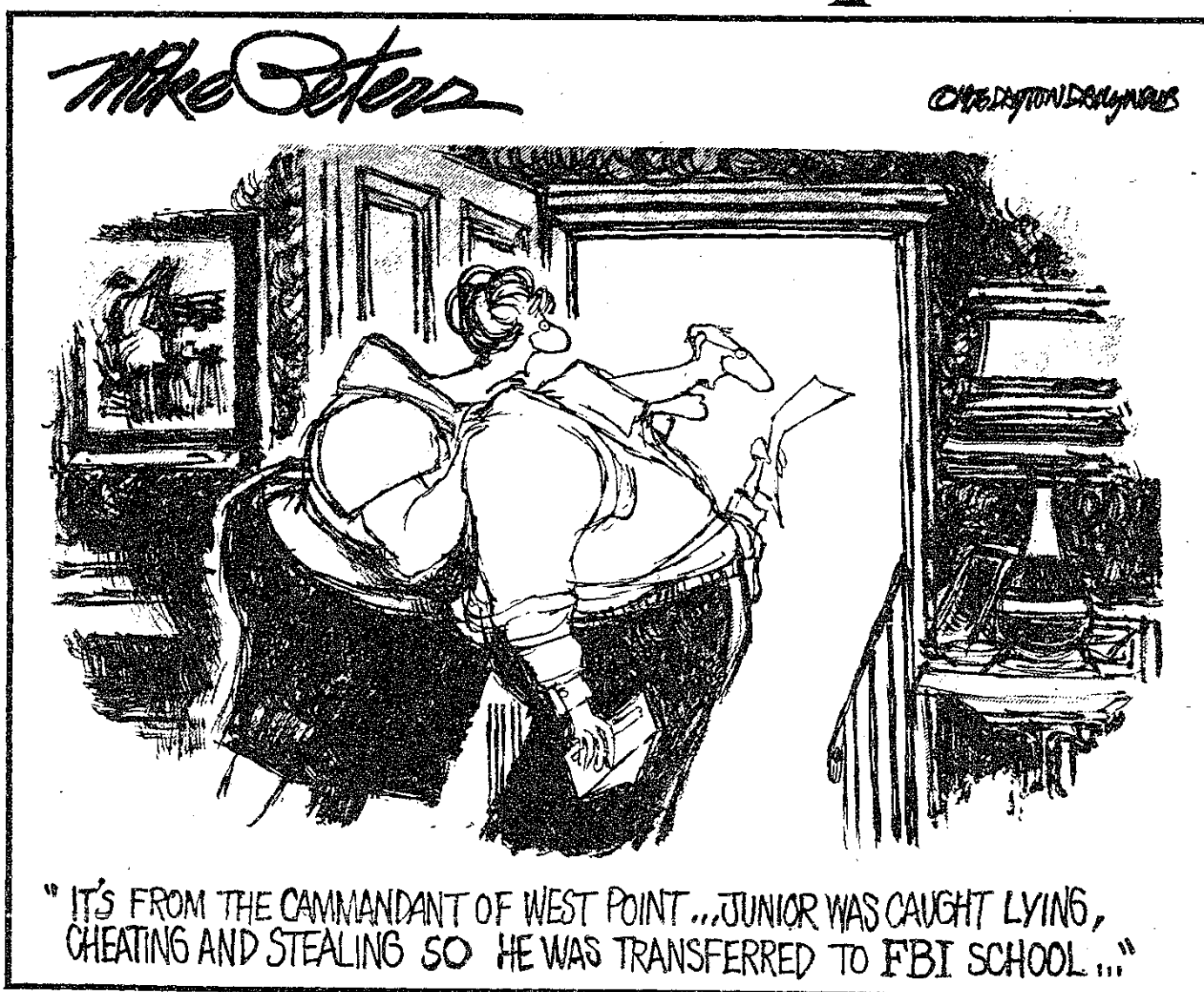
MIT, however, being in Cambridge, is almost entirely separate and distinct from the problems of its larger counterpart across the river. At times in the past few years, it has seemed that the newsfilm viewed on local stations was shipped in from Detroit or Louisville or Montgomery, so removed is the Institute from Boston at times.

The sorts of problems you'll find here mainly concern money and foreign affairs. The first area deals primarily with the budget, and the numerous constraints the Institute's current deficit will make on all students next year, although the freshmen will probably be affected the most.

For one thing, all dorms will be substantially overcrowded next year due to the increased class size, and classrooms will become more crowded as well, perhaps affecting such intangibles as teaching quality. From a financial aspect, freshmen will suffer the most when it comes to tuition, as increases are expected every year and the level of financial aid is not likely to increase commensurately, and the Class of 1980 may find cutbacks in academic programs or outside activities that could affect both their learning and their enjoyment at the Institute.

The foreign policy issue has been raised twice in the past 18 months, as MIT has entered into two highly unpopular programs: one to teach 54 Iranian students nuclear power technology, and one to give 15 Taiwanese engineers a two-year intensive program in inertial guidance technology. Both programs met with severe criticism from members of the MIT community, and the latter one was terminated six months early after the serious consideration was made that Taiwan's intent might be military instead of industrial (i. e. ballistic missiles and nuclear proliferation).

All of these issues, as well as the upcoming Presidential campaign, will affect the incoming MIT freshman next year. Many of the major aspects of these problems will appear in *The Tech* next term, but, more importantly, the nature of MIT is such that you'll very possibly find yourself quickly caught up in the constant debate, and make some serious choices regarding your academic and non-academic future, which is perhaps, in the long run, what college is all about.



Commentary

Crowding out R/O week

By Mark Munkacsy

Only 65 upperclassmen can return early this fall to work during R/O Week, the MIT administration revealed earlier this spring.

The limit had to be imposed because of the expected dorm overcrowding during R/O Week. An upperclassman wishing to arrive before the end of R/O Week must be screened by an R/O "Watchdog" committee to determine if a need exists for the upperclassman's early return. In previous years the number permitted to return early has not been so limited.

However, more severe overcrowding is expected in future years. The Freshman Advisory Council (FAC) is already drawing up plans to handle the anticipated problems.

For example, during the 1977 R/O Week, the FAC anticipates that only 20 members of the R/O Committee will be permitted to return early. To achieve this reduction, the number of Dining Service personnel permitted to return early will be drastically cut. The FAC expects, however, that this will have little effect on most incoming freshmen. According to one official, "The only change will be that freshmen will now have to wash their own dishes after the picnic in the Great Court."

R/O Week the following year should be worse. Overcrowding may be so severe that only ten members of the R/O Committee will be allowed back early. Many "traditional" R/O activities will be toned down.

Instead of the usual foreign student orientation program, one requiring much less manpower is being planned. In place of the gala picnic "get-togethers" the R/O Committee had originally hoped for, sugar doughnuts will be stuffed into foreign students' R/O information packets.

The lack of personnel will also slow check-in procedures to a crawl. Accordingly, all freshmen will be expected to arrive with a sleeping bag, and will be housed in the Student Center Library until temporary dorm housing is arranged.

The following year is expected to be the worst, however. Only the R/O coordinator himself will be permitted back early.

Each dorm will have tape recorders in their lounges playing back "normal sounds for the suite." This will permit freshmen to get an intimate feel for the flavor of each dorm, since there won't be any room for upperclassmen while the freshmen are making living group decisions.

The R/O Center itself will be completely computerized. Development of the system's program has already begun. It is expected that eventually the system will "forget" only a small handful of freshmen each day.

Other benefits will accrue from the state-of-the-art R/O Center. According to one spokesman, "Because the system cannot 'forget' a freshman's name, it will always address a freshman by that name. This should make the R/O Week experience much more

personal. Gone will be embarrassing questions like "What's your name?"

Each of the three Midways (Academic, Activities, and Athletic) will be restructured to use a minimum of labor. Present plans call for each to be a video-taped lecture.

However, "we should have it all together for the Class of '84," claims an Assistant FAC Dean. "That year the entire R/O Committee will be composed of entering freshmen." Since all entering freshmen are guaranteed rooms, a full-size R/O Committee can be accommodated without putting an extra strain on the housing system.

It is not without problems, though. Says the Dean: "A big question is how do we pick the committee? Perhaps we will simply pick the first freshman to show up and say, 'You're R/O Chairman.' Or maybe we'll pick the last freshman to..."

feedback

Warring with weather

To the Editor:

On July 12th, the *New York Times* published an article discussing the climatological theories of Dr. Iben Browning by which he accounts for weather anomalies — droughts or storms that are unheard of where they occur — in various areas around the world, now particularly in England, the Soviet Union, and France, and in our western states. Dr. Browning explains these events by saying that we are now returning to climate conditions that are normal, and that for fifty or so years out of the last 800 we have been blessed with unusually placid weather.

The recent CIA report on the impact of climate changes on political economic condition around the world (obtainable through the office of Congressman Fred Richmond) presents a view similar to this. According to the *Times* Dr. Browning's creden-

tials are as follows:

"He worked on development of the atom bomb. He is a facile inventor with 65 license patents. He holds degree in physics, mathematics and zoology, and he has worked as a weapons systems analyst on many secret government projects at Sandia Laboratories in Albuquerque."

"Studying the climate has been his 'hobby' for 19 years." The following day, July 13th, an article by correspondent Marquis Childs. The following day, July 13th, an article by correspondent Marquis Childs appeared in the *Washington Post* in which Mr. Childs included material suggesting a different explanation for the weather anomalies around the world. The article is entitled "Making War with the Weather" and discusses the efforts of Senator Pell of Rhode Island to

(Please turn to page 7)

The Tech

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Mark J. Munkacsy '78 — **Managing Editor**
John M. Sallay '78 — **Business Manager**
Volume 96, Number 27
Friday, July 30, 1976

News Editor: Gerald Radack '77
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Contributing Editors: Paul Schindler '74, John Hanzel '76, Thomas Mayer, Leonard H. Tower Jr.

Third Class postage paid at Boston, MA. *The Tech* is published twice a week during the academic year (except during MIT vacations) and once during the last week of July. Please send all correspondence to: P.O. Box 29, MIT Branch, Cambridge, MA 02139. Offices at Room W20-483, 84 Massachusetts Avenue, Cambridge, MA. Telephone: (617) 253-1541. Advertising and subscription rates available on request.

Opinion cont.

feedback

Controlling the climate: is weather a weapon?

(Continued from page 6)

get the Defense Department to testify on its weather modification activities. The article goes on to specify some of these and then concludes by quoting a statement of warning by the distinguished climatologist Dr. Gordon J.F. MacDonald of UCLA that operations causing tidal waves, floods and droughts could be carried out secretly:

"Such a secret war", Dr. MacDonald is quoted as saying, "need never be declared or even known by the affected population. It would go on for years with only the security forces involved being aware of it. The years of drought and storm would be attributed to unkindly nature and only after a nation was thoroughly drained would an

armed takeover be attempted."

To summarize the comparison between the two articles we have the veteran weapons systems analyst whose "hobby" is studying the weather, who tells us that natural weather is not to be desired — one presumes this leads to a prescription of weather modification to right the situation — and we have the eminent geophysicist and climatologist warning us that geophysical weapons systems are being developed that could produce long-term upsets in the climate.

Another point made by Dr. MacDonald in his article — the destructive effect of the electromagnetic fields in the environment on human health and performance — is also relevant here. He said that weapons

systems could be developed that would increase the intensity of the electromagnetic field oscillating in the spherical-shaped cavity between the Earth and the ionosphere specifically that this would "seriously impair brain performance in very large populations in selected regions over an extended period."

There are at least three kinds of studies of the effects of electromagnetic fields on animal and human biology: those dating back as far as 1935 in which the occurrences of solar-generated magnetic storms were successfully

correlated with increases in the incidence of such things as deaths from myocardial infarction, mental hospital admission, and automobile accidents; those of clinical symptoms in people occupationally exposed to electromagnetic field — these, oddly enough, are preponderantly Russian — and those recording the responses of animals and human experimentally exposed to electromagnetic fields — two principal findings of which are that such exposures induce hypermotility and impair conditioned reflexes and would therefore be of

interest to the behavioral scientist as well as to the climatologist.

Possibly related to the issue of lightning generation raised by Dr. MacDonald as means of intensifying environmental fields is a 1968 article by F.G. Hirsch *et al* on the psychophysiological effects of high-density pulsed electromagnetic energy, in which is described an immense electromagnetic pulse generator — a van de Graff generator charge an underground bank of capacitors which discharge from an array of aerial wires to a layer

(Please turn to page 12)

Protecting birthdays

To the Editor,

Over the last few years, *The Tech* has helped to promote the discussion of quite a few controversial issues involving student rights, and I'm sure all students are grateful for this service. Nevertheless, one important threat to student rights has been virtually ignored in the official student newspaper. Although almost all students are aware of insidious plans by the administration to rob them of one of their basic rights, *The Tech* has remained silent. By now I'm sure you have guessed that I am referring to our God-given Birthday Right.

Sometime during each of the last few terms, it has been said, the MIT administration has made a low-publicity move to regulate student birthdays. Their motives are well-known. Physical plant complains of excessive shower usage on these days. Others report a littering of both the chapel moat and the already much polluted Charles River. Some Professors have described a temporary lapse in the student work-ethic, sometimes to the extent that classes are missed as a result of reckless birthday

enthusiasm. (I must note here that none of these charges have ever been substantiated.)

Various measures have been proposed to eliminate these inefficiencies. Some of the more adamant demand the elimination of all forms of birthday celebrations, perhaps requiring a sworn statement by all prospective freshmen agreeing to abide by such a rule. Those more moderate among the administration suggest moving all student birthdays into the summer months.

As a student who has enjoyed more than a score of birthdays, I would strongly protest even the latter action. I will continue to celebrate each of my birthdays in April as I have ever since I came into this world. I hope that all students share my outrage at what could soon be forced upon us, and that they will redouble their efforts to postpone our oppression. And finally, in open defiance (for which I fear covert punishment) I would like, this thirtieth day of July, to declare

"HAPPY BIRTHDAY
MICHELLE"

to one of my fellow students.

"Little Johnnie"
(true name withheld)
July 27, 1976

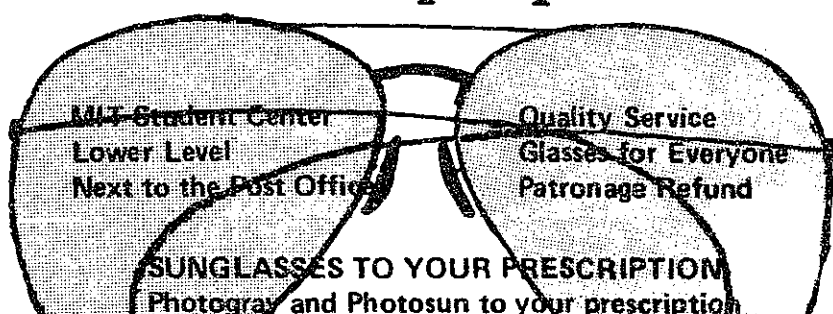
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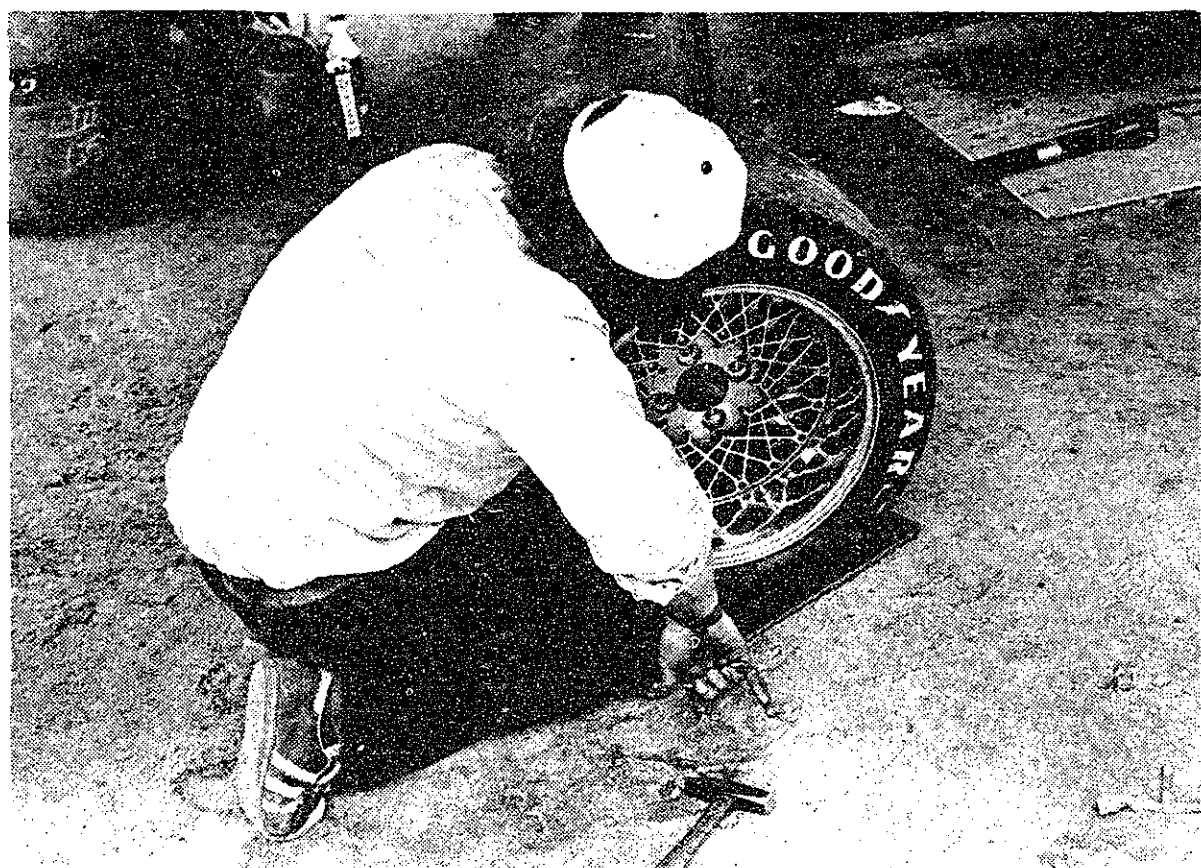
THE FREE UNIVERSITY OF IRAN

THE FREE UNIVERSITY OF IRAN IS ACCEPTING APPLICATIONS
FOR ACADEMIC AND TECHNICAL POSTS AND IS OFFERING
SCHOLARSHIPS TO IRANIAN NATIONALS

The Free University is a new and innovative institution established to respond to the increasing demand for higher education and the continuing need for qualified manpower through Iran. A distance — teaching format will be used to prepare, initially, professionals in two areas, teacher education and health sciences. Programs in the area of rural development and technician training are presently being planned. Course materials (e.g. correspondence texts, radio and television broadcast, home experimental kits, etc.) are designed and produced by "course teams". These teams consist of subject — matter specialists, educational technologists, radio/television producers, and editors. A network of local centers established throughout Iran will be staffed by tutors who will assist students in the use of course materials and who will guide practical work experiences.

The Free University wishes to identify qualified Iranian nationals who might be interested in working in such a context. Academic posts are currently available in the following areas: *medicine* (M.D. degree), *nursing*, *public health*; *physical and natural sciences*; *social and behavioral sciences*; *education*; *library science*; *Iranian studies*; *rural development*. Scholarships are also being awarded to qualified students who wish to continue their studies.

Interested persons are requested to send the following information to the North American office: name (first and last), university, field, and level. They should also note whether they are interested in a scholarship. Information should be sent to *FUI-North American office, PO Box 282, Rumson, New Jersey 07760*. Those who have already applied need do nothing further. Those planning to return to Iran this summer may also contact directly Mr. Firooz Firooznia, director, Manpower and Development Center, PO Box 11-1962 Aban Shomali St. Karim-Khan Ave., Tehran, 15, telephone 891521.

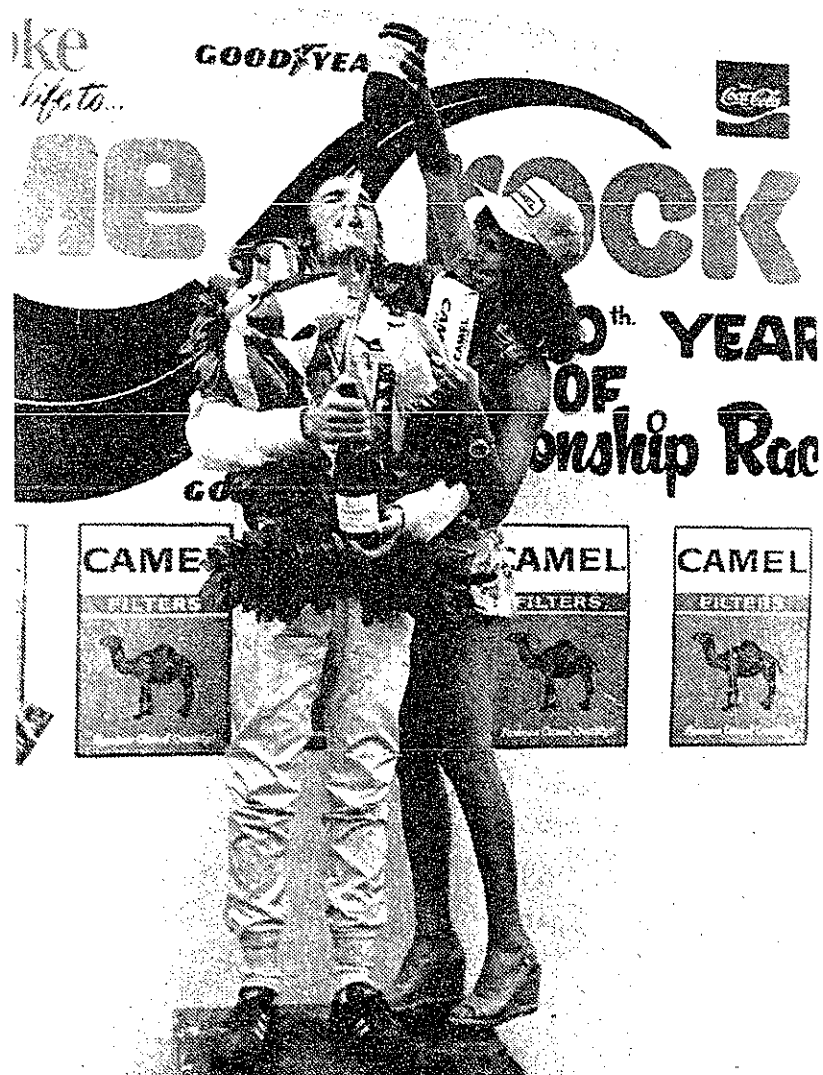
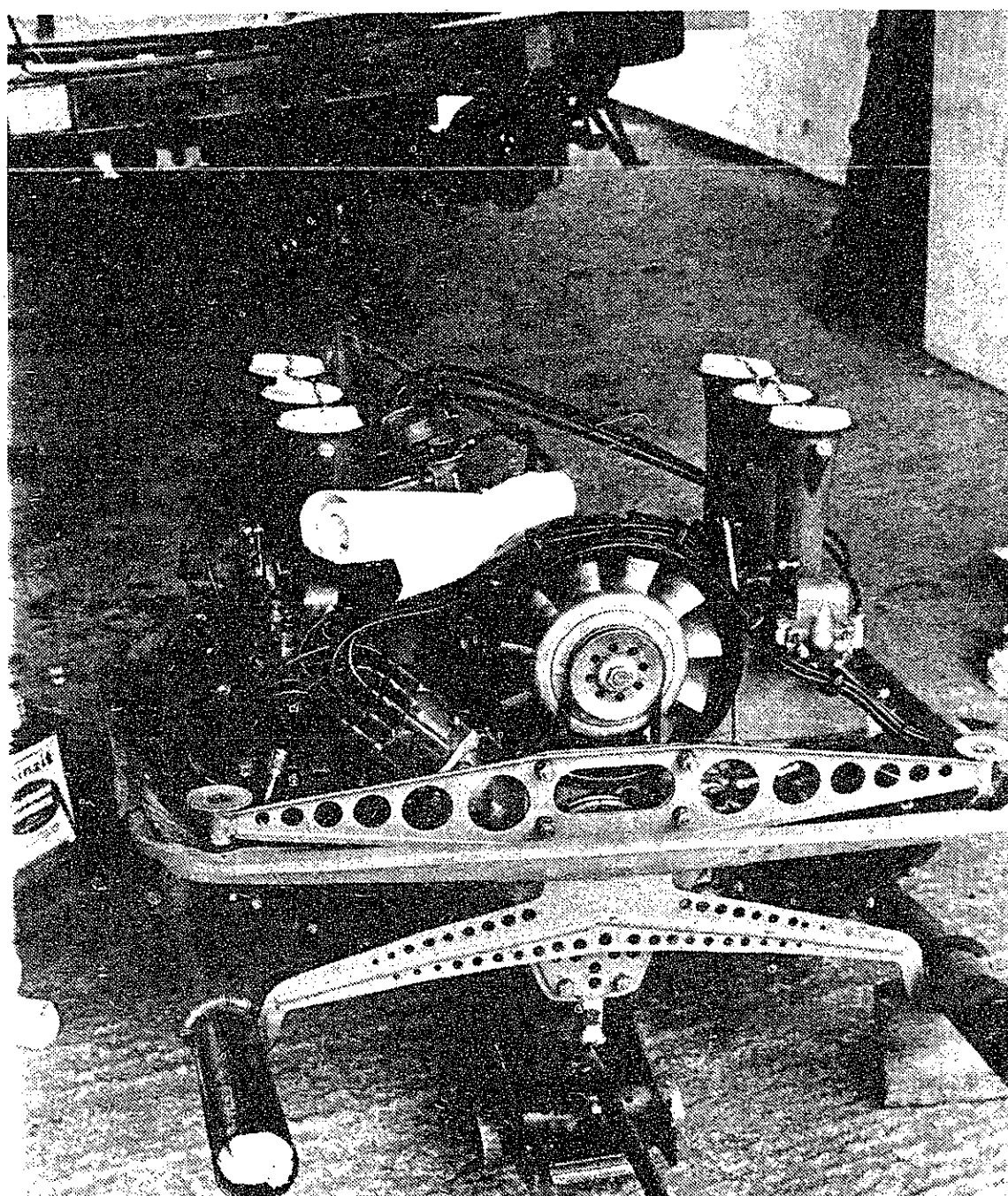


Lime Rock

... is the scene of many sports car races each year. In addition to Sports Car Club of America National Races on the Fourth of July and Labor Day weekends, and the *Car and Driver* Challenge for showroom stock sedans in October, a major race is held over the Memorial Day weekend.

This past Memorial Day, *The Tech* Photo Editors, Tom Klimowicz and David Schaller spent the day recording the sights and some of the feelings that existed at the International Motor Sports Association's Camel GT and Radial Sedan races.

While some teams relaxed between races, confident that their race car was as perfect as possible, other teams frantically worked against the clock, hoping to get their cars back together before the start of the race. Drivers could be



...the winners

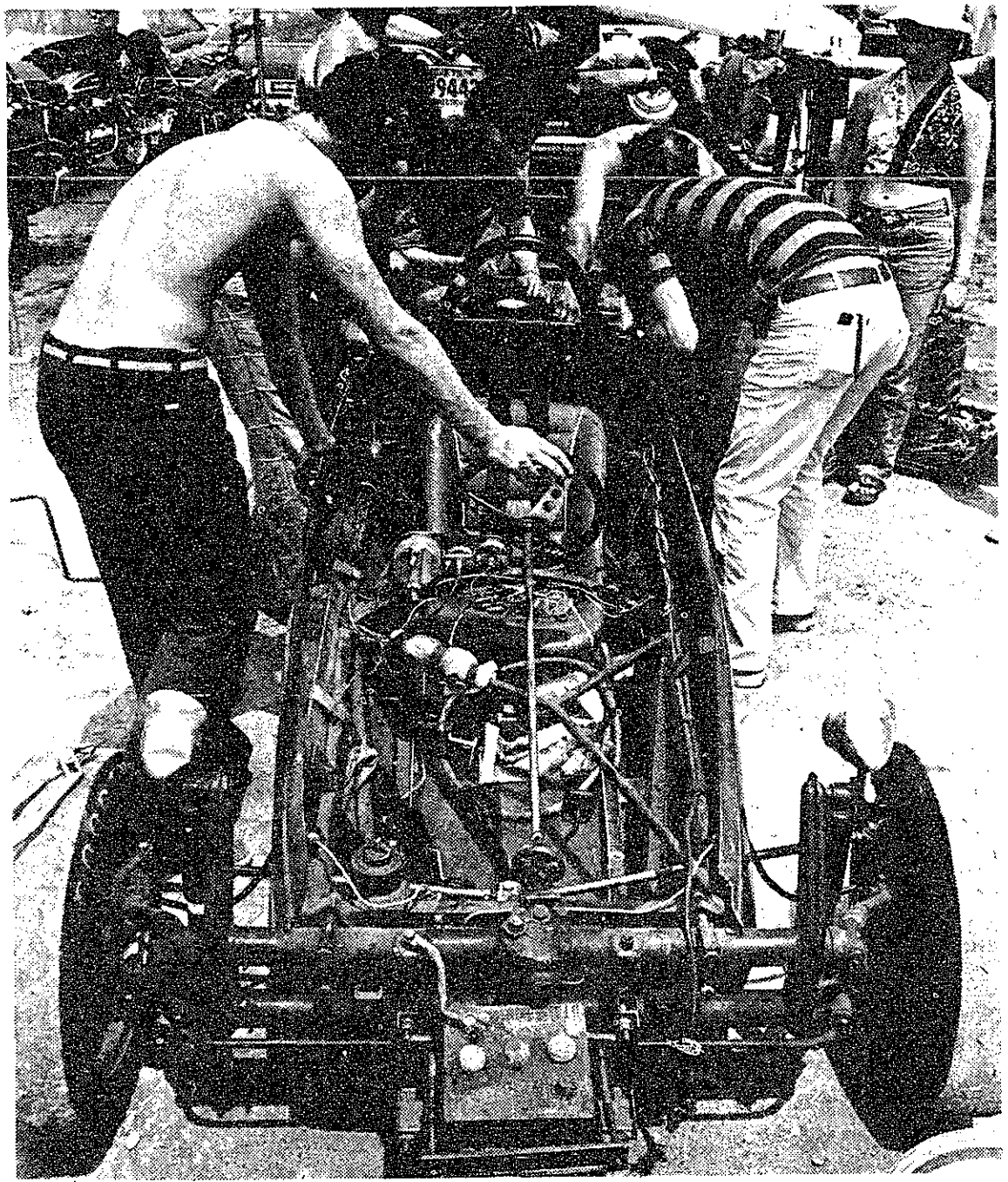
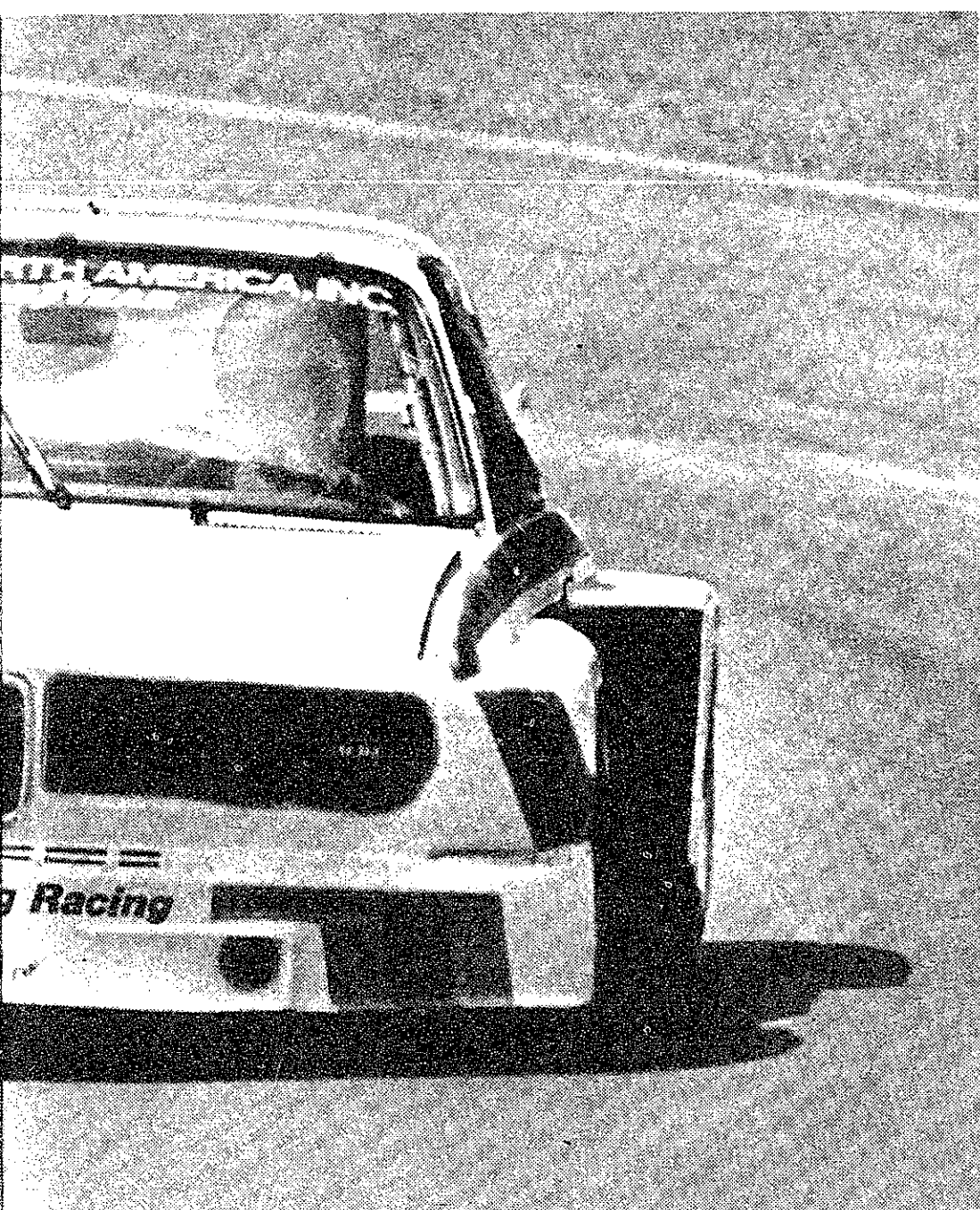


Park, Ct. . . .

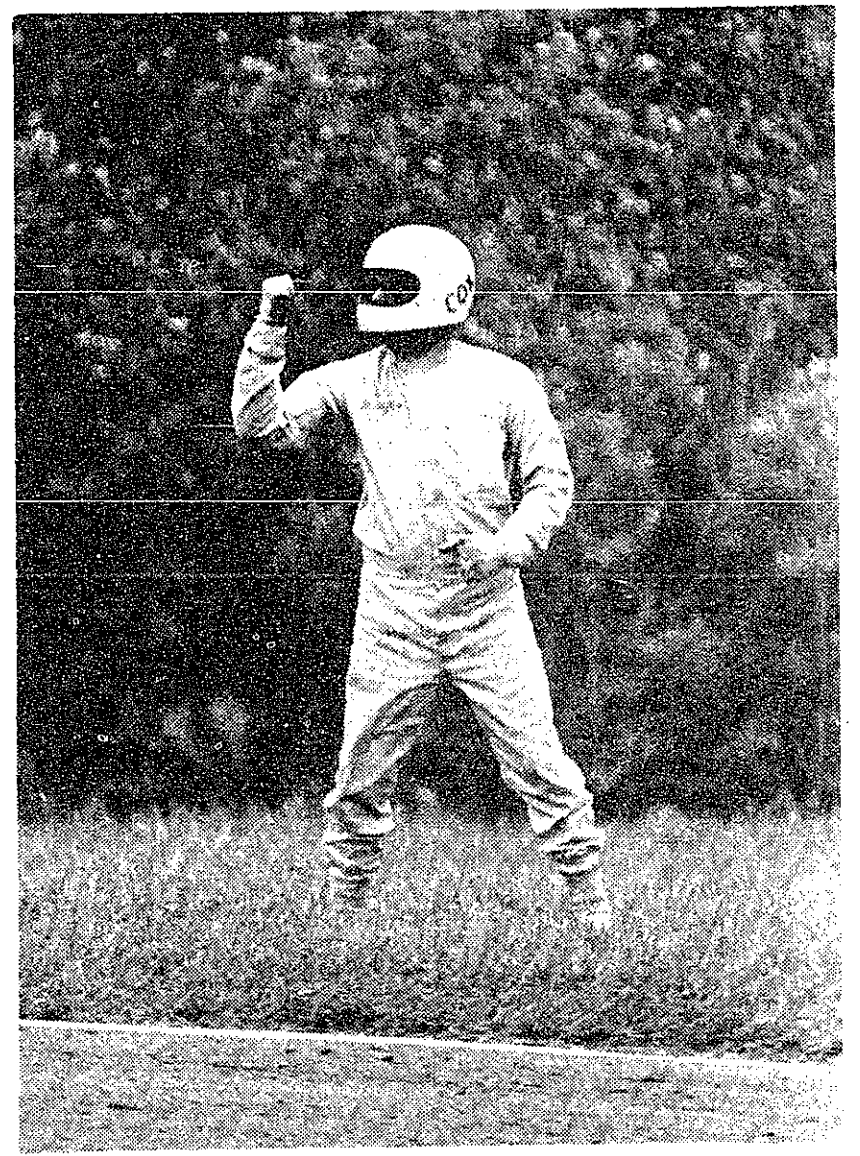
seen chatting with spectators, relaxing inside air-conditioned motorhomes, or working alongside mechanics to put the finishing touches on their cars. At the same time they were preparing mentally for the race, each knowing that only one driver would celebrate a victory.

Once the green flag fell even the best prepared plans went down the drain. Brakes locked up in a corner, which left a car in an uncontrollable slide, finally winding up balanced on the side of a dirt bank. An anxious driver hurried back onto the track after a spin, and crossed in front of a leading car. The resulting accident put both cars out of the race and caused tempers to flare.

But regardless of the outcome, the drivers will all be back for the next race, both . . .



and the losers.



Housingtight for freshmen

(Continued from page 1)

the present size of the class is 1088. This number is expected to fall by between five and ten students due to the summer "melt" — those people who have accepted MIT admission but do not actually enter in the fall.

Richardson said that MIT had "done all right" at controlling the class size, which was set at 1100 as part of a continuing effort to increase the total number of undergraduates.

Chancellor Paul Gray '54 has called the increase a "conscious effort" to increase tuition revenues.

According to Richardson, the "yield," or fraction of admitted freshmen who accept admission, has dropped significantly this year, and many students were admitted from the waiting list to bring the class size closer to MIT's goal.

Richardson added that "I hate to categorize students as being from the waiting list. The only difference [between the waiting list and those admitted initially] is our ability to guess how many will

[accept]" out of those admitted. Neither Richardson nor Browning had any explanation of the reduced yield.

The incoming class includes 175 women, about the same number as last year. The 61 black students entering is double that of last year — Richardson said "we are pleased" with the increase.

Although a record number of applications from women were received, the number is still much below the 225 in the class of '78. Browning said that this will still result in an increase in the number of women undergraduates.

"It's not as good a ratio as we might like," Browning said, but the lower number of freshman women will not jeopardize the status of present coed living groups.

He said there would "not be much of an increase" in either the number of coed groups or in the number of women in each group. Pi Kappa Alpha is the only new coed living group this year.

Browning said that he hopes that the rushing of women will be

evenly balanced among all the coed living groups, in order to "create more than one choice" for women in the housing system.

The overcrowding will be most severe in Burton and East Campus, mainly because the other dormitories have very little capacity for overcrowding. Eight suite lounges in MacGregor will be converted into freshman doubles for the first time.



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Where to eat at MIT

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Lobdell Dining Hall

on the second floor, across the lobby from the R/O Center

cafeteria service providing breakfast, sandwiches at lunch, and complete meals at lunch & dinner

Year Round Hours:		
Breakfast 7:30 to 10:00	Monday through Friday	Dinner 5:00 to 7:00
	Lunch 11:00 to 2:00	
Breakfast 8:00 to 10:00	Saturday	Dinner 5:00 to 7:00
	Lunch 11:00 to 2:00	
Breakfast 9:00 to 11:00	Sunday	Dinner 5:00 to 7:00
	Lunch 11:00 to 2:00	

The Lobdell grill will be open seven days a week from 2:10 to 4:30 for grill orders and sandwiches. Twenty Chimneys will open at 7:00 PM.

Twenty Chimneys

on the third floor, above Lobdell

fountain and grill serving bar-b-que chicken, half-pound chopped steak, Weiner Schnitzel, sirloin strip steaks, and fishwich, as well as California burgers, French fries, sandwiches, and desserts

Open daily from 7:00 PM to 1:00 AM

And, on East Campus, in Walker Memorial (Building 50)
which faces East Campus dormitory and the Great Sail

Morss Hall

on the first floor, on the side facing the Great Sail

cafeteria service providing breakfast, sandwiches at lunch, and complete meals at lunch & dinner

School Year Hours, effective September 13	
Breakfast 7:30 to 10:00	Continental Breakfast 10:00 11:00
Lunch 11:00 to 2:00	Dinner 5:00 to 7:00

Pritchett Lounge

on the second floor, above Morss Hall

snack bar serving hamburgers, French fries, fountain specialties

R/O Week Hours, effective September 7 through 10
5:00 PM to Midnight

School Year Hours, effective September 11:

Sunday 9:00 AM to Midnight	Monday through Friday 11:00 AM to Midnight	Saturday 8:00 AM to Midnight
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For the convenience of West Campus residents,
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Residence Dining Halls

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You may sign up for one of these three options at any of the dining facilities, and you may take any meal in your contract at any of the four main dining halls (Lobdell, Morss, Baker, MacGregor).

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The High School Studies Program is a wholly-owned subsidiary of the MIT Educational Studies Program.

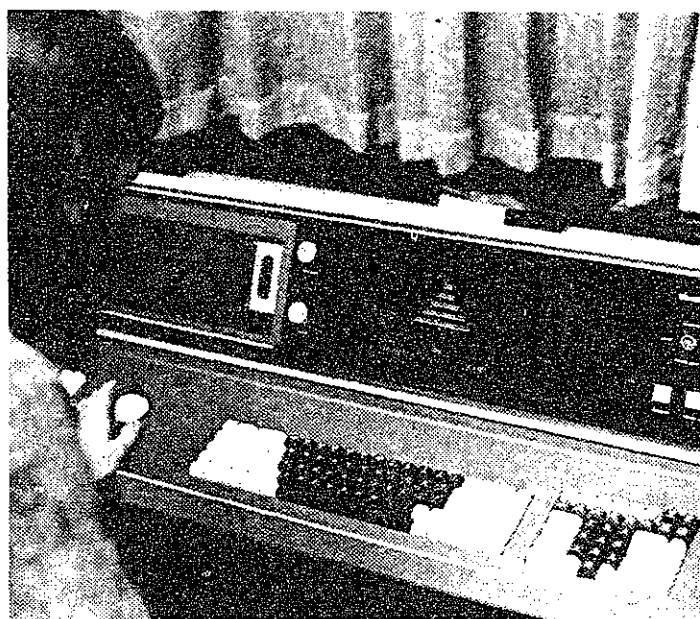
Warm bodies wanted; no experience necessary

Actually, we're not *that* desperate. But the headline does make a point — that no experience is necessary, or even expected, to work on *The Tech*. In fact, many of the most "successful" people on our staff never lifted a pen, a camera, or an X-Acto knife before they came to MIT.

What The Tech does for MIT

There are a number of publications at MIT — four or five undergraduate newspapers, several magazines, a graduate newspaper, and an administration newspaper. *The Tech* falls into the "undergraduate newspaper" category.

Published Tuesdays and Fridays, *The Tech's* prime objective is to serve as a **newspaper** (or the closest approximation possible) for the entire MIT community. As such, much of our effort is concentrated in the gathering and reporting of news — from a viewpoint (that of the undergraduate), but without a bias. Among some of the more significant events covered by *The Tech* last year were the detailing of a previously unannounced and undiscussed training program for Iranian graduate students in nuclear engineering — a story which some time later received coverage in *The New York Times*, an investigation into alleged surveillance of Taiwanese students on campus by their home government, and the publishing of reports that MIT may have been involved in the transmission of Army files on civilians.



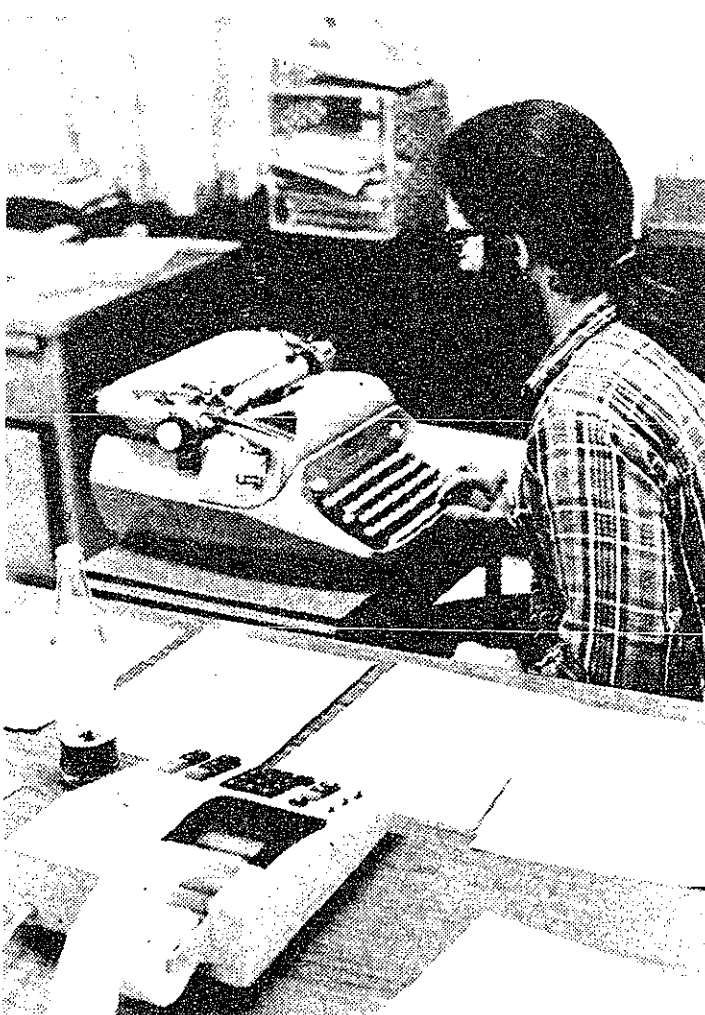
Not all issues at MIT are quite so controversial; however, when a controversy does arise, it seems the MIT community turns to *The Tech's* edit pages both for the expression of their own views and to read the views of others. In fact, the Iranian issue alone produced over six pages of opinions, including a special two-page summary, with both sides of the issue represented.

In addition to the regular news and opinion, we have put together several special sections detailing important issues, such as a four-page supplement on a multitude of proposals regarding the reform of MIT's grading system.



On the less serious side, *The Tech* has regular arts and literary sections covering the entire spectrum of music, art, books, etc. And we have the only sports section on campus, giving coverage both to MIT's 24 intercollegiate sports and to the myriad of intramural athletics.

Backing up these "word-producing" departments are a photo staff, whose members have access to some of the best darkroom facilities on campus, and our production staff, which produces (with our new photo-typesetting equipment) both *The Tech* and income producing work for staff members on typesetting jobs from the MIT community.



What The Tech can do for you

MIT can be a very complex and overwhelming place at times. The pressures and demands of courses, problem sets, and labs can often warp one's attitude towards life at MIT and the world in general.

The Tech offers a very easy way of getting under the surface of MIT and finding out what makes a \$250 million-a-year university run — or finding out why it doesn't.

In addition — actually, more importantly — at a school where friendships and friends may be hard to find, *The Tech* has proven for many to be an extremely active social group. When the urge to do something creative hits, it's often comforting to know that you can wander in and work with a group of people in a similar frame of mind. And then maybe go out and enjoy Boston afterwards.

What you can do for The Tech

As little, or as much, as you wish.

There are no time constraints, no minimum numbers of hours per week necessary. Commitments range from writing an article every few issues — maybe two or three hours of work — to performing several jobs at once and spending more time than anyone would imagine possible at MIT (while still getting decent grades).

You can take yourself as far as you want — from a staff member to an editor and maybe even beyond, into the "real world" of journalism, as several recent *The Tech* alumni have done. It all depends on your inclinations and desires.

There used to be a time many, many years ago, when *The Tech* would actually hold competitions for the posts on its managing board. In this enlightened era, however, we have found it much more practical to leave an open door in all departments — news, arts, sports, production, business, advertising, photo — all the time. And whether you're a news type, or on our business or ad staffs (who, by the way, receive varying degrees of monetary incentives), our office is always open as a refuge from the hassles of the Institute.

Where to find us

Either stop by at the Activities Midway, or come by our offices (Sunday or Wednesday nights are sure bets). We're on the fourth floor of the Student Center (Room 483), MIT extension 3-1541. Or feel free to write to us this summer (P.O. Box 29, MIT Branch, Cambridge, MA 02139) if you have any questions. Oh, even if you don't happen to be a freshman, you're still welcome to come by. The wisdom and experience gained by surviving MIT for several years is always useful.

Apply in person at above address

Climate control: a secret weapon?

(Continued from page 7)

of steel mesh covering a piece of ground that would make a good sized parking lot judging from the photograph — with a power output comparable to that of lightning. Since it is known that one lightning stroke will trigger others, it is conceivable that this EMP generator has been designed to trigger lightning or perhaps to be used as a supplementary lightning source in the kind of weapons system Dr. MacDonald describes. It is perhaps of interest that this particular generator is situated near Albuquerque and that one of the authors of the article is employed by the Sandia Corporation.

As a final point in 1969 and 1970, University of Minnesota climatologists J.G. Sparrow and E.P. New conducted via weather satellite a study of world-wide thunderstorm activity in which were observed a number of "spurious events" — flashes that for several reasons could not be classified as lightning. The EMP generator discussed here is suggested as a credible explanation.

Although there is no really solid evidence presented here with which one could convict some defense agency of secret and unauthorized environmental manipulations, the anomalous weather and the unaccounted for data spikes of Sparrow and New would seem to warrant an inquiry — perhaps under the Freedom of Information Act — into the intent of such an instrument as the electromagnetic pulse generator in Albuquerque.

D.G. Ely
Cambridge, Massachusetts
July 27, 1976

Bibliography

1. *New York Times*, July 12,

R/O midways provide info

(Continued from page 4)

midway on the Kresge oval. The midway allows you to take the initiative. Tables will be staffed by the faculty of the various departments. The academic midway provides a chance to ask all of the questions that you've accumulated. Your advisor will explain the other R/O academic events when you meet with him or her on Tuesday (7).

Academics are stressed here, some say too much. However, there are many clubs and activities available to help relieve the pressure. In addition, MIT has one of the best athletic programs in the U.S. If you come to the midways Thursday night, you will get a glimpse of both of these sides of student life.

So much for residence selection and orientations, what about the enjoyable parts of R/O? Well, even after the Fraternity rush is over both the frats and the dorms will be having parties and similar activities. During the week, different groups, such as the Black Student Union, Hillel, and the Women's Orientation Committee, will have things going on. Then there's the grand finale on Friday(10): the Dormcon-R/O Committee all day carnival and all night block party (yes, we actually plan to block off a street!).

R/O can become overwhelming. If it gets to you, it just proves you're human. Sometimes talking with someone helps. The R/O center will be open every day. The students there are glad to help.

The best way to keep up with what's going on during R/O week is to read the Daily Confusion. It is published every day during R/O. All of the dorm desks as well as the R/O Center will have copies

1976, B-1.

2. *Washington Post*, July 13, 1976, A-19:6.

3. MacDonald, Gordon J.F., "How to Wreck the Environment", in: *Unless Peace Comes*, Nigel Calder, ed., New York: Viking Press, 1968. Reprinted as an appendage to Dr. MacDonald's testimony before the Senate Subcommittee Oceans and International Environment, hear-

ing entitled "Weather Modification", January 25 and March 20, 1974, p. 63.

4. Sudakov, K.V. et al. (Central Mechanism of Action of Electromagnetic Field"), *Joint Publications Research Service*, no. 60711. Translated from *Uspekhi Fiziologicheskikh Nauk*, no. 2, 1973, Moscow.

5. Persinger, M.A., "Psychophysiological Effects of Ex-

tremely Low Frequency Electromagnetic Fields: A Review", *Perceptual and Motor Skills*, 1973, 36, 1131-59.

6. Frey, A.H., "Behavioral Biophysics", *Psychological Bulletin*, 1963, vol.63, no.5, 322-337.

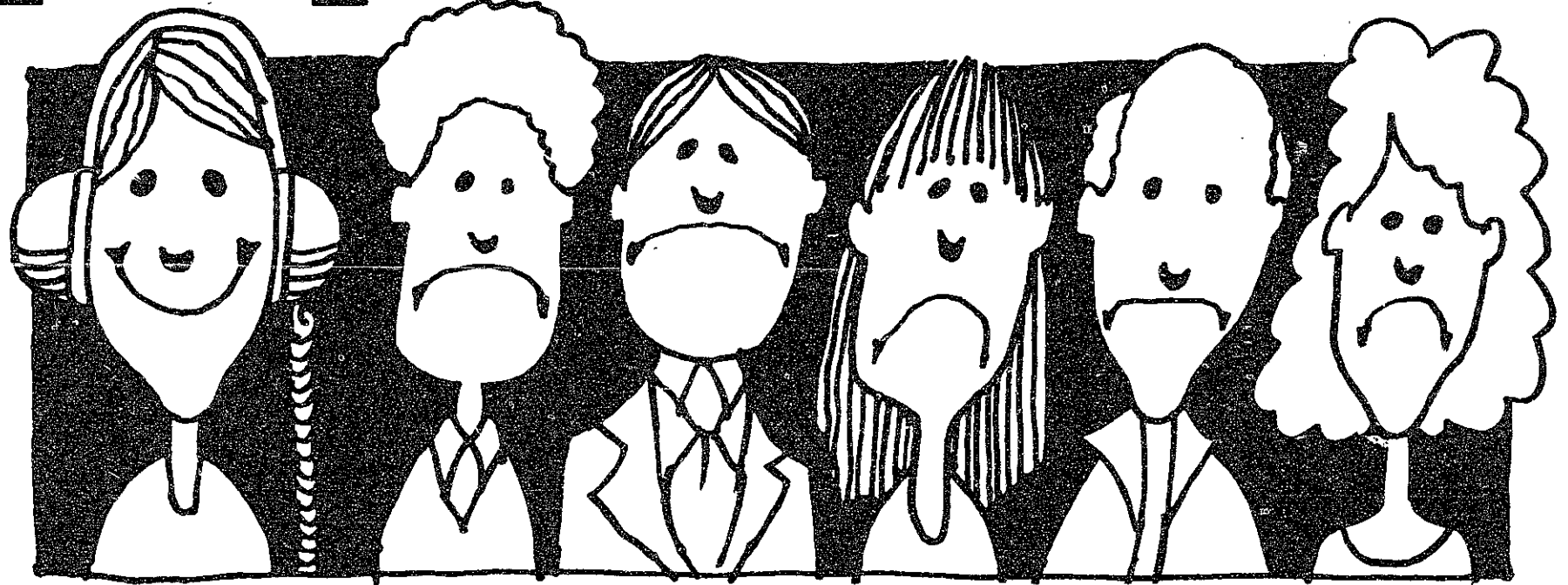
The foregoing three articles are all surveys with extensive bibliographies on the biological effects of electromagnetic fields. On the issues discussed here, the

Sudakov is the most specific.

7. F.G. Hirsch et al. "The Psychologic Consequences of Exposure to High Density Pulsed Electromagnetic Energy", *International Journal of Biometeorology*, 1968, vol.12, no.3, pp. 263-270.

8. Sparrow, J.G. & E.P. New, "Lightning Observations by Satellite", *Nature*, vol.232, August 20th, 1971, pp. 540-41.

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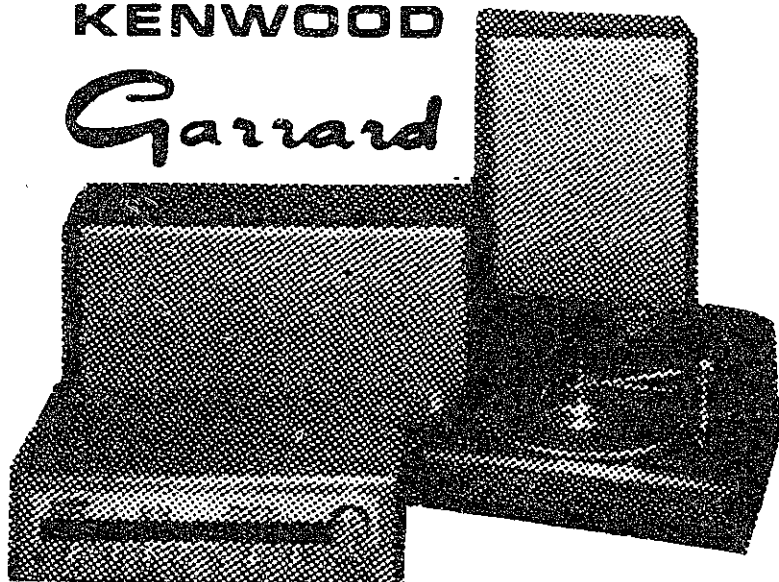
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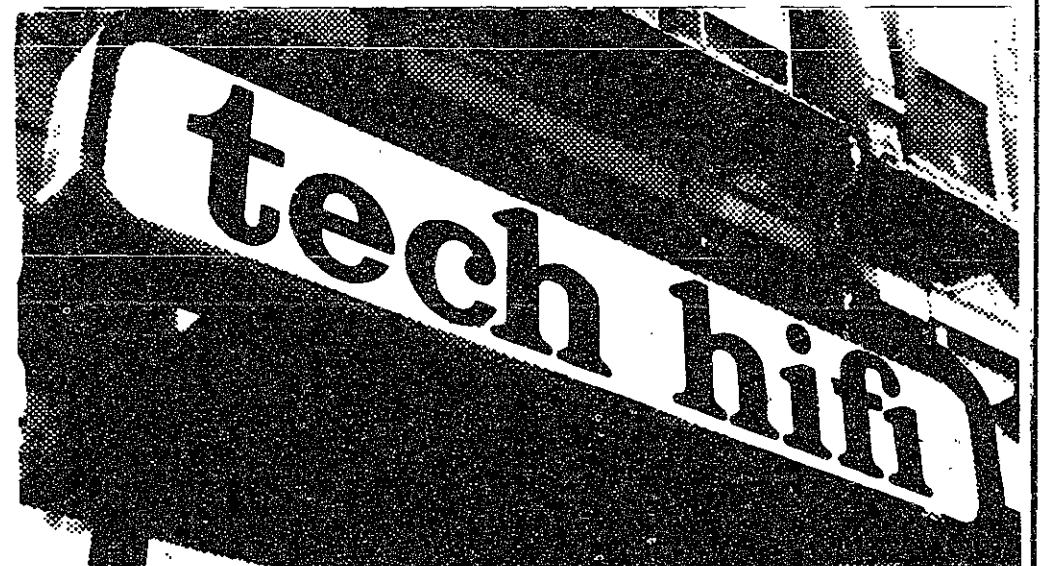
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DNA debate — a question of probabilities

By Mark James

The issue of recombinant DNA research, and biological hazards in general, is a perfect illustration of a much more general situation — the highly technical issue which is also a highly controversial topic of public debate.

Just as in the debate over the safety of nuclear reactors, the debate resolves itself into two basic questions — the technical question of whether the estimates of risk are accurate, and the moral question of how much risk should be accepted.

From these two points of dispute, a third inevitably arises — who is to judge these questions: should it be the research scientists themselves, who have the technical knowledge needed, but who may have a vested interest in gaining approval for the research involved, or the general public, who may lack background in the issues, but who must bear the results of any slip-up.

In the case of recombinant DNA research, the viewpoint of the experts in the field is embodied in the NIH guidelines. The guidelines are the result of a large amount of study initiated at the request of a number of concerned scientists working in this field.

These scientists, who met at Asilomar, California in the spring of 1975, called for a voluntary halt to recombinant DNA research until the hazards could be assessed. Among these scientists was MIT American Cancer Society Professor of Microbiology David Baltimore. Baltimore told *The Tech*:

"Since I believe that the federal guidelines are an appropriate response to whatever hazard might exist in recombinant DNA work, I personally believe that it's unnecessary for the Cambridge City Council to go over the same ground again. Therefore I don't see any reason for the moratorium."

This, aside from technical arguments, is the essence of the debate: those opposing the moratorium think that the NIH guidelines are enough, and those that support it feel that they are not.

Unknown possibilities

One trouble with assessing the dangers of this research is that they are largely unknowns. Hypothetical cases must be considered. For example:

A piece of DNA containing genes that code for the production of the protein insulin, the vital hormone which diabetics lack, is inserted into *E. Coli* with the aim of mass-producing the drug. The bacterium, through carelessness, takes hold temporarily in the intestine of one of the lab workers. It survives long

enough to transfer a *plasmid*, a small circle of DNA, into another, more common strain of *E. Coli*. This plasmid happens to contain the gene for insulin. The new host spreads among the population. These bacteria produce large quantities of insulin, which enters the bloodstream of the infected people in amounts sufficient to destroy the normal functioning of their bodies.

There are many other scenarios possible, some involving the creation of new, more dangerous disease causing organisms which might not be detected before they became widespread.

Both sides in the debate admit that events such as this may be a possibility. What they differ on is the probability.

Low Likelihood

Those in favor of doing such research think that the NIH guidelines make such an occurrence unlikely, for several reasons:

- The laboratory safeguards make it unlikely that such a bacterium would be taken out of the

laboratory.

- If it did get out, the chances of the bacterium — which was chosen to be an especially weak strain — surviving for any time at all in a human intestine are also very small.

- If it did survive, it is unlikely that it would donate its DNA to another bacterium.

- And finally, even if the above events all did occur, the likelihood of the gene operating to make insulin in a new recipient would be slim.

In essence, these scientists are saying that the danger consists of a very, very unlikely event. They say that the hazards are only hypothetical, and very improbable anyway — and they weigh this against benefits that they consider very real: improved knowledge of the mechanism of cancer, and greater insights into the operation of genes — the basis of life.

"There's no other way" to isolate specific genes, according to Associate Professor of Biology David Housman, a researcher at MIT who would like to do such work.

Risk estimates incorrect?

Opponents of such research disagree in two important ways.

First, they feel that the estimates of risk made by the researchers aren't accurate, for several reasons:

- They argue that real lab workers in a real laboratory won't comply with the guidelines enough to make them effective, even if they are thorough enough.

- They claim that the bacteria involved can survive outside of the lab long enough to do damage.

- They feel that the standards were drawn up by a biased group of scientists — people who want to do this type of work.

Moral questions

The second point of disagreement is more a moral than a technical issue:

Opponents of the research argue, as have opponents of nuclear power plants, that even a small, but unknown, risk to human life should not be tolerated.

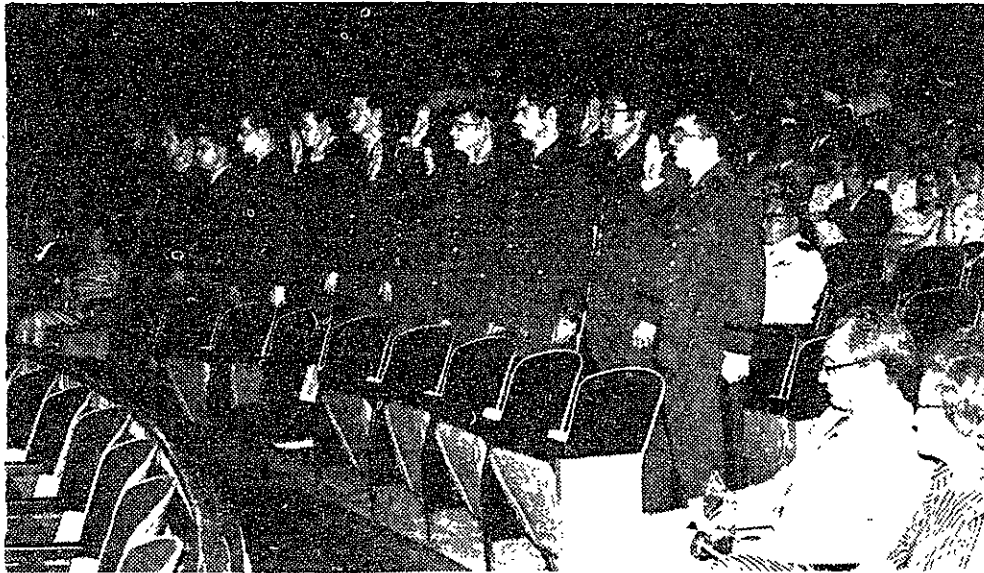
Harvard Professor of Biology Richard C. Lewontin argued at

the City Council hearings that "the benefits [of such research] are private, not public benefits," that claims of the usefulness of such research to the problems of cancer are made mainly to secure research funds.

The opponents would like to have seen more involvement from the public in the drafting of the NIH guidelines, and they think that the public should supervise such research in addition to the customary "peer review," review by other scientists in the area of research involved, that is the basis for the distribution of grant money.

Increased consciousness

The next few months will probably see much more discussion and decision-making on the issue of recombinant DNA research. People on both sides of the issue do share one hope — that all this talk will make all researchers working with biohazards a little more conscious of what they are doing, and therefore less likely to put results ahead of safety when they experiment with the basis of life.

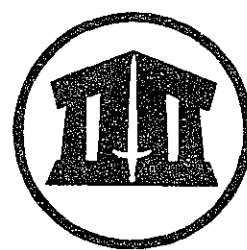


Class of '76 graduates are sworn in at Commissioning ceremonies in Kresge Auditorium.



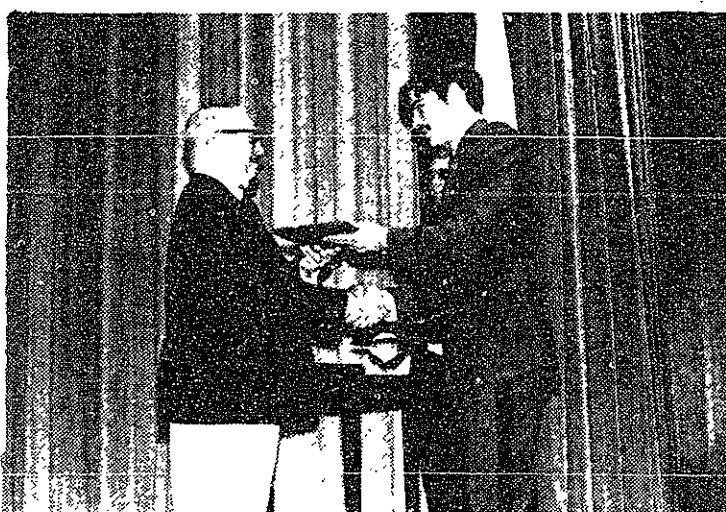
John Hagman '76 is a first-year medical student at the Uniformed Services University of the Health Sciences at Bethesda, MD. Lieutenant Hagman is attending medical school on a full Army scholarship, and receives full Army pay and allowances.

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Paul Robershotte '76 receives his commission from Major General Lincoln. Lieutenant Robershotte is on active duty as a graduate student at MIT, attending the Institute on an Army Fellowship.



Bruce Blankinship '76 receives MIT President's Award from Dr. Weisner.

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TE

sports cont.

Olympics to tiddlywinks: a sports recap

(Continued from page 16)

crewing placed fourth overall. Alanna Connors '78 also sailed for the Engineers, who defeated third place San Diego State by over forty points.

Moving back to the start of the previous school year, the fall season was dominated by the achievements of one well-established team and one first-year varsity squad.

The women's volleyball team, competing for the first time on a varsity basis, enjoyed a sensational 13-1 season that culminated in the Massachusetts state championship for the Engineer spikers.

Losing only one regular season match to arch-rival Eastern Nazarene, the volleyball team took the measure of Nazarene in both the Metropolitan and State final rounds to win those titles.

Although cross-country's 8-4 record was not as good as the 9-2 mark of the year before, the harriers placed sixth in the Easterns and 18th in the NCAA Championships at Franklin Park, aided by the fifth place finish of junior Frank Richardson, who wound up just four seconds behind race winner Vin Fleming of the University of Lowell.

As was not totally unexpected, most of the athletic glory, of both the modest and well-publicized fashions, went to winter squads.

It was a season of "firsts", as women's swimming and women's gymnastics won their first meets ever, and MIT's long-suffering

hockey team, greatly helped by a change to club status and the chance to use graduate students, not only snapped a 37-game losing streak, but went on to a relatively successful 7-10-1 season.

Cam Lange '76 broke the all-time MIT basketball scoring record in mid-season, finishing with a career total of 1699 points, while teammate Peter Jackson '76 ended his varsity career with 954 rebounds, another record, and a fourth place standing on the all-time MIT scorers' list. The Engineer hoopmen finished a somewhat disappointing year at 9-11, the best mark since 1972, but well below the squad's tournament hopes of the pre-season.

Injuries forced wrestling coach Will Chassey to use freshmen in over half of the weight classes, but the MIT grapplers still complete an excellent 12-5 season despite two end-of-season losses to Springfield and Harvard. Van Lidth de Jude finished the season with a perfect record in the heavyweight class, including a six-second pin victory over a helpless Tufts opponent during the mid-season meet.

Erland's win streak finally came to an end in the NCAA Division III Championships, when St. Lawrence's Earl Peregra topped the 6'6" heavy weight 4-1, in the final round.

Track continued the excellent running season, finishing 6-1-1, the only loss coming to

powerhouse Brandeis, and that only by a point and a half. MIT's two-mile relay team shaved ten seconds off the old school record, setting the 7:53.8 mark in the New Englands at Tufts.

Women's basketball had a .500 record, including a third-place finish in the University of Chicago Invitational Tournament despite illness and injury woes, and gained a berth in the State Championship. Women's fencing also had a fine year, losing one regular season match and placing a best-ever fourth in the New Englands.

In less conventional sports, an Intrafraternity Council-sponsored canoeing team outpad-

dled both USC and UCLA in a 72-hour race in Los Angeles to finish second to Maryland, and MIT's tiddlywinkers placed second in the North American championships.

Besides the achievements of the crew and sailing teams, a number of other spring varsity squads had distinguished seasons.

Outdoor track set a number of school records and finished with a 4-1 mark, while varsity baseball, although unable to reach its goal of a post-season tournament, completed a respectable 14-11 year.

Senior Mike Royal anchored a generally strong pitching staff, and hurled a 14-strikeout, one-hit

shutout against ECAC tournament-bound Bates during the year. In addition, MIT edged its crosstown nemesis, Harvard, 8-7, with a seven-run sixth inning and a game-saving tag play at home plate in the contest's last frame. The win was the Engineers' first over the Crimson in eight years.

Although it's unfair (and inappropriate) to compare MIT's athletic fortune with those of Division I powerhouses, the Institute varsity program remained the largest in the nation with 29 intercollegiate sports, and the teams concerned combined for an overall winning record and a all-time high level of participation.

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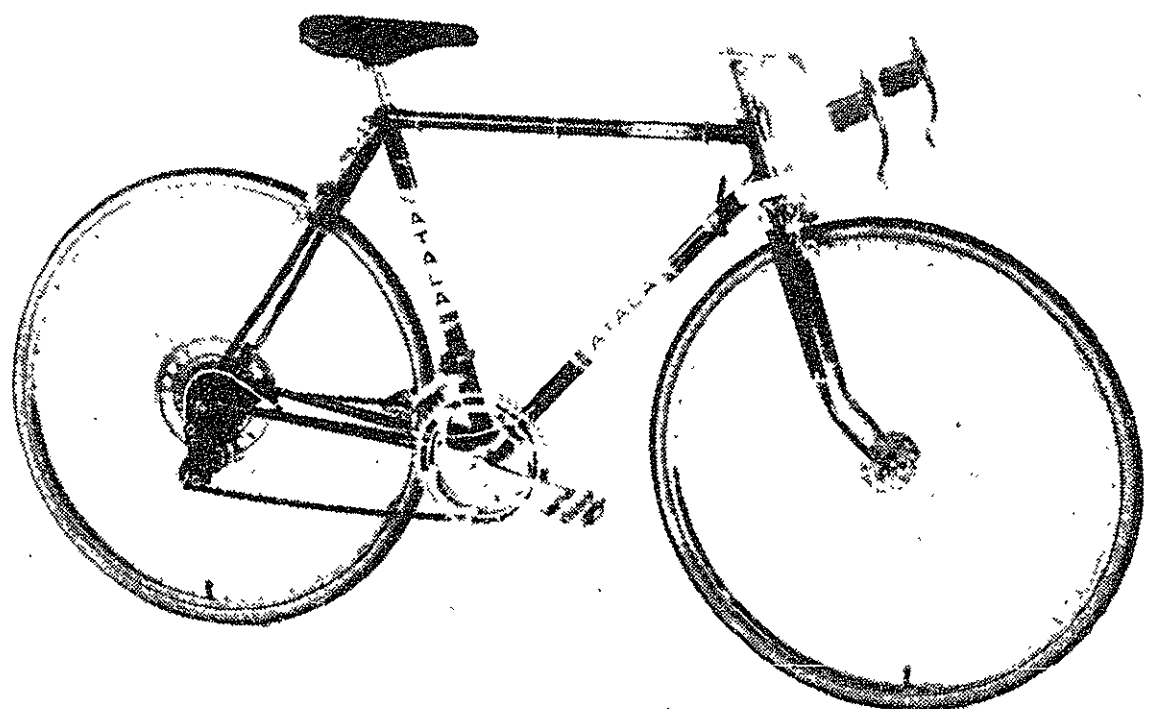
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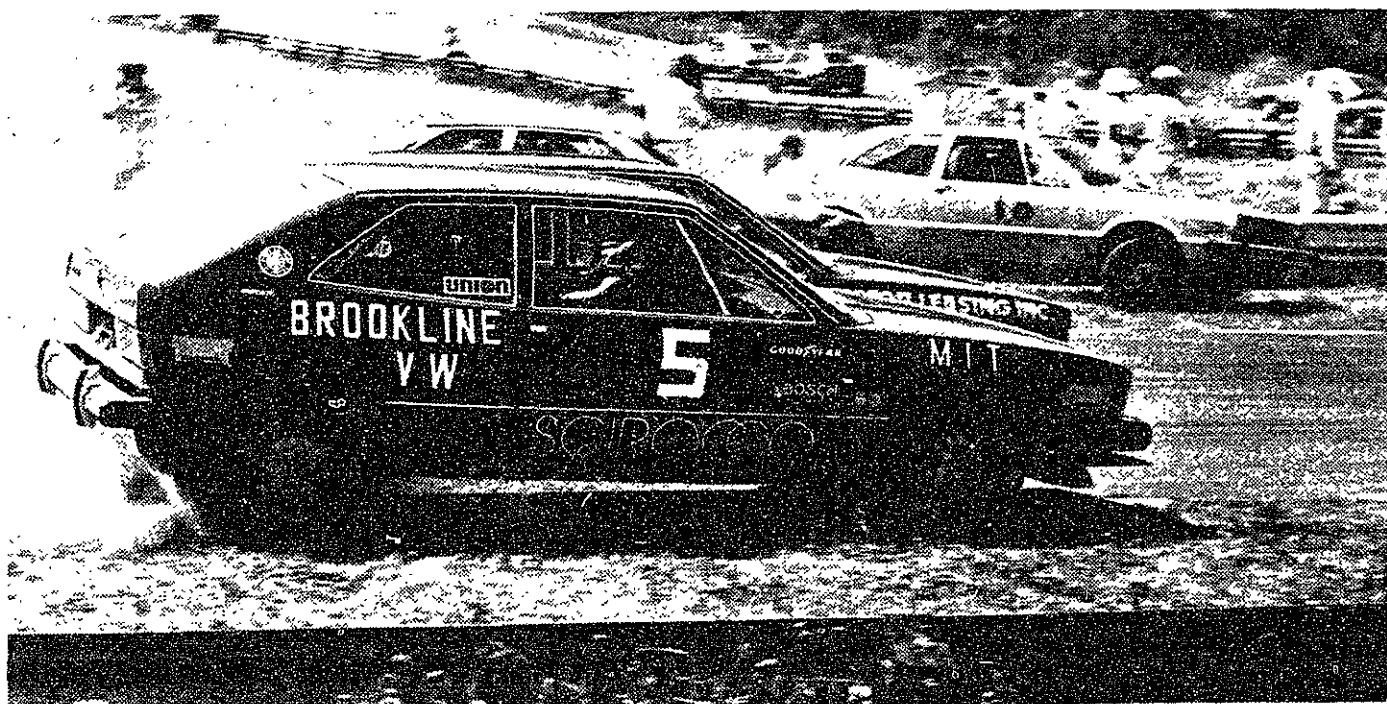
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Sports



Joel Bradley heads for the grass to avoid a pile-up on the first lap. Car #18 (sideways above the MIT on car #5) seconds later crossed the track and hit the MIT/Brookline VW car in the left rear, putting #18 out of the race, and dropping Bradley to the back of the pack.

Racers lose out west

By David Schaller

The MIT Racing Team made its entry into professional racing Sunday at the 4.0-mile-long Road America racetrack in Elkhart Lake, Wisconsin. After several years of championship racing in the Sports Car Club of America's (SCCA) amateur classes the MIT team obtained sponsorship from Volkswagen of Brookline and began preparing a 1976 Volkswagen Scirocco for the Scirocco Cup Series.

No major modifications were required since the rules of the series require all the cars to be Volkswagen Sciroccos in showroom condition. The only changes allowed in the series are the addition of an open exhaust, aftermarket shock absorbers, and Goodyear street radial tires.

After arriving at the track on Friday morning, the MIT Team checked over the car for the first practice session. During the first practice session driver Joel Bradley found his tire pressure was several pounds too high, but managed to turn in the ninth fastest time. On Saturday during qualifying the engine developed a misfire at high speed, which dropped the car into 18th position on the 20-car grid.

In preparation for the race Sunday, team members Bob

Humphrey '77, Dusty Nicol '76, and David Schaller '78 replaced the entire electrical system and tuned the engine in an attempt to eliminate the misfire. To ensure top performance the brakes were bled, new brake shoes were installed, and the wheel alignment was checked.

At the start of the race Bradley quickly passed three cars by the second turn. As he came toward turn five, a group of cars in front of him started spinning, and to avoid the cars Bradley went wide onto the grass on the corner. However, there wasn't enough room, and he got hit in the back by one of the other cars. The crash locked bumpers, and it took 40 seconds for Bradley to get free and back on the track. The rest of the pack had long since disappeared, but the MIT racer took off in pursuit, and despite the return of the misfire caught several cars, finishing 14th at the end.

The MIT/Brookline VW Racing Team will be traveling to Ohio and Minnesota for races on the 8th and 15th of August, and will be at Lime Rock, Ct. for the Labor Day Nationals September 3rd. After that race the car will be prepared for the Car and Driver Challenge V, again at Lime Rock October 16th.

Sports: the year in review

By Glenn Brownstein

It's not the same as the University of Southern California, or Penn State, or even Northeastern, but MIT's varied intercollegiate athletic program and its 1000-plus varsity athletes had an ample share of successes (and failures) during the past year.

Most recent and perhaps most encouraging, MIT sent two members of its varsity heavyweight crew team to the Olympic Games in Montreal, as John Everett '76 rowed in the number seven spot in the US eights boat, and Gary Piantedosi '76 filled a seat in the coxless four shell. Although neither crew made the finals (the eights' ninth-place finish was their worst ever), Piantedosi's boat won its preliminary heat, and the two oarsmen were MIT's first Olympic participants in many years.

Other Olympic hopefuls, including riflemen Jerry Dausmar '76 and Alan Marcum '78, world intercollegiate pistol champion Steve Goldstein '76, and mammoth 340-pound wrestler Erland

van Lidth de Jeude '76 all missed out on a trip to Montreal. The Engineer shooters suffered from a lack of funds, preventing them from making a trip to Arizona for the trials, while van Lidth de Jeude was simply outwrestled in his bid to make the US Greco-Roman wrestling squad.

The heavyweight crew team, crippled by the loss of the Olympic rowers and Will Sawyer '76, who took a term off, surprised all observers, including Coach Peter Holland, with a fifth-place finish in the Intercollegiate Rowing Association championships in Syracuse in early June.

Holland, who was quoted before the competition as simply wanting to beat a couple of crews in the petite finals (seventh through twelfth places), gained some measure of consolation for the disastrous regular season in which MIT defeated only last-ranked Columbia.

The women's sailing team, aiming for a national championship, fell just short of its goal, finishing second to Princeton in the annual

regatta, held at MIT for the first time ever during Memorial Day week.

The squad, whose New England championship earned them a place in the nationals, was led by the third place B-Division finish of Debra Meyerson '79 with Audrey Greenhill '79 crewing. A-Division skipper Barbara Belt '77 with Sally Husted '78

(Please turn to page 15)



US Olympic oarsmen Gary Piantedosi '76 (third from left) and John Everett '76 (center).

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