

Institute graduates 1700 Gray and Iacocca discuss MIT, national policies

By Ben Stanger

President Paul E. Gray '54 declared MIT must "endeavor to be neutral as an institution" on the issues of Strategic Defense Initiative (SDI) funding and divestment of stocks in companies doing business in South Africa in his charge to the Class of 1985 at commencement June 3.

Over 1700 students received degrees in the presence of over 7000 guests, making MIT's 119th Commencement Exercises the most well attended ever, according to the MIT News Office.

Commencement speaker Lee A. Iacocca, Chrysler Corp. chairman, warned that the absence of a US industrial policy is turning this country into a colony of Japan. He also criticized the Reagan administration for its record deficits.

schools as "political instruments in an attempt to obtain implicit institutional endorsement. This university will not be so used."

Gray said that Institute policy regarding divestment is to urge companies in which it invests to "improve the status and condition of their South African employees." Gray said earlier in his speech that although apartheid is an "evil, unsupportable, and vicious system," the best path for the university to follow is unclear.

Gray emphasized that an institution should voice its position only about issues directly connected to its activities. He said when a university steps beyond this boundary, it risks "political

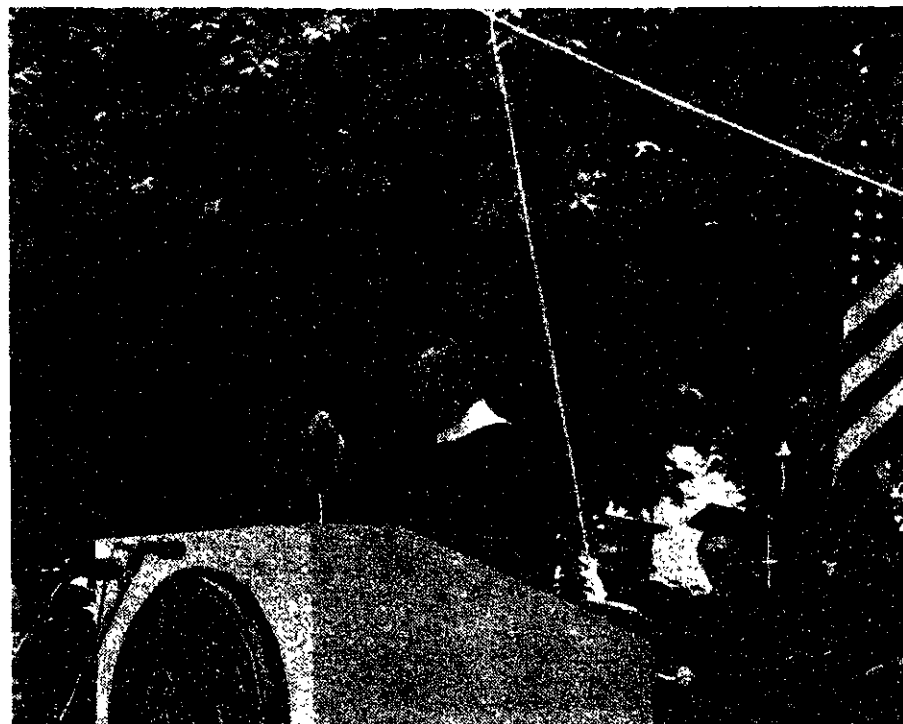
treatment of its own interests and disenfranchises those within the institution whose views are different."

Iacocca encouraged the Class of 1985 to "get mad" about the national debt and the trade deficit in order to change American economic policy.

"Satisfied people change nothing," he said. "Only angry people change things."

Iacocca said the \$1.7 trillion debt is "invisible" to the American family, which does not know where it stands in relation to this debt.

"I understand you have something here at MIT called hacking. (Please turn to page 2)



Tech photo by Simson L. Garfinkel

Chrysler Chairman Lee A. Iacocca addresses the graduating students.

Texts of the speeches given by President Paul E. Gray '54 and Chrysler Corp. Chairman Lee A. Iacocca, Pages 13 and 14.

Gray cited the SDI and apartheid issues as two cases in which "efforts are made to nudge the university out of the middle," and cause it to "achieve goals which are only remotely related to the academic purpose or to the vital internal interests of the university."

He decried SDI funding as an "effort to short-circuit the debate" and use MIT and other

Committee presents its Simplex plan

By Ben Stanger

The Simplex Steering Committee (SSC) presented a scale model of its "vision of the Cambridgeport neighborhood" to the Cambridge City Council in a public hearing held on June 24.

The council adopted a motion for the City Manager to appoint and implement a blue-ribbon committee. It will consist of professional planners and consultants to devise zoning initiatives.

Forest City Enterprises Inc. has been MIT's developer for the Simplex site since late 1983.

SSC Chairman Bill Cavellini said the major difference between MIT's development plan and the SSC plan is that the latter takes 40 acres into account while the MIT plan only considers 23 acres north of Pacific Street.

Cavellini said MIT owns 20 of the 23 acres that Forest City Enterprises is considering and a similar percentage of the 17 acres south of Pacific Street.

Ronald P. Suduiko, special assistant to the chairman, said he believes Forest City is looking at 27 acres.

Suduiko said that MIT does not own the land south of Pacific Street. "We're phasing it in over 10 to 15 years. The first phase is to concentrate on the land we own."

The SSC model provides for 1.8 million square feet of Research and Development floor space and a 12-story hotel, the same amount as the MIT plan, according to Cavellini.

The model also provides for 650,000 square feet of light industrial space and 450 units of housing. The SSC hopes to sell (Please turn to page 2)

Committee on military funding chosen

By Diana ben-Aaron

The new *Ad Hoc* Committee on Military Research at MIT will meet tomorrow to discuss its charge and plot its course, according to Professor Carl Kaysen, director of the Program in Science, Technology, and Society and chairman of the nine-person committee.

"We're trying to draw a map of the situation and see what questions the map raises," Kaysen said. The committee will welcome outside input, he added.

The committee does not plan to release its findings "until we've had a chance to study them," Kaysen said. "We have only very crude data, and we don't want to

have a running count of our deliberations based on it," he explained.

The committee has already had a brief meeting, but not all members were present and nothing substantial was discussed, Kaysen said.

Professor Arthur C. Smith, former chairman of the faculty, appointed the committee in May in response to a letter signed by 40 faculty members. He has urged the committee to report its findings to the faculty beginning in the fall.

The faculty letter raised concerns about the effects on MIT of a "national shift of the support for both education and research from the civilian to the military sector."

It spotlighted the shift in sources of research money available to faculty, the shift in new jobs available to MIT graduates, and the "much more active role that ROTC now plays on campus."

President Paul E. Gray '54's charge to the graduating class of 1985 addressed the question of SDI funding. "What I find particularly troublesome about the SDI funding is the effort to short-circuit the debate and use MIT and other universities as political instruments in attempt to obtain implicit institutional endorsement. This university will not be so used," Gray said.

He expressed concern that MIT participation in SDI funded research should not be interpreted as an institutional endorsement of the program. "We should endeavor to be neutral as an institution on all matters which do not have a direct and immediate effect on this place," Gray said.

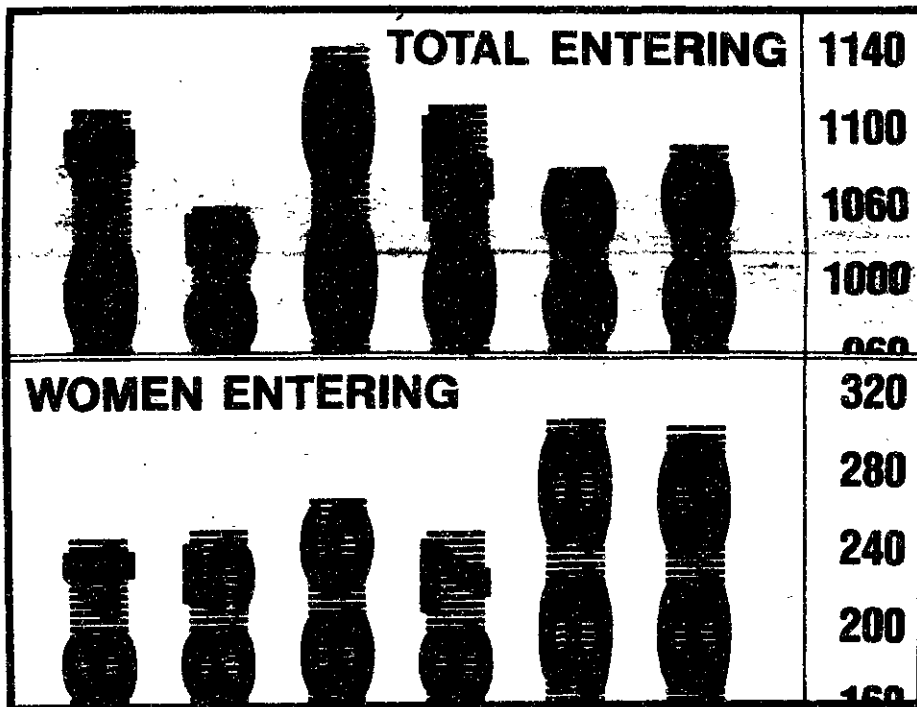
Although its formation was spurred in part by concern about SDI, the *ad hoc* Committee is not an "SDI Committee," Kaysen emphasized.

The committee's charge, written by Smith, gives it three specific tasks as well as a general mandate to "gather facts [about military funding at MIT], organize them in a suitable fashion, and present them to the Faculty for discussion":

- "Identify those areas where military funds are received by MIT or by MIT students (e.g., research support, and ROTC scholarships) and establish the current extent of such funding and the changes that have occurred over time.

"The funding of the Lincoln Laboratory and the Laboratory's role in educational programs needs to be identified separately; communication with the Committee on the Lincoln Laboratory should be established at an early stage. The extent to which funding from non-military sources re-

(Please turn to page 12)



1087 have accepted MIT's offer of admission

By Katie Schwarz

As of the first week of July, 1087 students had accepted MIT's offer of admission to the Class of 1989, according to Eduardo Grado '83, an administrative assistant in the Admissions Office.

Last year's entering class numbered 1076 at midsummer. MIT accepted about 50 more applicants this year than last year, although the targeted class size of 1025, set by the Academic Council, was the same for both years, Grado said.

The Admissions Office expects a final class size of about 1050.

Some admitted students who say they will attend MIT change their minds during the summer. The difference between the number who say they will enroll and the number who actually register in the fall is called the summer melt. The Admissions Office expects a summer melt of 30 to 60 students, according to Grado.

The students who said they would come represent a "yield" of 87.5 percent of those accepted, Grado said.

The summer melt affects the final yield. The final yield was 58 percent in 1984 and 61 percent in 1983, according to Grado.

The Class of 1989 will include

approximately 300 women, 27.6 percent of the class. The Class of 1988 is 28.9 percent female.

Nearly one hundred students, or 8.6 percent of the entering class, are members of minority groups, including blacks, Mexican-Americans, Puerto Ricans, and American Indians. The Admissions Office defines minority groups as ethnic groups whose representation at the Institute is less than their representation in the US population. Last year 9.4 percent of the freshman class were minority group members.

Admitted minority and women applicants were invited to visit the MIT campus last spring for special programs. The Admissions Office has not yet decided whether to hold these programs next year, according to Director of Admissions Michael Behnke. "Our inclination is certainly to do it again," Behnke said.

This year's entering class and last year's freshman class "aren't really any different . . . in a general sense," according to Associate Director of Admissions Daniel T. Langdale.

Associate Dean for Student Affairs Robert A. Sherwood anticipates that 125 to 130 freshmen will live in crowded dormitory (Please turn to page 12)

David J. Shapiro

David Jonathan Shapiro '87 of Concord died June 19 in a glider accident in Vermont. He was 30 years old.

Shapiro graduated from Saint John's College with a degree in philosophy in 1976. After Saint John's, he went to West Germany where he built and repaired sailplanes for the Schemp-Hirth Company.

Shapiro took up formal study of aeronautics when he returned to the United States and entered MIT as an Aeronautics and Astronautics major.

The accident occurred while Shapiro was participating in a cross-country soaring contest. His glider crashed in a field during the New England Regional Gliding Championships.

Assistant Professor of Aeronautics and Astronautics Robert J. Hansman Jr. PhD '82, who also participated in the contest, said Shapiro was probably trying to land when his glider stalled.

Shapiro modeled propeller blades as an undergraduate research project with his academic advisor, Associate Professor of Aeronautics and Astronautics Edward F. Crawley '76.

Shapiro had planned to attend the world gliding championships next month as a repairman. He was considered one of the top two or three glider repairmen in the world, Hansman said.

Shapiro was employed by Cambridge Aero, a Billerica company which makes flight equipment. Shapiro worked on research and development of new equipment and handled the importing of Schemp-Hirth sailplanes for the company.

A memorial service was held June 24 in Concord, Massachusetts. Another memorial will be held July 29 in Pittsburgh.

Contributions can be made to the David J. Shapiro Fund through the MIT Treasurer's Office.

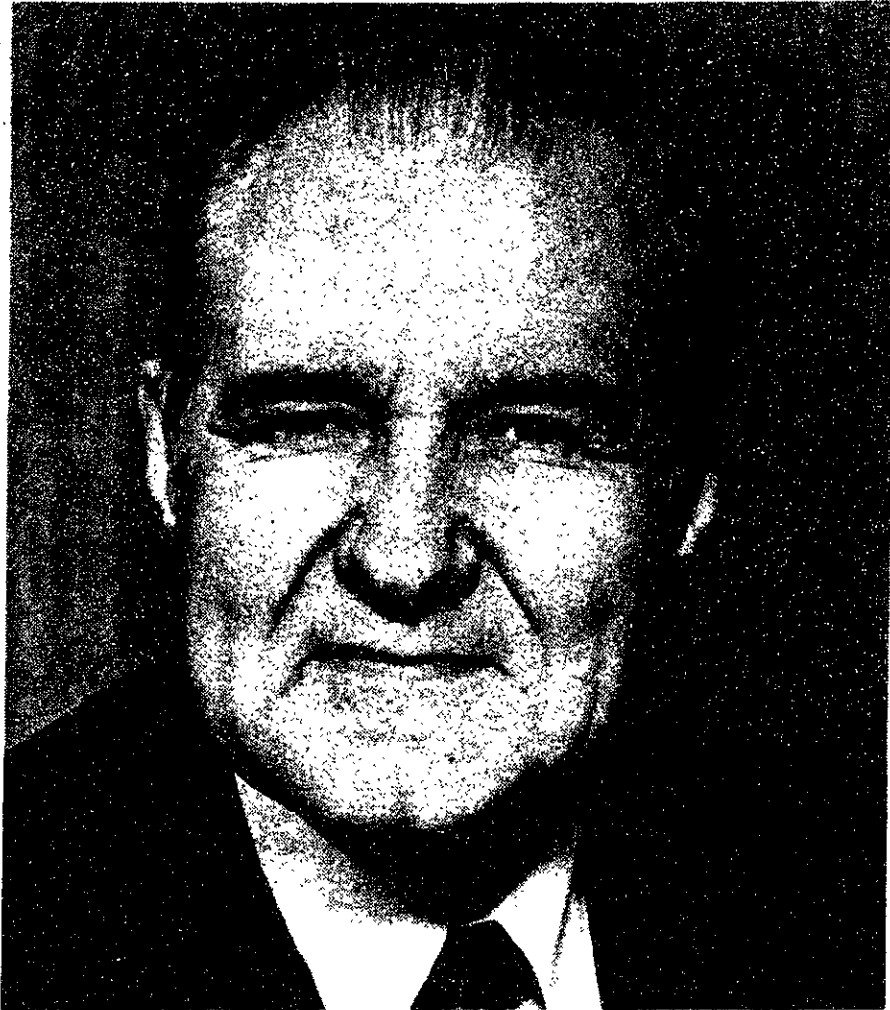


Photo courtesy MIT News Office

Gene M. Brown, new dean of the School of Science.

Iacocca speaks on economic policies

(Continued from page 1)

Well somebody is pulling a hack on your future. The piling up of debt to create the illusion of prosperity is a cruel hoax," Iacocca said.

He encouraged the Class of 1985 to face the debt and not pass it on to future generations as the past generation had.

Iacocca called the trade imbalance the "bastard child" of the deficits and blamed it for the high trading value of the dollar. He said that the high dollar foils the efforts of Chrysler and other corporations to increase productivity.

He said that the United States cannot stick to the ideal of free trade when all other countries use trade policies that help their own companies compete. The Japanese have fought to protect their markets, and that is what we must do too, he said.

Iacocca compared America today to the colony it was two hundred years ago. He said that the United States trades raw materials to Japan in return for manufactured goods, "the classic definition of a colony."

Iacocca also discussed the uselessness of high tech without an industrial backbone and the slow deindustrialization of America.

The invocation to the graduates was delivered by Rabbi Daniel Shevitz. He told the graduates not to be afraid to say "I don't know . . . Humility is the true parent of wisdom," he added. "Efficiency must give way to justice, rectitude and compassion if our society is to prosper."

Shevitz also told the graduates to make time for their families and "be home in time for dinner."

Gray also called attention to the families of the graduates and asked the graduates to stand and applaud their families.

Inge Gedo '85, permanent president of the Class of 1985 presented a class gift of \$9127 to be used to rebuild the park on the corner of Danforth Street and Amherst Alley.

Demonstrations concerning divestment, SDI research, and MIT's development of the Simplex Wire & Cable Co. site took place at the ceremony. Notable parts of these demonstrations were anti-apartheid protestors who chanted, "Divest Now," throughout the ceremony and an airplane towing the sign "MIT OUT OF CAMBRIDGEPORT," rented annually by the Simplex Steering Committee since 1975.



Tech photo by Shari Jackson

Win Treese '86 and Chris Peterson '87 pose with some of their 15-case stash of "old" Coke.

Brown is new science dean

By Robert E. Malchman

Gene M. Brown, new dean of the School of Science, said he plans no immediate changes in the policies of his predecessor, John M. Deutch '61.

Brown, head of the Department of Biology since 1977, became dean when Deutch became provost July 1.

Brown agrees with the faculty's decision not to continue to allow General Biology (7.01) to fulfill the Institute's chemistry requirement but also has an "open mind" regarding a new biology requirement. Brown stressed that he would not support the institution of such a requirement, unless another one still existing was eliminated.

The new dean would like to see "the development of a new course or courses for the appreciation of modern biological science," including molecular biology, biochemistry and genetics.

Brown said he supports the growth of industry-sponsored research in the school. "MIT ought to be flexible enough to make agreements with industry," he said. "MIT must be careful to maintain the integrity of the researcher," he cautioned.

"We've developed guidelines for this. We have to consider it on a case-by-case basis," he con-

tinued. "We're always looking for a good possibility."

Brown said he expects to be an active dean, particularly in the area of undergraduate education.

His primary goal is to continue "the high quality of research, faculty and students in the School of Science," he said, warning that there must be no complacency.

Publicizing the school's strengths is another priority for Brown. The new dean said he supports "anything that can be done to bring [the school] to the attention of students and guidance counselors."

Few prospective students knew there even was a Biology Department at MIT, "much less that it's the best one in the country," Brown said. While he was head of Biology, the department sent out thousands of pamphlets to encourage prospective students to consider it, Brown said. "That could be done for the other departments."

Brown will now chair the Science Council, comprised of the school's department heads. The council makes school-wide policy decisions, and promotes and appoints faculty members. The school consists of the Departments of Biology; Chemistry; Earth, Atmospheric and Plan-

etary Sciences; Mathematics; Applied Biological Sciences; and Physics.

The Department of Biology will probably have a new head by the first of August, Brown said.

Brown has been at MIT since 1954. His research has focused on "the methylation of nucleic acids and the isolation, biosynthesis and function of vitamins, coenzymes and related substances," according to a statement from the MIT News Office.

Brown said he will continue teaching General Biochemistry (7.05).

MIT appointed Brown assistant professor of biochemistry in 1956, associate professor in 1961 and professor in 1967. He was Biology Department executive officer from 1967 to 1972. He served as associate head of the department from 1972 to 1977, when he was named department head.

Brown received a BS in chemistry from Colorado A&M College in 1946. He did his graduate work in biochemistry at the University of Wisconsin, earning an MS in 1950 and a PhD three years later. He served one year as a postdoctoral fellow at the University of Texas.



Photo courtesy Simplex Steering Committee

The Simplex Steering Committee presented this model for development of the Simplex property to the Cambridge City Council.

MIT and Cambridgeport in discord

(Continued from page 1)

the housing units for \$65,000 to \$70,000 with financing options.

The MIT plan only calls for 100 units of housing, Cavellini said.

According to Suduiko, the MIT staff concerned with the Simplex site has not seen the SSC model.

Cavellini said that the zoning for the Simplex site is "Industrial B." He added that MIT could build almost anything under this zoning.

MIT could face several problems in its development plans, Cavellini said. The biggest potential problem is an Environmental Impact Report which MIT must file with the Massachusetts Environmental Protection Agency (MEPA). The report will address traffic concerns.

Philip A. Trussell, MIT director of real estate, said that MEPA recently gave Forest City a "scoping document" which included input from all groups concerned with the development.

The goals of the SSC are to promote a "diversity of jobs," not all of which will require advanced college degrees, and to build "at least 30 percent low to moderate income housing," according to Cavellini. "A lot of this [plan] comes head-on with rigid positions that MIT has held over the years."

Some of the councilors commended the citizens of Cambridgeport for their determination and efforts when the model was brought into the City Council Chambers.

Councilor David E. Sullivan '74 said, "This [proposal] will not come to pass unless the citi-

zens of Cambridge and the City Council insist that it happens."

Councilor Alfred Vellucci said, "The name of the game is to win. . . . Somewhere down the line, [the people of Cambridgeport] are going to win. . . . What you have to do is go after MIT."

Cambridgeport residents have protested at the last 10 MIT commencement exercises. They have also rented an airplane towing a sign with anti-MIT sentiments.

"If that was the only thing we were doing, it would be irresponsible," Cavellini said of the commencement protests. "We hesitate to give up that tactic unless we knew it was worth nothing."

Over 1500 pamphlets were distributed at graduation this year. Cavellini said that despite some harsh words, their demonstration was received well. "It's an embarrassment to them," he added.

news roundup

World

Vietnam to return 26 MIAs — The Vietnamese government has announced that it will return the bodies of 26 Americans missing in action and provide information on another six. Vietnam had previously promised to accelerate the process of accounting for approximately 2500 Americans still missing in Indochina.

OPEC meeting ends inconclusively — A meeting of the Organization of Petroleum Exporting Countries (OPEC) seeking new ways of raising world oil prices ended Sunday with members failing to reach a final agreement. The organization will meet again July 22, in Geneva.

Canada announces sanctions against South Africa — Canada announced measures on Sunday which will curtail trade with South Africa. These measures include an end to export and investment incentives for Canadian companies operating in South Africa and restrictions on the sale of high-tech equipment to the South African government.

Nation

Court rules against services for fetuses — In a legal battle between anti-abortionists and civil libertarians, Superior Court Judge Robert O'Brien ordered Los Angeles County to decide whether to dispose of 16,500 aborted fetuses by cremation or burial. He also ruled that the county could not arrange for any religious services or turn the fetuses over to a group that would do so.

Sports

Becker becomes youngest Wimbledon victor — Boris Becker of West Germany defeated Kevin Curren, 6-3, 6-7, 7-6, 6-4, in the finals to win Wimbledon. At 17, Becker is the youngest champion and the first unseeded player to win in the history of Wimbledon.

Weather

Rain to return — There is a good possibility of showers on Wednesday, although the rest of the week should be fair. Temperatures will range between the high 50s and the low 80s.

Edward E. Whang

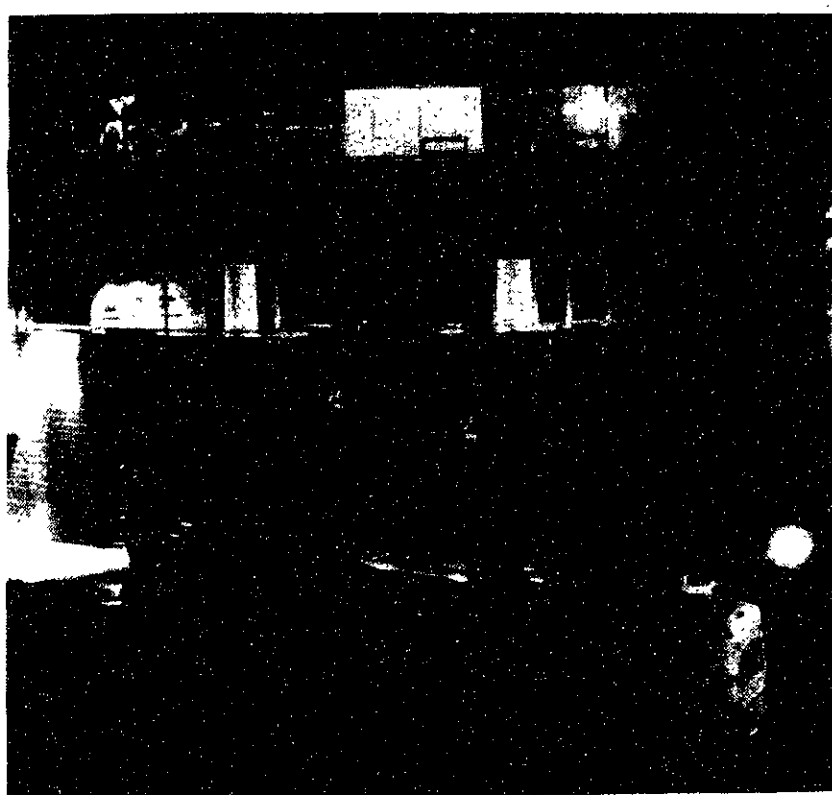


Photo by Tim McNerney

An MBTA shuttle bus jumped the Whitehead Institute steps late on the night of June 24 while avoiding a collision with a van. One person on the bus sustained minor injuries. The bus was soon towed off the steps.

Former BC officials are indicted for stealing

By V. Michael Bove

Two former employees of Boston College pleaded "not guilty" in Middlesex Superior Court Friday, June 28, to charges they had embezzled over \$90,000 from housing and student activities funds.

Former Boston College Housing Director Richard E. Collins and former Housing Business Manager David Mitchell were indicted by a Middlesex County grand jury after an investigation by the District Attorney's office.

An internal audit of housing department records showed that \$56,015 in profits from a student-run snack bar were never reported to Boston College.

The profits were to have funded student activities, and Collins was the sole administrator of the snack bar's account. Assistant District Attorney Lawrence A. Dugan charged that Collins in-

stead used the money to "support a lavish lifestyle," including a vacation home and ski trips.

Mitchell is charged with embezzling \$34,514 from the housing department through various means, including changing receipts and having expenses associated with a pub he runs in Marblehead billed to Boston College.

Both men resigned their positions last year.

Last May, Kenneth E. Dumas '83, president of the MIT Class of 1983, was sentenced to a one-year suspended sentence, three years on probation, and full restitution for the theft of \$35,300 from receipts of the Student Center Committee's 24-Hour Coffeehouse.

Mitchell and Collins have been released on personal recognizance, and their cases continued until July 29.



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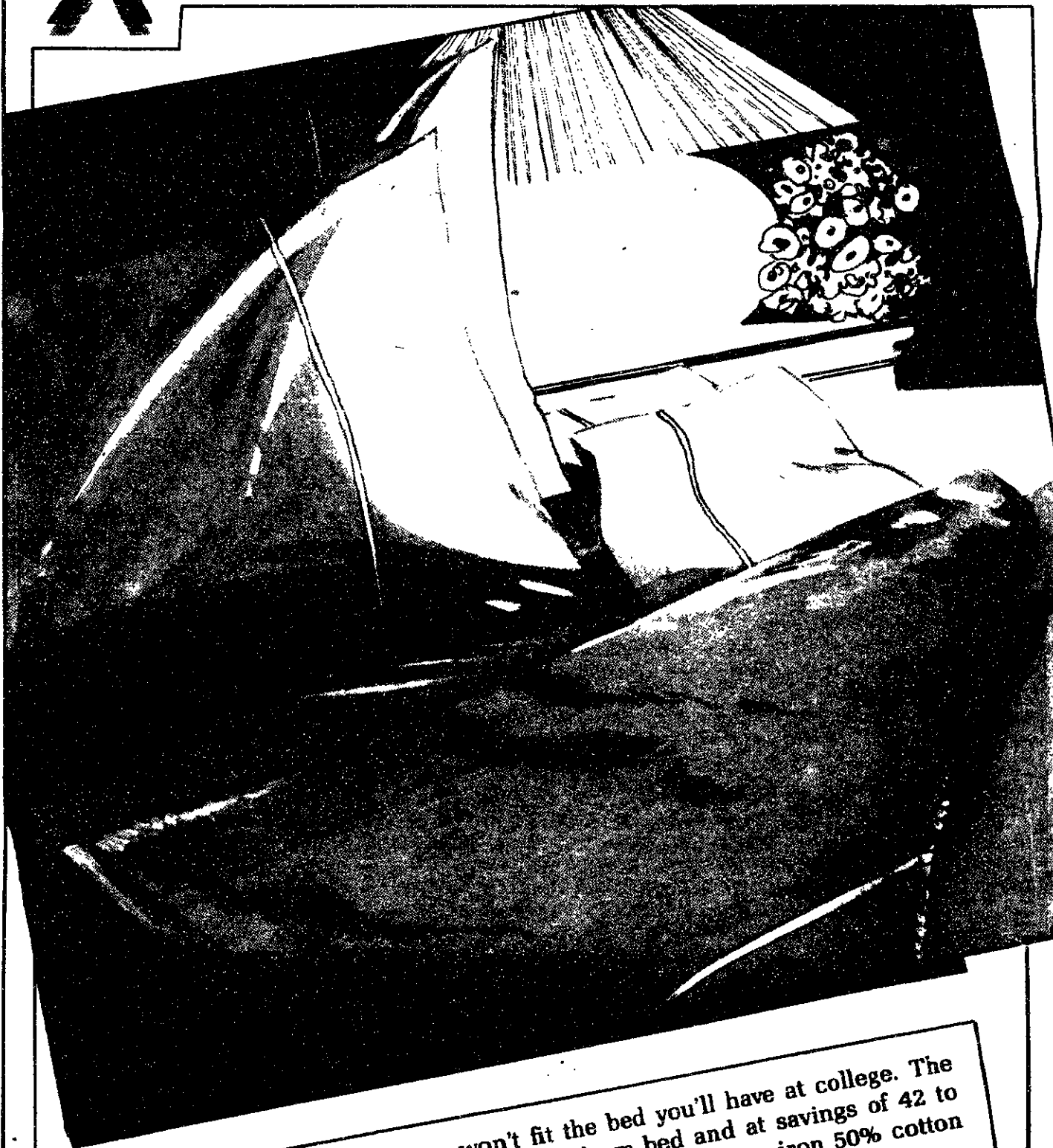
*** Boston Globe. 1985

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opinion

Column/Robert E. Malchman

Gray's divestment policy is insulting

Editor's note: The charge to the Class of 1985 appears on Page 14.

In his commencement charge to the Class of 1985, President Paul E. Gray '54 insulted the graduates by attempting to link his decision not to let MIT be used for propaganda purposes by supporters of the Strategic Defense Initiative (SDI) to his decision not to support university divestment from companies doing business in South Africa.

Gray began his address by correctly noting that government attacks on academic freedom and the free exchange of knowledge should be resisted vigorously by universities. That which directly impinges on a university's self-interest not only deserves, but requires the university's response.

Gray then properly dissociated MIT from support of SDI. The project will fund new research at universities and will take over administration of other already-existing programs.

"The head of the SDI's Office of Innovative Science and Technology has asserted that the participation of university researchers in SDI-funded projects will add prestige and credibility, and will influence the Congress to be more generous in funding for the program," Gray said. "This university will not be so used," he declared later in his speech.

Gray claims, however, that to divest from companies doing business in South Africa is to enter a political debate on social policy, just as it would be to allow SDI proponents to claim MIT supports their program. The two cases are not comparable.

Gray would certainly not deny that MIT can choose whether or not to do SDI research — or any other research, for that matter. The Institute is not obliged to accept every research offer that comes its way. It will not accept the research if it violates Institute guidelines.

Just as the Institute can decide what research to accept, it can decide in what companies it will invest. The Institute makes its decisions based on the expected return and potential risks of the research or investment, and on the

uses to which the company will put the research or investment.

In the SDI case, MIT has made a decision to accept certain research, but will not allow others to impose their interpretation on that decision. Gray can successfully claim that SDI research satisfies MIT's agenda of free scientific enquiry and is therefore not necessarily an endorsement of its political aspects.

In the divestment case, there is no way MIT can avoid making a political decision. It has decided to support companies which do business in South Africa. The direct effect of that decision is to support the South African economy.

To claim that divestment is a political statement, while retention is not, is ridiculous. Maintenance of the *status quo* does not imply political neutrality, as Gray would have one believe.

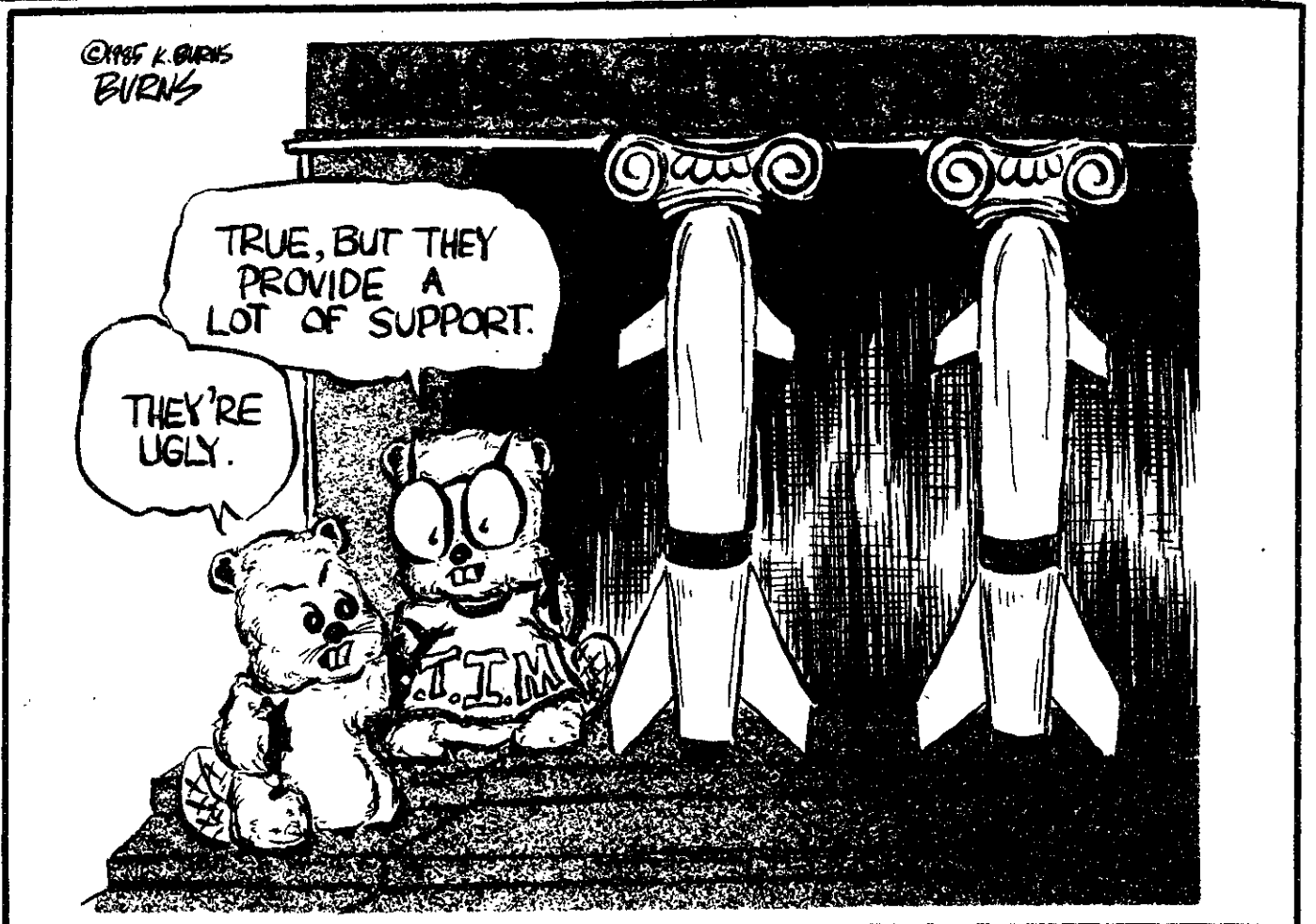
To extend Gray's argument, one must presume he would have no qualms if MIT had investments in companies that made drug paraphernalia or produced sexually explicit films.

The Germany of the 1930s and the South Africa of the 1980s are both known for certain objectionable social policies. Gray's remarks suggest that had he been president at the time, he would have as steadfastly refused to divest from companies doing business with Nazi Germany.

He would instead "urge companies . . . to comport themselves in ways which improve the status and condition of their . . . employees." He would have had as much effect then as he will now.

Gray condemns apartheid, as most everyone else does. His condemnation, however, begins and ends with his hand-wringing. The decision to do nothing is a decision itself. MIT, as a powerful, supposedly ethical institution, must make an institutional decision about what types of companies it will support.

Gray has declared that MIT will support the economy of South Africa. No amount of rhetorical obfuscation can successfully hide that fact.



Column/Diana ben-Aaron

Advice from a veteran of MIT

"I suppose this is the time I should give you some advice . . . I wish I had some for you, but I haven't."

— Evelyn Waugh, *Brideshead Revisited*.

The last thing you need right now is more advice. You're going to get far too much of it between now and the end of R/O Week, and almost none thereafter.

But that's true of lots of things: new acquaintances, decisions to make, parties. As Dave Scrimshaw '83 once said, MIT is like a movie where the big action scene happens before the title credits.

Students sometimes feel subtly betrayed at first because MIT does not "live up to" their preconceived notion of college. MIT has no ivy-covered red brick buildings to speak of, paneled libraries with leather-bound armchairs and matching leather-bound classics, Old Masters in the college museum, or national-class football team.

Instead, we have gray concrete boxes, pink steel shelves full of engineering journals, modern sculptures the size of jungle gyms, and a winning women's volleyball team.

We also have an artificial intelligence lab full of pianos, a mechanical engineering design contest reminiscent of Isaac Asimov's short story "Profession," student groups for disarmament and against hunger, and an active Assassin's Guild.

By the end of a term, all this will seem perfectly natural. By the end of a year, you will be warped forever. MIT marks peo-

ple for life with grayness, cynicism, faith in numerical modeling, its own peculiar slang ("Then this random comes over to my terminal and starts flaming . . ."), a passion for practical jokes (only we call them "hacks"), and a clumsy Brass Rat ring.

I've just graduated, so I feel as if I ought to have some sort of distant perspective on the Institute. I don't, but I'm going to try describing MIT culture to you anyway. It's going to be very difficult, sort of like describing a game of Monopoly to a being from Mars.

Academics. I double-majored in materials science and humanities; I can't really recommend either. One of the main requirements of the first was being able to explain what it was; of the second, being able to explain what I was doing at MIT. I spent most of my time taking core courses in other majors, and the courses where I learned most and had the most fun were in the School of Science.

One of the advantages of MIT is that you will never exhaust it academically. When you run out of major courses, you can routinely take courses out of your major, graduate courses, even graduate courses out of your major. And you can always do more research; at some point, almost everyone does a research project for credit or works in a research lab for pay.

Living groups. MIT social life is very living-group oriented. And as my roommate said, ev-

eryone is convinced his living group is the "best" place for him and forms negative stereotypes of other living groups in order to reassure himself that he "chose right."

Clubs. Five percent of the students appear to run all the activities. The social life of much of that five percent revolves around the fourth floor of the student center, where the activities offices are. Athletics are different; a much broader range of people participates in sports.

Clothes. I was going to write that everyone at MIT wears jeans and T-shirts, but I just looked around and most of the people here are wearing blue button-down or Lacoste-type shirts.

It's still true that you will probably acquire a collection of T-shirts indicating your membership in various MIT subcultures or participation in MIT events. As you won't be able to wear a "Stratton Fifth Toolers '86" T-shirt with a straight face after you leave MIT, you might as well wear it while you're here.

Art. The art at MIT probably looks like nothing you've ever seen before, and everybody discusses it. If you say you hate it all, you're thought closed-minded; if you say you love it all, you're thought indiscriminating. The best-move is to like a few well-chosen pieces.

The Great Sail is considered okay because it's functional — it breaks up the wind tunnel under the archway behind it. No one likes Transparent Horizons, (Please turn to page 6)

The Tech

Volume 105, Number 27 Tuesday, July 9, 1985

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The Tech (ISSN 0148-9807) is published Tuesdays and Fridays during the academic year (except during MIT vacations), Wednesdays during January, and monthly during the summer for \$13.00 per year Third Class by The Tech, 84 Massachusetts Ave. Room W20-483, Cambridge, MA 02139. Third Class postage paid at Boston, MA. Non-Profit Org. Permit No. 58720. POSTMASTER: Please send all address changes to our mailing address: The Tech, PO Box 29, MIT Branch, Cambridge, MA 02139. Telephone: (617) 253-1541. Advertising, subscription, and typesetting rates available. Entire contents © 1985 The Tech. Printed by Charles River Publishing, Inc.



opinion

Column/Carl A. LaCombe

"Silly questions" are the roots of discovery

Young children are natural questioners. They have a natural curiosity about the world around them and constantly ask about it. Their endless barrage of questions often becomes frustrating to overworked parents. Sometimes parents must brush off the questions so they can get some work done.

At some point during development, a child learns to stop asking "silly" questions. They tend to make the parent angry and do not tend to get satisfactory answers. They also learn not to experiment on their own. For some reason, smashing a cookie jar in a clumsy attempt to find out what is inside is usually frowned upon by parents.

The attitude that *I should not ask questions; they might be silly, and make me look like a fool* accompanies many students to MIT. One might think that those who get into MIT would ask questions. But just watch everyone clam up when the professor asks, "any questions?" Listen to the class quietly castigate the person who does ask a "silly" question. Common though this attitude is, it is counterproductive. Einstein would never have developed his theory of relativity had he not dared to ask what might have been silly questions.

Actually, he probably did ask some silly questions. Scientists do not just sit down and say, "I think I will develop a theory today." They make plenty of abortive starts and ask plenty of silly questions. Numerous discoveries happen as accidents while someone is looking for something else, and I will bet that plenty of those "something elses" were rather silly.

Yes, but no one knew any better at the time. People who ask

silly questions in class ask about things which are well-known. I have two responses to this statement. First, the answer is not well-known to the person asking the question or he would not be asking, providing he is not just trying to get attention. So long as he does not know the answer, people should respect his desire to know it, simple and silly as it may be.

Second, just because the answer is well-known does not mean it is right. Newton's theories were well-known. Many were also wrong. Sometimes a "silly" question is asked not because the person has trouble understanding the answer, but because he has trouble accepting the answer. Somehow it feels wrong to him.

MIT offers many opportunities to ask questions. A lecture hall full of 500 freshmen is not, perhaps, the best place to ask them, but classes of that size tend to have recitations, which are great places to get problems of understanding straightened out. Professors and recitation instructors often have open office hours or will arrange special office hours to help students on a one-to-one basis. Many humanities classes are big question and answer sessions.

For those who have trouble accepting certain aspects of a theory, laboratory exercises offer a chance to try the ideas out for yourself. If you are still not convinced, you can talk to a professor and perhaps arrange a research project. Who knows what you might find? Professors are not the only ones who come up with brilliant new discoveries. A new outlook is often more valuable than several decades of experience.



Column/Andrew Bein

Boston camping gives new viewpoint

It is 4 am as I walk the deserted streets. The brick-covered crossing reflects the light of the old streetlamps. No one else is seen or heard.

The emptiness is startling, almost eerie, because this is not any intersection, late at night. It is the Corner, the heart of Boston's downtown shopping district. By day, it is the busiest intersection in the city — now, in the gloom before sunrise, it is as desolate as a backwoods shantytown.

The traffic lights have stopped their cycle from green to red hours ago. They are not needed; hardly a car passes by. The signal simply blinks yellow, serving only as a warning to drivers on the barren road.

What has brought me here in the dead of night?

Saturday afternoon I had heard the advertisement on the radio: "WAAF, first with concert

information . . . August 6 at the Worcester Centrum, Foreigner with special guest Joe Walsh . . . Tickets go on sale Monday at the box office and all Ticketron outlets." It was a concert I had waited a long time to have a chance to see. The adrenaline started to flow. I wanted to be there. I wanted good seats.

One of the closest Ticketron outlets to MIT is at the Orpheum Theater, near Park Street in Boston. My roommate and I decided the concert was worth camping out all night. There were some less strenuous ways to get decent seats, but none had the potential for the best seats in the house. We wanted to try for front row center.

The line at the Orpheum stretched on a long alley, Hamilton Place. A small crowd was already lined up when we arrived around 1 am on the last scheduled T of the day. Their presence made us change our seating goal to somewhere in the first ten rows.

Waiting is old hat to some in this group. An overweight girl ahead of us tells her friend that she had camped out three times already in the past week: Bryan Adams, Eric Clapton, Robert Plant and now Foreigner. What else did she do with her life?

She made us confident about our chances for excellent seats. Along with imagining front row center seats, we also considered the possibility of not getting good seats. But people on line had come close before. "We were in the 16th row for Deep Purple . . . we saw Kiss from the fourth row . . . but wasn't Van Halen excellent up close?" In the end though, we would not do nearly so well.

A young man, wearing jeans and a button-down shirt approaches the line. Another ticket waiter? Maybe not. He sits to our left, along the Orpheum wall. He is asleep in minutes, the reek of alcohol wafting over to us through his raucous snores.

A rat runs across the alley, close to the street; one of the girls screams.

Always in front of us, down the alley and across Park Street, stands the Park Street church. John Hancock, Sam Adams, and Paul Revere, buried in the yard of the church are as peaceful as ever.

With two people it is easy to take a break from the line, and walk through the silent streets of the city. During one of these strolls, a man approaches. Wasn't this our snoring friend from the line? I tentatively nod to him as he nears.

It is not the Snorer. "Wanna buy a reefer?," the stranger asks, in a voice surprisingly harsh after the walk through the still streets.

"No thanks," I muttered and quickly moved on. I could just see my ticket money walking away with this sweaty stranger.

A highlight comes at 4:30 am. The *Globe* arrives in the green truck with the yellow old-English lettering. Hardly had it stopped, before I had picked myself up for the short walk down the alley, to purchase the much anticipated newspaper. The idea of the news, comics and sports arriving to this apparently abandoned area seems remarkable.

The dark sky above the Park Street church steeple pales and then grows bright. The line has grown considerably longer now, stretching down the long alley to the street, slowly waking up.

The solid black door finally opens, quickly and silently as the attendant pulls out its bolts. The first two fans are let in even as the Park Street church's bells conclude chiming ten.

Our tickets finally are printed by the overloaded Ticketron computer at 10:15. The seats are in the middle of the arena — not terrible, but certainly not great. Was it right to decide to stay up all night for them? We'll find out on August 6.

Guest Column/Suzanne L. Horine and Win Treese

R/O a time to explore opportunities

Residence/Orientation (R/O) Week has been called everything from fast-paced, high-pressured, and overwhelming to "the most fun I've ever had." This ten-day period before classes begin is designed to introduce new students (both freshmen and transfers) to MIT. It allows them to choose their housing and classes — things that are often simply assigned during the summer at other schools. New students also have the opportunity to join student activities and athletic teams, and to explore MIT and the Boston-Cambridge area.

Accomplishing all of this in so short a time requires exchanging a lot of information. During the summer most new students are swamped with mail from MIT living groups, activities, and especially the Office of the Dean for Student Affairs. This inundation, however, pales in comparison to the amount of advice the new students get from upperclassmen and other "helpful" people in the community. The sheer volume of information and advice is often confusing, and important pieces are frequently missed.

The R/O Committee, a group of approximately 40 students, plans Institute R/O during the summer with the goal of helping each new student make the most of R/O week. Toward this end, the committee has thought of a number of suggestions for new

students to help ease their transition into MIT.

And so, freshmen and transfers, in preparation for this coming transition, we offer some advice: you are about to enter a short period of time during which you will make decisions which will affect the rest of your life. Be yourself! This will go a long way in helping you find your niche at MIT. As you will soon find out, you will get a lot of

Column/Simson L. Garfinkel

Replace keys with card

"You'd think that with high technology they would be able to do better than this." — an MIT graduate student complaining about the large number of keys she must carry around.

This September, over a thousand freshmen will enter the Institute. A typical freshman will receive two keys to his dormitory, a Vali-dine card, and an MIT ID card. He will have to memorize the combination to every terminal room he uses on campus. These combinations will change at least eight times before he leaves the Institute. He will receive, on average, two keys or combinations for every student activity he joins, and two more for every UROP he has.

The large number of keys, cards and combinations that ev-

contradictory information, so take everything (including this column) with a grain of salt.

Be open-minded. Do not be afraid to try something different. Students from Hawaii can take ice-skating here — there is something new for everyone. Leave your prejudices at home — at MIT everyone is different, but everyone has something to offer. Go beyond academics: try lob-

(Please turn to page 6)

erybody at the Institute carries around is one of the more distinguishing characteristics of MIT.

During the summer, I cut back from my usual 15 keys to only ten. Today, I am carrying four keys to the *Tech* office, a key to my truck, a key to the lab where I work, a key to the SIPB office, two keys to my dorm and one that looks pretty. That is five ounces of keys.

A friend sitting next to me has 12 keys in his pocket. Another has 11. A few years back, rumor has it, an MIT student named Sklar carried around 41 keys.

I have found that most people at MIT carry between seven and ten keys. If eight is about average, then there is over a ton of keys being carried around daily by MIT students.

(Please turn to page 6)

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.

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.

opinion



Be yourself during R/O

(Continued from page 5) ster, take an art course, join a student activity (rumor has it that they are looking for someone to restart the Society of Midwestern Commuters. . .). MIT may be an engineering school in some eyes, but to many it is much, much more.

Unfortunately there is no way you can see and explore everything yourself, but, as a group, the new students constitute a veritable encyclopedia of information. So, please, talk to each other! Ask questions and share what you know. You will later find that this socializing pays off in friends for study groups and study breaks, but for now fellow new students can help you make your way through R/O. Friendships made during this time can last for four years or even a lifetime.

Keep a journal or diary. Suzanne still fondly looks back at what she wrote during her R/O week. A journal can also help you organize your thoughts and feelings, so you can make better decisions. Journals later shared with the R/O Committee serve as extremely helpful aids in improving the program each year. At the

end of R/O, feel free to bring it in the UASO and talk over your R/O experiences.

Lastly, remember that you can change your mind. Most decisions (especially about living groups and classes) are not irreversible. Do not be timid because you are afraid to fail; the opportunities here are limitless, and you may never again have the chance to take advantage of them. Freshman pass/fail grading gives ample opportunity for exploring different activities or academic departments, but you have to do the exploring yourself. There are plenty of people here to help and encourage you; the initiative, however, belongs to you.

We hope this advice is useful during R/O. R/O Week is a busy and often stressful time for everyone. There are parties to enjoy, decisions to be made, and people to meet. By working together and trying to understand different points of view, we can make it a better experience for everyone.

(Editor's note: Suzanne Horine and Win Treese are co-coordinators of the Institute R/O Committee.)

MIT atmosphere unique

(Continued from page 4)

which has been described as "a big black scrap heap," "helicopter junk," and "a dog and a cat, if you look at it the right way."

Special exhibits based on mathematics or physics are pretty safe to like because it would be illogical to dislike abstract concepts. Strobe photography is popular; "Doc" Edgerton, inventor of the strobe, is an MIT institution.

Architecture. I.M. Pei '40 has designed lots of the buildings. He used to be into acute angles, and now he's into bathroom tiles. His Building 66 (the Landau Building) is cool because it's a 30-60-90 triangle (principle of abstraction) and besides, you can play war games in it (principle of utility). Everyone claims to be the first to have described his new Arts and Media Technology building as "a bathroom turned inside out."

Books. When I was a freshman, everyone had *Gödel, Escher, Bach*, mostly unread, propped up next to a Rubik's Cube, unsolved. I don't know what people are reading now, apart from science fiction. Considering that half of *Hackers* is set at MIT, it's amazing that almost no one seems to have read it.

Computers. You don't need to buy a personal computer, because all undergraduates get accounts on Project Athena, the new computer facility.

The Project Athena administrators use slogans like "Throw away your typewriter" and "Never use graph paper again" to advertise their courses on how to use the system. But if you already have a PC (or a typewriter), don't leave it at home. At the end-of-term crunch, there won't be a terminal in sight.

After MIT. After MIT, you become a "real person," and go out into the "real world" to make your fortune. You might not want to, though, and if you work it right, you won't have to. President Gray hasn't left yet, except for a couple of years in the Army.

Let me quote *Brideshead Revisited* again: "You'll find you spend half your second year shaking off the undesirable friends you made in your first." In fact, you'll spend most of your college career undoing your mistakes. And then you'll get the urge to tell people what you've learned, and, despite your best resolutions, you'll end up giving advice to freshmen.

High-tech alternative to MIT's keys

(Continued from page 5)

The average MIT student carries two cards with him, as well. Some labs in which students work issue additional cards that activate computer-controlled door locks. If the MIT library's computerized circulation system ever gets working, faculty and students will use optical bar-codes which will be stuck to the back of their IDs to check out books.

There are a growing number of computer terminal rooms around campus which have electronic combination locks. Their combinations are changed regularly, because they quickly become common knowledge, rendering the locks useless.

Wouldn't it make sense if instead of the keys, the cards and the memorized combinations, MIT affiliates had simply one card?

The "MIT Card" could be as simple as an MIT ID with a magnetic strip or bar-code strip on the back. This strip would contain two numbers, the MIT ID number and a key number. Although student ID numbers could be public knowledge, the key number would be known to

no one, including the student.

Rather than giving out literally thousands of keys to large Institute offices, and requiring people to memorize many constantly changing combinations, students would simply be authorized to use particular doors. The central computer would be told that a particular student ID card was allowed to open a particular door. It could also be set up so that, for example, any MIT female had access to the Cheney Room.

The use of such cards would eliminate the problem of lost keys or disclosed combinations allowing unauthorized access to secure areas, since lost cards would be deactivated and new cards issued. The cards also would eliminate the problem of seniors giving their keys to underclassmen when they leave the Institute.

The overhead involved in issuing the cards and maintaining the equipment is a major cost for groups at the Institute who wish to install computer-controlled locks. But if the cards were issued and authorized centrally, and if physical plant was trained in the installation and servicing of the locks, costs would be minimized.

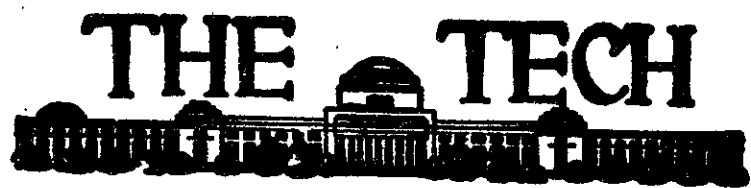
Students would still have keys for their individual dorm rooms, and professors would have keys to their offices, since it is not likely that it would be cost effective for the Institute to install computer-controlled locks on doors which only one or two people should have access to. But personally, such a system would reduce the number of keys that I carry from fifteen to two. At a cost to MIT of approximately three dollars per key, the Institute would save \$39 on me alone.

After the initial cost of the computer, new locks can be installed for less than \$150 each. If twenty new people have access to a given door each year, that lock would pay for itself within three years. At the current time, I know of two or three such installations of key-card systems. They have proven to be more cost effective and more secure than conventional locks and keys.

Unfortunately, it is doubtful that MIT will install such a campus-wide key-card system. It is too bold a move for an Institute too ingrained in tradition. Such a system could be developed here, but never installed. It would make too much sense.

You may not write home. But we will.

(We've been doing it for over a century)



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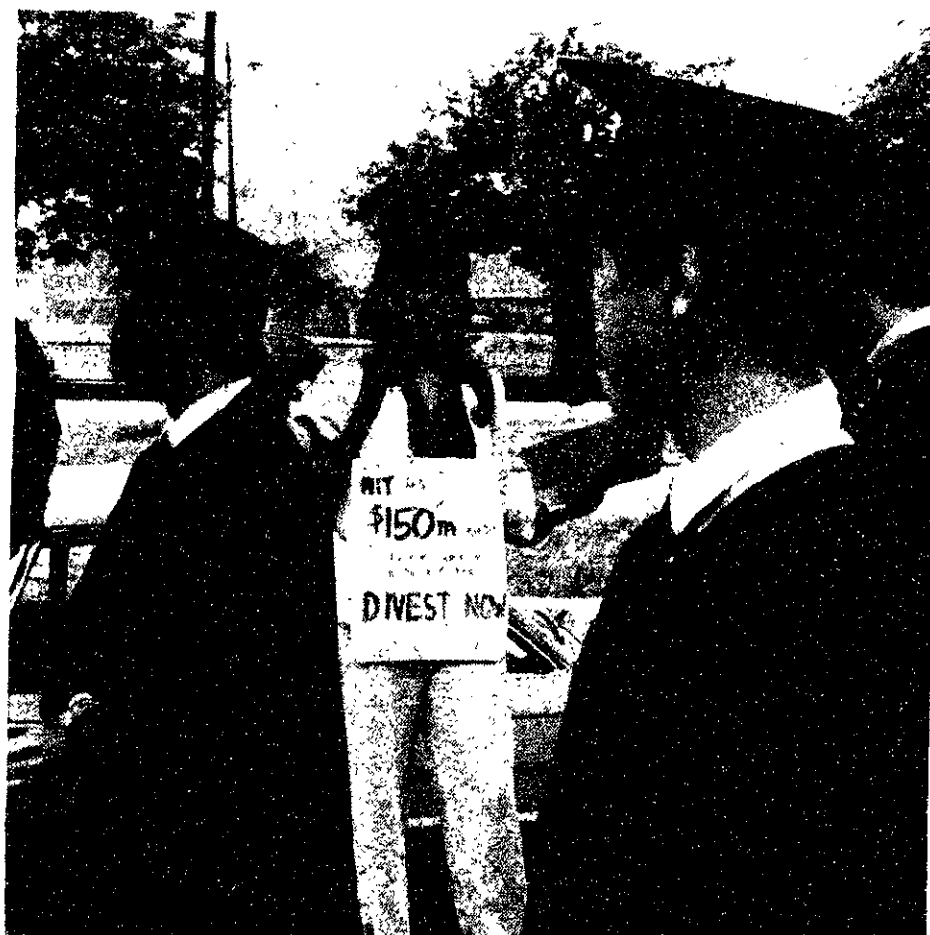
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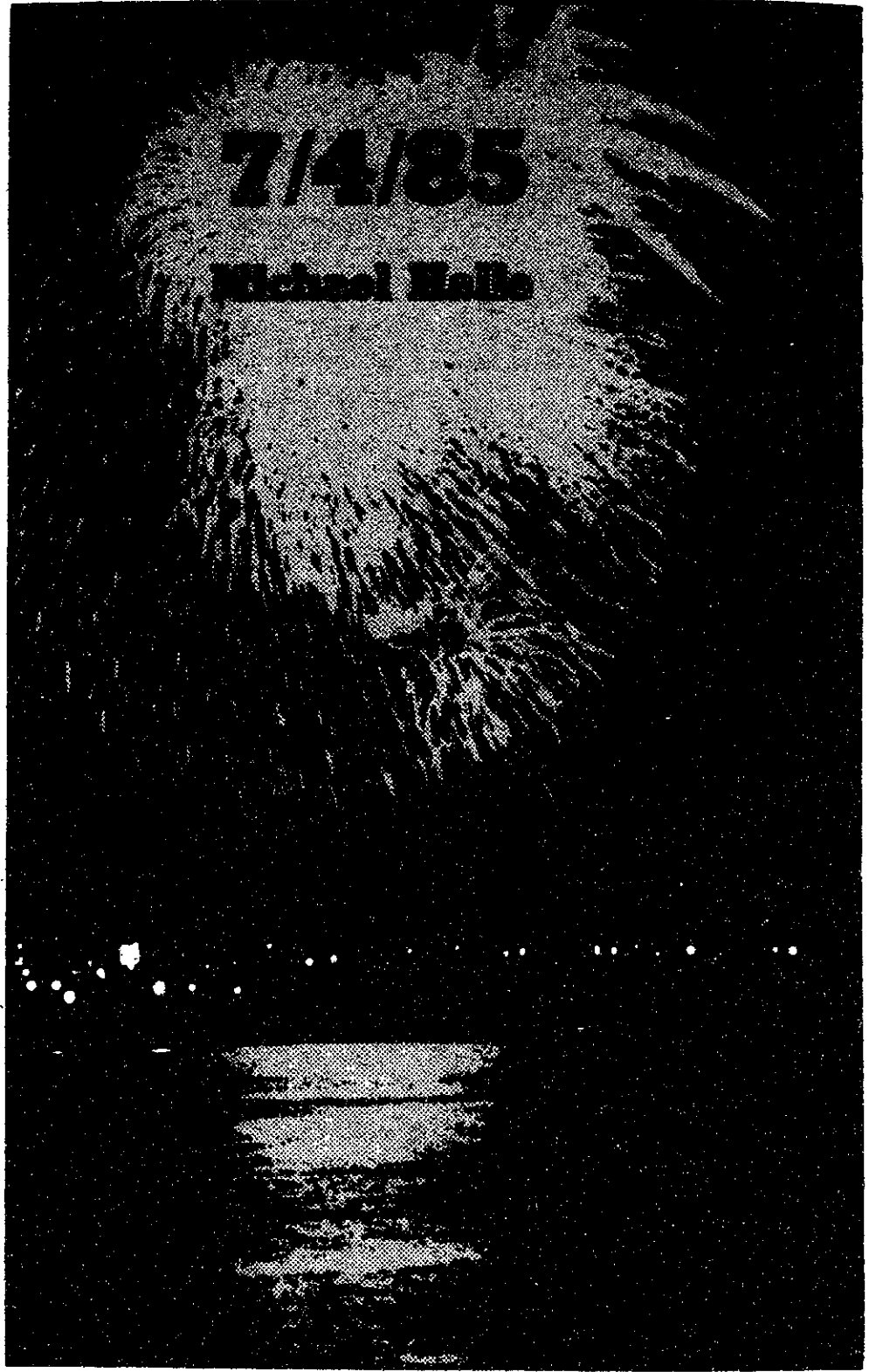
photo essay

MIT OUT OF CAMBRIDGEPORT



Graduation cheers and jeers
Photography by Simson L. Garfinkel and Ben Stanger

photo essay



artsrecord

Go beyond academics
Try Lobster

Claws!, a compilation of tracks by 15 Boston area bands on Throbbing Lobster Records.

Throbbing Lobster Records began at MIT's radio station, WMBR-FM, where local rock and new wave fill the airwaves on weekday mornings. Last year, WMBR disk jockey Chuck Warner decided to start a record company and put out his favorite selections from the tapes Boston bands sent to the station. The result was *Nobody Gets on the Guest List!*, the definitive record of the summer of 1984. Warner turned success into a tradition with a second compilation (*Let's Breed*, released last November), and now *Claws!* has arrived to seize your ears.

Side one of *Claws!* is great for creating the illusion that it's 8:30 am on Monday and you're blasting WMBR while brushing your teeth. It will also please those who consider 1966 the ultimate year. All eight bands on side one have mastered the 1960s garage-rock style, complete with clanging guitars, treble harmonies, wailing organ, and thumping rhythms. Despite the his-

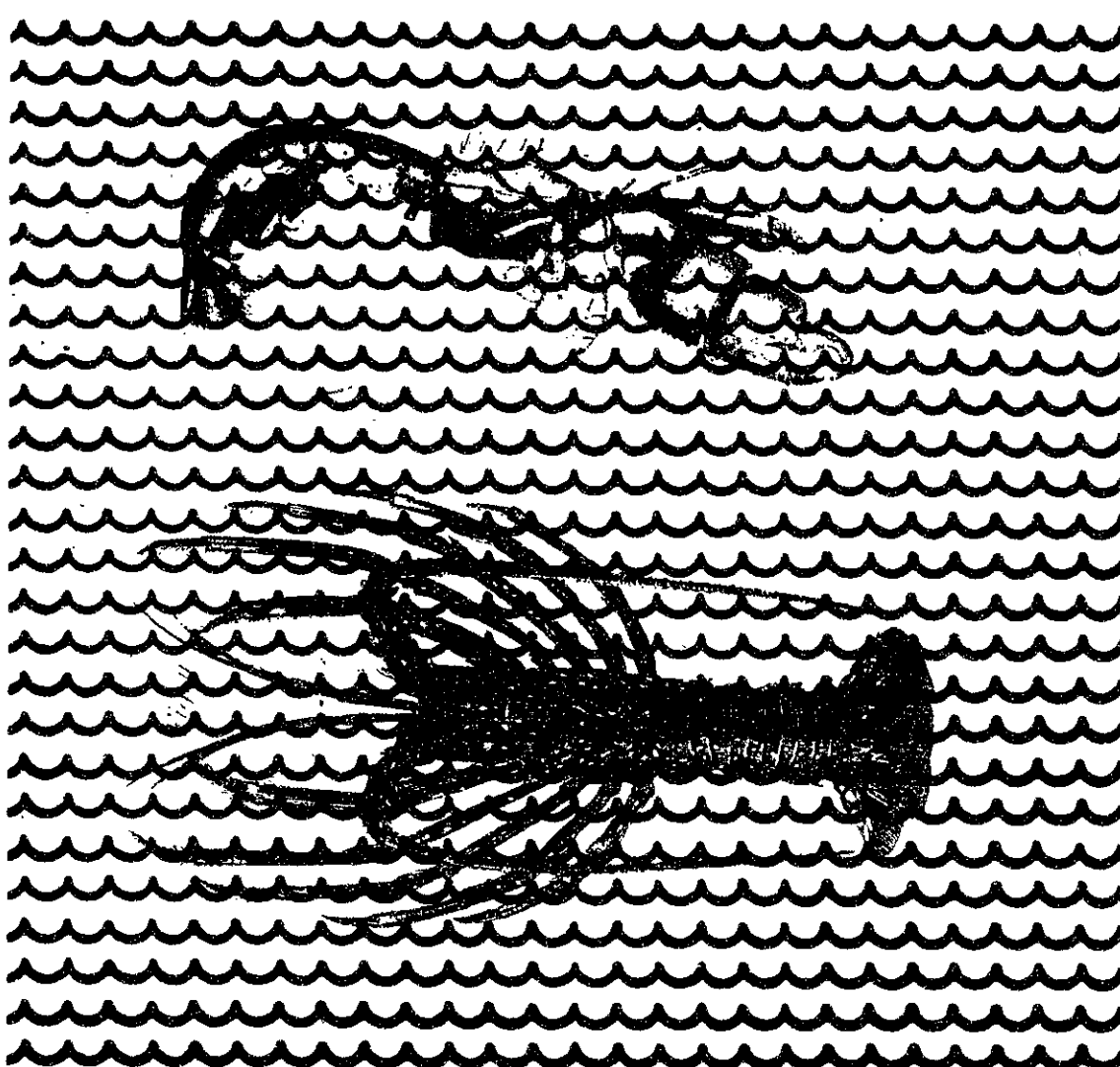
torical influence (Capture The Flag's "Looking Through at You" seems to have borrowed a melody from the Monkees), all the songs sound fresh, and you can jump up and down to them.

Alas, the cuts don't match the previous standard of Lobster quality. Not much stands out on a first listen, and the songwriting is often ragged. The contributions of the Prime Movers and the Turbines, two of Boston's finest groups, suffer from undermixed, rushed vocals, and pale next to what they had on *Nobody*.

There is little to say about side two. It contains another 1960s-style pop song — "Yellow Brick Road" by New Parts From Old — and some attempts at novelty songs that don't hit my funnybone. The rest is disappointing, particularly the song by the Underachievers, who sounded like X's bright young understudies on *Nobody*.

WMBR listeners will enjoy *Claws!*, but it will never be number one on my party list. I'm keeping my ears open for the next Lobster platter.

Katie Schwarz



Talking Heads go better than Coke



Little Creatures, Talking Heads on Sire Records.

This record is everything that we were promised New Coke would be. "Somehow sweeter, yet more refreshing," it is less bizarre than previous works, but still just as much fun.

The nine new songs sound most like those from *Talking Heads 77*: the poly-rhythmic structures, conceptual unity of albums, and Brian Eno tape-loop treatments have been traded back for the semi-minimal guitar-and-vocal sound.

But in many ways, the Heads' sound has matured in the past eight years. Vocals are often harmonized. Psychotic, coffee-achiever quirkiness has been replaced by a relaxed, mellow attitude. David Byrne often sings in a low register. The snippet quotations of various musical styles (for example, the steel drums on "Uh Oh . . . Love comes to Town") have been expanded and elaborated without being used in parody. The Heads have molded some trendy pop licks (screeching guitars, ominous church bells, and synthesizer oozes, for example) into their own distinctive musical style. To quote David Byrne: "We wanted to make an album of American songs."

In fact, one of the best songs on the album is a country and western tune, "Creatures of Love."

Well, I've seen sex, and I think it's alright

It makes the little creatures come to life

Well, I can laugh, or I can turn away.

I've seen sex, and I think it's okay.

We are creatures, creatures of love . . .

What makes this song so exciting is not only how well it works as a C&W tune, but also how well it works as a Talking Heads tune. It has their trademarks: an unorthodox outlook on life, minimalist lyrics, and strong social commentary.

Lyrics in other songs talk about such diverse topics as cynicism, the genius of love, the ontology of language and life after death:

Doctor, doctor, tell me what I am

Am I one of these human beings

Well I can't say, but I can learn to think

So help me find out what I am

"Stay Up Late" is a mammoth novelty song along the lines of Shel Silverstein's *Uncle Shelby's A B Z Book*. "Road to Nowhere" has been getting a lot of airplay recently, and for good reason. Byrne is not kidding in the title, and contrasts his feelings with those of the apathetic. This lyrical construct is a little awkward as recorded, since he sings both parts, but is very clear on the lyric sheet.

Little Creatures is a strong album for the Heads, especially after *Stop Making Sense*, which broke no new ground, and was much too commercial for my tastes (the original versions of almost all the songs were much better). It may not be their best album ever, but it is better than New Coke.

Bill Coderre

Classical chamber music summery

MIT Chamber Music Society, June 20, in Kresge Auditorium.

Climbing the steps of Kresge a few nights ago, I heard someone exclaim behind me: "Gee, this is just like an LSC movie." Well . . . not quite. The LSC screen was replaced that night by members of the MIT Chamber Music Society, and instead of a soundtrack we heard music — a lot of it.

The program began with Mozart's famous clarinet trio in E flat major, K. 498. From beginning to end the performance was beautiful. Mozart, in the hands of the players, was summery, full of sparkling humor, and dressed in white, like the players themselves.

Pianist Luz Martinez Miranda controlled the keys as well as she understood the music. Her tone, rich and delicately nuanced in every single bar, rose far above amateur standards. Violist Ted Sussman and clarinetist Alan Barnett answered her with equal prowess.

From Mozart we passed to Duparc.



Baritone Kevin Brau and pianist Barbara Tilson performed four of his songs: *Song of Sorrow*, *Phidyle*, *The Manor of Rosamunde* and *Invitation to a Voyage*. It is difficult to characterize these songs. They are sentimental, lyrical, and reminiscent of French chansonettes, romanticism and impressionism. Brau sang simply, missing little of the passion of both the words and the music. Never was his singing overdone or in bad taste, and never did Brau put himself in front of the music. The pianist gave an equally good accompaniment.

Concluding the first half was a simple quintet by Johann Andreas Amon, op. 19, no. 3. After the subtle emotions of Duparc, one could easily have judged the music to be not only simple, but simplistic. But the group played well from beginning to end, with a few minor exceptions. The flute stood out beautifully among the strings. On this light note ended the first half.

The second half opened, like the first, with Mozart. We heard the quartet in F

major, K. 370. The playing this time was not quite as good as in the beginning. Despite Sandra Ayres, who controlled her oboe part quite well, the Allegro and the Adagio remained a little slow and uninspired. Things changed by the third part, however. The finale was a veritable Allegro, in tempo as well as in spirit.

Saxophone sounds are bound to arouse smiles after violins, cellos, clarinets and pianos. And indeed there were smiles in the audience when a saxophone sextet — two soprano, one alto, two tenor and one baritone — started the first part of Bach's second Brandenburg concerto.

We all know that Bach is both old enough and modern enough to reincarnate in the most fantastic garments. There it was — before our eyes, clothed in brass. I had nothing but admiration for the ingenuity of the arrangement. Before Bach, the group had played *As Vesta was Descending* by Thomas Weelkes and *Prelude* by Richard Shores.

Jacqueline Gottlieb

arts

Feynman flirty
not fulfilling

Surely You're Joking, Mr. Feynman!, the autobiography of Richard P. Feynman, Norton, \$15.95.

At its best, the biography of a scientist can do things no other form of writing can do. It records the myths and traditions of the scientific community, and helps aspiring members of that community, like me, learn about those traditions. Often it serves as a forum for musings on the ethics and philosophy of science and the scientific establishment's relation to society. A popular autobiography can show the public the way scientists feel about the world.

Nobel laureate physicist Richard Feynman '39 has a reputation for an enthusiastic, playful style, well known to readers of his *Lectures on Physics*, which is more of a chatty ramble through science than a textbook. I expected his autobiography to be exciting and entertaining, and I was hoping for a more lively view of what MIT was like 50 years ago than old volumes of *Technique* provide. And since Feynman worked on the Manhattan Project, I was eager to read his thoughts about the development of the atomic bomb and the years afterward.

Surely You're Joking, Mr. Feynman! succeeds as light summer reading, but fails

to reach the potential of a good scientific autobiography. Feynman's zest engages the reader on the first page as he describes his experiments as a 12-year-old with a bank of light bulbs that would "gloooooow, very nice!" His story is full of humor, candor, and delight in life, yet fails to develop emotional force.

The problem is that Feynman is not comfortable with writing. *Surely You're Joking* was transcribed from his conversations, not written. Thus, the story is just a series of episodes, with no attempt at coherence or continuity. Feynman is an amusing, spontaneous speaker, but he did not write his book sentence by sentence, looking at his words on the page, and it shows. He never breaks his string of reminiscences to mull things over and reflect on what he has recounted.

The book is like a partially completed jigsaw puzzle, in which only the outline of Feynman's surroundings is seen. He tells of his first wife's death, but never mentions her otherwise. Also lacking is a discussion of his interaction with other physicists on both scientific and personal levels. And it is hard to discern much personal growth between the teenage Feynman and the established scientist. The perky, colloquial tone holds the reader's attention, yet



because it never gives way to serious contemplation it wears thin by the end of the book.

Feynman promises zaniness and delivers it, but offers little enlightenment. He presents only his nonscientific side, avoiding the fascinating question of how it is integrated with the part of him that does

physics. For a fuller portrait of a scientist's life, try George Gamow's *Thirty Years That Shook Physics* or Victor Weisskopf's essay "My Life as a Physicist" in *Physics in the Twentieth Century*. Gjon Mili's *MIT Revisited* offers more about MIT's history.

Katie Schwarz

The voice of war

Voices from the Great War, by Peter Vansittart, Avon Books, 303 pp., \$4.95.

There exist two types of history scholarship: secondary and primary. Secondary scholarship is the kind with which we are most familiar. It is the stuff analyzed and distilled by historians with their own interpretation laid on top. At its best, it reaches the thorough excellence of a Bruce Catton or Barbara Tuchman.

Primary scholarship consists of taking source documents, such as newspapers and books written at the time of the event, or statements by the principals involved with the subject, and editing them to present a view of history from the participants' perspectives.

Peter Vansittart succeeds mightily in his primary work, *Voices from the Great War*, now in paperback for the first time. The author has culled from a plethora of sources quotations from books, speeches, letters and poems regarding World War I and presented them against a chronology of the war.

Vansittart takes the reader from the corridors of power to the trenches of death and places in between. Some examples:

"Frivolity and weakness are going to plunge the world into the most frightful war," Kaiser Wilhelm II.

"My chief feeling is of immense curiosity — and, I confess, the deepest sympathy

for this loathed, enigmatic and fated Germany, which, if it scarcely ranks 'civilization' as man's chief estate, has at least assumed the responsibility of destroying the world's most degraded police state," Thomas Mann.

"All my libido is for Austria-Hungary," Sigmund Freud.

"At least the thing will be over in three weeks," Lieutenant (later Field Marshall Sir) Bernard Montgomery.

"This war was commercial and industrial war. It was not a political war," President Woodrow Wilson.

"This is not peace, it is an armistice for 20 years," Marshal Ferdinand Foch.

"I together with the Duce [Italian Dictator Benito Mussolini], am the only head of government in Europe who knows the war as it really was, I mean for the front line crock," Adolf Hitler.

These examples are from the famous and infamous; the lesser-known also leave their important marks in *Voices*.

Vansittart's work should not be an introduction to World War I. The reader requires a secondary-source introduction to the conflict and its underlying causes. With such a background, *Voices* makes an excellent addition to one's library and one's understanding of the Great War.

Robert E. Malchman

A real catherine wheel

Music for The Knee Plays, David Byrne and Robert Wilson on ECM Records.

David Byrne made a wonderful record four years ago for Twyla Tharp's dance, *The Catherine Wheel*. Brian Eno, Adrian Belew and assorted others helped out, but it was mostly Byrne who created that album's blend of highly rhythmic tribal-influenced funk and psycho-lyrics, a style that he would carry over into the Heads' *Speaking In Tongues*. It worked well in both records, and produced a bit of Talking Heads trivia in the form of an EP (remember the "Three Big Songs"?).

Byrne's current solo offering is a collection of essays that function as "intermissions" or "joints" in Wilson's performance piece *the CIVIL WAR*, thus the name, "Knee Plays." We hear Byrne reading to the accompaniment of a brass ensemble, which is playing somber, dirge-like chords. Occasionally the band erupts into melody, but most of the time, the music blurs together into a sordid mess.

The essays Byrne reads will sound familiar to those lucky enough to have gotten a "collector's edition" of *Stop Making Sense*. The inspiration and titles of some of the mini-essays in that album's picture-book have migrated to the *Knee Plays*.

In some cases, especially "In the Future" and "Tree (Today is an Important Occasion)," the sharp contrast between Byrne's zippy lyrics and deadpan rendering is hilarious. Consider:

In the future, television will be so good that the printed word will function as an art form only.

In the future, we will all drive standing up.

In the future, it will be impossible to tell girls from boys, even in bed.

But again, these moments are much too far apart.

I would love to recommend this record, but the music is too slow to dance to, and too grating to listen through. It might have worked spread out during a performance, but doesn't seem to hit it off as an album. I wish this record had come with a lyrics sheet, since the essays are quite funny and would work well without the music.

To those wanting to hear a Byrnian solo album worth hearing, I would strongly recommend *The Catherine Wheel*. *Music from The Knee Plays* only seems to qualify as a partial document of the original performance or as a collector's item.

Bill Coderre

Nobody got on the guest list

An Unpatriotic July Fourth Event, a multimedia arts show on the Boston Common.

To a lot of folks, the Fourth of July means family reunions, Pops concerts on the Esplanade, and unabashed patriotic fervor. For those who march to the beat of a different drummer, an event intended as an alternative to the traditional holiday festivities was staged at the corner of Beacon and Charles Streets by the Media Workshop.

About a thousand people (including a fairly large contingent of MIT-types) celebrated the 209th anniversary of American independence in a manner which many of our present fathers, if not the founding ones, would heartily disapprove. While no flags were burned, none were waved either, unless one counts the black flag of anarchy tied to a nearby lamppost.

The six bands that performed were the afternoon's main drawing card. Without them, it is unlikely that more than a few diehard Revolutionary Communist Party (RCP) zealots would have listened to political speeches in the sweltering sun without the benefit of any available public restrooms. Not that the RCPers ran the show, but their presence was more than a little piteable.

It can almost be taken for granted that, anytime punk bands play, the communists will be out in force to proselytize. While many in the crowd may be against our current political regime to some degree, no one was flocking to the communists' table to buy their books, and most people seemed to tolerate the political haranguing only for as long as it took to change the bands' equipment between sets.

In addition to politics and music, the day was one for local artists. Kevin Porter displayed a number of color photocopy collages, most of which had a humorously political message, and distributed a free book of his cartoons. Another artist's piece was in the shape of a man's head, complete with movable jaw (eat the rich?), but mechanical problems prevented it from working well for very long.

A hundred-foot-long ribbon inscribed with prose was spread along the grass. Several poets read their works. Someone passed out hundreds of index cards, one to each person, with two different, but related words, one on each side. He then had everyone read their words simultaneously to create a cacophony of words. I guess you had to be there.

The first group to play was Feminine Protection, an all-woman band from Bos-

ton. (None of the other groups had any female members whatsoever.) Their minimalistic sound is similar to the now-defunct local bands Dangerous Birds, and Bound and Gagged, primarily due to the Casio mini-synthesizers which figure so prominently. Feminine Protection's songs deal with serious feminist issues such as rape and abortion, but their occasional use of humor brings the point across better than would a completely deadpan approach.

Next up was Brain Trust, a Boston band whose use of distortion and feedback drone was a pleasant flashback to some of the more chemically inspired music of the 1960s. Their lyrics were unfortunately hard to decipher through the singer's thick British accent. Vasco de Gama, a group quickly becoming noticed within the local music scene, followed with an impressive set of fast, tightly-arranged political songs.

The New Lions, a racially-mixed quartet (all members of all the other bands were white), played a set of more or less standard-sounding rock with a touch of reggae. Many welcomed the change from the punk-oriented sound embraced by the previous bands and the ones which were to follow.

The Dicks, from Austin, Texas, per-

formed next. Their singer, Gary Floyd, is openly gay; he believes that much of his political awareness comes from growing up as a misfit in "Marlboro Country." The Dicks' music is loosely-arranged, and the band members visibly have fun by not becoming overly serious while playing. There is an MIT connection here — guitarist Tim Carroll's brother Steve is a member of the Class of 1984.

The last band to play included the "very, very special guests from Vancouver, Canada" — no one was surprised in the least when DOA stormed the stage and launched into their blitzkrieg aural assault. But the day was becoming long, and since DOA would be playing in town again a few days later, they cut their set short.

These free alternative events have been staged for the past several Independence Days, but it is becoming increasingly more difficult for the promoters to obtain the necessary permits with each passing year. The residents of the ritzy condominiums lining the Common seem to recoil against the thought of their expensive peace and quiet being disturbed, even for a few hours on a holiday afternoon. Such is the price of freedom.

Drew Blakeman

artsfilm

Silverado and Pale Rider resurrect the Western

Silverado, written by Lawrence Kasden and Mark Kasden; produced and directed by Lawrence Kasden; opening soon at a theater near you. *Pale Rider*, written by Michael Butler and Dennis Shryack; produced and directed by Clint Eastwood. Playing at the Sack Cheri.

Experts tell us that close to 30 percent of American fiction films have been Westerns. The Western is the biggest genre in Hollywood's history, and many 20th century people have spent much of their time in the neighborhood theater watching movies about men and women in the 19th century frontier.

But in the past 15 years the popularity of the Western has declined. In the past five years particularly, there have been no big Westerns (big at the box office, anyway). The genre has been kept alive by smaller productions like *The Gray Fox* and *Barbarosa* (both pretty good, but neither very popular), but in this era of box-office extravaganzas there have been no Westerns of significant popular stature.

This summer promises to change things as Hollywood brings out two Westerns likely to attract much attention. *Pale Rider* is likely to attract attention because Clint Eastwood is in it, and Eastwood is, along with Sylvester Stallone, the biggest box-office draw in movies today. Some people, myself included, will always go to Eastwood's movies, no matter what they are about.

Silverado is likely to attract attention because it was written and directed by Lawrence Kasden, a filmmaker with a good track record. *Silverado* also has an all-star cast, although nobody of the magnitude of Eastwood. Kasden was the guy who made *Body Heat*, a throw-back to the films noirs of the 1940s. He was expected to recreate in *Silverado* the Westerns of the 1940s and 1950s.

It's extremely doubtful the Western will again become a Hollywood staple, but if *Pale Rider* and *Silverado* are successful, we could see more of their type in the next couple of years.

* * * *

Silverado is such an ambitious, dynam-

ic, fun, and unpretentious movie I hate to say anything bad about it, but I have to say it isn't as successful as it could have been. Happily though, its failings are a result of trying too hard, of packing too much into one movie. In these days of slick films with simplistic plots, it's nice to see a movie with too much in it rather than too little.

Silverado is a fast-moving, high-adventure movie, a rollercoaster of a film. Its rich, complex plot is overlaid with a sensational style that makes it the most exhilarating movie so far this year.

It's completely attuned to its Western roots, although it has style all its own. *Silverado* borrows from many Westerns of the past, in terms of theme and accoutrements. It has all the elements of the classic Western: farmers, cattle, gun fights, and the heroes galloping to the rescue. The town of Silverado acts as a focal point for the playing out of the Western myth which *Silverado* plays homage to, but doesn't flaunt obtrusively.

Unfortunately, *Silverado* suffers from the same disease as last winter's *The Cotton Club*: It's too fast moving. The scenes are too short and they fly by so fast they leave the viewer not just satiated, but overwhelmed. Not enough time is taken to build tension or to develop many of the characters. For the sake of telling a really good story one wishes the film had been simpler or longer.

The story has four heroes, all of whom are outlaws, but not really bad guys. Scott Glenn and Kevin Costner are brothers on their way to California who stop off to visit their sister in the generic Western town of Silverado. Kevin Kline plays the ex-convict drifter they meet along the way and take to Silverado. Danny Glover is the Easterner on his way to Silverado to help his family farm land on the outskirts of the town. The four become friends and team up to fight the nasty cattle baron and the corrupt town sheriff.

The film's rapid procession leads to truncating of characters and little use of fairly famous and talented actors like John Cleese, Rosanna Arquette and Jeff

Goldblum. Kline, despite a fairly large part, comes across as Robin Williams on Quaaludes. Glover runs around with one emotion all the time. The only players to emerge with any depth and vitality are Glenn and Costner.

Silverado is at its best when it remains an adventure story. It is at its worst when it tries to go deeper into human relationships, which are done 1980s-style. There are hints of *The Big Chill* here, but mercifully, *Silverado* isn't *Yuppies on the Range*.

Silverado is closer to a Western version of *Raiders of the Lost Ark*. It blazes through its story — it blazes too fast, but it blazes. And it never gets boring or self-important.

As far as ambition and vitality go, *Silverado* is the best film to hit the theaters in a long time. See it and try to keep up with its pace; it's worth the effort.

* * * *

Pale Rider is a Western with a capital "W." It has all the classic elements of a Western and one can't imagine it as anything else.

Pale Rider is a Clint Eastwood movie all the way. Eastwood dominates his first Western in nine years, and one can't imagine it without him. The film reminds one of how good Eastwood can be in Westerns and of how distinctive Westerns can be with Eastwood.

Eastwood plays his familiar Man-With-No-Name character who rides into town dressed in black and needing a shave. Some Biblical allusions are made to equate him with either Death or an Avenging Angel, it is unclear which. He then sets out to save the good townspeople from the bad guys.

The town in question is a small settlement of gold miners who have hit bad times. They're flat broke, and the evil capitalist owner of a large nearby mining company wants to drive them off their lands. The mining baron will resort to anything to accomplish his purposes, even if it means sending his henchmen in to bully the independent miners. The poor miners are in low spirits and are ready to give

up when Eastwood arrives to save the day. Eastwood wears a white collar, so the miners call him "preacher," even though he never does any preaching. Instead he leads by example and inspires with actions, bringing the miners together to stand up to the company.

Unfortunately, Eastwood's mere presence in *Pale Rider* is a double-edged sword. On one hand he dominates so forcefully that his magnetism is a major component of the film. But on the other hand, his lean, tough, tight-lipped screen persona contrasts with the otherwise fairly rich movie. The part was doubtlessly written with Eastwood in mind; terse dialogue is his hallmark. But in *Pale Rider*, the speak-softly-and-carry-a-big-gun philosophy does not serve the protagonist well; it keeps the movie from taking off and expanding on its promise. Some may argue that Eastwood's cult following is derived from this very persona, and this is true. But in the context of this one movie, his identity is rather limiting.

Eastwood is surrounded by some exceptionally good supporting acting, most notably by Michael Moriarty as the miner who befriends the traveling preacher and brings him to the mining camp. Carrie Snodgrass plays a tough mountain woman at the camp who seeks to become Eastwood's love interest.

Pale Rider is very neat; the rhythm and texture are well defined and controlled. This is probably the first movie in which Eastwood did a better job directing than acting. One gets a feel for the California mountains where the action takes place.

The story is consistently engaging and holds one's attention all the way through. It's pretty simple, but at least it's not obsessed with itself. *Pale Rider* understands that it shouldn't try to be the definitive American Western, if there could be such a thing.

Pale Rider is worth seeing, even for people who aren't Clint Eastwood fanatics. One hopes Eastwood will continue to make Westerns; he's one of the few stars who can single-handedly carry a movie, both inside the film and at the box-office.

Dan Crean

The Emerald Forest explores the tropical jungle

The Emerald Forest, written by Rospo Pallenberg; produced and directed by John Boorman. Playing at Sack Beacon Hill, Sack Copley Place, and the Harvard Square Theatre.

The Emerald Forest is the kind of movie you'll probably either like a lot or not like at all. Different people have different reactions to any movie, but with *The Emerald Forest* there's likely to be a wider range of opinion than usual, depending on how deeply the viewer gets into the story.

The Emerald Forest is very weird, and for the first 20 or 30 minutes it looks like that's all it's going to be. But then the magic of the story takes over, and you get caught up in this fascinating adventure story of two cultures in conflict along the Amazon.

The story, which the film claims is based on real events, is about an American engineer (Powers Boothe) who brings his British wife and two children to South America where he is working on the construction of a dam on the Amazon. On an excursion to the jungle, Boothe's young son is kidnapped by a primitive Indian tribe which lives deep in the rain forest.

The scene suddenly shifts to ten years later, and Boothe is still searching for his lost son. The boy, however, has grown up with the Indians and has "gone native" (*a la Tarzan*). To give away more of the plot would spoil it for you, but you can count on being surprised.

A dreamy mysticism runs through *The Emerald Forest* the way water runs through the rain forest. There's a visual

style and texture not often seen in mainstream movies, and it's one which can be pretty irritating unless you're caught up in the story.

This picture is also unique in that, despite being a British production, it is essentially a foreign-language film. Most of the conversation is in the Indian language or Spanish. We are aided by easy-to-read subtitles.

Powers Boothe is known mainly for his portrayal of religious cult leader Jim Jones. Boothe may not be a great actor, but he's very good at sweating. I've only seen him in two films, but I'm beginning to think Boothe is to sweating as Cher is to chewing gum: distinct from and better than anyone else.

Charley Boorman (who curiously has the same last name as producer-director

John Boorman; I wonder how he got the part) plays Boothe's grown-up son. He's pretty good, at least when it comes to acting and speaking the Indian language at the same time.

But this isn't an actors' movie. It's a writer's and director's movie. Screenwriter Rospo Pallenberg and director John Boorman have a message for the audience: Modern civilization is encroaching on the last bastions of wilderness and ruining it. They're using *The Emerald Forest* to spoonfeed this message, no matter how explicitly they have to do it.

But for entertainment, *The Emerald Forest* is one of the best movies of the summer, provided you fall under its spell. You may not like it, but take a chance anyway. You could love it.

Dan Crean

Cocoon offers the same old summer escapism

Cocoon, screenplay by Tom Benedek; produced by Richard F. Zanuck, David Brown, and Lili Fini Zanuck; directed by Ron Howard. Playing at the Sack Cinema 57.

Religion is the opiate of the masses, Karl Marx once said, and more recently others have been saying that movies are the opiate of the masses. Nowhere do we find these two lines of thought better demonstrated than in so-called "feel-good" movies, like *Cocoon*, which besides offering slick, fast-paced entertainment, also comfort us with messages of cosmic oneness with our fellow man and/or alien.

Cocoon is the biggest and most-hyped of this summer's feel-good movies, which don't differ too much from last summer's feel-good movies, except there are more of them. Ron (Opie) Howard directed *Cocoon*. His last project, *Splash*, was one of the best pictures of 1984. *Cocoon* is not one of the better movies of 1985, although

it may become one of the most popular.

Cocoon is like *Splash* in many ways. Both have beautiful female aliens (Tahnee Welch here, Darryl Hannah in *Splash*). Both have bumbling-but-likable guys (Steve Guttenberg here, Tom Hanks in *Splash*). Both have a romance between the alien and the ordinary guy. Both involve a secret which society would go crazy over if it got its hands on it (a mermaid in *Splash*, a swimming pool of youth here).

You doubtlessly remember from high school American history how the Spanish explorer Ponce De Leon searched the New World for the fabled "swimming pool of youth" which kept the Indians so young. All he found were alligators in the Florida swamps. Of course hindsight is 20/20, and today we know that the Indians' youthful appearances was due to exercise and a proper diet, and that there is no swimming pool of youth, at least native to this planet. But, as we learn in *Cocoon*, there is a

secret to everlasting youth on other planets. Some aliens have brought the magic pool to a St. Petersburg, Florida house where they use it to help bring their cocoon-entrapped comrades out of a 10,000-year-long hibernation.

Three adventurous old men from the nearby retirement home start taking swims in the magic pool without the aliens' knowledge, and discover that it makes them feel young again. Not only do the mystical waters heal cancer and improve eyesight, they make you horny.

Well, one thing leads to another, and naturally the oldsters find that too much of a good thing is bad. Even the wisdom of the years has not prepared them for something which can make them feel young again. Even old people can learn new tricks, we see.

Howard's visual style has improved since *Splash*, and there are some good characters here, but the story runs out of steam in the final third of the film. *Co-*

coon lacks the coherence and the satisfaction of *Splash*. More of the Guttenberg/Welch relationship would have helped, too, as would have some better acting from Welch.

Cocoon also spins up some overt religious symbolism which isn't nearly as effective as it wants to be. Of course, *Cocoon* isn't the first movie to associate meetings between aliens and Earthlings with religion. But the best movies of this sort, *2001: A Space Odyssey* and *Close Encounters of the Third Kind*, project a religious aura. The religious attitude is unstated but it's strongly implied. In *Cocoon*, the mystical allusions are explicit, but the feeling just isn't there as it is in *Close Encounters* and *2001*.

This isn't to say *Cocoon* is a bad movie. It's fair summer escapism, although it doesn't meet its lofty ambitions. There are better movies around; *Cocoon* just fits into the "OK" category.

Dan Crean

Professors free to express their views

(Continued from page 1)

presents indirect military influence should be considered.

● "Consider the nature and degree of the effects of such funding on the education of our students. Some particular issues are restriction of publications, restriction of students' choices of major, and changes in the direction of research which may be attributable to military funding. The numbers of faculty, students, and staff involved should be determined in order to document the scale of the problem.

● "Give specific attention to programs in which our students carry out educational activities elsewhere, e.g., co-op programs, Draper Laboratory, off-campus research."

Students gathered 790 signatures from members of the community supporting the faculty petition and presented them to the faculty.

"The [students' petition] was the initiative of a number of students who discovered through reading *Science* that the innovative science officer for the Strategic Defense Initiative (SDI) was making appeals to Congress on universities' behalf for the program," said Jonathan Weil G, one of the organizers of the petition.

James Ionson, director of SDI's Innovative Science and Technology Office is quoted in the April 19 issue of *Science* as saying, "This office is trying to sell something to Congress. If we can say that this fellow at MIT will get money to do such and such research, it's something real to sell."

Robin Wagner G was the other principal organizer of the petition, Weil said. He credited the Student Disarmament Study Group, Student Pugwash, and the MIT Hunger Action Group with supporting the movement and helping collect signatures.

Francis E. Low, then Provost, responded to the student letter in

the May 29 *Tech Talk*. Low denied the letter's charges that that the administration had "discouraged faculty who have reservations about SDI from expressing their views" as MIT professors.

"The MIT Administration ... has always insisted on the right of faculty members and staff members to express their views on any subject together with their institutional affiliation," Low wrote, noting that those who do so should make it clear they are speaking as individuals.

"The same tradition of academic freedom that permits professors to take public positions on public issues also permits them to work on the research projects of their choice provided that the projects carry no contractual restrictions on publications or on access, and are appropriate projects for the university," Low emphasized.

He endorsed open discussion of the SDI program, but warned that such discussion "should not be expected to result in an MIT institutional position."

Gray responded to the student petition with a letter to Weil that "mostly reiterated Provost Low's points in *Tech Talk*," Weil said.

MIT's Lincoln Laboratories received \$12.9 million in SDI funds through last September, according to the *Boston Globe*. Total research revenues for Lincoln Labs in fiscal 1984 were \$240.5 million, according to the MIT Treasurer's Office.

The other members of the *ad hoc* committee are Professor Allan F. Henry (Nuclear Engineering), Professor James L. Kirtley, Jr. (Electrical Engineering), Professor Vera Kistiakowsky (Physics), Professor James R. Melcher (Electrical Engineering), Professor George W. Rathjens (Political Science), Louisa Koch G (Civil Engineering), and Daniel J. O'Day '86 (Electrical Engineering).

More dorm crowding expected as class size exceeds the target

(Continued from page 1)

rooms based on the expected class size. This crowding level is a little higher than it has been for the past few years, Sherwood said.

The Admissions Office does not know the number of transfer students entering MIT this fall because not all admitted transfer applicants have notified MIT of their plans. The number of transfer applicants accepted this year, 102, is about the same as last year, Grado said.

"We're following the same policy we have for the past three years" on transfer student housing, Sherwood said. The Dean's Office will reserve 40 spaces in the housing system for transfer students. The spaces will be allocated by lottery to transfer students desiring dormitory rooms. Sherwood expects roughly 50 to 60 transfer students to apply for these spaces. The remainder will pledge fraternities or find apartments.

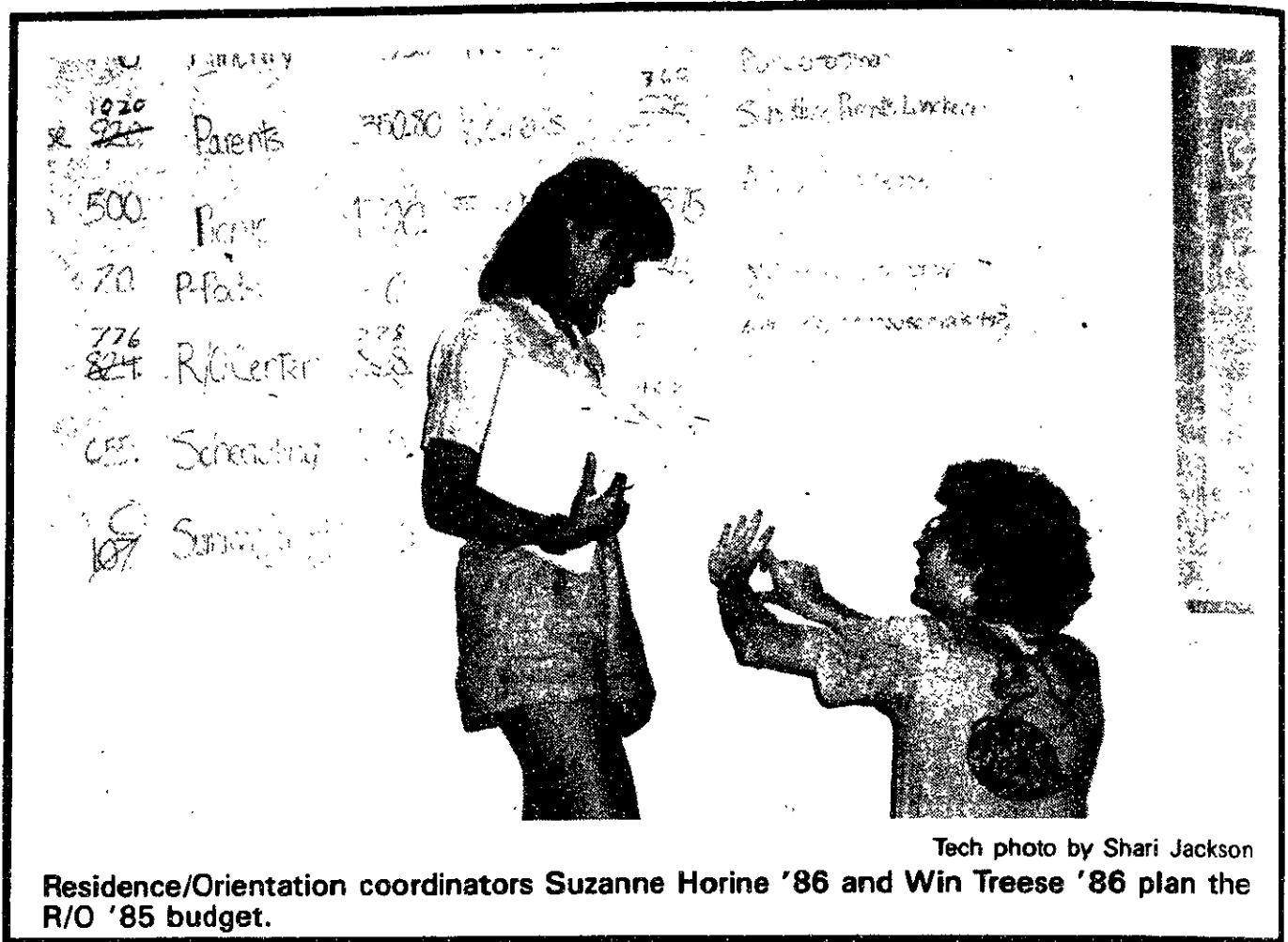
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Tech photo by Shari Jackson
Residence/Orientation coordinators Suzanne Horine '86 and Win Treese '86 plan the R/O '85 budget.

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Text of Iacocca's Commencement Address

(Following is the text of the address by Lee A. Iacocca, chairman and chief executive officer of the Chrysler Corporation, at MIT's 119th Graduation Exercises June 3, 1985.)

Thank you Dr. Saxon and good morning.

President Gray, members of the MIT Corporation, members of the faculty, distinguished guests, parents, and members of the Class of 1985.

Thank you for asking me to share this very special day with all of you. And it is a special day. It is a day for all of you graduates to thank your teachers for their hard work, and your parents for all their sacrifices. And, by the way, don't forget to pat yourselves on the back, too. You deserve it, and my hat is off to every one of you.

I asked one of your alumni at Chrysler to tell me a little bit about MIT students. He said quickly that they are all brilliant, but they are too intense, and they are too competitive. He said the only thing they can't seem to learn is how to relax. Well, let me tell you, relax today, it's your day, enjoy it.

\$2.4 billion last year, and we were broke five years ago.

And how about you? Well, you've got the world by the tail. You are all going to make a bundle of money next year at least. Some of you will be Yuppies sooner than you think. We call anybody a Yuppie who is around 40, and makes 40 grand a year. Hell, we are hiring some 20-year-olds at almost \$40,000. Thirty-three thousand to start, by the way, for engineers, to be exact. I guess you would call them baby Yuppies or Guppies. Or I say Yuppies twenty years ahead of their time.

But, to be honest with you, we are handing you more than anybody has ever passed on to their kids. Generations ahead of you were lucky if they inherited a little shack in the back forty. You are getting a big beautiful mansion on a hill. That is what we are leaving you.

Now, before you get all choked up with gratitude, I should tell you one more thing: we haven't paid for all this yet. We are leaving you the mansion, but it's got a little mortgage on it. About \$1.7 trillion, in fact, and going to

to give it to your kids. But I sure hope you don't.

I understand you have something here at MIT called hacking. Well, somebody is pulling a hack on your future. The piling up of debt to create the illusion of prosperity is a cruel hoax. And the joke, my young friends, is on you.

Now let me pause to ask you, how am I doing so far? Is anybody mad yet? Yeah, one guy back there. Well, if you are not, let me go one step further. Let me tell you about our second national scandal, one that will put another dark cloud over your futures. I am talking about a trade deficit that is going right off the charts.

Our trade deficit in goods last year was \$123 billion. In 1980, just 48 months ago, we had a \$40 billion surplus. So we had a negative swing of \$163 billion in less than four years. And we are on a toboggan ride right now. We will probably go \$150 billion in the hole this year alone.

These two scandals, of course, are related. The trade imbalance is the bastard child of those huge deficits that raise interest rates

Senate, God love them, has already fired a shot across their bow by voting 92 to 0 to retaliate because of Japan's closed markets. Now that is pretty significant when you consider that Congress can't even get a unanimous vote to go home for Christmas. So we will probably see a lot of finger pointing for a while, and that could hurt everybody.

Now, consenting adults just shouldn't act like that. We should sit down and reason this out. No threats. No talk of trade war. Just an absolutely firm understanding that America has something to protect, too. And that we intend to protect it. We intend to protect our ability to compete.

But we aren't doing that. Last March we took all import restrictions off of Japanese cars. We said to them, "Look how generous we are. Now what are you going to do for us?" And the Japanese said, "Thank you very much. We are going to send 24 per cent more cars in this year than we did last year."

We got nothing in return. We got some promises, but we get a lot of promises every year. Our guys who go over to negotiate are supposed to bring home the bacon for America once in a while.

I don't blame the Japanese for a minute. They are very good businessmen. They are managing their trade according to the unwritten rules used by almost every other country in the world. And those rules are simple — devise trade policies that help your own companies compete.

We, on the other hand, are worshipping at the altar of free trade. We are blindly wedded to a set of lofty principles that everybody else in the world ignores. We have got this silly notion that it is a mortal sin to play by the rules that everybody else is using. We are the ones who are out of step today, not the Japanese. They are in step with the rest of the world. We are not.

I always say, we are like those few crazy hockey players who still refuse to wear their helmets. And we are getting our brains beaten out.

Don't get me wrong. I believe in free trade. Who doesn't? I think it is a beautiful ideal. It is right up there with goodness, and mercy, and charity for all. But it is not one of the 10 Commandments. It is not the way the world works. And we are not going to change that all by ourselves. Maybe someday we will achieve that ideal. I really hope so. But I am not willing to risk your fu-

of policy to help other companies in trouble. But the purists say it would wreck free enterprise forever. I don't know why. Chrysler is a bastion of free enterprise today. We are making lots and lots of money. We are paying lots of taxes — a quarter billion in 90 days and that ain't bad for guys who were broke. Six hundred thousand people have jobs who would have been on the street. The government never put up a cent, and not only got its \$1.2 billion of guarantees back seven years early, but it made \$350 million on the deal to boot — pure profit. The Chrysler loan guarantee board wasn't a welfare office. It was a profit center. They don't have any idea what that means down in Washington, by the way.

Let me be blunt. Until we fix the currency problem and write a trade policy — and an industrial policy for America — it is going to make less and less sense for companies to build plants and put people to work in America. Our trade deficit is already costing us three million jobs, and more are going overseas every day. Economics, when you think of it, is pretty simple. You build it in yen and you sell it in dollars, and you don't need a degree from MIT to figure that out. Hell, they probably understand it even over at Harvard.

Well, maybe some of you, right about this point, feel that maybe we should deindustrialize America, get rid of all those dirty smokestacks, put everybody to work in service industries, or — maybe even better — high tech. I have to admit that the weather is nicer in Silicon Valley than it is in Detroit. But let me tell you, if America gives up its industrial base there is no future for high tech either because we smokestack guys are your best customers for all the wizardry that comes from Silicon Valley or from up here on Route 128. We put high tech to work. We put it to work in our plants. We have robots and laser cameras all over the joint now. We have some of the world's finest CAD/CAM facilities. We put it to work every day in our cars, too. Our new Laser and Daytona sports cars — this is as commercial as I get today — have seven microprocessors or minicomputers in each car. Unless you put it to work, unless you use it to compete, high tech is really just a toy. How much do you think a bag of silicon chips would bring you in a supermarket anyway?

Your future depends on an

"We are leaving you the mansion, but it's got a little mortgage on it. About \$1.7 trillion, in fact. . ."

Relax, but don't go to sleep. Because tomorrow the real final exams start. And they'll go on for the rest of your lives.

I am going to try to give you a little peek at the test, but I won't be able to help you with the answers. They'll have to come from you. But in case you want to take a nap for the next 20 minutes or so, I'll give you the ending to this speech right now.

I am going to tell you to go out and change the world. That's my duty, right? That is what every commencement speaker says. And every graduating class just sits there, hoping he'll be brief, so they can go uncork the champagne, but musing to themselves, if the world had to be changed, why in the hell didn't he do it?

Well, my generation tried pretty hard at times, and with some success, I might add. I sat in your place in those happy days at the end of World War II. That was the good war, you know, the one in all those old Ronald Reagan movies. Our future couldn't have been brighter then. America was flushed with victory. We were King of the Hill, the undisputed leaders of the whole world. Russia soon got some funny ideas about that, however. But believe it or not, back in those innocent days a lot of people really thought we had a chance to build a perfect world.

I wasn't sure. I graduated from Lehigh, but I kept my mouth shut, because I didn't want to spoil it for the rest of them. Well, a few things went wrong. There were a couple more wars, there were eight recessions, there was Watergate, and a dozen other man-made disasters along the way. But in spite of all that, we did manage to wipe out a few diseases, we put a man on the moon, and we produced more technological change than all of those who came before us, and I mean combined. And we made America, I think, a little more just, a little more fair, and maybe a little bit more humane.

All in all, we really haven't done a bad job. And if you believe everything you read in the papers, the country must be in terrific shape. The stock market just went over 1300, companies are spending billions of dollars just buying each other up. And the public is on a buying binge, too. They are buying lots of expensive cars and houses. Things are so good even Chrysler made

\$2 trillion, whatever that is, in just a couple of years.

That's a public debt we are going to hand this class. And if you don't like the deal, if you don't want the mansion, I'm sorry, because it's yours along with the note. You can't give it back, but you can get mad about it. In fact I hope you do. I am mad, too. I think the mortgage you are picking up is a national scandal. Right now we are paying \$150 billion a year in interest alone on our national debt. And adding almost \$200 billion a year on the principal.

For a long time we fought a battle with inflation in this country. We beat it, but we paid a heavy price. We paid a price in unemployment, in high interest rates, and in bigger federal deficits. And we did weaken many of our basic industries, especially housing and autos.

Now inflation is an economic evil. Let us hope it stays in its own little hole. But at least inflation is a penalty we pay now. It takes money out of your pockets every day. It is sort of a pay-as-you-go penalty.

But these huge deficits are a penalty that we keep deferring. We are going to leave them for you. It is not pay-as-you-go anymore. It is more like "pass the plastic." It is a credit card approach, and it is your credit card we are using.

What makes this debt so insidious is that so much of it is invisible. I often say that the government ought to be forced to follow the truth in lending law. Every year at tax time, it should have to send out a statement to you just like your bank does. And that statement would tell every American family where he or she stands. This year for the average family, it would go something like this: "Dear Mr. and Mrs. Taxpayer. This year your family's share of the national debt stands at \$27,950. In the past 12 months, your share has increased by \$3,980. Your share of the interest bill this year is \$2,127. Have a nice day."

Now maybe you noticed that one line is missing from that statement, the one that says, "Please remit." We aren't remitting. We aren't paying our own way. But there are no free lunches in this life. That bill has to be paid someday, and I guess you get the honor. Unless, by the way, you want to float it long enough

and throw the dollar out of whack. The high dollar makes American goods cost more, and gives foreign products a big leg up.

American companies — I am part of one — can work night and day to get more productive. Three years ago, we built 10 cars per employee at Chrysler per year. Now we build 20 cars per employee per year. But the currency problem just throws all that effort right out the window. That is one side of the problem. Our own fiscal irresponsibility creates that high dollar, and we can't blame anybody else for it. We have to fix that ourselves.

But there is another side of the problem. Even when we are competitive, we are facing a crazy festival of trade barriers all over the place that keeps our products out of other countries. Consider Japan. Last year the Japanese sold us \$37 billion worth of products more than we sold them. That is a \$37 billion deficit with just one country in one year. If you disregard oil imports, 62 per cent of our total trade deficit worldwide comes from Japan alone.

"Economics, when you think of it, is pretty simple. You build it in yen and you sell it in dollars, and you don't need a degree from MIT to figure that out. Hell, they probably understand it even over at Harvard."

The high dollar counts for a lot of that. But so does the fact that Japan protects its own markets. It does so rather openly, and without much apology. Japan is a free and sovereign nation, and it has a right to act in its own self-interest. But, guess what, so do we. We have a right to go to the Japanese, as close friends and trading partners, and say, "Hey look, we got us a \$37 billion problem here. We can't handle that. It has to come down. If, for internal political reasons, you can't buy American rice or oranges, even though they are much cheaper than your own, that is okay with us. But then you'll have to cut back on some of the heavy traffic coming the other way across the Pacific."

You see, that imbalance isn't just an American problem. It is Japan's problem, too. It is a mutual problem because, if it isn't solved soon, our Congress will be forced to take drastic action. The

tures waiting for that blessed occasion.

One impact of these twin scandals may be the deindustrialization of America. In fact, the process is really well underway. Go to Pittsburgh or Akron or Detroit — you will see it all around you. American heavy industry, old smokestack America, is slowly dying. Many of the companies that helped build the industrial middle class, the backbone of the country in this century, are boarded up. Why? They can't compete anymore. They can't compete because our currency and trade policies have tilted the international playing field against them, and they are getting short of breath from running uphill.

Maybe they could use a breather. We got one at Chrysler six years ago with the Federal loan guarantees and it saved us. I suggest some kind of — if you will please ignore the term — industrial policy. I suggest some kind

America that can hook and jab in the international marketplace. Never forget that. And right now we are falling behind and fast. Right now, America is getting whipped. Right now, our three largest exports to Japan — you have heard this before — are, in this order, corn, soybeans, and coal. Japan's largest exports to us are cars, trucks, videocorders. Raw materials and foodstuffs traded for manufactured goods.

Does the pattern sound a little familiar? It is the classic definition of a colony. That is what deindustrialization and weak-kneed trade policies are doing to America. They are making us a colony again.

We were a colony once before. But we got so mad we threw the tea into the harbor, and not very far from where I am standing, by the way. Well, here we are becoming a colony again, and I mean that.

(Please turn to page 14)

Text of Gray's Commencement Address

(Following is the text of remarks by President Paul E. Gray in his Charge to the Graduates at Commencement on June 3.)

Thank you, Ms. Gedo, Dr. Saxon, Mr. Iacocca, ladies and gentlemen.

May I begin with the observation that I am the man in the middle. I come after the addresses by the head of Chrysler and the head of your class, and just before the ultimate awarding of your degrees, which is why you and your families came this morning.

In short, I know my place. And my remarks, therefore, will be brief. First, I want to say to each of you: congratulations! You have completed the most rigorous and demanding collegiate course of instruction in the nation. In so doing, you enter that legendary band of survivors who are proud to count themselves graduates of this great university.

You have not reached this moment by yourselves. I like to think that the gift of an MIT education is priceless. But you know, and your families know, that it was not gift and it certainly had a price!

It is to the families that I wish first to call attention. And I call, therefore, upon the graduates to join me in an expression of gratitude of the great company of family and friends who, through sacrifice and love, have made this day possible. Will the graduates please stand, face those wonderful people in the audience, and give them the applause and thanks that they so richly deserve.

I began these remarks by observing that I am the man in the middle. That is a familiar feeling for most college presidents, and one that I have experienced often during the past five years. It might be more accurate, however, to observe that the university is an institution in the middle — in the middle of the continuing experiment we know as democracy.

For both the university and for democratic society, the common

hallmarks are the free and open expression of ideas, the embrace of pluralistic beliefs, the reliance on civil discourse — all in the development of common cause. Just as the university takes its primary direction and priorities from its faculty, so a democratic society draws its strength and mandate from consultation and consensus among its citizens. I would like to speak briefly this morning about the university's role in debates on matters of public interest.

At the university, the principles of open expression and academic freedom have faced challenges over the years — from within and without. We have weathered those challenges and have stood firm against efforts to place limits on inquiry and on open discourse among members of the academic community. As many of you know, the past few years have witnessed some efforts by the federal government to restrict information about university-based research on the grounds that — without such restrictions — sensitive technologies may be transferred unintentionally to potential adversaries. These efforts have been much muted in the past year, largely because the university community has been successful in persuading policy makers in the government that science is an enterprise which depends for its vitality and strength on free, open, and widely-shared communication and access. And the nation depends on the vitality of science and engineering for continued prosperity, innovation, and economic growth.

We should not assume, however, that concerns regarding the independence of the universities can be put behind us. More recently, two different issues have highlighted the dilemma of the university in the middle.

First, the funding of science research under President Reagan's Strategic Defense Initiative — the program known popularly as Star Wars — has created controversy within the scientific and academic

communities. We have recently learned that the SDI Program will fund basic research in universities, and that the funding of some ongoing research programs which are relevant to SDI may be shifted to that program. The head of the SDI's Office of Innovative Science and Technology has asserted that the participation of university researchers in SDI-funded projects will add prestige and credibility, and will influence the Congress to be more generous in funding for the program. The impact of this manipulative effort to garner implicit institutional endorsement for SDI comes with special force because of the controversial nature and the unresolved public policy aspects of SDI.

Second, there has been a renewal of efforts at colleges and universities around the country — MIT included — to persuade these institutions to take an active stance against the government of South Africa and its system of apartheid. These efforts have primarily taken the form of calls for the universities to sell their stock in US corporations which do business in South Africa. I share the view that apartheid is an evil, unsupportable, and vicious system. I would like to see it end — the sooner the better. Even those of us who decry that system, however, hold differing views as to the consequences of divestment for the majority of the people in that country, for its government, for the corporations involved, and for the universities who hold stock in those companies. There is no agreement on the best course of action. And there is a major question, again, of how far a university — chartered for academic purposes and educational functions — should go in the direction of using the resources entrusted to it for the purpose of influencing social policy.

In each of these two cases, efforts are made to nudge the university out of the middle, to put

it in a position in which its influence and authority or prestige are used to achieve goals which are only remotely related to the academic purpose or to the vital internal interests of the university.

Obviously, there are situations in which it is appropriate for a university — for this university — to speak with an institutional voice on political issues. Our steadfast opposition to constraints on access to research and on free communication of results, as in the case of technology transfer, is one such example. The test, if you will, is whether the issue at hand has a clear unambiguous, and direct connection to the essential activities of the institution. Every time a university moves beyond this boundary, it invites political treatment of its own interests, and disenfranchises those within the institution whose views are different. Great caution is required in such matters.

This is not to say the academic community should not participate in the debate on matters of public interest. Questions regarding the establishment of national priorities, policies, and allocation of resources must be informed by the will and the judgment of the people, reflected and expressed within the Congress. The national debate on these issues can — and should — be invigorated and illuminated by discussion and reflection within the universities. Beyond that, universities have a responsibility to communicate these insights to the public and to policy makers alike.

What I find particularly troublesome about the SDI funding is the effort to short-circuit the debate and use MIT and other universities as political instruments in an attempt to obtain implicit institutional endorsement. This university will not be so used. Any participation at MIT in SDI-funded research should in no way be understood or used as an institutional endorsement of the SDI

program. I have begun the process of communicating this view to appropriate persons in the government, and will continue to do so.

With reference to divestment, it is the policy of the Institute to urge companies in which it invests and which do business in South Africa to comport themselves in ways which improve the status and condition of their South African employees. I believe that this policy is appropriate, both in terms of its effect in that nation, and in terms of the Institute's mission and responsibilities, and I support it fully.

In conclusion, I suggest once again that our continued effectiveness as an educational institution, as a focal point for research and scholarship, and as a place in which the views of all members of the community are afforded the proper respect and credibility, depends on our careful adherence to the principle that, within very broad limits, we should endeavor to be neutral as an institution in all matters which do not have direct and immediate effect on this place. I am convinced that holding fast to the principles of open expression, academic freedom, and institutional neutrality both serves the national interest and manifests our institutional purposes. Our greatest strength is a commitment to the unfettered exploration and discussion of ideas.

Similarly, the free and open expression of ideas, the embrace of pluralistic beliefs, and the reliance on civil discourse to reach our goals are the heart of the democratic society in which we live. As you leave these halls, I urge you to carry these traditions with you and to bring your voices and your talents to bear on the question which will determine the future directions for this society and this planet.

Goodbye, and may good sense and good fortune go with you.

Iacocca addresses MIT graduates

(Continued from page 13)

And I hope it really makes you mad. So get mad. Don't burn the place down, or start dumping things into the river here. But get mad. Get mad because some people are saying that you are going to be the first generation of Americans who have to settle for less than their parents had. I hope to God you aren't listening to them. I hope you don't believe that because it does not have to be true. It doesn't have to be true, because, even though we have taken our eye off the ball, this is still America, and your birthright as Americans is to change things.

In America, when people get mad enough, they can change anything. Righteous anger, intelligently directed, has made this the greatest democracy in the world. I hope every cancer researcher in the country goes to work every morning mad. And every engineer. And economist even, and teacher, and congressman. Satisfied people change nothing. Only angry people change things.

I got mad six years ago — really mad — when the Wall Street Journal said a little prayer over Chrysler in one of their editorials, and told us in big bold type, "Please die with dignity." A lot of people at Chrysler got mad as hell at that kind of advice. They got so mad they scratched and they clawed and they survived.

So you get mad, too. Get mad at the people in Washington who are burying you under a dung heap of public debt. Tell them, "No more." Get mad at the free lunchers of the world, and tell them, "No more, it is time for sa-

crifice." Get mad at the ideologues who want to make you martyrs to some 18th-century trade principle, who want you to live in a colony. Tell them, "No more, we want to compete."

And get mad at anybody who tells you that you have to settle for less. Tell them, "Get the hell out of my way!" You owe that to yourselves. Your education is as good as anybody can get anywhere, remember that. You are smart enough to compete with anybody in the world. And you deserve the chance to be the best. You owe it to yourselves and to those who follow you, too.

Now you are not getting a perfect world, but I hope you all appreciate what has been given to you. I hope you feel a deep appreciation for what other people have done so that you could be here today. But I also hope you understand how you will pay that debt. It doesn't get paid to me, or to my generation, or to your teachers, or even to your parents. There is a scene in the movie "Guess Who's Coming to Dinner" in which a father is very angry with his son, and he says, "I carried that mailbag for 40 years so you could go to college and to medical school. You owe me for that." And the son says, "I owe you nothing. If you carried that mailbag a million miles you did what you were supposed to do. You owed me everything you could ever do for me, just as I will owe my kids." The son wasn't ungrateful. He loved and respected his father. But he also understood how civilization is supposed to work. One generation making things a little better for the next. Fathers and mothers

sacrificing everything for their kids.

That is how we got where we are today. That is the way civilization is supposed to work. Now my generation is leaving you with too much debt, and we are a little blind to some of the new economic realities in the world. We are leaving you with a lot of problems to solve. But that is the way civilization works, too. Every generation inherits the unfulfilled dreams of the one that came before, and every generation inherits its own set of challenges.

We were naive 40 years ago thinking we had a shot at making a perfect world. But, in many ways, we made it a lot better for you, and, by the way, we are not through yet — almost, but not yet.

You, more than most, have been given the tools to meet your own set of challenges. A degree from MIT just about guarantees you at least a shot at molding the future. It is a prestigious ticket, and it puts you right up in front of the pack.

Well, let me tell you, it may also be a bit of a burden to you. People are going to expect more of you. They are expecting you to be leaders and to be winners.

Your MIT degree puts you in the pole position, as they say, and the green flag is about to go up. So now let's see if you are mad enough to make this imperfect world just a little better for your kids. Let's see what you are made of.

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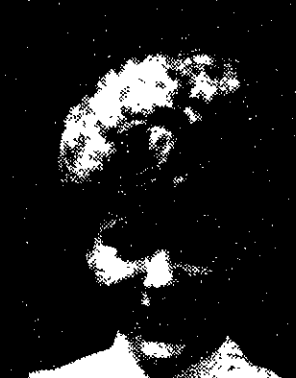
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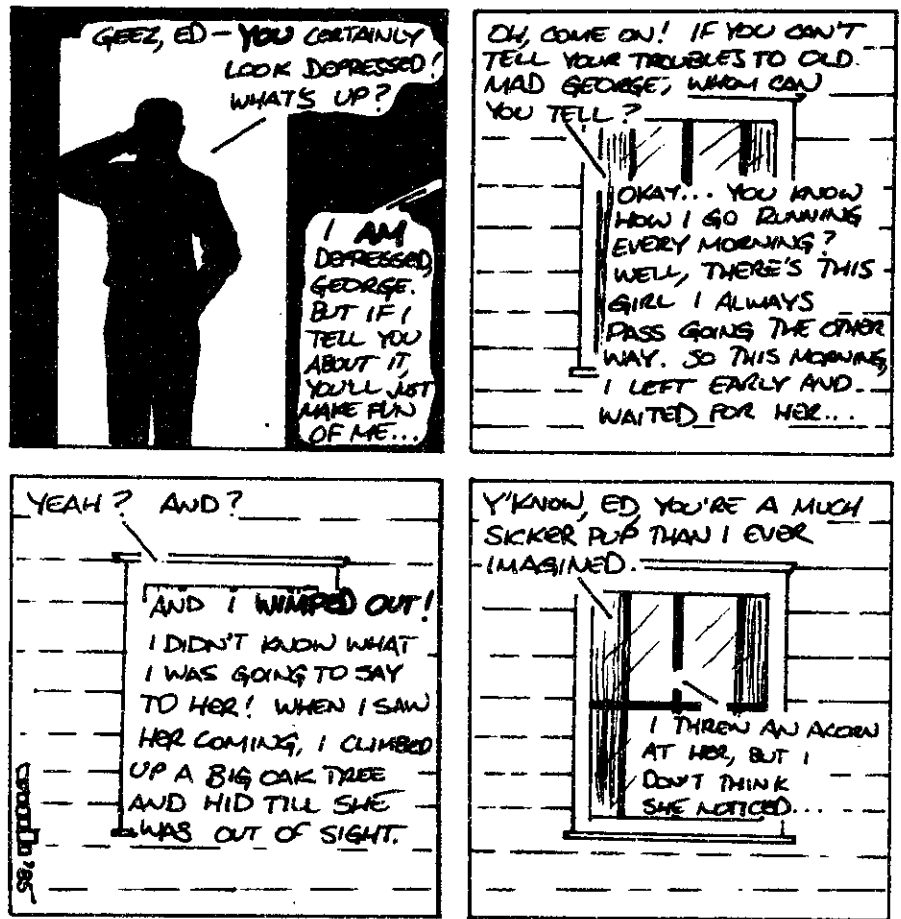
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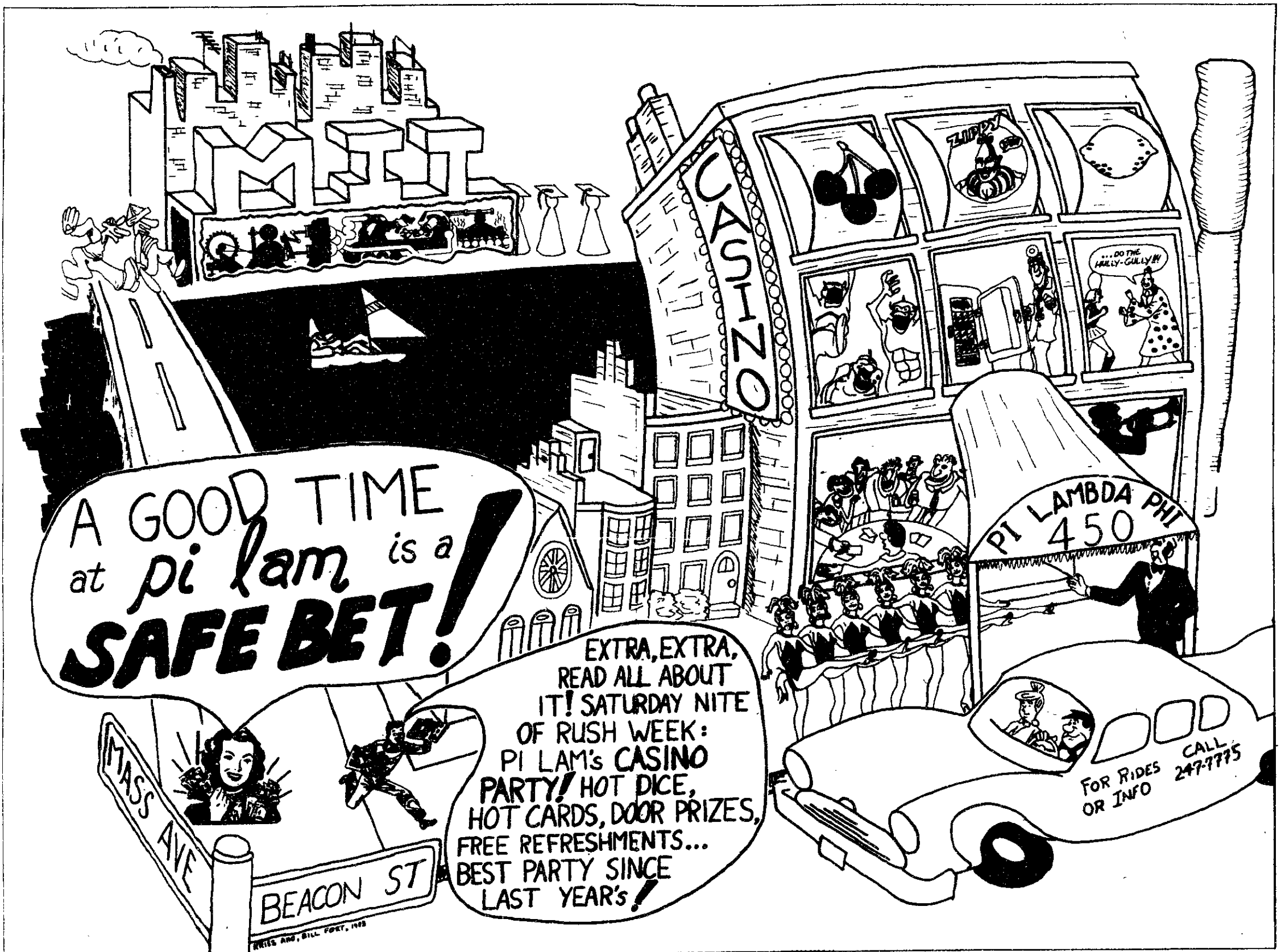
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