

UA, faculty votes focus on divestment

Faculty to vote on non-binding Corporation plan

By Earl C. Yen

The MIT faculty will vote Dec. 18 on a resolution that calls on the MIT Corporation to fully divest its holdings in US firms operating in South Africa.

The faculty vote on MIT's South African-related investments is not binding on the MIT Corporation, which controls the Institute's investment portfolio.

Gretchen Kalonji, professor in the Department of Materials Science and Engineering, proposed divestiture of MIT's investments at the Nov. 20 faculty meeting.

"Divestment is a valuable tool for putting pressure on the South African regime," Kalonji said. "It is immoral to profit from a system of institutionalized racism. Divestment is an effective action, and it has been overwhelmingly called for by black South Africans."

"South Africa is in a state of crisis, and we could help shorten the conflict and save lives by visible and important action, which divestment would be," explained Professor Willard R. Johnson of the Department of Political Science.

Divestment is already affecting the South African economy, Johnson asserted. The Investor Responsibility Research Center, an organization funded by

(Please turn to page 15)

UA approves resolution calling for South African divestment

By Earl C. Yen

The Undergraduate Association (UA) Council called for total divestment of MIT's holdings in companies operating in South Africa in a resolution it approved Dec. 5.

"It's not common for the UA to take a stand on such an issue," said UA President Bryan R. Moser '87, who supported the proposal. "This issue is of national . . . [and] international importance, and it's also a campus issue. It's very appropriate now that the council take a stand."

The UA Council agreed to hold a student body referendum on divestment in the spring term. The council will set the referendum date at its Jan. 23 meeting, said UA Vice President Mary S. Tai '87.

Nine council members voted for the proposal, two opposed and eight abstained, according to UA Secretary Sarah R. Thomas '87.

Moser said the high number of abstentions may have stemmed from the mixed feelings among many of the council members about divestment.

Thomas added that many UA Council members had not expected to vote on a divestment proposal at the meeting. Some of the council members were not sure how their constituents felt about the issue, she said.

Scott Saleska '86, member of the MIT Coalition Against Apartheid, asked the UA on the day of the meeting to consider taking a stand on the divestment issue.

"International pressure on South Africa can be effective," Saleska said. Many black South Africans, such as Bishop Desmond Tutu and Nthato Motlana, have called on US corporations to withdraw from South Africa, according to Saleska.

"It's time to show support for the South African people," said Anne Khaminwa '89, a proxy representative at the meeting who introduced the resolution to the council. "It would be very good if other student associations also pledge support for divestment."

Saleska asserted that divestment is more than a symbolic show of support against apartheid. "It's not just a withdrawal of capital from these companies," he explained. "Divestment helps create a climate of opinion against apartheid — it's a political action."

"There's always some amount of risk in divesting," Saleska said.

(Please turn to page 15)



Tech photo by H. Todd Fujinaka

Apartheid protests have punctuated the past year at MIT and other campuses nationwide. The attention brought to this issue by students has some college administrators considering divestment.

Students request reform input

By Anu Vedantham

Of the four curriculum reform committees established last academic year, only the Humanities, Arts and Social Sciences (HASS) Committee has appointed a student representative. The committee named Mark Curtiss '87 as a member.

The School of Science Education Committee, the Committee on Integrated Studies, the Commission on Engineering Undergraduate Education and the HASS Committee have all considered student representation and other forms of student input.

The Graduate Student Council (GSC) and the Student Commit-

tee on Educational Policy (SCEP) initiated the drive for student representation with letters to Dean for Undergraduate Education Margaret L. A. MacVicar '65. Undergraduate Association (UA) President Bryan R. Moser '87 said that he "met with [MacVicar] more than once" during the summer to discuss student input to the curriculum reform committees.

Moser and UA Vice President Mary S. Tai '87 spoke with MacVicar regarding the reforms at the beginning of the summer. Moser and two SCEP representatives spoke about similar concerns with MacVicar at the end

of the summer.

MacVicar deferred the decision concerning student representation to the various committee chairmen, according to GSC President Janine Nell G.

The GSC, UA, SCEP, MIT

(Please turn to page 6)

Engineering program discussed

By David P. Hamilton

Jack L. Kerrebrock, associate dean of engineering, joined seven students, two faculty members and three representatives of Tau Beta Pi, the engineering honor society, last night at a society-sponsored forum on the future of

MIT's engineering curriculum.

The Commission on Engineering Undergraduate Education, which Kerrebrock chairs, is studying the MIT undergraduate engineering curriculum while the Humanities, Arts and Social Sciences Committee and the School of Science Education Committee study their respective areas, Kerrebrock said.

Students at the forum expressed their suggestions for commission topics: freshman and upperclass advising; lectures; and problem sets.

Advising

Most students were dissatisfied with the current freshman advising system. Their complaints centered on their advisors' narrowness and inability to provide them with information outside the scope of their own fields.

Several students also asked

why upperclass advising was such a low-priority task for most faculty members. Kerrebrock responded by admitting that the current organization of the advising system "doesn't work very well."

Faculty priorities are "promotion, tenure and money," said a humanities professor attending the forum. Advising gets placed on a "back burner," he said, because these rewards depend almost solely on a professor's teaching or research performance.

Lectures

The students had divided opinions about the value of lectures. Some felt that lectures repeated material in course notes and text books unnecessarily. But others disagreed, saying that they found the lecturer's perspective useful in

(Please turn to page 6)

ODSA, CUP examine possible changes in freshman advising

By Sally Vanerian

The Office of the Dean for Student Affairs (ODSA) and the Committee on the Undergraduate Program are considering changing MIT's freshman advising system. The main goal of the changes is "to get more faculty and student contact," said Dean for Student Affairs Shirley M. McBay.

"I think that there's always been an undercurrent of dissatisfaction with the freshman advising system," said Holliday C. Heine '67, associate dean for Student Affairs. MIT's advising system is "a pretty good system compared with other systems" at other schools, she said, but there is always room for improvement.

There are several different ideas about how the advising system should be changed. Many sources suggested that freshman advising could be combined with freshman seminars that would be

created under the new system.

Professor of Biochemistry Vernon M. Ingram, chairman of the Committee on Academic Performance, said faculty rather than staff members should advise freshmen. He acknowledged in a letter to *The Tech* ["A new method of advising," Nov. 1] the skills of some current staff advisors, but felt professors would be better able to give advice about academic programs.

An advisor should teach a seminar limited to his advisees, and seminar enrollment should not exceed eight students, he suggested. This way, Ingram said in an interview with *The Tech*, an advisor could see his advisees on a regular basis and "get to know individuals."

The faculty member would thus be in a "much better position to give good advice," Ingram explained. "Advising gets

(Please turn to page 6)

IAP issues

This is the last scheduled issue of *The Tech* for 1985. Issues will be published each Wednesday during Independent Activities Period (January 5, 15, 22 and 29). The deadline for advertising and letters to the editor will be 5 pm on Monday for Wednesday issues. Normal Tuesday/Friday publication will resume Feb. 4, 1986.

MIT experiment flies on Atlantis

By George Sarver

Technology

An MIT laboratory experiment that began in a swimming pool may help astronauts determine what it will be like to build a manned station in space before the turn of the century.

On Nov. 26, the astronauts of the space shuttle Atlantis blasted off into orbit with an experiment designed by the MIT Space Systems Laboratory (SSL) that examined the ability of humans to work outside the spacecraft.

Researchers at MIT hope that the experiment, called Experimental Assembly of Structures in Extra-vehicular activity (EASE), will provide valuable information needed to build the proposed space station currently scheduled for operation in 1993.

The EASE experiment is the

culmination of eight years of work by Prof. David L. Akin '74 and many MIT graduate and undergraduate students. Akin was a graduate student in the newly-founded SSL when he first started studying the productivity of humans in space.

The systems studies which he and other students performed on structures — such as space stations, satellite solar power stations and space colonies — all indicated that a person's productivity in space is a key parameter in the overall costs of projects. There was, however, little extra-vehicular activity (EVA) productivity data available.

The swimming pool

Akin designed a simple experiment as a graduate student under the direction of Prof. James W. Mar '41 and Prof. Rene H. Miller: the assembly of a pyramid-

shaped structure in the MIT Alumni Pool. The experiment consisted of eight six-foot-long aluminum beams with styrofoam flotation taped to them so that they would neither float nor sink, simulating the weightlessness of space.

The test subject, outfitted in

(Please turn to page 9)



Photo courtesy NASA
The space shuttle Atlantis.

inside

MIT refuses to renew lease on Kendall Square restaurant. Page 2.

The Visiting Committee evaluates graduate student life. Page 7.

The Del Fuegos catch fire. Page 11.

Winter sports begin: women's fencing, Page 19, and men's indoor track, Page 20.

MIT replaces Alexander's

By Betty McLaughlin

Alexander's Restaurant, formerly at 254 Main Street in Kendall Square, lost its lease on the MIT-owned property this fall. The restaurant closed Oct. 18 amidst complaints by owner William McLaughlin that he got "a raw deal."

In place of Alexander's, Au Bon Pain will open its doors sometime early in 1986, according to MIT Director of Real Estate Phillip A. Trussell. The exact date has not yet been set.

McLaughlin's lease expired at the end of June. The Institute then chose to solicit bids for rental of the property from him and several other food vendors, ac-

ording to Walter L. Milne, assistant to the chairman and the president.

MIT asked each potential tenant to make a presentation outlining how they planned to renovate the property, what food services they would provide and how much rent they were willing to pay, Milne said. Au Bon Pain, a chain of French bakeries, was selected as the new tenant after MIT evaluated the presentations, he added.

McLaughlin agreed with Milne's account of the bidding procedure. He added that MIT requested that plans for satellite locations be included in the presentations.

Caltech admissions study gives 27 improvements in policy

By Robert E. Malchman

Second of two parts.

PASADENA, Calif. — The California Institute of Technology (Caltech) faculty *Ad Hoc* Committee on Admissions Policies and Procedures made 27 recommendations to improve the school's ability to attract new students.

The committee's report identified five areas for improvement: Caltech's visibility for student recruitment; the school's image; applicant selection; the yield of admitted students choosing Caltech; and organization of the admissions process.

Recruitment visibility

The committee recommended that Caltech make itself more visible to high school students. This would include:

- Development of a vigorous program of staff visits in the fall to college nights, science fairs, guidance counselors and advanced placement science teachers.

- Creating a fall "road show" for a night in a hotel banquet hall in major cities to meet parents, students and teachers in the area.

- Targeting of major science high schools around the country.

- Giving the director of admissions administrative responsibility for recruitment, and the secondary schools committee oversight jurisdiction in that area.

- Extension and improvement of interactions with local high schools, perhaps expanding the Summer School Program to aid recruitment.

- Targeting of students with specific scientific interests and mailing them special brochures, especially in Caltech's strong but underpopulated majors, such as biology, chemistry and geology.

- Considering offering prospective freshmen prize fellowships and advertising them in major science magazines.

Image improvement

The committee recommended that Caltech improve its image and tap into "cultural and humanistic" resources at other area

schools. Steps include:

- Creation of an *Ad Hoc* Curriculum Committee to explore ways to reduce student pressure and the curriculum's inflexibility.

- Preparation of a brochure on humanities and social sciences offerings and its distinguished faculty to offset Caltech's "weak" image in that area.

- Emphasis in the literature of Caltech's small size, intimacy, fellowship, flexibility and honor system.

- Consideration of a shuttle bus service "to schools with cultural and humanistic offerings that Caltech cannot provide itself."

- Expansion of the 3/2 engineering/humanities double degree program with other schools, and exploration of the possibility of extending the program to scientific areas.

Selection improvement

The committee recommended revisions in the admissions process, including:

- Development of Faculty Admissions Committee (FAC) criteria for admissions which it would revise annually.

- More than one reader per application.

- Institution of a personal rating for non-academic interests, and the introduction of greater diversity among the entering freshmen, without sacrificing academic excellence.

- Making a special effort to recruit in underpopulated majors, and among women and minorities.

- Establishment of a committee on undergraduate performance responsible for assessing student performance and writing a report to aid the FAC in the formation of its guidelines.

- Provision in the Student Affairs Office for a statistician charged with collecting data on students and issuing statistical reports.

Yield enhancement

To increase the number of accepted students who choose to enter Caltech, the committee ad-

(Please turn to page 6)

The manager of the building Alexander's occupied told him "everything was cool" with the restaurant's presentation, McLaughlin said. The building manager added that the Institute would suggest improvements to the restaurant's presentation if it was unacceptable, according to McLaughlin.

"I was getting bad vibes" toward the end of the summer, McLaughlin said. MIT returned his initial presentation, he added, requesting that it be resubmitted formally.

McLaughlin claimed that his first submission was a formal proposal. Ultimately, McLaughlin's presentation was rejected and Au Bon Pain's was selected.

After more than seven years of tenancy, McLaughlin "left with regrets." He added that he was willing to do whatever MIT required to renew his lease.

He speculated that MIT chose Au Bon Pain over Alexander's Restaurant because of the issues of satellite locations on campus and the large chain's "clout."

Gaggle cops Tech board

Special to The Tech

Non-denominational holiday spirit and wanton lust dominated the proceedings Saturday as *The Tech's* board of directors elected its successors for Volume 106.

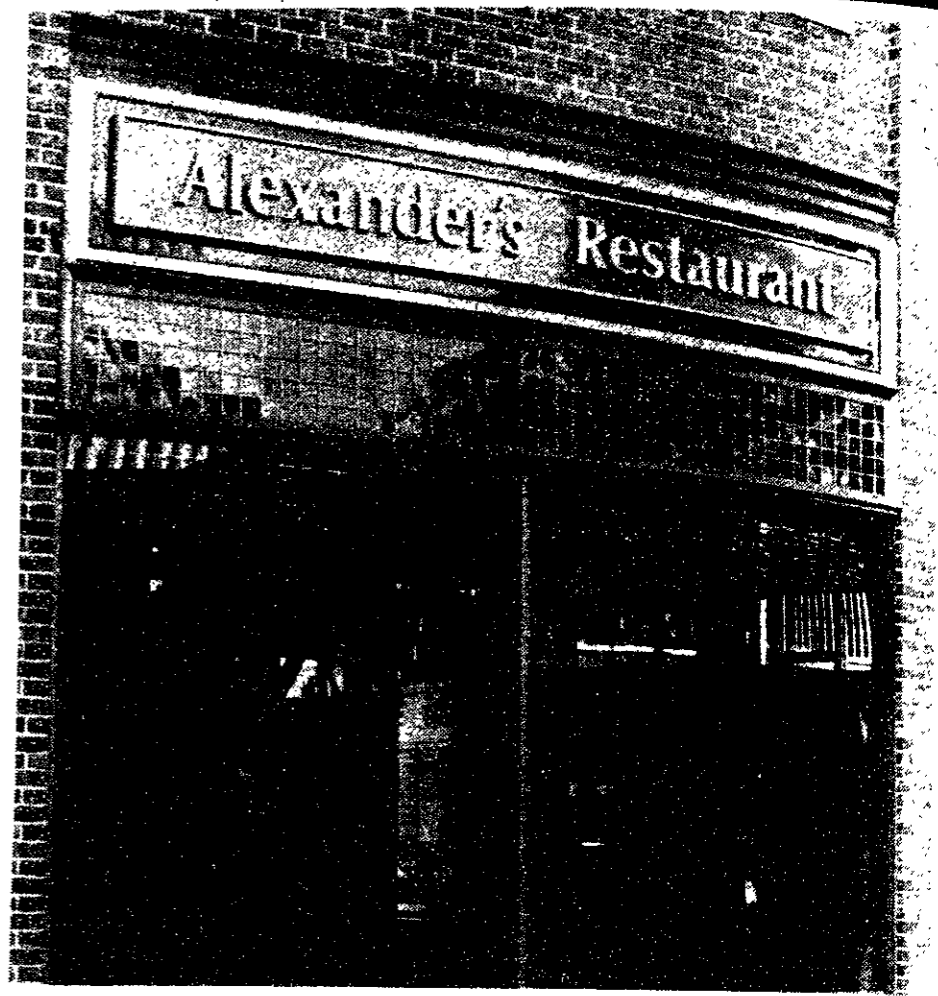
The voters named current Managing Editor Ronald E. Becker '87 to chair the new board. Becker pledged to keep the newspaper's film and beer cold, and to serve as the sole staff repository of purity.

The board elected News Editor Harold A. "Howard" Stern '87 as the next editor in chief, based largely on his promise to schedule personal interviews with Valerie C. Coel S&M '80 for anyone who voted for him.

"Starkman, you vote for Stern and you're a dead man," warned production staff member Shari A. "Sha-a-a-ri Baby" Berkenblit '88, after Stern's pledge. Night Editor Eric N. "Star-Kist" Starkman '87 ironed out his differences with Berkenblit in time to be elected managing editor for the next volume. Starkman will be responsible for setting deadlines and satisfying the production staff's lust for X-ACTO knives, Art Wax and Cora Zilch '54 clip art.

Advertising Manager Michael J. Kardos '86 decided to take the money and run for business manager, which the board elected him. "I'm boning up on my Portuguese," winked the soon-to-be-illicitly-wealthy one. "Ail I need to figure out is where they speak Portuguese." Attempts to confirm Kardos's planned flight failed when repeated telephone calls to the Business Office went unanswered.

Editor in chief Thomas T. "Tom-Tom" Huang '86 refused to identify his friends, and was



Tech photo by Eric I. Chang

Alexander's Restaurant, formerly of Kendall Square, lost its lease from the MIT Real Estate Office. Au Bon Pain, a national chain of French bakeries, will take over the location early next year.

thus compelled by the board to serve as executive editor for the coming volume. "Airball" will assist the editor in chief and managing editor in the newsroom and on the basketball court.

After the meeting and three Molson Goldens, Huang attempted to assist "The Fridge" Becker by demonstrating sit-ups on the photography department's desk.

In the hotly contested race for news editor, Earl "The Earl of Yen" Yen '88 was named most liked among the candidates — and therefore was denied the position.

Less fortunate were Katherine T. "Yow!" Schwarz '86, Ben Z. "Sting" Stanger '88 and David P. "Mad Dog: Sick Pup" Hamilton '88. The new *Tech* senior muckrakers promised in-depth coverage of campus events. David and Sting vowed to pay particular attention to the effects of blacklight and vaseline on Katie, and vice-versa. The three also agreed on REM as the "official music of the news editors."

Mathews M. "The Mut" Cherman '88 signed up for another year as opinion editor, because he needed more altruism letters for his parakeet. His partner in flame for next volume will be current Associate NuzEd Whang '87.

The meeting paused at this point for the lighting of the non-denominational holiday candleabra. Staff *goyim* looked out the window at the Julius A. Stratton '23 Student Center's non-denominational holiday shrub. Huang, currently a 2/3 member of Jewish faction, just stood there with a confused look on his face. "One more visit to the Kosher Kitchen and I think they're going to make me have a *briss*," Huang lamented.

After the proceedings, Becker led the staff in a chorus of "Oy Schwartzbaum, oy Schwartzbaum, oy vas a mensch that Schwartzbaum," to the delight of all. The delight was mostly due to the absence of Becker's flute.

While the rest of the staff contemplated its dates with Valerie, Malchman (winner of the Leonard H. Tower Jr. '71 Memorial Hanger-On Award), Mark W. Eichin '88 and Mark "Oliver Wendell" Kantrowitz '89 will have to keep theirs with Dawn. The trio will serve as night editors for Volume 106. Malchman will also continue as production manager, and Kantrowitz will replace Starkman as director of the *Tech* Electronic Pizza delivery service.

The Tech will leave the positions of sports editor and features editor open once again in the hope that no sports or fea-

tures will occur next year.

Foreign interests kept their hold on the Arts Department, as Briton Jonathan "Rhubarb" Richmond G and Italian wax impressionist Corrado "Honcho" Giambalvo '86 will serve another year as editors. "We have a pact," Richmond said. "I'm teaching Corrado how to cook, and he is teaching me how to drive a motorcycle." Giambalvo's latest work of art, "Self Portrait in Three Inches of Wax," is now being displayed in the *Tech* office.

Rumor has it the pair remained solely because of the presence of "The Bobsey Twins," Associate Arts Editors Betty J. McLaughlin '89, Allison Druin G and Michiel Bos G. When informed that the word should be "triplets," Bos commented, "Oh, vat a rich language das ist."

Associate Photo Editor Stephen P. "Berzerk" Berczuk '87 will move up to full editor. He denied his "MTG" shirt advocated a rival student group, claiming that it was a second-prize in a Music TeleGision contest.

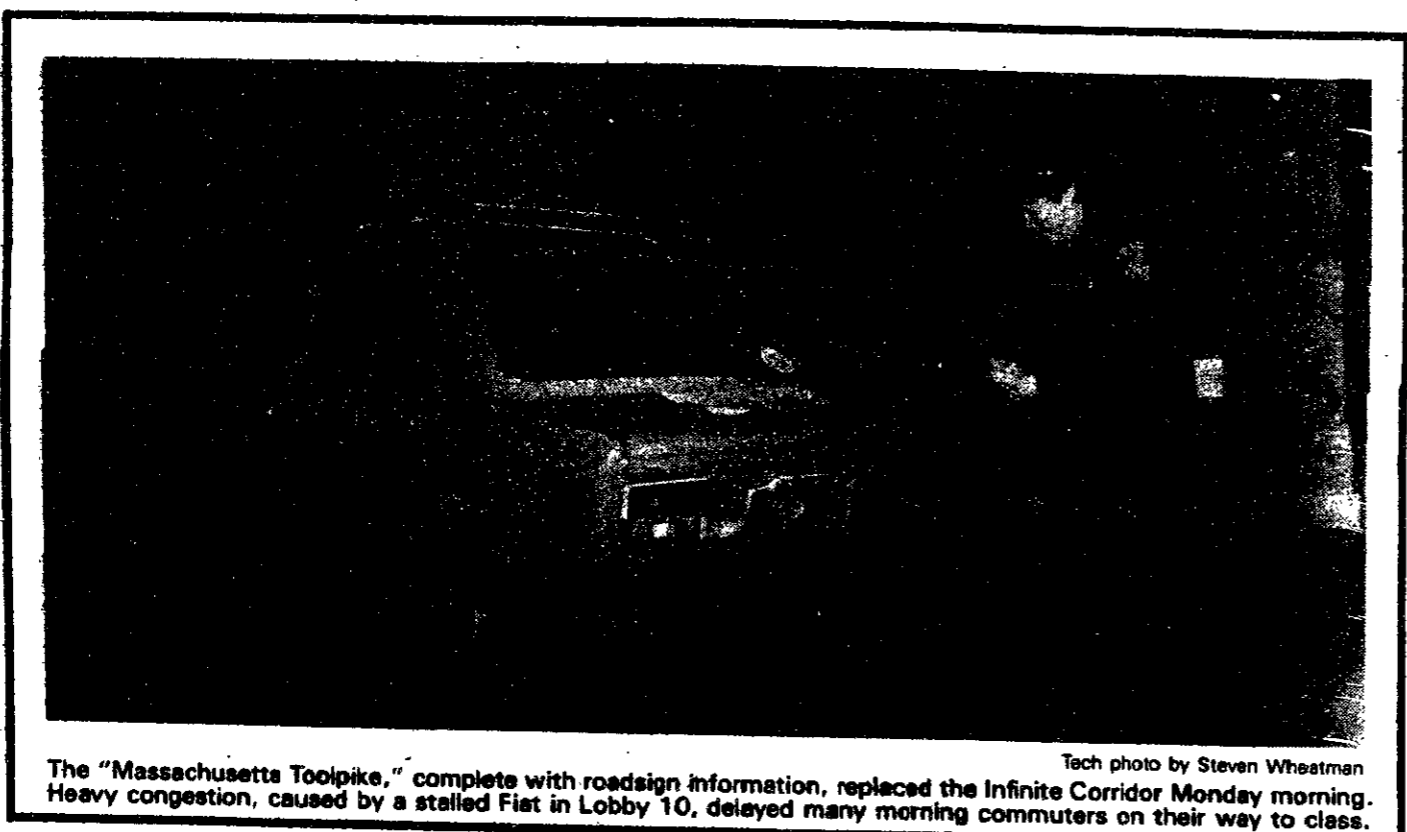
"Money speaks louder than words," said Craig "Craig" Jungwirth '88 of his move from news editor to advertising manager.

"I like Caltech guys," said Schwarz, but none were elected to the prestigious post of contributing editor. Those who were selected included *Tech* icon (sorry Dave) V. Michael Bove G, elected to his sixth managing board; Bill Coderre '85+, who finally decided he wanted a lifetime subscription; Simson L. Garfinkel '86, who promised Richmond flying lessons if he survives Giambalvo's motorcycle instruction; Carl A. LaCombe '86, who should have known better, but who will continue to serve as *Tech* Indexing Project Representative anyway; Photo Editor Sidhu Banerjee '87, who was still annoyed that he didn't get the Coel photography assignment; Andrew S. Gerber '87, '63 and VI-3; and Michael J. "Phantom" Garrison '88, who enjoyed the post-election party so much he had to call Nightline to find out what time it was when he got home.

Put out to pasture as senior editors were Photo Editor Steven Wheatman '86 and Chairman Ellen L. Spero '86, who liked the position they were in almost as much.

In the final contest of the evening, *The Captain* — Horatio C. Crunch — was unanimously named *The Tech's* official mascot.

Andy "The Guru" Bein '87 was last seen driving a Rolls into the sunset, along with Amy S. "What time do elections start tomorrow?" Gorin '84+.



The "Massachusetts Turnpike," complete with roadsign information, replaced the Infinite Corridor Monday morning. Heavy congestion, caused by a stalled Fiat in Lobby 10, delayed many morning commuters on their way to class.

Tech photo by Steven Wheatman

news roundup

World

Synod issues final report — The Synod of Roman Catholic Bishops issued a report summarizing their two-week meeting. The Synod was called by the Pope John Paul II to "remedy problems that have arisen since the Second Vatican Council" which met 20 years ago. The report included recommendations regarding the policy of the Church today. These recommendations include revitalizing catechisms and increased evangelization.

OPEC ministers meet — The Organization of Petroleum Exporting Countries (OPEC) oil ministers decided at their meeting in Geneva to change their marketing strategy to compete successfully in the world market. The price of oil is expected to decline if OPEC abandons its monopolistic pricing strategies and allows its members to act independently.

Nobel laureates in Stockholm — Seven Nobel prize winners, including MIT's Franco Modigliani, journeyed to Stockholm to accept their prizes. The five American, one French and one German recipients will each be awarded \$225,000 for their distinguished work in their fields.

Opposition to Marcos split — Two of the leading figures opposing Philippine President Ferdinand Marcos in that country's national elections have been unable to reach an agreement and form a joint ticket. Former Philippine senator Salvado Laurel and Corazon Aquino, wife of assassinated opposition leader Benigno Aquino, announced their independent bids for the presidency. Political analysts have speculated that the divided opposition will reduce the chance that Marcos will be ousted from his post.

Nation

Lucky goes to California — The first dog Lucky, who was given to Ronald and Nancy Reagan by the national March of Dimes poster girl last year, has been exiled from the White House to California. Lucky was confined to purgatory because of her "slow progress in becoming White-Housebroken," stated *Newsweek*. In an effort to quiet the outraged nation, Reagan referred to his ranch in California as "dog heaven."

Local

Yelena Bonner in Boston — Yelena Bonner, the wife of dissident Andrei Sakharov, has arrived in Boston to undergo treatment for her heart and eye ailments. She is staying with her family, some of whom she has not seen in over six years. According to her son-in-law Efrem Yankelevich, Bonner viewed the videotapes that the Russian government released of her husband eating, and claimed that they were forged.

Sports

Brockton wins championship — Brockton defeated Natick last Saturday to win the Division 1 Super Bowl for the second year in a row. Brockton took an early lead against Natick and withstood a last-minute drive to establish a 22-20 victory.

Weather

More of the usual — Tomorrow should be partly cloudy, with highs near 40. Extended forecast: Cold over most of Independent Activities Period with a 100 percent chance of snow. Sunshine prevailing during the daytime, with very dark nights.

Stanley E. Etra

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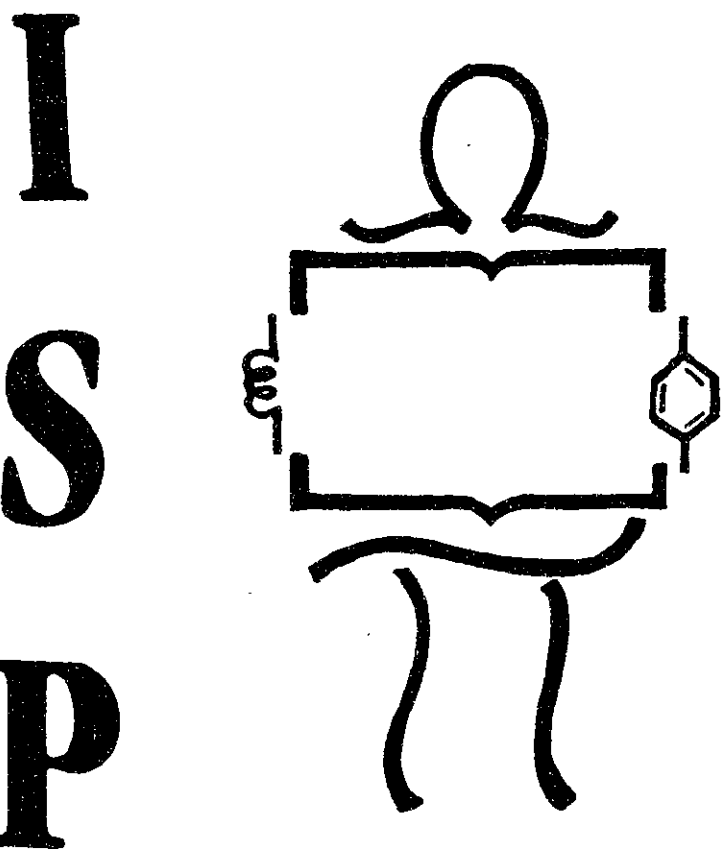


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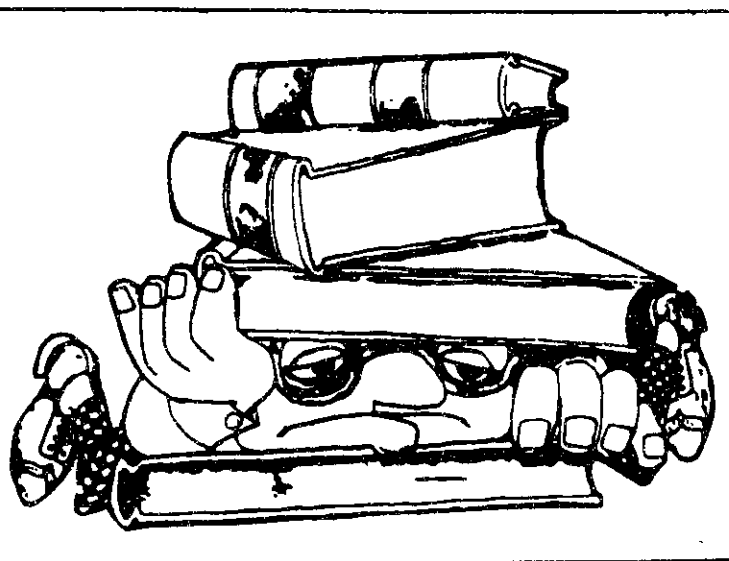
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opinion

Editorial

MIT must divest from South Africa

President Paul E. Gray '54 argues that MIT should remain neutral on political questions that do not affect the Institute directly. But the decision to do nothing — to keep investments in corporations operating in South Africa — is a decision to support not merely a political course of action, but a crime. That crime is apartheid.

Divestment is not an economic issue. Associate Treasurer Allan S. Bufferd '59 has said that divestment would limit MIT's investment options, but could not determine how divestment would affect MIT's endowment. It seems unlikely that a gradual divestment, given the vast number of corporations available for investment, would be unbearably onerous or damaging.

"Divestment is not a moral issue," Gray has claimed. But if divestment is not an economic issue, what can it be if not moral?

MIT's primary obligation is to its students and its research. Morally, it may not take actions contrary to that interest. MIT's second obligation is to set a moral example for the academic and business communities. An institution dedicated to freedom for academics must likewise be dedicated to freedom for people. To assert a right to learn is to assert a right to speak, to assemble, to walk freely without fear of cruel oppression.

Divestment will not violate MIT's primary obligation: neither students nor research will suffer. Divestment alone is not hypocritical, as some have charged. MIT need not refuse to purchase from or perform research for companies doing business in South Africa. Either of those actions would interfere with MIT's primary obligation.

Gray deludes himself if he believes the world will dismiss an MIT divestment as "a misguided act of sentiment." Divestment is a powerful moral statement that says: *We will not do business with a criminal government.* One hopes foreign presences in South Africa would hear this statement, and take action to support the turnover of power from whites to blacks, whether through corporate pullout, political pressure, or military support of the blacks.

But whether a corporation changes its behavior, or another university decides to follow MIT's suit, is not the issue. The argument that "if we don't do it, someone else will," is of the weakest moral fibre. People will note that MIT, a leader in the academic and technological communities, has taken a stand. Our hands will be clean.

Support for "constructive engagement" or selective divestment hinges on the belief that companies in South Africa can improve the life of their employees. It is true that some corporations in South Africa pay blacks fairly, educate them and employ them in integrated workplaces. But corporations can only improve the lives of a small number of blacks and only in a superficial manner.

No cash payment can compensate for the apartheid system, the forced relocation, the absence of human rights. The good these corporations do by employing blacks is far outweighed by the evil they do by perpetuating the racist South African regime.

Many black South Africans agree that foreign companies stabilize and improve the oppressive, exploitative system. "You are not changing it," said Dr. Nthato Motlana. "[You are] making it possible for the Afrikaner racists to continue their merry way exploiting the black people. If the aim of foreign corporations is fundamental structural change, then their presence in South Africa will not contribute to that change."

Those workers benefiting from "good" corporations form but a small percentage of the black population. The remainder continues to be victimized by government oppression. By remaining a part of the economy, these corporations support apartheid. They pay taxes and sell goods to South Africa's government. Revenues are used to preserve the *status quo* with guns and violence.

A position against apartheid, then, cannot countenance mere "constructive engagement." Only through total divestment from corporations operating in or with South Africa will the MIT Corporation make a clear statement that South Africa's government is an abomination.

Editorials, marked as such and printed in a distinctive format, are the official opinion of **The Tech**. They are written by the Editorial Board, which consists of the chairman, editor in chief, managing editor, executive editor, news editors, and opinion editors.

Dissents, marked as such and printed in a distinctive format, are the opinions of the undersigned members of the editorial board disagreeing with the editorial.

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 addressed to **The Tech**, PO Box 29, MIT Branch, Cambridge MA 02139, or by interdepartmental mail to Room W20-483. Letters should be typed and bear the authors' signatures, addresses, and phone numbers. Unsigned letters will not be accepted. **The Tech** reserves the right to edit or condense letters. We regret we cannot publish all of the letters we receive.

Dissent

Selective divestment is MIT's only alternative

Apartheid is an evil system. Every effort should be made now to mitigate its effects on South Africa's black population. MIT should not simply wash its hands of all its investments in companies doing business in South Africa.

Instead of walking away, MIT should motivate companies to improve the work and living conditions for blacks in South Africa.

The MIT Corporation must selectively divest from those companies that are not making "good progress" (Category 1) in adhering to the Sullivan principles.

The Sullivan principles classify the success of desegregation policies enacted by the corporations. [Text of the principles, page 15.] A corporation that fails to conform to these principles deserves blame.

A company is not immoral merely by doing business in South Africa. Many American corporations do operate morally in South Africa. They have provided a role model of equality using these principles.

Total divestment is too much, too soon. MIT stands to lose economically from a fire sale of 18 percent of our endowment. MIT's primary responsibility is to educate its students. Hurting ourselves is no way to prove a point. Taking a first step to counteract injustice is.

A one-time, dramatic pull-out by MIT will have no long-term effect. We are morally obliged to apply solid, prolonged pressure — accomplished through selective divestment — on our companies, our government and South Africa, toward apartheid's destruction.

MIT must take a stand against apartheid. Constructive engagement has not worked. Total divestment is a painful overreaction. Selective divestment is our only alternative.

Andrew Bein
Craig Jungwirth

feedback

LSC should reconsider screening of "Rambo"

To the Editor:

On Saturday night I attended LSC's showing of "And Now for Something Completely Different," which was wonderful, as usual, and made a superb Putnam decompression flick. The audience, of course, adored the film, despite the scores of deaths and the sometimes graphic violence of the animation. It also enjoyed watching Bambi's battle with Godzilla in the short feature.

All of what just goes to show that Saturday's crowd was far from squeamish. So why did the audience members respond with a chorus of boos when LSC made their awaited To Be Announcements, and screened a preview of "Rambo"? It is because "Rambo" is a truly offensive film.

Watching the preview was a new experience for many of us, akin to attending Orwell's "two minutes' hate."

I am not used to seeing people dismantled by automatic weapons, and found it qualitatively different from watching 16 tons being dropped on an individual. The glorified violence was nauseating, and I cannot imagine my or anyone's sitting through two solid hours of it.

Since the audience full of LSC customers was so quick to object to Rambo's rampant xenophobia and gratuitous violence, perhaps LSC would like to reconsider showing this film. If not, I would be happy to help organize a protest against it.

Julian West G

The Tech

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PRE-GENEVA ARSENAL POST-GENEVA ARSENAL

If this is success, what would failure have meant?

opinion



feedback

The Christmas tree: is it non-denominational?

To the Editor:

I am sorry to have to raise the thorny issue of the *TREE* again, but some folks still don't have it right.

What is a "non-denominational" tree-lighting? Is the lighting non-denominational, or the tree? In fact, there is nothing "non-denominational" about the tree or the lighting.

Many Jews and other non-Christians (and I imagine many Christians as well) feel overwhelmed by Christmas symbols at this time of year. But that is

another problem. *This* problem is more aggravating; namely, the pretense that Christmas is a secular, American holiday and that everybody can participate in it.

Come now, we all know it's a Christmas tree. And that's fine — let's have a Christmas tree, a beautiful one. But please, let's call it a Christmas tree, and stop pretending that it is a universal symbol.

Dan Shevitz
Hillel Director
and Jewish Chaplain



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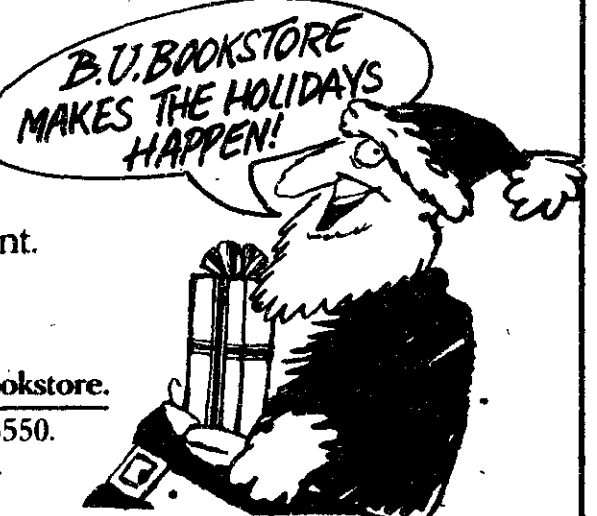
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Value of student representation examined

(Continued from page 1)

Student Pugwash, the MIT Disarmament Study Group and the MIT Hunger Action Committee are among student groups that have urged MIT curriculum reform committees to increase input from students, according to Robin Wagner G, a member of Pugwash.

The HASS committee, chaired by Professor of History Pauline Maier, voted Nov. 15 to seek an undergraduate — but not a graduate — representative. The Undergraduate Association Nominations Committee then interviewed undergraduates and selected Curtiss.

"My duty . . . is to represent the undergraduate view as accurately as I can," Curtiss said. "I also feel a personal responsibility to put as much time into this as I can."

"I think I have a good feeling for how MIT students consider the humanities curriculum . . ." he continued. "For this committee, one student representative is enough since it's a very small committee." The HASS committee has 10 to 11 members, Curtiss said.

Professor of Literature John Hildebidle, member of the HASS committee, said, "I think it's very helpful to have someone who's actually experiencing the undergraduate curriculum. . . . He is a very, very helpful voice."

"My sense is that on the whole students are not radically discontent with the present HASS requirements," Hildebidle said. "There has not been enough time to survey the undergraduate population." He believes that the committee's work is too far along for a graduate representative to

catch up.

The HASS committee decided on Nov. 15 not to appoint a graduate student representative. The committee did not relay that decision to the GSC until early December, according to Wagner.

"The total picture that emerges at least in my mind is that students have been so far a low priority to the faculty and administration," she said. "And I think that there is substantial room for improvement and hope that it occurs soon."

Jack L. Kerrebrock, department head of Aeronautical and Astronautical Engineering, chairs the Commission on Engineering Education. The Commission decided Nov. 25 against any student representation. It instead plans to focus on individual departments and accept student input from each department, according to Wagner. Kerrebrock could not be reached for comment.

The Commission held an open forum yesterday to solicit student input. [Editor's note: See related story, page 1.] "Even though I think it's wonderful that the faculty members are meeting with students," Wagner said, "it would be better if they didn't schedule major forums during the last week of classes."

"I am not convinced at this time that any guarantee of student input is available, any guarantee that most or all students in the departments are aware of these opportunities," she added. "They rejected the idea [of a student member] on the basis of breadth. But I think breadth would be enhanced by student representation."

The School of Science Education Committee agreed on Nov.

Caltech ad hoc admissions committee studies five topics

(Continued from page 2)

vised:

- Consideration of a large fund-raising campaign for non-need fellowships, reduced tuition or reduced self-help levels.

- Increased sensitivity to the effects of large tuition increases on prospective students.

- Development of a systematic program for recruiting applicants after Caltech accepts them.

Organization

The committee also suggested some changes to the admissions organization:

- Creation of a dean of admissions and financial aid to oversee the whole process.

- Creation of a dean's advisory committee comprised of the chairmen of the relevant faculty committees and anyone else appropriate.

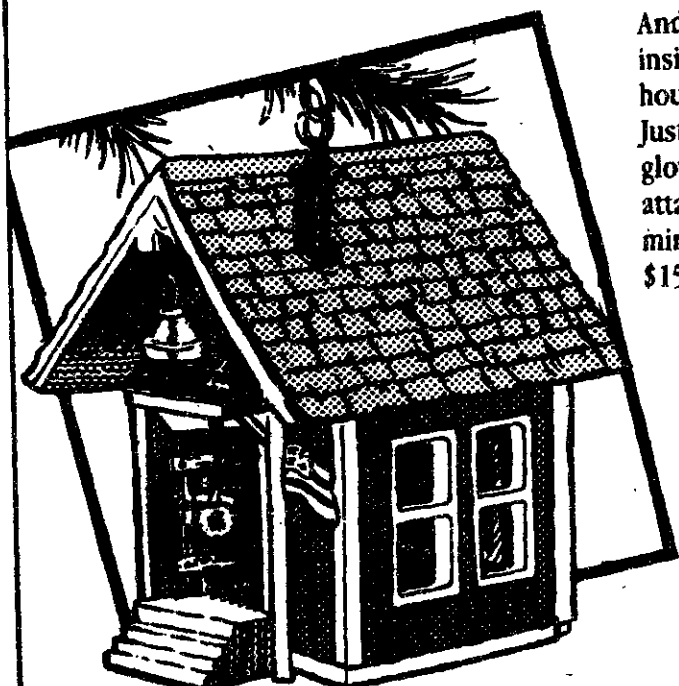
- Admissions staff autonomy in recruitment, free of faculty interference, and holding the staff responsible for its success or failure.

- One term teaching credit for faculty on the admissions committee, with at least one member from each division.

- Confidential FAC recommendations to the Caltech administration.

- Continuation of the *ad hoc* admissions procedures committee through the transition period to review the progress.

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25 that it should include student representation. The committee, however, is not yet ready for a student member, according to Professor of Chemistry Robert Silbey, chairman of the committee.

"There are many ways of getting student input," he said. "We have come to no final conclusion. . . . We got started late. Right now we are really educating ourselves about the freshman science requirements."

"No undergraduate student committee, or individual student, has ever asked me [if the committee or student could] be a member of the committee," Silbey said. "Some graduate students have expressed interest."

Forum studies engineering

(Continued from page 1)

understanding the course.

Kerrebrock entertained the proposal that lectures be eliminated entirely, to be replaced by personal work with faculty members in small groups in what he called "a big tutorial." He envisioned more project-oriented work in which students would hold the primary responsibility for learning material themselves.

Problem sets

Most students agreed that MIT places too much emphasis on problem sets as a method for learning material. "If I do a problem set, well, four weeks later it's gone," said one student. "But if I've written a paper or done a project, I'll remember that for a long time."

Students do not remember problem sets as well as other work because they are following someone else's thoughts rather than their own, Kerrebrock said. Those present expressed overwhelming agreement when he suggested that courses should emphasize projects and case studies as an alternative to, but not in addition to, some problem sets.

Present and future forums

Holding the forum late in the

The Integrated Studies Committee, chaired by Professor of Science, Technology and Society Leo Marx, decided in late October to have both an undergraduate and a graduate representative, according to Wagner. Both students will be chosen this week, she said.

Professor of Literature Irene Tayler, a member of the committee, said that no action regarding the appointment of student representatives was taken at yesterday's committee meeting.

The committee will not meet over winter break and is scheduled to make its report in January. "The lack of coordination between committees and important people has preempted any

meaningful input," Wagner said. "There needs to be a greater emphasis on student input."

"I don't understand how a graduate representative could help a committee," Nell said. "I don't know what the committees are afraid a student representative would do. A graduate representative would provide a more experienced outlook."

"If there had been a more coordinated effort to involve students at the formation of the committees," Wagner noted, "we might have experienced fewer delays in getting students on these committees and getting more meaningful student input."

term made it difficult for many students to attend, said another student. Tau Beta Pi representative David DiPietro '86 explained, however, that the society had scheduled the conference in order to allow students eligible for membership to complete a project before their elections in

January.

DiPietro added that the society plans to schedule a similar forum next term at a time more convenient to students. The society will also conduct a survey next Registration Day based on information gathered during last night's forum, he added.

New freshman advising proposed by Ingram

(Continued from page 1)

mixed in with the taking of the seminar in a very informal and natural way."

The seminar should be voluntary, he said, and other methods of advising should be available to the freshman. Seminars are a good proposition for faculty, he added, because they are a fun method of advising and "rewarding to get to know freshman and undergraduates."

Ingram said the seminar method of advising should be used only in the first semester, because a relationship between the advisor and advisees would then be established. The freshman would then not be shy about approaching his advisor after the first se-

mester.

Another option is to hold the seminars in the living groups, McBay said. She expressed concern "about increasing the faculty's knowledge of the living groups." The Institute must try "more than one approach," she added.

"I think what we're doing now in discussions is try to sort out which of the points of the advising system are most important," said Heine. Whatever is decided in these meetings "would be a trial for next year," she added.

The advising system should incorporate flexibility and different options: "It should not be just a monolithic system," she explained.

CORRECTION

ADDITION

Philosophy

■ Distribution Subjects

24.04 Moral and Legal Responsibility 3-0-6

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MWF 2-3 36-155

THOMSON: Every society needs to determine for itself, and express in its legal code, the ways in which it will fasten responsibility on those of its members who cause harm to others of its members. Considerations of morality and efficiency enter into the decisions the society makes. The class will look at the ways in which moral conceptions of fault are expressed in a society's legal rules, and at the sources of change in a society's legal system — in particular, at those places at which a society may decide to relax its concern for fault in the name of efficiency.
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Political Science

■ Elective Subjects

17.247 National Security and Democratic Values

Prereq.: 17.241, 17.243 or 17.245 or Permission of Instructor

3-0-9

The growth of national security concerns poses important challenges and problems for individual freedom and democratic processes. This course examines this phenomenon and congressional and presidential initiatives to deal with these perceived problems: intelligence agencies, loyalty-security clearances, secrecy and classifications, espionage, freedom of press, of travel, of scientific exchanges, and defense spending will be examined.

Menand T 3-5 10-280

Visiting Committee report supplement

(Editor's note: This supplement on graduate student concerns followed the Report of the Visiting Committee on Student Affairs, printed in the Dec. 6 issue of The Tech.)

Additional Details on Graduate Concerns

Perspective

The Committee held both formal and informal meetings with graduate students who expressed their views on the quality of student life at MIT. It also received various written statements from graduate students on this subject. These students expressed their strong opinion that the Institute offers them superior research and academic opportunities. They also expressed concern about what they regard to be their second-class status in the MIT community. Chief among their complaints is the inadequacy of Institute housing, which is addressed elsewhere in this report.

The number of graduate students on campus is now approximately 4600, both outnumbering the undergraduate enrollment and growing at a significantly higher rate. Furthermore, because many graduate students stay only for two-year masters' degree programs, the flux of graduate students through MIT significantly exceeds that of the undergraduates.

Since most decisions involving graduate students, including acceptance into an MIT program, financial support, and degrees earned, are largely made at the department or program level, the graduate school is a highly decentralized entity and projects many disparate images to its students. Despite significant efforts by the Dean of the Graduate School and various departments to inform and help, the prevailing view among graduate students remains highly-charged with perspectives of inconsistency, lack of concern on the part of the Institute, and isolation and loneliness on the part of the student. Consideration could be given to expanding incoming graduate student orientation.

Specific Complaints

Graduate student complaints presented to the Committee during the February session covered fairly broad grounds. They included: 1) the lack of central facilities for providing graduate students with information, counseling and social contact; 2) the lack of consistency among various graduate programs in student aid availability, teaching and research assistantship rights and responsibilities, job placement and career counseling opportunities and the acceptability of participation in non-research related activities; 3) a lack of clear options for students in conflict with their advisors; 4) a general confusion over the roles of the Office of the Dean for Student Affairs (ODSA) and the Office of the Dean of the Graduate School in graduate student affairs; and 5) a perception that the Institute, in general, and the ODSA, in particular, cares more about, or at least pays more attention to, the undergraduate population.

The graduate students with whom the Committee spoke stated that they felt isolated from the

rest of the community for several reasons. Most said that the decentralized nature of the graduate school had contributed to an environment in which hardly anyone knew students outside their own laboratory, to say nothing of their department. Several complained of the pressures exerted by advisors seeking to curtail outside activities unrelated to research, and stated that they feared the possibilities of losing funding if they defied their advisors' wishes. Based on these and other similar comments, it appears that the entire subject of the exercise of authority by advisors is worthy of more detailed review by the Committee in the future.

Many of the students' comments were directed at the lack of opportunity for social interchange between graduate students. Some proposed the establishment of a Graduate Student Center, either at Walker or Ashdown. The Committee agrees that it would be beneficial to provide graduate students with a central place where they could meet, talk informally and perhaps share a meal. The Ashdown dining room appears well-suited for this purpose and its reopening should be given consideration.

Mention was also made of the lack of information available to graduate students about on-going social and extracurricular activities. By the conclusion of our discussions, it was clear that the decentralized nature of the graduate student body makes it difficult for such information to spread by word of mouth, as it does among undergraduates. Reopening the Ashdown dining room would contribute toward a solution to this problem, but more is needed. The Committee would recommend that an Institute office, possibly the ODSA, be assigned the responsibility of disseminating such information.

Several students also commented about what they perceive to be inconsistencies from department to department as to the rights and responsibilities of graduate students. In fact, there appears to be considerable confusion among graduate students about the scope of their rights, as well as the mechanisms available for redress if they are violated. While not persuaded of the inequities alleged, the Committee agrees that all graduate students must enjoy the same rights without regard to their department. The Committee would also recommend that graduate students be informed of their rights and their means to seek redress on an Institute-wide basis.

Many of these concerns could be effectively dealt with by aggressively advertising the currently available services offered by the ODSA and the Graduate School Office. The designation of an ODSA staff member with full-time responsibility for graduate student concerns would serve as a focus and catalyst for more effective action. There also seems to be a significant level of need for a central graduate student facility for both social functions and as an information and focal center for GSC and Graduate School Office activities. Reactiva-

tion of the Ashdown House cafeteria is frequently mentioned in this context.

However, there is one overriding graduate student concern which tops most graduate student lists, is focused and concrete and falls clearly within the purview of ODSA; the single issue, if successfully addressed, would serve as the clearest indicator of the Institute's commitment to strengthening the quality of graduate student life. The remainder of this section will address both long term and short term strategies for addressing this central issue.

The Graduate Student Housing Problem

To quote the background information provided to the Visiting Committee by the ODSA staff: "The quality and capacity of graduate student housing has been a concern for many years. MIT houses about 30 percent of the 4600 graduate students while approximately 50 percent would like on-campus housing. The problem is particularly acute for married and international students."

In fact, private conversations with graduate students indicate that increasing pressure from the tight and expensive Boston-area housing market may well drive the percentage of graduate students needing and desiring Institute housing well above the 50 percent level quoted above. ODSA personnel indicate that an increasing number of graduate students must seek off-campus housing well away from the campus as the gentrification of Cambridge and the Back Bay area of Boston remove increasingly more housing from the student price range.

Some simple facts seem to be recognized by both ODSA and faculty contacted on this matter. These include: 1) the quality of the graduate student body is of the first order of importance with respect to the quality of research performed at MIT and, thus, to the Institute's continued reputation as a premier research center; 2) the quality of life is important to graduate students and the availability of decent, safe, convenient and affordable housing is probably the major single factor in determining that quality; 3) the Institute already loses some top graduate student prospects because it cannot guarantee in-

coming graduate students Institute housing and this loss factor may grow as the pool of top-flight, technically-oriented students seeking advanced degrees declines. (At least one member of the Visiting Committee used the quality of graduate student housing for his family and himself as the final determinant among offers from competitive graduate programs.); 4) graduate students with safe and convenient on-campus housing are able to work longer hours and return safely and efficiently for late-night research activities. (This is of particular concern to students with families and to female students); 5) graduate students housed on campus are more likely to develop a sense of camaraderie with their fellow students and a heightened sense of belonging to the Institute community — attitudes which are woefully lacking among many current graduate students; 6) housing problems are often multiplied for graduate students with families and foreign students who may be poorly equipped to deal with the vagaries of the Boston area housing market; and 7) the competition between MIT graduate students and the poorer members of Boston area communities for affordable housing hurts both groups and creates community resentment against MIT and the rest of the academic community.

The basic problem is clearly stated above. The roughly 1400 graduate students housed by MIT are probably only half of the number who desire and would greatly benefit from decent, safe and affordable on-campus or near-campus housing. We suggest two tacks to deal with this problem: 1) a reevaluation of the housing assignment practice to assure that the currently-available allotment of housing is assigned in the fairest and most effective manner possible; and 2) a renewed commitment on the part of the senior administration to secure funding for the construction of significantly higher levels of Institute-provided graduate student housing.

Reevaluation of Housing Assignment Practices

After two years in Institute-provided housing, most graduate students staying on should be acclimated to the Boston area and much more capable of finding and negotiating suitable housing

on the open market. They will also have had an opportunity to develop a network of references, referrals, possible sublets and even potential roommates.

The goal of this policy is to move toward a system where all interested first-year graduate students are offered Institute housing for two years. Any movement of more "tenured" graduate students into the housing system or stays beyond two years would be discouraged until this goal is achieved.

If all new graduates had secured housing for two years, much could be done to insure the communication and sense of community that currently are not experienced by this population. The process can also be vitalized to enable the transition to the larger community in the second year to be an informed, inclusive and confident one.

Obtaining Additional Institute Housing

The only long-term solution to the problem (short of limiting enrollment in the graduate school) is to obtain funds to significantly expand the current stock of graduate student housing. An expansion by a factor of two could well be necessary given the tightening conditions in the Boston area housing market and the continuing expansion of the graduate school enrollment.

The administration has not ignored graduate student housing needs: both Tang Hall and Eastgate have come on-line in the last 20 years. However, during the same time, the effort put into building and renovating undergraduate housing has greatly outstripped that for graduate student housing. This fact is apparent to graduate students and adds to their sense of second-class citizenship.

The goal should be to house at least half of the graduate student community and their dependents in Institute housing on or near campus. If this goal can be met, we feel that the Institute will reap great rewards from a happier and more productive graduate student body, more accepting nearby communities responding to the decreased pressure on community housing and facilities, and eventually from a more grateful and caring group of graduate alumni.

D. Reid Weedon Jr. '41
Chairman, Student Affairs
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STORE COUPON

Atlantis experiment studies feasibility of space station

(Continued from page 1)

scuba gear, assembled the structure while strapped in a harness which prevented him from swimming. The measured productivity was impressively high, so much so that the National Aeronautics and Space Administration (NASA) sponsored a series of experiments in NASA's Neutral Buoyancy Facility, a water tank 75 feet in diameter and 40 feet deep. The test subjects, MIT students, were able to wear space suits which better simulated the EVA environment.

The neutral buoyancy experiments showed that structural assembly in EVA is easier than the assembly of equivalent structures on earth. The simulated weightlessness improved the ability of EVA astronauts to assemble large space structures. The initial experiments showed the restraints for the astronauts were not necessary.

The astronauts could climb on the structure while assembling it, learning through experience how best to position themselves for the next task and adapting very quickly to the zero-gravity environment.

There was, however, little data for correlation between simulated EVA assembly in the neutral buoyancy facility on earth and actual EVA assembly in space. To take the final step, Akin proposed to NASA that it perform the identical experiment in space as on earth: assemble a tetrahedron.

Blastoff

On a warm, clear night late this November in Florida, EASE was launched into orbit aboard the maiden flight of space shuttle Atlantis, in a fiery display which could be seen 500 miles away, lighting the sky.

EASE was among four other shuttle payloads: three satellites and ACCESS, a comparison structural assembly experiment built by NASA. EASE consisted of six aluminum beams about 12 feet long, and four joint clusters which joined the beams together.

Astronauts Jerry Ross and Sherwood "Woody" Spring each took turns at the two work positions for assembling the tetrahedron during the two EVAs. The astronaut in the lower position was placed in foot restraints as he received the beams from the storage area in the shuttle cargo bay. He attached beams to the tetrahedron's vertex and passed them to the top of the structure where the second astronaut was positioned.

The second astronaut either held onto the structure or was attached to the Remote Manipulator System, which was controlled from within the shuttle by astronaut Mary Cleave. Ross and

Spring were given basic assembly instructions for the EASE experiment, but were encouraged to adapt to their environment by modifying the procedures.

Learning and adaptation to the zero-gravity conditions were evident during the nine assemblies and disassemblies the astronauts completed. Correlation between neutral buoyancy tests conducted before the flight and the flight tests seem quite good, but the final results will not be known until all the data has been examined.

Akin stressed the involvement of MIT students in the SSL. The EASE experiment is the first safety-critical EVA experiment performed by NASA which was planned, designed and built by students. Under the direction of Akin and Research Associate Robert Wolf, graduate and undergraduate students were, and still are, involved in every aspect of EASE. When the video tapes of the flight are delivered to the SSL it will be students that examine and analyze the data.

(Editor's note: Sarver is a graduate student in the Department of Aeronautical and Astronautical Engineering and is a member of the Space Systems Lab.)

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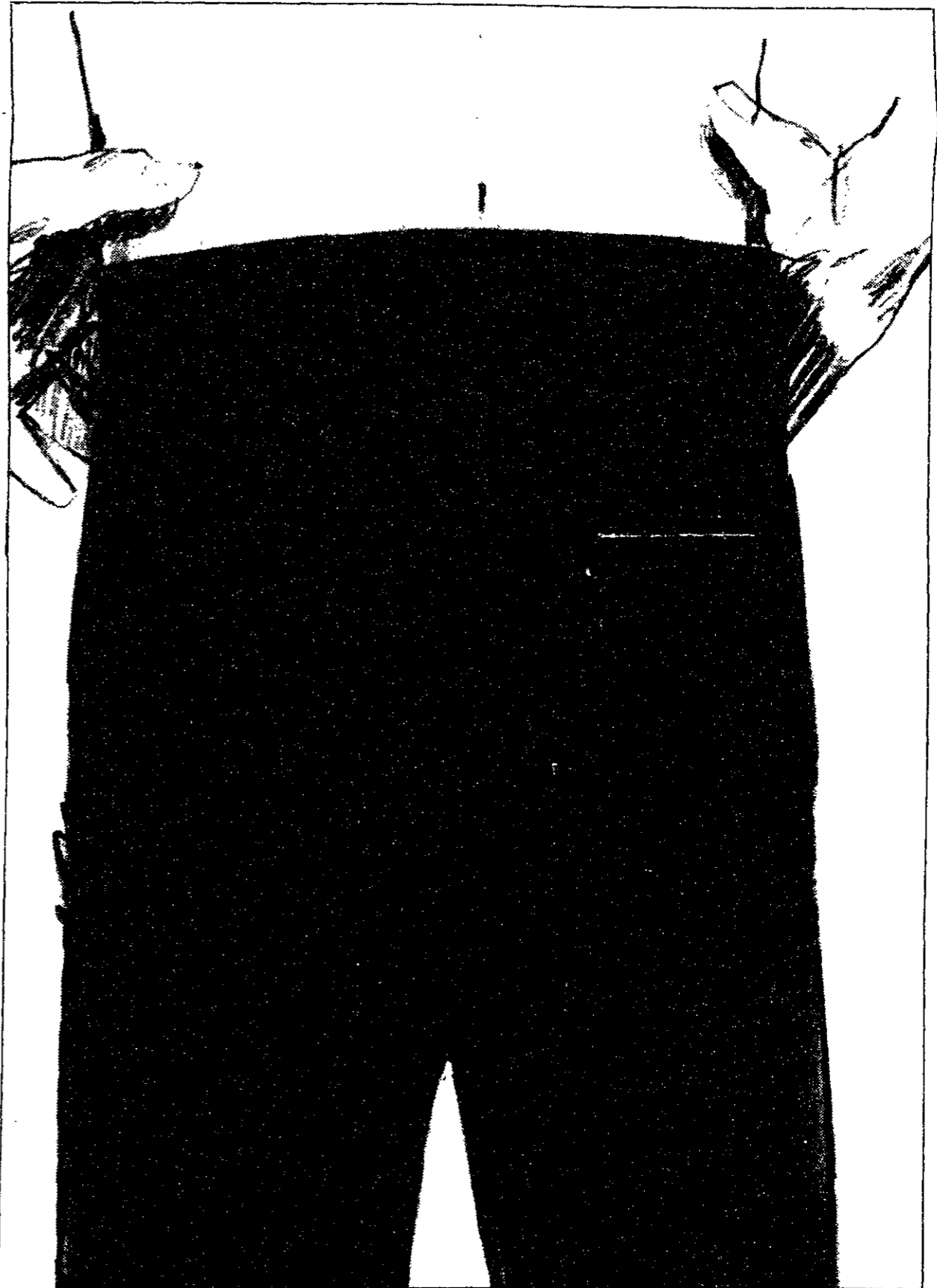
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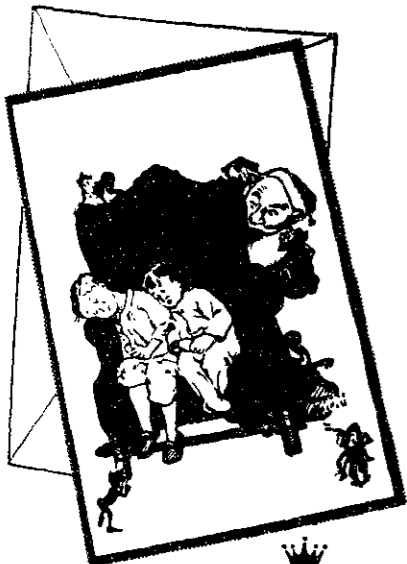
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ARTS

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Spiralling Double-Reeds conquer Music Library

MIT Chamber Music Society, Music Library, December 9.

What do you get when you take two each of oboes, cor anglais, bassoons, a cheeky contrabassoon and septet of enthusiastic musicians? You get the unusual highlight of yesterday's marathon-length concert by the MIT Chamber Music Society.

Boris Pilin is probably not a name you would be familiar with, but his *Three Pieces for Double-Reed Septet* have been played by a group from the Los Angeles Philharmonic, and his music well-deserved the performance it received last night.

Pilin has developed a series of inventive rhythmic patterns, juxtaposing voices against each other in unexpected and stimulating ways. This must be an extraordinarily difficult piece to pull together, and the razor-sharp precision of playing we heard is a credit to Jean Rife, who conducted the ensemble. Each member of the group brought a high standard of performance to the work, endowing the

spiralling flow of harmonies with both intellectual and sensual pleasure.

The concert had begun with an insightful rendition of Mendelssohn's *Trio No. 1 in D minor*, Op. 49. Playing — by Barbara Hughey, Joyce Wong and Robert Beckwith — was bright and crisp, but the intimate relationship established between the players also gave a lyrical fluidity to their playing. The second movement was intensely personal, while the *Finale: Allegro assai appassionato*, full of suspense, was exciting and vibrant.

Elizabeth Connors and Ruth Shyu next played Schumann's *Fantasiestücke*; both players had a few technical problems, but although this piece lacked the eloquence of the Mendelssohn, it was brought off with commitment, and provided pleasure for the audience.

The same cannot, unfortunately, be said for the rendition of the *Adagio: Allegro* from Mozart's K. 465 *String Quartet*. This rather involved movement — when di-

vorced from the movements which sandwich it — must surely sound naked under the best of conditions. But conditions were far from optimal: the movement, replete with squeaks and other musical warts, sounded badly unrehearsed.

The two concluding items on the agenda brought a renewed concentration to the Music Library stage. First we heard Barber's *Quartet*, Op. 11, brought off with depth and involvement by Kirk Chao, Eric Wong, Priscilla Huang and Richard Gottlieb. Coloration was finely studied in the opening *Molto allegro e appassionato*, while the second movement was breathtak-

ingly moving. The balance was beautiful, the listening blissful.

Philip Hsu, Ko Hayashi, Ted Sussman, Sam Osofsky and Bertha Chang were thus given a tough act to follow. But there was no need to fear: Shostakovich's *Piano Quintet in G minor* Op. 57 was utterly gripping, as melting melodies gave way to stridently biting rhythms and percussive intensities. Bertha Chang's piano performance was commanding, Philip Hsu's violin-work unpretentiously virtuosic. This was a sublimely musical experience, chamber playing at its best.

Jonathan Richmond

Individual yet unified approach to Beethoven

The Juilliard String Quartet, Jordan Hall, Friday, December 6th.

The Juilliard String Quartet visited Boston for the second time this season, presenting a program representative of Beethoven's major quartet-writing periods and styles. They played quartets op. 18 No. 2 (1800), op. 59 No. 3 (1807) and op. 127 in E flat major (1824).

The quality of the quartet's playing on Friday came as no surprise to their devoted audience. Be it throughout the bright op.18, the demanding op.59 or the tormented later piece, the players remained one with Beethoven. It is difficult to characterize their playing as "romantic" or "restrained" or "expansive", or with any other adjective. Suffice it to say that their playing fused with the music: it was the music. Even in the *tour de force* their program entailed, the performance remained flawless from beginning to end.

Op. 127 opens with a series of full chords which, in Beethoven's language, is perhaps the most certain sign of an approaching storm. From the beginning to the *Finale*, the music was a huge question mark. Like the mutterings of a pained man, the sentences were seldom complete. Often, they were mere shards. Each instrument was caught into its own hesitations, searches and wanderings, yet they were all united by a common thought. One sensed that thought, never being able to say what it was.

This is a very difficult piece to understand. One may listen to it as to a dialogue with death, a subject Beethoven dared to explore much more than any of his contemporaries. Three years before his death he started to write these last quartets. The music he produced was abstract, remote, tormented, received by his contemporaries as the ramblings of a near mad man.

Jacqueline Gottlieb

Del Fuegos full of fire

Boston, Mass., the *Del Fuegos on Slash Records*.

Boston's most recent band to receive national attention in the rock charts has just released its second album. The Del Fuegos (Spanish for "The Fires") have lived up to their name by releasing another red-hot LP. They are local favorites from way back and have built a reputation as a band that loves to play live anywhere and anytime.

It is their enthusiasm for what they do and persistence in refining both their music and stage presence that makes the Del Fuegos a band with great potential. The Del Fuegos are a garage band with enough of a pop sound to give them a widespread appeal.

This second LP is more experimental than the first with a greater mix of fast and slow songs, and a variety of vocal/musical combinations.

The two major hooks captured on this album are represented by the lead cuts on each side. "Don't Run Wild" has already been the recipient of substantial airplay, both nationally and locally. "It's Alright"

is an equally catchy tune. These two songs epitomize the Del Fuegos' sound with the garage style guitar sounds of Dan and Warren Zanes fluctuating in and out to complement Dan's rough edge vocals.

In the slower and more melodic category, "I Still Want You," "Coupe DeVille," and "Fade to Blue" represent a different and pleasantly surprising side of the Del Fuegos. Their ability to make good on these songs is an assertion of musical diversity and flexibility. The unnamed prelude to "Night on the Town" is the most bizarre cut on the album with a strange mix of guitars and background noise.

The Del Fuegos are definitely progressing, both professionally and musically. *Boston, Mass.* exhibits a number of musical directions; I am curious to see what the next LP from this group will bring. Now that the Del Fuegos have attained a following on both coasts, it is becoming more difficult to catch them for a live show in Boston. Thus, we local fans must content ourselves with wearing out the grooves in their latest piece of vinyl between local appearances and beer commercials.

Stephen A. Brobst

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Tickets are on sale courtesy of the Technology Community Association. Drop by Room W20-450 in the Student Center, or call 253-4885 to check on availability.

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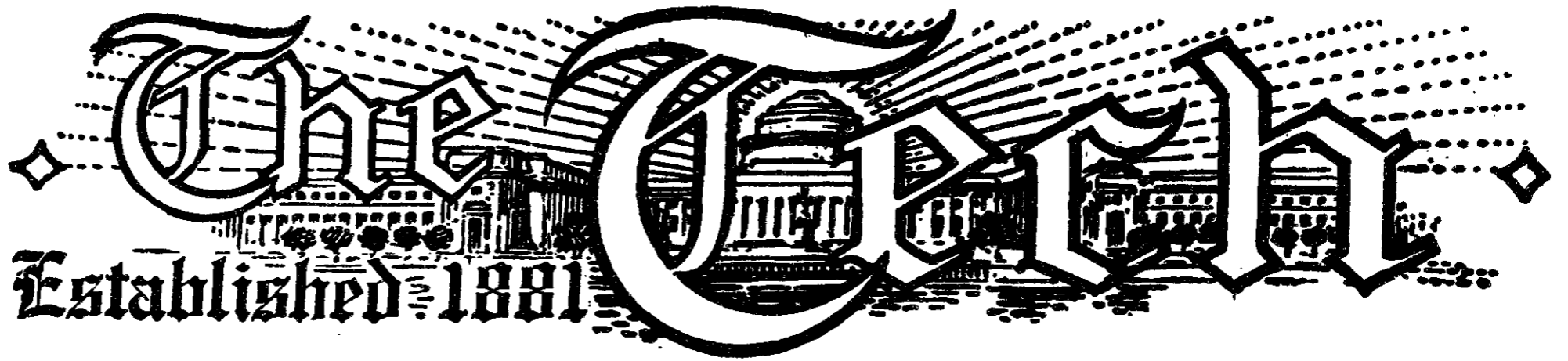
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notices

Ongoing

The professional tutor staff of the MIT Writing and Communication Center (14N-317) will be glad to consult with you on any writing or oral presentation project (papers, theses, letters, etc.) from 10 am to 4 pm Monday thru Friday. You may either phone for an appointment (253-3090) or just drop in. In addition workshops for those for whom English is a second language are held in the Center on Thursdays from 4:15 to 5:15 pm. All services are free.

Getting High? or Getting Desperate? If drugs are becoming a problem, call or write: Narcotics Anonymous, PO Box 142, New Town Branch, Boston 02258, (617) 569-8792.

Local meetings held at the MIT Medical Department, E23-364, on Mondays from 1-2 pm.

The "Statement of Registration Status" is still required of all male students who are (by law) expected to register for the draft, if they desire to receive federal financial aid.

The following students do *not* have to file statements: women, underage students and those who have completed the statement in previous years.

MIT requires male students who have completed the statement by indicating they are "underage" to submit the statement annually until they have registered.

Students may find that GSL and Pell Grant lenders require the statement where MIT does not.

Undergraduates who are interested in communicating with high school students (and guidance counselors) what it's like to be an MIT student are encouraged to join **Project Contact**. For more information please contact the Educational Council Office, 4-240, 253-3354.

Reference librarians in each of MIT's fourteen libraries will be glad to explain how to find and use the materials in their libraries. Call to find out about scheduled or specially arranged tours.

The Cambridge Dispute Settlement Center has announced that it is making its service of mediating disputes available to roommates in the Cambridge area. Those interested in using CDSC's service to resolve a roommate dispute or any other dispute should contact the mediation center at 876-5376.

The University of Southern California has established a **Center for International Journalism** offering a unique new graduate program. Send away for application or information: University of Southern California, Center for International Journalism, Grace Ford Salvatori 315, University Park-MC 1695, Los Angeles, CA 90007, attn: Professor Murray Fromson, director.

The Americans for Democratic Action Education Fund is offering fellowships to students interested in **internships with Con-**

gressional offices in Washington, DC. Applications for the Jan. 3-31 or the July 3-31 programs must be postmarked by Nov. 22, 1985. Contact Bill or Sara at (202) 638-6447.

The Peace Corps is offering skill-training for programs utilizing the backgrounds of college graduates with mathematics and science minors. Peace Corps volunteers serve for two years. During their service they receive a generous living allowance, paid travel, training and health care. A post-service readjustment allowance of \$175 per month is paid to each volunteer. For information on Peace Corps service, call 223-6366 or 7366, or write PEACE CORPS, 1405 McCormack POCH, Boston, MA 02109.

The Institute of International Education is opening a new **International Education Information Center**. The center will contain extensive information on opportunities for study abroad. Facilities are located in the United Nations Plaza in New York. For information, call Ed at (212) 984-5410.

Opportunities for on-the-job training for American engineering students are available with

companies in Denmark, Finland, Norway and Sweden through the **American-Scandinavian foundation reciprocal training program**. Deadline for applications is Dec. 15. For more information, write to: Exchange division, American-Scandinavian foundation, 127 East 73rd Street, New York, NY 10021.

The **Cambridge School Volunteers** invites you to help us help children learn. Your time and talents can really make a difference in a child's life. There is a spot for you among our many volunteer opportunities ranging from Basic Skills to Computers to College and Career Awareness. Credit may be available.

The **Professional Studies Program in India** is offering American graduate students the chance to do fieldwork or research for a year in India. Applications for the 1986-87 year are now available from International Education at the University of California, Berkeley.

Jan. 6, 1986 is the application deadline. For further information, write to Linnea Soderlund, Program Coordinator, International Education, University of California, 2538 Channing Way, Berkeley, CA 94720.

Semester break?

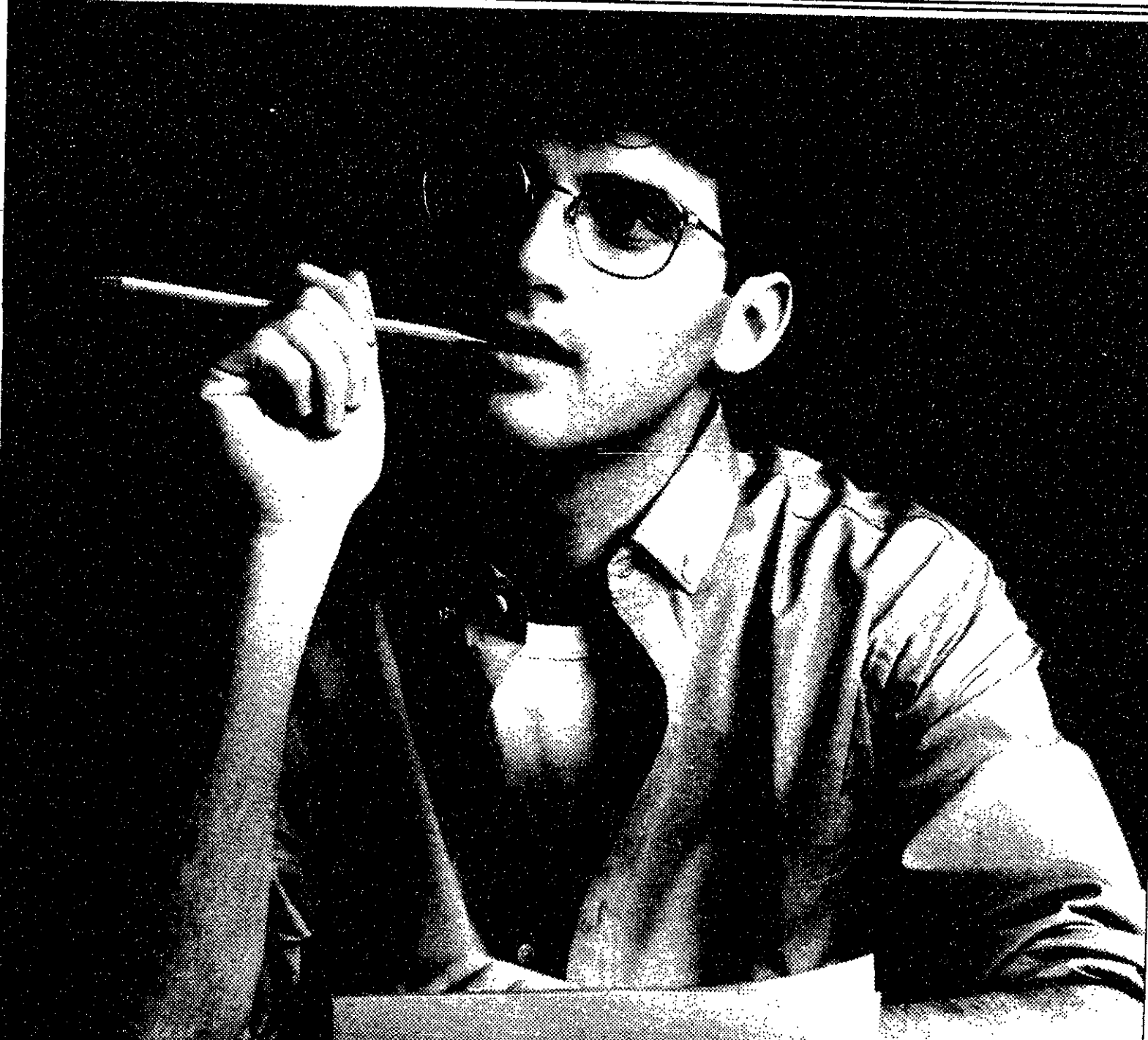
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notices

Listings

Student activities, administrative offices, academic departments and other groups — both on and off the MIT campus — can list meetings, activities, and other announcements in *The Tech's* "Notes" section. Send items of interest (typed and double spaced) via Institute mail to "News Notes, *The Tech*, room W20-483," or via US mail to "News Notes, *The Tech*, PO Box 29, MIT Branch, Cambridge, MA 02139." Notes run on a space-available basis only; priority is given to official Institute announcements and MIT student activities. *The Tech* reserves the right to edit all listings, and makes no endorsement of groups or activities listed.

Announcements

The Departments of Materials Science and Engineering and Humanities and Social Sciences are announcing the **Kathlyn Langford Wolfe Awards**: two \$1,000 prizes to be awarded each year, one to an undergraduate student and one to a graduate student, upon completion of an imaginative and significant project combining research in materials and humanities or in materials and the arts. Preliminary project proposal due Feb. 4, 1986. Final submission on April 25, 1986.

The Institute for Humane Studies will award **Student Fellowships** of up to \$10,000 for juniors, seniors and graduate students. Includes tuition plus

stipend. Applicant's major field of study must be in the social sciences, law, the humanities or journalism. The application deadline is Jan. 15, 1986.

For application packets and further information, contact: Walter Grinder, Claude R. Lambe Fellowship Program, Institute for Humane Studies, George Mason University, 4400 University Drive, Fairfax, VA 22030

The **Grolier Poetry Prize (1986)** is now accepting inquiries for official rules and information. The contest opens Dec. 1, 1985 and the deadline is March 15, 1986. Please send a self-addressed stamped envelope to the Grolier Book Shop, 6 Plympton Street, Cambridge MA 02138.

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Tuesday, Dec. 10

The Cambridge Human Rights Commission is observing **International Human Rights Day** at the City Hall, beginning at 7:30 pm. Speakers will include: Tillie Olsen, author and feminist activist; Sandile Ngcobo, of the Legal Resources Center in South Africa; and Estela Ramires, Salvadoran refugee. Contact: Merrill Goldwyn, 547-3130.

Wednesday, Dec. 11

Jacob Neusner, professor of Judaic Studies at Brown, will speak on **"Israel in America"** as part of the Cambridge Forum. Lecture begins at 8pm, at 3 Church St., Harvard Square. Free and open to the public.

Thursday, Dec. 12

Dr. Philip Morrison, MIT Institute Professor of Physics, and Phylis Morrison, author and teacher, will discuss the **"Symbol and substance in grade school science."** The New England Aquarium is sponsoring the talk, as a continuation of its examination of "The crisis in science education." The lecture is free, open to the public, and take place at 7:30 pm in the Aquarium's auditorium.

The Cambridge Forum and the League of Women voters will sponsor a luncheon featuring seven of the candidates seeking to fill the **Congressional seat vacated by House Speaker Thomas P. O'Neill.** The forum will be held at the Harvard Club, One Federal St., Boston. Reservations cost \$21, and can be made by calling 876-9644 before Tuesday.

Wednesday, Dec. 18

Marilyn Spivak, director of the national head injuries foundation, will examine **"Traumatic brain injury: silent epidemic"** as part of the Cambridge Forum. Talk will take place at 8 pm, at 3 Church St., Harvard Square. Free and open to the public.

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UA recommends MIT sell S. African stocks

(Continued from page 1)

But he claimed that divestment would not necessarily decrease the size of MIT's endowment. "Some institutions have altered their portfolios and come out ahead. There's no guarantee, but it could also happen to MIT."

The council discussed whether it should vote on the proposal before conducting a student referendum on the issue, Thomas said. The members decided they should take a stand on the proposal before the Dec. 18 faculty meeting when the faculty will consider a resolution calling for divestment, Thomas explained.

Moser said he was unsure how the UA Council's decision will affect the upcoming faculty vote, but he "hopes that the faculty will take the UA vote seriously."

Saleska said he hoped the UA Council's decision to support divestment would contribute to the pro-divestment side in the faculty vote. He also suggested that divestment could be the first in a series of MIT actions against US companies operating in South Africa.

He added that he would have liked to see MIT take more of a leading role in the fight against apartheid by divesting earlier.

Committees consider input

(Continued from page 1)

major corporations to research social responsibility issues, reports that 43 American companies have pulled out of South Africa as of May 1985, Johnson said.

Kalonji's proposal calls on the Corporation to divest itself of stock in companies doing business in or lending to South Africa by May 1, 1986. She suggested that divestment by MIT could influence other colleges to reconsider their South African-related investments.

"MIT has a good deal of institutional prestige," she asserted. "Because of our prominence as a scientific and technological university, divestment would encourage other institutions to take such actions."

US companies that withdraw from South Africa will probably sell their operations to local South African businesses, not to other multinational firms, Johnson said. The Pretoria regime will lose its highly-valued access to American equipment, managerial expertise and financial markets as a result.

"South Africa wants to maintain ties to American businesses, but local ownership [of divested businesses] would not provide those ties," Johnson said. He predicted that the resolution before the faculty will pass.

Kalonji also said there is a good chance that the faculty will approve the resolution. The lack of attendance at faculty meetings, however, makes it difficult to predict how the faculty will vote on the resolution, she explained. "I hope there will be considerable discussion," she added.

Gray opposes divestment

President Paul E. Gray '54 said he is opposed to apartheid, but he does not believe divestment is an effective tactic for ending apartheid. "Opposing divestment doesn't mean favoring apartheid," he said.

There are two viewpoints on how US companies operating in South Africa affect the apartheid system, Gray noted. He explained some people feel that firms profit unreasonably by doing business in a country that imposes rigid racial segregation.

Other people believe that US companies contribute to the advancement of blacks in the workplace, he continued.

"The companies I have studied, the ones I am familiar with,

are contributing to the weakening of apartheid," Gray said. "The US companies have promoted blacks [in South Africa], and they have encouraged black performance. The companies are a positive force, and telling them to get out is just the wrong sign." But he cautioned that it is difficult to determine how the presence of all the US companies affects apartheid.

Gray said he would be "astounded" if the proposal passed by an overwhelming majority. "I can't imagine that the faculty would come down so one-sided on such a complex issue for this institution," Gray indicated.

Faculty to vote on pension fund

The resolution also urges the Teachers Insurance Annuity Association College Retirement Activities Fund (TIAA-CRAF) to sell its stocks in companies hiring workers in South Africa.

The TIAA-CRAF is the largest private pension fund in the world, according to Johnson. The fund has approximately \$8 billion invested in companies hiring workers in South Africa, he said. MIT offers the pension as an optional, supplementary pension fund to its faculty members, he added.

The TIAA may decide to divest its South African-related stocks early next year, Johnson said. He explained that the value of the association's South African holdings surpasses the amount that has been divested by all other US organizations combined. It is important for the MIT faculty to express its opposition to the fund's South African-related investments, he added.

Faculty members may move to vote separately on the MIT divestment and the retirement fund divestment, Kalonji said.

Corporation reviews policy

The MIT Corporation's Executive Committee, which is ultimately responsible for MIT's investments, has been conducting a review of the Institute's policy on South African-related holdings since September, according to Gray, who serves on the committee.

The Executive Committee has asked the Corporation Investment Committee and the Advisory Committee on Shareholder Responsibility (ACSR) to look into issues surrounding investments in companies doing business in South Africa, said Walter L.

Milne, assistant to the Chairman of the Corporation and secretary of the ACSR.

The Executive Committee will discuss the South African investment review at its monthly meetings in January and February, Gray said.

"Based on activities at MIT and elsewhere, the Executive Committee felt that the issue of South Africa would be of some interest to the MIT community this year," Gray explained. "The committee felt it necessary to be brought up-to-date on the [divestment] issue in order to be prepared for questions about MIT's policy."

Gray pointed out, however, that the fact that the committee is reviewing the policy does not mean that it feels a change in policy is necessary.

Student group supports proposal

The part of the resolution before the faculty that calls on MIT to divest resembles a petition that the MIT Coalition Against Apartheid has circulated since mid-November, according to Gretchen Ritter G, a member of the coalition.

"It's a great idea, and it's long overdue," Ritter said of the resolution. She criticized the administration for avoiding immediate action on the divestment issue.

"The administration would like divestment to go through all the proper channels," she said. "They would like to have divestment happen on their own terms."

"Clearly, the administration has understood that ... divestment is coming to MIT, and the process of understanding what actions are needed to divest is well under way," Ritter explained. The proposed six month period for MIT to divest "is quite a reasonable amount of time to divest \$150 million. I have difficulty with the belief that MIT needs more time."

Divestment will cause corporations to reconsider their South African operations, Ritter claimed. "Getting companies to change their direction is the whole point," she said.

Ritter, however, praised Gray for his openness in dealing with the apartheid issue. "I'm quite pleased with his attendance [at Apartheid Colloquium] events and his willingness to engage in public discussion," she said.

MIT holdings in South Africa: Sullivan Principles compliance

Category I: Making Good Progress:

International Business Machines	\$32,314,714
Exxon Corp.	\$11,785,479
Hewlett-Packard Co.	\$6,627,670
Eastman Kodak Co.	\$6,430,498
Johnson & Johnson	\$5,649,402
Ford Motor Company	\$4,425,686
Minnesota Mining & Mfg. Co.	\$4,053,816
McGraw-Hill, Inc.	\$3,752,850
Mobil Corp.	\$3,016,597
Burroughs Corp.	\$1,462,500
General Motors	NA

Category II: Making Progress

Merck & Co., Inc.	\$6,807,280
General Electric Co.	\$6,396,328
Squibb Corp.	\$6,312,500
Dow Chemical Co.	\$5,432,320
Warner-Lambert Co.	\$4,337,500
American International Group, Inc.	\$4,250,000
American Cyanamid Co.	\$2,150,250
United Technologies Corp.	\$2,075,000
E.I. DuPont de Nemours & Co.	\$2,071,226
Citicorp	\$1,826,875
Phillips Petroleum Co.	\$953,125
John Fluke Manufacturing Co.	\$260,647
CIGNA Corporation	NA

Companies in Category II sold since Nov. 22, 1985

Dart & Kraft, Inc.	\$6,385,541
American Hospital Supply Corp.	\$5,533,860
Upjohn Co.	\$2,684,600
Motorola, Inc.	\$187,824
Baxter Travenol Labs, Inc.	NA

Category III: Needs to Become More Active

Raytheon Co.	\$3,550,650
Nalco Chemical Co.	\$3,031,250

Unranked: New Signatories

Dun & Bradstreet Corp.	\$8,321,250
Air Products and Chemical, Inc.	NA
Beatrice Companies	NA

¹ Some plants rated Category I; some rated Category II. Dollar value is for all operations combined.

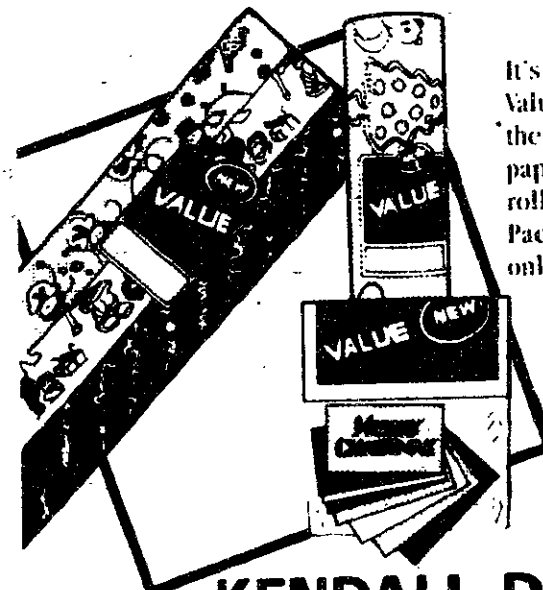
² Some plants rated Category II; some rated Category III. Dollar value is for all operations combined.

The list of corporations is from the 1985 Treasurer's Report amended Nov. 22, 1985. Dollar values of holdings as of June 30, 1985.

MIT also has invested in the United States Steel Corp., a company which, as a minority shareholder, has South African investment interests.

Source: Arthur D. Little

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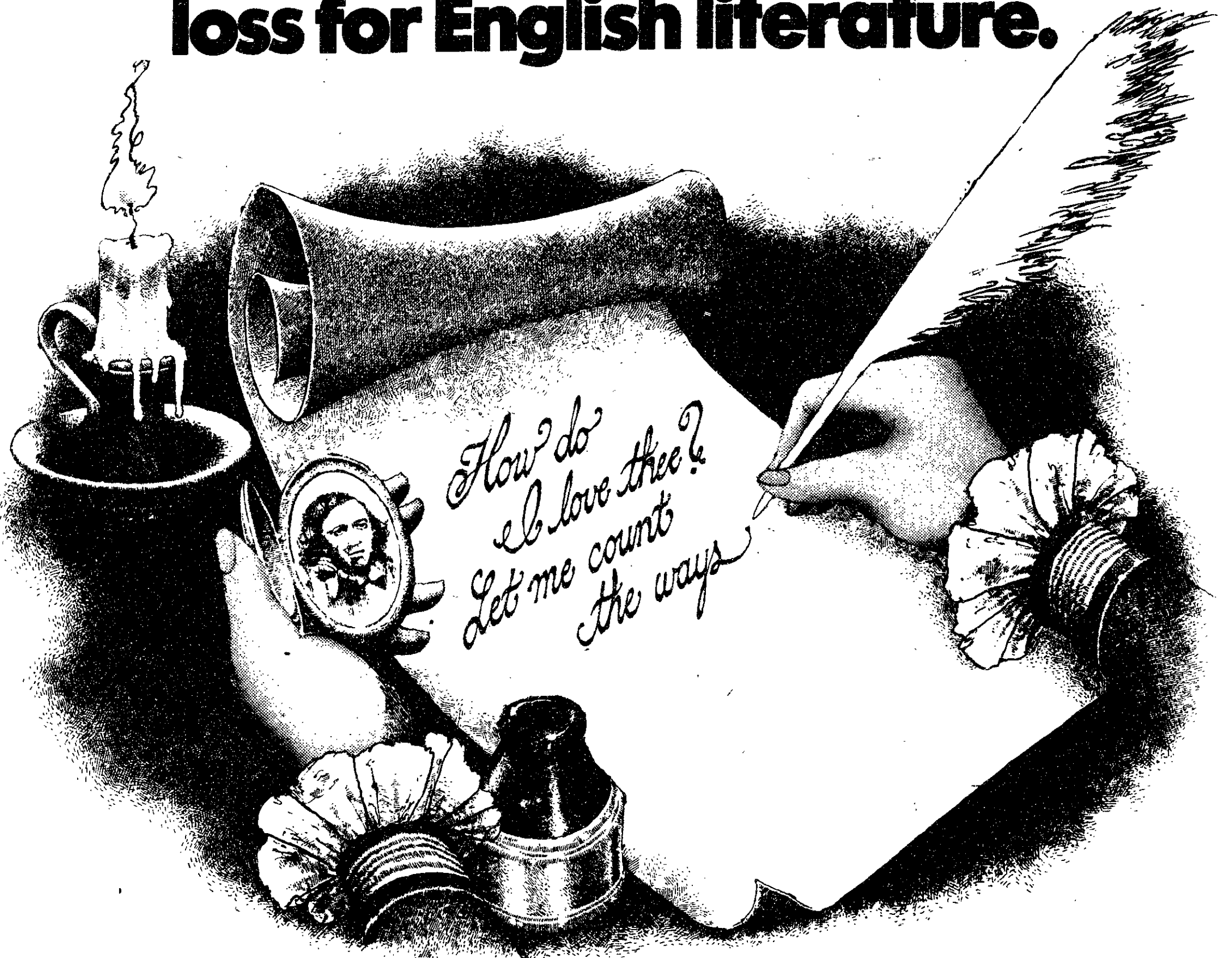


- sports -

Tom Clancy '88 (in the dark uniform) wrestles against an opponent from Bridgewater State. Clancy won his 158 pound bout during Saturday's competition. MIT won the match 43-6. The Engineers will be in action again Saturday at UMass-Boston.

Tech photo by Donald Chan

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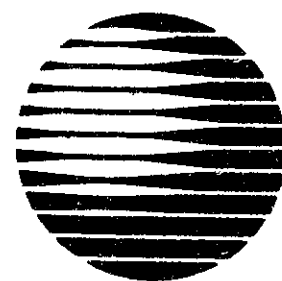
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Alen Brien, British journalist, quoted in Newsweek March 20, 1967:

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Each of the inmates has a little specialty to please the customers. The highest paid ones perform only by appointment, the poorest take on everything and anybody. The editors are like madams — soothing, flattering, disciplining their naughty, temperamental staff but rarely obliged to satisfy the clients personally between the printed sheets.

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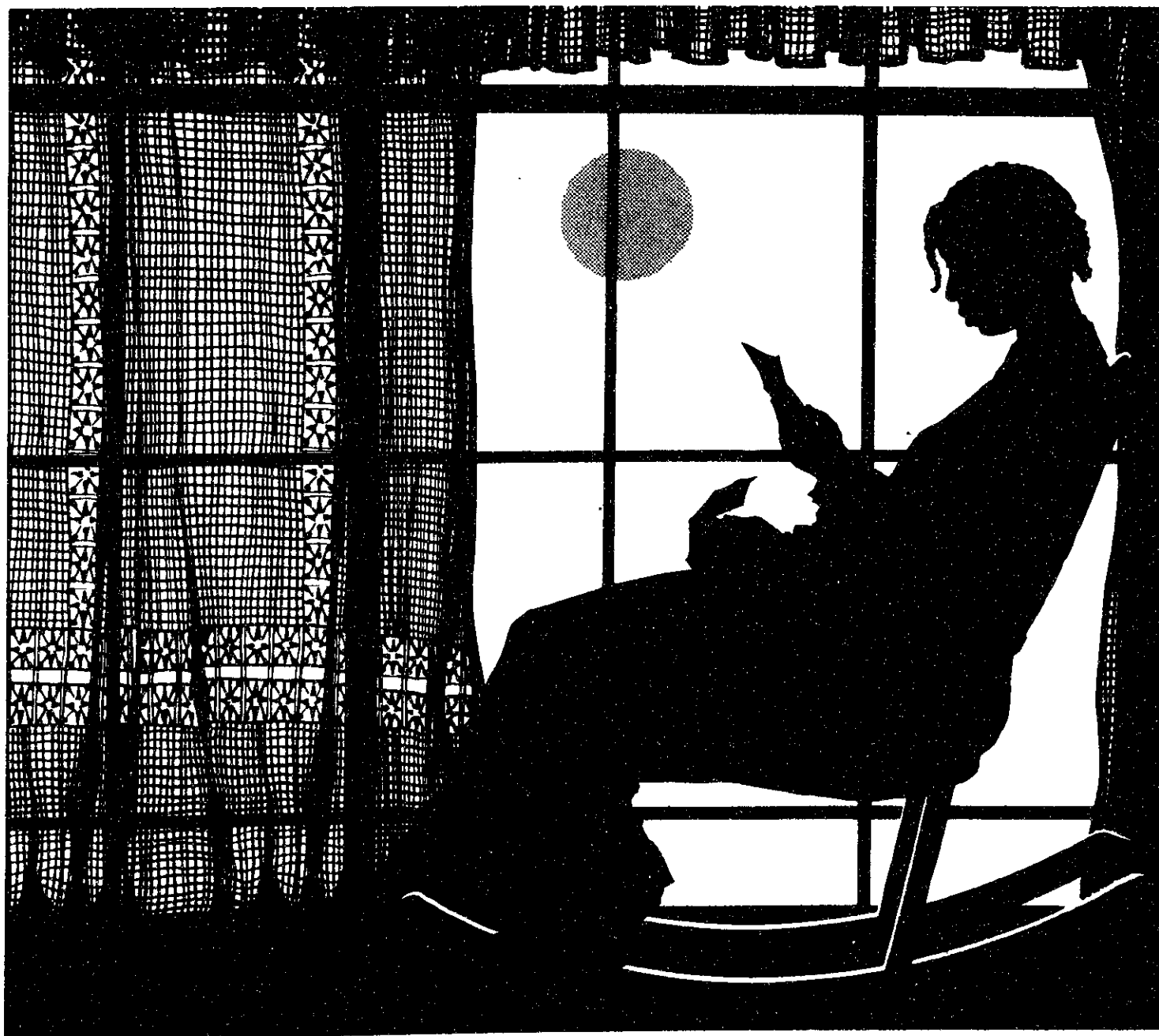
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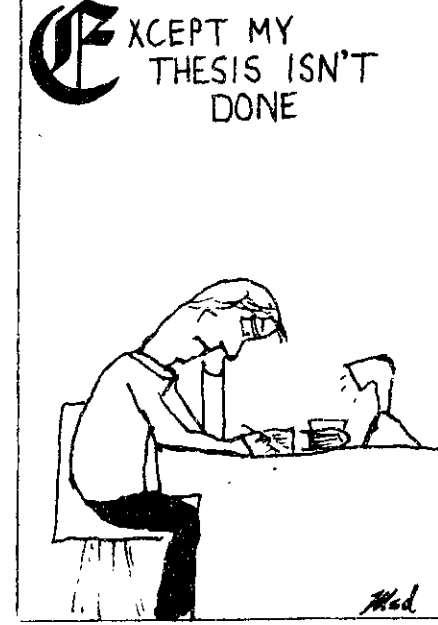
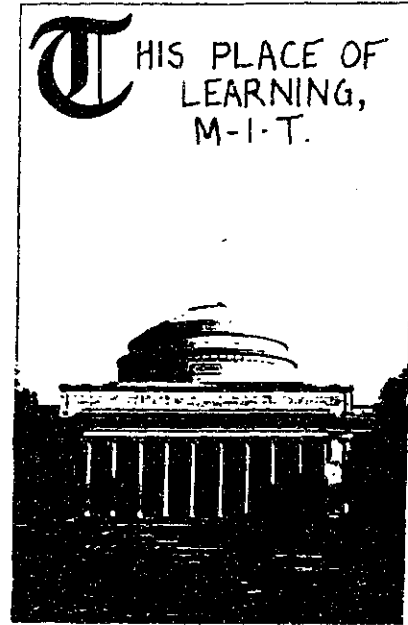
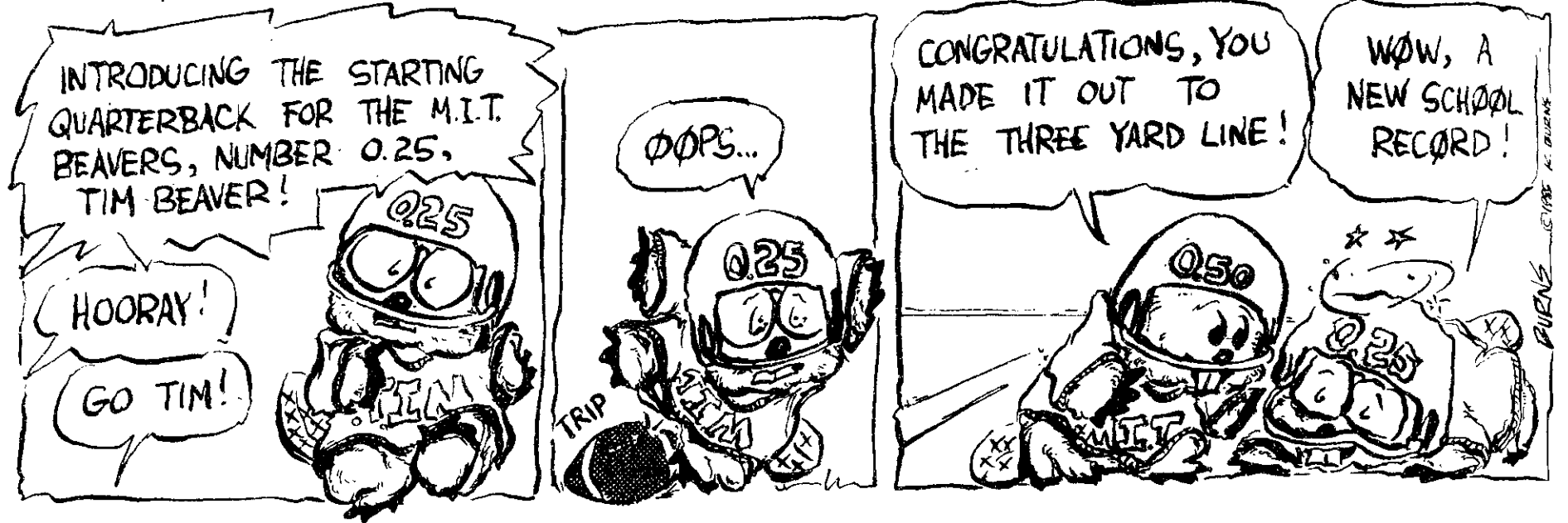
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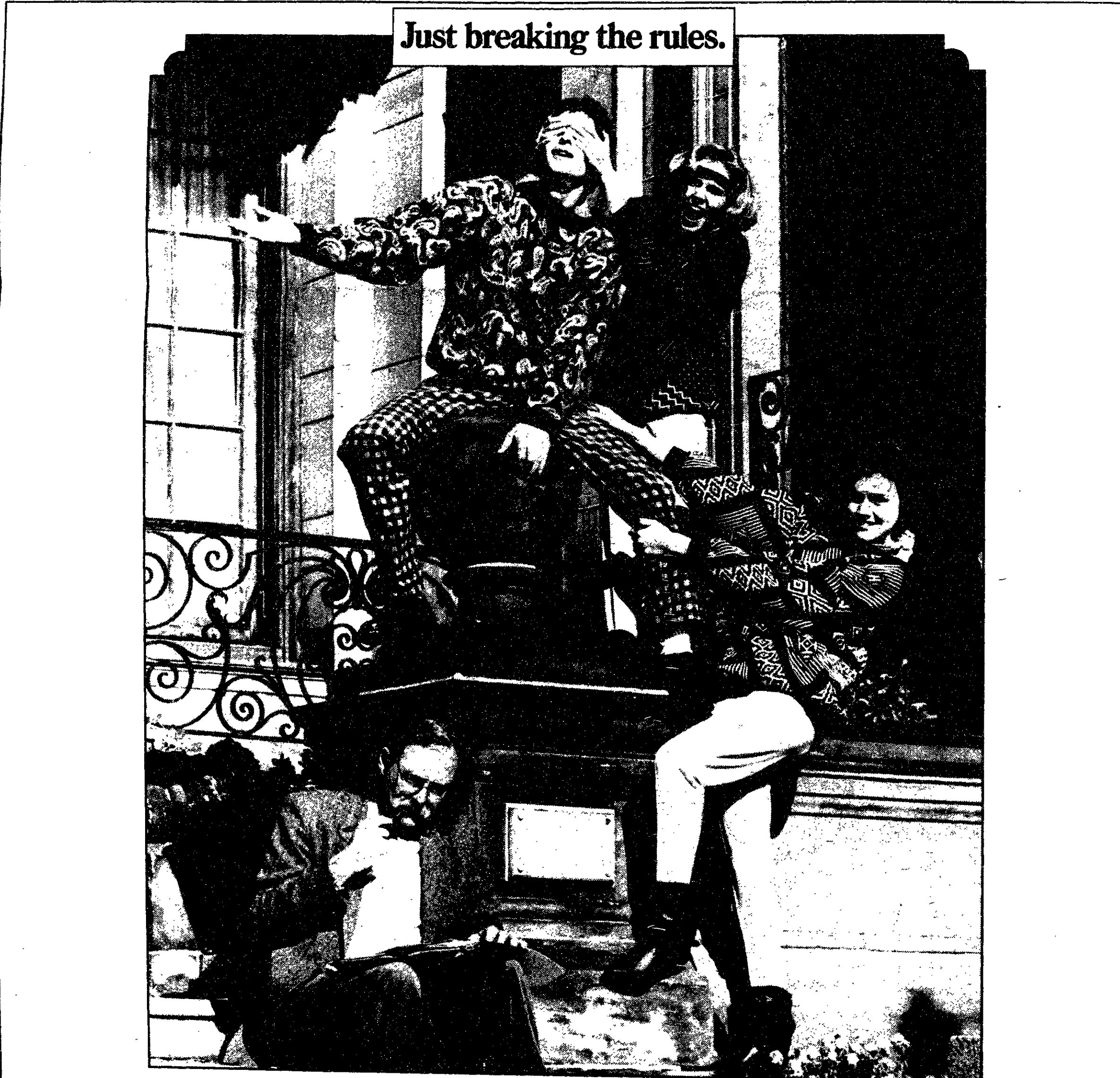
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sports



Tech photo by Donald Chan
George Fischer '86 attempts a breakdown against his Bridgewater State foe. Fischer was victorious in his 177 lb. bout.

Women fencers capture top spots at invitational

By Christine Chu

MIT varsity women fencers captured the top two spots at the Carla Richards Holiday Invitational, sponsored by the New England Women's Intercollegiate Fencing Association. Team Captain Ann Zabludoff '86 finished in first place with a record of 18 wins and one loss. Team Armorer Linda Ystuenta '88 took second at 17-2.

Four junior varsity fencers also entered the competition, held at Brandeis University this past Sunday, along with 32 other representatives from other regional schools.

All six MIT women qualified from the first round into the quarterfinals. Three of the junior varsity fencers — LeNore Leh-

man '87, Laura Ryzowicz '89, and Aimee Yermish '88 — were eliminated there, despite strong individual efforts.

Zabludoff, Ystuenta and rookie Hope Nelson '86 advanced to the semifinals. Here again, the varsity foilists fought their way into the finals. Junior varsity fencer Nelson was eliminated but impressively finished twelfth overall in the competition.

In the final round, Ystuenta and Zabludoff were pitted against Grace Bai, Stephanie Ewing and Melissa Sparks of Wellesley, as well as Anne Giuliano of University of Massachusetts at Amherst. MIT skill and finesse prevailed.

(Editor's note: Chu is manager of the women's fencing team.)

Engineers take second in four-way track meet

(Continued from page 20)

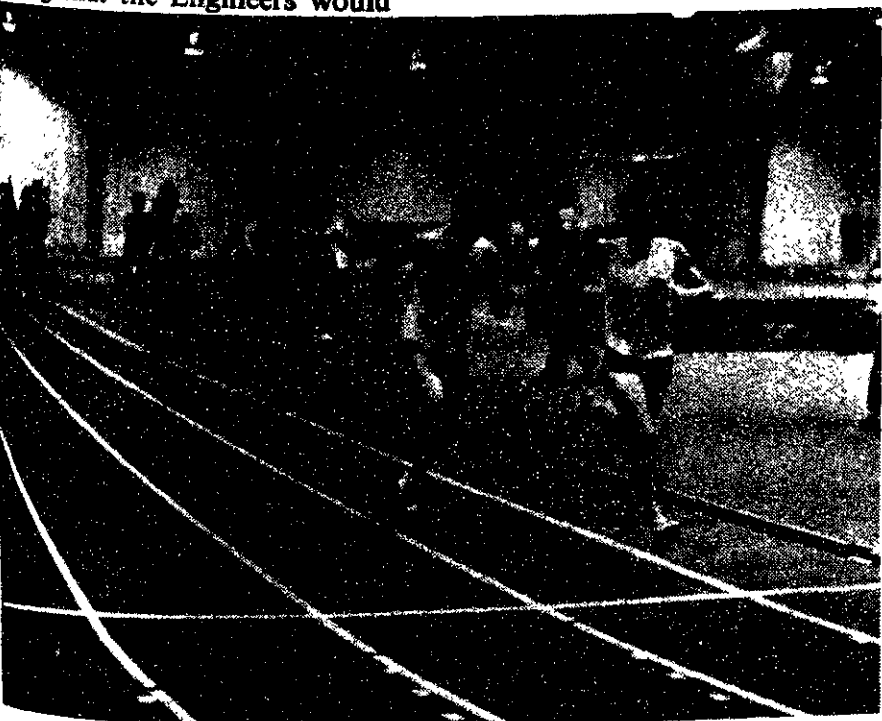
The race was cat-and-mouse for the first two legs, but Walker ran away from the pack in his leg and Holterman had a strong anchor leg for his third win of the meet.

Coach Gordon Kelly was proud of his team in staying close to the Crusaders. He noted that the four-way meet hampered MIT's chances for victory, predicting that the Engineers would

have defeated Holy Cross in the originally-scheduled dual meet.

The Engineers will return to dual-meet competition in January with the next home meet on Jan. 18 against the Coast Guard Academy. The annual MIT-Alumni track meet will take place Saturday at the Athletic Center.

(Editor's note: Kim is manager of the indoor track team.)



Tech photo by Dan O'Day

Gordon Holterman '87 edges out a runner from Worcester Polytechnic Institute to win the 800-meter run. Holterman also took first place in the 1500-meter run, and ran the last leg of the 3200-meter relay.

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